

DRAFT

ANNUAL REPORT

2013 - 2014

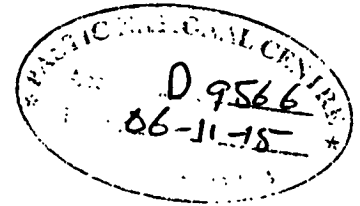


Pakistan Science Foundation
Islamabad

DRAFT

ANNUAL REPORT

2013-2014



PAKISTAN SCIENCE FOUNDATION
1 - Constitution Avenue
Islamabad

PAKISTAN SCIENCE FOUNDATION

CHAIRMAN

Prof. Dr. Khalil Ahmed Ibupoto

EXECUTIVE COMMITTEE

Prof. Dr. Manzoor H. Soomro	Chairman (Uptill 06.10.2013)
Prof. Dr. Khalil Ahmed Ibupoto	Chairman (Since 07.10.2013)
Prof. Dr. Khalil Ahmed Ibupoto	Member (Science) (Since 14.04.2011)
Mr. Haider Zaman Khattak	Member/Director (Finance) (Since 19.02.2013)

BOARD OF TRUSTEES

Three Whole-time Members (appointed by the President):

Prof. Dr. Manzoor H. Soomro	Chairman (Uptill 06.10.2013)
Prof. Dr. Khalil Ahmed Ibupoto	Chairman (Since 07.10.2013)
Prof. Dr. Khalil Ahmed Ibupoto	Member (Science) (Since 14.04.2011)
Mr. Haider Zaman Khattak	Member/Director (Finance) (Since 19.02.2013)

Sixteen Part-time Members:

1. Prof. Dr. M. D. Shami, S.I.
Former Chairman, PSF,
House No.299, Street No.14, F-10/2,
Islamabad

2. Prof. Dr. M. Aslam Baig, *H.I., S.I., T.I.*
Consultant (LPP),
National Centre for Physics (NCP),
Quaid-i-Azam University,
Islamabad
3. Prof. Dr. A.Q. Ansari, *S.I.*
Rector-VC Al-Khair University,
Zaki Plaza, Flat #.5, I-8, Markaz,
Islamabad
4. Prof. Dr. Kauser Abdulla Malik, *H.I., S.I., T.I.*
Former Member Planning Commission of Pakistan,
FC College University,
Lahore
5. Prof. Dr. Mudassir Asrar
Chairperson,
Pakistan Council for Science & Technology,
Islamabad
6. Prof. Dr. Altaf Ali G. Sheikh,
Pro. Vice Chancellor
Isra University,
Farash Town, Lehtrar Road, Phase-II,
Islamabad
7. Prof. Dr. M. Qasim Jan, *H.I., S.I., T.I.*
Advisor,
COMSTECH,
Constitution Avenue,
Islamabad
8. Prof. Dr. M. Masoom Yasinzai, *S.I., AF,*
Rector,
International Islamic University,
Islamabad
9. Dr. M. Ashraf Poswal,
Global Director, Plant wise Programme,
CAB International,
1-A Data Ganj Bakhsh Road,
Satellite Town,
Rawalpindi
10. Prof. Dr. Ikram-ul-Haq, *S.I.,*
Tenure Professor,
Institute of Industrial Biotechnology and
Ex-Dean, Faculty of Science & Technology,
Government College University,
Lahore.

11. Prof. Dr. M. Iqbal Choudhary, *H.I., S.I., T.I.*
Director,
International Centre for Chemical & Biological
Sciences (ICCBS),
HEJ Research Institute of Chemistry, Karachi
12. Prof. Dr. Nilofar Shiekh, *T.I.*
Vice Chancellor,
Preston University
Majlis-e-Taleem-e-Milli Pakistan
Jamia Millia Malir, Karachi
13. Prof. Dr. Bhawani Shankar Chowdhry,
Dean,
Faculty of Electronical, Electronics and Computer Engineering,
Mehran University of Engineering & Technology,
Jamshoro
14. Dr. Abdul Hameed Bajoi,
Ex-Vice Chancellor,
C/o Saira Aman, Department of English,
Lasbela University of Agriculture, Water and
Marine Sciences,
Uthal, Balochistan.
15. Dr. M.A.K. Malghani,
Pro-Vice Chancellor,
Baluchistan University of Management Sciences & Information
Technology,
Samungli Road, Quetta
16. Prof. Dr. Khan Bahadar Marwat,
Vice Chancellor,
Shaheed Benazir Bhutto University,
Sheringal, Dir Upper ,
Khyber Pakhtunkhwa

The Board of Trustees of Pakistan Science Foundation was re-constituted vide Government of Pakistan notification No.1(2)/2003-Elect/PSF dated 12.02.2013.

CONTENTS

Chapters	Page
EXECUTIVE SUMMARY	1
INTRODUCTION	6
ACTIVITIES AND PROGRAMMES	7
I. PAKISTAN SCIENCE FOUNDATION (PSF)	8
1.0 RESEARCH SUPPORT	8
1.1 Research Funding	8
1.1.1 Research Projects Funded	8
a) Under-Process Projects	8
b) On-Going Projects	8
c) Completed Projects	8
1.1.2 Scientific Publications Produced through PSF Supported Projects	24
1.1.3 Higher Degrees Earned through PSF Supported Projects	24
1.1.4 R&D Industry Programme	24
a) Under-Process Projects	24
b) Approved Projects	26
c) On-Going Projects	26
d) Completed Projects	28
1.1.5 International Linkages	28
1.1.6 Exhibition Organized	31
1.1.7 Collaboration/ Meeting with Similar Stakeholders	33
1.1.8 Exhibition Participated	34
1.1.9 Documentary to Highlight Success Stories of R&D-Industry Programme	35
1.1.10 Workshops/Seminars/Meetings and Training attended	36
1.1.11 Inventions and Innovations Programme	37
1.2 Pak-US Natural Sciences Linkage Programme (NSLP)	
Endowment Fund	38
1.2.1 Activities and Programmes	39
1.2.1.1 Research Funding	39
a) Under-Process Projects	39
b) On-Going Projects	40
c) Completed Projects	40
1.2.1.2 Scientific Publications & Patents Produced through NSLP Funded Projects	50
1.2.1.3 Higher Degrees Earned through NSLP Supported Projects	50
1.2.2 Project Formulation Workshops	50
1.2.3 Meetings of Fund Management Committee of NSLP	51
1.2.4 Meetings of Technical Committee of NSLP	52
1.2.5 On site Monitoring of NSLP Projects	52
1.2.6 Commercialization of Humic Acid Started from NSLP Project	52
1.3 Science Promotion	53
1.3.1 Institutional Support Programme	53

1.3.2	Financial Assistance for holding Science Conferences, Seminars, Symposia and Workshops	53
1.3.3	Financial Support to Scientific Societies for holding Scientific Conferences and Publication of Scientific Journals	55
1.3.4	Awards and Fellowships	56
1.3.5	Financial Support for Scientific Survey	56
2.0	SCIENCE POPULARIZATION	56
2.1	Science Popularization Activities	58
2.1.1	Science Caravans (Mobile Science Exhibitions)	58
2.1.2	23 rd Intra and Inter Board Science Essay and Poster Competitions	59
2.1.3	Donation of Scientific Literature to High Schools	59
2.1.4	Financial Assistance to High Schools and other Organizations	60
2.1.5	Popular Science Lectures (Cataract Awareness)	60
2.1.6	World Science Day for Peace and Development celebration	62
2.1.7	Inquiry Based Science Education Programme in Pakistan	65
2.1.8	New Activities and Future Plans	66
2.1.9	Participation of Pakistani Students in London International Youth Science Forum (LIYSE)-2013	70
2.1.10	High School Summer Science Research Programme (HSSSRP)	71
2.1.11	Collaboration with Intel, Pakistan	72
2.1.12	Students Fête on Energy	75
2.1.13	2 nd Winter Science Camp-2013	76
2.1.14	Other Activities	79
2.1.15	Signing of MoUs	82
2.1.16	Future Plans/Targets	83
3.0	INTERNATIONAL LIAISON	83
3.1	Collaboration with International Organizations	83
3.2	Other International Activities	83
4.0	PLANNING AND DEVELOPMENT	84
4.1	Activities under Development Budget	84
4.1.1	On-going Development Project	84
4.1.2	New Development Project Approved	85
4.1.3	New Development Project Submitted to MoST	85
4.1.4	PC-IV of the completed projects submitted to MoST	86
4.2	Activities under Non-Development Budget	86
4.2.1	International Liaison	86
4.3	Other Activities	87
II.	PAKISTAN MUSEUM OF NATURAL HISTORY (PMNH)	88
1.0	Natural History Research	89
1.1	Botanical Sciences Division	89
1.1.1	Field Work	89
1.1.2	Laboratory Work	90
1.1.3	National Collaborative Projects	90
1.1.4	Publications	91
1.1.5	Seminars/Workshops Organized	91
1.1.6	Conferences/Workshops Attended	92

1.1.7	National/International Collaboration/Liaison	92
1.1.8	Services Rendered to other Organizations	92
1.2	Earth Sciences Division	93
1.2.1	Field Work	93
1.2.2	Laboratory Work	94
1.2.3	Publications	94
1.2.4	Seminars/Symposia/ Training/Workshop Organized	95
1.2.5	Seminars/Trainings/Workshops attended	95
1.2.6	National/International Collaboration /Liaison	95
1.2.7	Display Work	95
1.3	Zoological Sciences Division	96
1.3.1	Field Work	96
1.3.2	Laboratory Work	97
1.3.3	National Research Projects	97
1.3.4	Collaborative Research Projects	97
1.3.5	Publications	98
1.3.6	Seminars/Symposia/Congress Organized	98
1.3.7	Seminars/Symposia/Workshops Attended	99
1.3.8	National/International Collaboration/Liaison	99
1.3.9	Services Rendered to other Organizations	99
1.4	Public Education and Display	100
1.4.1	Exhibits Developed/Organized	100
1.4.2	Important Visits to PMNH	100
1.4.3	Educational Services	101
1.4.4	Man and Biosphere Website	103
1.4.5	Number of Visitors to Display Galleries	103
2.0	INTERNATIONAL LIAISON	103
3.0	PLANNING AND DEVELOPMENT	103
III.	PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE (PASTIC)	104
1.0	Aims and Objectives	105
2.0	Activities and Services	105
2.1	Document Procurement and Supply Service	106
2.2	Bibliographic Information Service/ Literature Search	106
2.3	Abstracting and Indexing Service (Pakistan Science Abstracts)	108
2.4	Directory of Scientific Periodicals of Pakistan	109
2.5	Union Catalogue of Scientific Periodicals of S&T Libraries of Pakistan	109
2.6	Technology Information Service	109
2.7	PASTIC National Science Reference Library	110
2.8	Reprographic Service	111
3.0	International Liaison	111
3.1	UNESCO Software	111

3.2	SAARC Documentation Centre	111
3.3	KOICA	112
4.0	PASTIC Information Service Stalls	112
5.0	Human Resource Development	115
5.1	Trainings/Workshops/Seminars/Symposia Organized	115
5.2	Trainings/Workshops/Seminars Attended	116
6.0	Other Activities	119
6.1	PASTIC Membership	120
6.2	Consultancy	120
IV.	ORGANIZATION AND ADMINISTRATION	121
1.0	PSF Sanctioned posts and Organizational Chart	121
2.0	PMNH Sanctioned posts and Organizational Chart	124
3.0	PASTIC Sanctioned posts and Organizational Chart	126
V.	PHOTO GALLERY AND PRESS CLIPPING	129
1.0	PSF Photo Gallery and Press Clipping	130
2.0	PMNH Photo Gallery	171
3.0	PASTIC Photo Gallery and Press Clipping	174
VI.	AUDITOR'S REPORTS	193
1.0	PSF Financial Statements	194
2.0	PMNH Financial Statements	204
3.0	PASTIC Financial Statements	213
	ANNEXURES	223-277
I.	Pakistan Science Foundation Act-III, 1973	
II (a).	List of Projects Approved in 2013-14	
II (b)	List of Projects Recommended By Technical Committees in 2013-14	
III.	Detail of Monitoring and Evaluation of On-Going Projects in 2013-14	
IV.	List of Scientific Publications Produced through PSF Supported Completed Projects in 2013-14	
V.	List of NSLP Projects Recommended by Technical Committee in 2013-14	
VI.	Detail of Monitoring and Evaluation of NSLP On-Going Projects in 2013-14	
VII.	List of Scientific Publications Produced through NSLP Supported Completed Projects in 2013-14	
VIII.	Detail of Science Caravan Exhibitions in 2013-14	
IX.	Detail of 23rd Intra-Board Science Essay Completion, 2013-14	
X.	Detail of 23rd Intra Board Science Poster Completion, 2013-14	
XI.	List of Schools/Organizations Provided Financial Assistance in 2013-14	
XII.	List of Scientists availed Travel Grants under Development Budget in 2013-14	

ACRONYMS

AGR	Agricultural Sciences
AJK	Azad Jammu and Kashmir
AKU	Agha Khan University, Karachi
B	Balochistan
BIO	Biological Sciences
BIOTECH	Biotechnology & Genetic Engineering
C	Capital
CDWP	Central Development Working Party
CEMB	Center of Excellence in Molecular Biology, Lahore.
CEME	College of Electrical and Mechanical Engineering, Rawalpindi
CEWRE	Center of Excellence in Water Resources Engineering, Lahore
CIIT	COMSATS Institute of Information Technology
COMSATS	Commission on Science and Technology for Sustainable Development in the South
COMSTECH	OIC Standing Committee on Scientific and Technological Cooperation
DDWP	Departmental Development Working Party
EARTH	Earth Sciences
ENG	Engineering Sciences
ENVR	Environmental Sciences
ILG	Industrial Linkages Group
KPK	Khyber PakhtoonKhwa
PU	Peshawar University, Peshawar
FJWU	Fatima Jinnah Women University
GCU	Government College University, Lahore
GU	Gomal University, D. I. Khan
KU	Karachi University, Karachi
MED	Medical Sciences
NARC	National Agricultural Research Center
NIBGE	National Institute for Biotechnology and Genetic Engineering, Faisalabad
NNSFC	National Natural Science Foundation of China
NSLP	Natural Sciences Linkage Programme
NSTC	National Science and Technology Commission
P	Punjab
P-AU	Agriculture University, Faisalabad
P-PU	Punjab University, Lahore
PHYS	Physics
PINSTECH	Pakistan Institute of Nuclear Science and Technology, Islamabad
PCCC	Pakistan Central Cotton Committee, Sakrand
PSDP	Public Sector Development Programme
S	Sindh
SALU	Shah Abdul Latif University, Khairpur
SUIT	Sindh Institute of Urology & Transplantation, Karachi
SU	Sindh University, Jamshoro

EXECUTIVE SUMMARY

PAKISTAN SCIENCE FOUNDATION (PSF)

Pakistan Science Foundation (PSF) is apex body for promotion and funding of scientific and technological research and other related activities in the country. The tasks undertaken by the Foundation for the performance of its statutory functions are divided into two broad categories viz., Science Promotion and Science Popularization. Some of these activities pertaining to above mentioned categories are undertaken by Pakistan Museum of Natural History (PMNH) and Pakistan Scientific and Technological Information Centre (PASTIC), the two subsidiary organizations of PSF, while others are performed by PSF Science Wing and are reflected as under:

RESEARCH SUPPORT

To promote basic and applied research relevant to socio-economic development of the country, Research Support Programme is playing a pivotal role in the Foundation. During 2013-14, a total of 307 projects in the fields of Agricultural, Biological, Chemical, Medical, Maths & Computer, Earth, Engineering Sciences, Biotechnology and Genetic Engineering and Physics remained under consideration. Out of these, 175 were under-process projects including 23 newly approved at a total cost of Rs.46.464 million and 135 ongoing research projects. An amount of Rs.0.25 millions was released on account of first installments of newly approved projects. Besides, 23 project proposals were recommended by relevant Technical Committees for funding, however, due to shortage of funds, these could not be processed. A total of 79 technical reports (semi-annual/annual/final) of on-going projects were received, of these, annual reports were sent to subject experts for evaluation and an amount of Rs.9.428 million released on account of due instalments. Final technical reports of 61 on-going projects were presented to relevant Technical Committees and were adopted, account settled and files closed. From these completed projects, a total 16 research papers were published in different national/international journals, and 03 Ph.D. and 04 M.Phil degrees were awarded to the Research Associates enrolled under these projects.

Focusing on collaborative research and strong industrial linkages, R&D-Industry Programme (previously called Industrial Linkages Programme, ILP) aimed to bring researchers, end-users and the funding institutions together at one platform to create an environment of a unified approach to identify and solve industrial problems through applied research and technology transfer mechanism. During the report period, a total of 09 research proposals were received

from various organizations, out of these, 07 proposals were presented in Technical Committees, wherein, 02 were approved at a total cost of Rs.6.1 million. Currently, 04 projects are on-going and an amount of Rs.1.81 million was released on account of due instalments for smooth running of these projects. During this period, 01 project was also completed. In addition, under this programme, “Invention to Innovation Summit-2014” was also organized at University of the Punjab, Lahore to establish linkages between Academia and Private Sector.

PAK-US NATURAL SCIENCES LINKAGE PROGRAMME (NSLP) ENDOWMENT FUND

PSF maintains an Endowment Fund under Pak-US Natural Sciences Linkage Programme (NSLP) to boost the research in agriculture sector in the country. During the report period, 208 proposals remained under consideration of the NSLP. Out of these 56 projects were presented in four Technical Committee meetings wherein 30 projects were recommended for funding by these Committees at total cost of Rs.124.134 million. Currently 64 projects are on-going at different Universities and R&D Organizations across country, an amount of Rs.48.8 was released on account of due installments for smooth running of these projects. During the report period, 08 projects were also completed.

SCIENCE PROMOTION ACTIVITIES

During the report period, an amount of Rs.0.680 million was released to various institutions for organizing 12 conferences, seminars, and workshops on important scientific topics and Rs.0.5 million were released to 08 scientific societies/journals for their regular activities. However, Institutional Support and PSF Fellowships programmes were not entertained due to paucity of funds.

SCIENCE POPULARIZATION

Need of promotion and popularization of science and technology for economic growth and for improving the quality of life of a nation can never be denied. Even so, an irrational use of science and technology has also contributed to the current environmental, social and economic problems faced by humanity in the 21st century. The dream of scientific and technological development leading to economic self-reliance cannot come true unless all the segments of the society realize the importance of science and technology. Popularization of science through non-formal science education activities can play an important role for creating science awareness among the masses. Need is to initiate sustainable and mega

programs for motivating the students of our formal schools to study science from the grass root level.

INTERNATIONAL LIAISON

Liaison with Foundations, Academies, Science Centers, Museums and International bodies around the world provide many benefits and challenges. These include achieving greater awareness of a diverse, complex and interdependent world, exchange of expertise and professional development through undertaking collaborative research projects. During the report period, 15 proposals of PSF, PASTIC & PMNH for S&T collaboration with Turkey, Argentina, European Union, Uzbekistan, Mexico and Russia were forwarded to MoST for consideration under various S&T Protocols/Agreements/MoUs signed by the Government of Pakistan. Some other MoU's were also taken up with MoST/concerned International bodies such as; (i) MoU between Pakistan Science Foundation (PSF), Islamabad and National Science Foundation (NSF), Sri Lanka, (ii) MoU between the Scientific and Technological Research Council of Turkey (TUBITAK) and Pakistan Science Foundation, and (iii) MoU between Pakistan Science Foundation, Islamabad and Economic Cooperation organization-Institute of Environmental Science & Technology (ECO-IEST), Iran.

PLANNING AND DEVELOPMENT ACTIVITIES

During the year 2013-14, an amount of Rs. 5.0 million were allocated / released under the PSDP and spent mainly for provision of travel grants to scientists/technologists/ other heads of the project. A total of 308 requests were received from scientists and technologists of the country. After comprehensive scrutiny as per eligibility criteria, 174 requests were presented in 08 meetings of Travel Grant Award Committee (TGAC) whereas 69 were recommended and 43 scientists/technologists availed the grant and 26 could not proceed abroad due to visa problems and other reasons.

PAKISTAN MUSEUM OF NATURAL HISTORY (PMNH)

PMNH has four principal divisions namely Botanical Sciences, Zoological Sciences, Earth Sciences and Public Services. The first three divisions are engaged in the collection, identification and research activities pertaining to plants, animals and mineral resources of Pakistan, respectively; while the latter is responsible for mass education and popularization of natural history. During the report period, PMNH researchers conducted field work in various localities of Sindh, Punjab, Khyber Pakhtunkhwa, Gilgit-Baltistan and Azad Jammu and Kashmir. Research activities were carried out under three national collaborative research

projects and one PSF-funded research project and a number of natural history specimen related to animals, plants, rocks, minerals and fossils were collected and identified. The findings of research activities were published in the form of 57 research articles in national and international journals. Ten popular articles on various natural history topics were also published and 14 technical reports on their collaborative research projects were produced.

During the report period, an exhibition and seminar on “medicinal and aromatic plants”, the “33rd Pakistan Congress of Zoology” and “1st NCOBAM” were jointly organized with various national and international organizations, and PMNH scientists also participated in celebrations of “International Biodiversity Day” on 22nd May, “World Environment Day” on 5th June, “International Museum Day” on 18th May and “World Science Day” on 14th November. PMNH as MAB country Secretariat in collaboration with UNESCO activated National MAB Committee-Pakistan and established MAB Secretariat, worked for the declaration of “Ziarat Juniper Biosphere Reserve”, prepared TORs for review of “Lal Suhanra National Park” and conducted studies for new Biosphere Reserve (Central Karakoram Biosphere Reserve). PMNH also rendered services to other organizations in animal and plant specimen identification, research techniques for students and evaluation of M.Phil and Ph.D theses.

During the period, the life size displays of *Baluchitherium* (the largest land mammal on earth) and Blue Whale Skeleton were inaugurated by the Federal Minister for Science and Technology, Mir Changez Khan Jamali at PMNH premises on 24th October 2012 in presence of a large number of scientists, educationists and students. Regarding popularization activities, about 73680 visitors (students and general public) including 159 foreigners from USA, France, China, India, Nepal, Afghanistan etc visited display galleries of PMNH. As a part of improvement/up-gradation of the Display Centre, a wide screen display was installed in the VOG to provide scientific information in the forms of movies, documentaries and different types of presentations to the visitors.

PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE (PASTIC)

Pakistan Scientific and Technological Information Centre (PASTIC) is the premier organization in the field of S & T information dissemination in the country. During the report period, 35 service stalls and 12 awareness seminars were organized at various universities and R&D organizations. Updating of in-house databases such as Serial Holdings of Libraries of

S&T Institutions of Pakistan, Research Published in Pakistan and Scientific Periodicals of Pakistan remained in progress. Further, a total of 2777 S&T documents were provided to 483 R&D workers from 60 organizations on demand, and 882,828 references/abstracts on various S&T topics to 5019 researchers from 180 organizations under the Bibliographic Information Service.

PASTIC also regularly publishes abstracting journal entitled “Pakistan Science Abstracts” (PSA) in ten different scientific disciplines. Five issues of bimonthly Trade and Technology news e-bulletin entitled “*Technology Roundup*” were published online and as a result oriented and coordinated University-Industry Partnership Programme, various seminars, symposia, conference and exhibitions were organized at the Chambers of Commerce & Industry in Lahore, Sialkot, Peshawar, Faisalabad and Islamabad. During the report period, a total of 5,267 users visited PASTIC library and the library also received 583 issues of National & International Journals along with 30 miscellaneous documents in exchange of Pakistan Science Abstracts, under international cooperation activities. Under Reprographic Service, 103 printing jobs of 08 R&D organizations were performed. Besides the development project on “Strengthening and Enhancement of Reprographic Services of PASTIC” was completed.

PASTIC also acts as the National Focal Point for International/Regional Information Networks, like SAARC Documentation Center (SDC), WHO/CEHANET, IFAP/UNESCO and is the national distributor of UNESCO developed library management software WINISIS and IDAMS. During the year, WINISIS package was supplied to 16 Librarians and other professionals and one training workshop on WINISIS was organized. Moreover, 10 seminars, workshops and symposia on PASTIC Information Services, Library & Information Management, Internet Searching Techniques, Intellectual Property Rights, Developing Local Food Additives/Preservatives and Technologies for Sportswear Sector-Ensuring Competitiveness, were organized at different cities of the country. In view of the importance of public private partnership for strengthening of activities, promotion of services, etc., PASTIC signed MoU with Riphah International University. A PC-1 “Establishment of PASTIC S&T Information Kiosks/Cells in selected Universities of Pakistan” was prepared and submitted to MoST.

INTRODUCTION

Pakistan Science Foundation was established on June 30, 1973 under the Pakistan Science Foundation Act No. III of National Assembly (**Annexure-I**) as an autonomous body to promote and finance scientific and technological activities having a bearing on the socio-economic needs of the country. The tasks undertaken by the Foundation for the performance of its statutory functions are divided into following three broad categories:

- i) Science Promotion supports basic and fundamental as well as applied research involving researchers/academia at universities and R&D organizations focusing socio-economic needs/development of the country.
- ii) Science Popularization endeavoring to image scientific ideas to grasp the concept of fundamental science.
- iii) Science Centers to encourage all segments of society in thinking, understanding and exploring science.

Under the Act, the Foundation has been entrusted to carry out the following functions:

- i) Establishment of comprehensive scientific and technological information and dissemination centers.
- ii) Promotion of basic and fundamental research in universities and other institutions on scientific problems relevant to the socio-economic development of the country.
- iii) Utilization of the results of scientific and technological research including pilot plant studies to prove the technical and economic feasibility of processes found to be promising on a laboratory scale.
- iv) Establishment of science centers, clubs, museums, herbaria and planetaria.
- v) Promotion of scientific societies, associations and academies engaged in spreading the cause of scientific knowledge in general or in the pursuit of a specific scientific discipline or technology in particular.
- vi) Organization of periodical science conferences, symposia and seminars.
- vii) Exchange of visits of scientists and technologists with other countries.
- viii) Grant of awards, prizes and fellowships to individuals engaged in developing processes, products and inventions of consequence to the national economy.
- ix) Special scientific surveys not undertaken by any other organization and collection of scientific statistics related to the scientific efforts of the country.

The Foundation shall also:

- i) Review the progress of scientific research sponsored by it and evaluate the results of such research.
- ii) Maintain a National Register of highly qualified and talented scientists/engineers and doctors both in and outside Pakistan, and to assist them in collaboration with concerned agencies to seek appropriate employment.
- iii) Establish liaison with similar bodies in other countries.

The activities performed under the above mentioned statutory functions are as under, however, the details are given in different chapters:

ACTIVITIES AND PROGRAMMES

The activities and programmes undertaken by the Foundation to perform its statutory functions can be divided into the following four categories:

- i. Promotion and Financing of Scientific Research in the Country and the Utilization of the Research Results.
- ii. Promotion and Popularization of Science in Society.
- iii. International Liaison.
- iv. Establishment of Comprehensive Scientific and Technological Information Dissemination Centers.

The main functions of the Foundation i.e., research support and science popularization etc., are performed by the Science Wing of the Foundation and their detail is given as under:

Research Support is performing the following activities:

1. Research Support
 - a) Grants for Research Projects
 - b) Grants for Institutional Support
2. Research Evaluation
3. Promotion/funding of Scientific Societies/Learned Bodies
4. Funding of Conferences, Symposia, Seminars & Workshops
5. Travel Grants
6. International Liaison
7. Awards and Fellowships
8. Survey and Statistics
9. Scientists Pool
10. Innovations & Inventions
11. Planning and Development Programme

Science Popularization carries out science popularization activities including Science Caravans, Science Clubs, Science Fairs and holding of Popular Science Lectures, Workshops, Conferences and Symposia.

Pakistan Museum of Natural History (PMNH) is a subsidiary organization of PSF, established in 1979 to serve the national needs in the vitally important areas of research, conservation and education involving Pakistan's heritage of natural resources. The Museum is a National Repository for permanent storage of plants, animals, rocks, minerals and fossils of the country.

Pakistan Scientific and Technological Information Centre (PASTIC) is another subsidiary organization of PSF, performs as Scientific and Technological Information Dissemination Center with its sub offices in all provincial capitals of the country.

1. PAKISTAN SCIENCE FOUNDATION (PSF)

1.0 RESEARCH SUPPORT

1.1 Research Funding

1.1.1 Research Projects Funded

Research Support (Science Promotion) is the principal programme of Pakistan Science Foundation for the promotion of basic and applied research relevant to the socio-economic development of the country. The criteria for funding of research projects include the availability of basic equipment and laboratory facilities, scientific and technical merit of the proposed research projects and likelihood of completion of the proposed research within the stipulated time and budget. Each proposal, after getting reviewed from subject expert in the particular field, is placed before the relevant Technical Committee for technical and fiscal evaluation and recommendations for provision of funds. The proposal, if recommended by the Technical Committee, is then submitted to PSF Executive Committee for final approval.

a. Under process Projects

During 2013-14, 307 research proposals remained under active consideration of the Foundation. Out of these, 175 projects were under-process and 69 were approved by relevant Technical Committees at the total cost of Rs.46.464 million. Twenty three more projects were also recommended for funding by these Committees (**Annexure-II, a&b**), however, due to shortage of funds, these could not be processed. An amount of Rs.0.25 million was released on account of first installments to approved projects.

b. On-going Projects

During report period, 135 research projects were remained on-going and 79 progress reports (semi annual, 1st, 2nd annual & final) were received. Semi annual reports were scrutinized by PSF staff, whereas the annual and final reports after initial scrutiny were sent for evaluation to the subject experts to assess the interim progress of the projects. The due installments of on-going projects are released only if interim progress of the projects is satisfactory. An amount of Rs.9.428 million was released on account of due installments and evaluation fee of ongoing projects. A list of the semi-annual, annual and final reports is given in **Annexure-III**.

c. Completed Projects

During the year, 12 research projects were completed. The subject experts evaluated the final technical reports of these projects, which were subsequently placed before the

respective PSF Technical Committees for consideration. After adoption of these reports by the Committee, the accounts of these projects were settled and files were closed. A list of the completed projects followed by their scientific output is given below:

Sr. No.	Project No.	Project Title
1.	PSF/Res/P-AU/Agr (319)	Potential Use of CO ₂ as Foliar fertilizer for Wheat Yield Enhancement under Salt Stress Strategies for the Future.
2.	PSF/Res/P-CABI/Agr (380)	Exploration of Baculoviruses Prevalent in Different Agro-ecological Zones of Pakistan and Their Evaluation against Target Lepidopteron Pests.
3.	PSF/Res/C-QU/Med (255)	Effect of Peripheral Administration of Puberty Onset Protein Kisspeptin on Male Sex Hormones and Spermatogenesis in Prepubertal Stages: an <i>in vivo</i> and <i>in vitro</i> .
4.	PSF/Res/C-IBGE/Med (271)	Genetic Screening of Pakistani Population for CYP2D6 Genotypes
5.	PSF/Res/C-PINSTECH/Med (207)	Helicobacter Pylori in Children: Prevalence and Strain Identification.
6.	PSF/Res/P-SKMCH/Med (240)	Metaplastic Breast Carcinoma: Histopathological Characteristics and EGFR/HER2-NEU Genes Expression.
7.	PSF/Res/S-PMRC/Med (269)	Health Seeking Behaviour Among Adult Patients Attending OPDs of Public Hospitals in Karachi.
8.	PSF/Res/Biotech /P-NIBGE/Ind (32)	Mutation Breeding of <i>Lactobacillus delbrueckii</i> for Hyper Production of Lactic Acid for the Development of Biodegradable Polymers.
9.	PSF/Res/Biotech/P-NIBGE/Med (50)	Detection of Y-Chromosome Microdeletions Associated with Infertility in Different Geographic/ Ethnic Groups in Pakistan.
10.	PSF/Res/P-AU/Chem(406)	Feasibility for Production of Biodiesel from Indigenous Vegetable Oil Resources.
11.	PSF/Res/S-HEJ/Chem (426)	Metabolomics Profiling of Pakistani Healthy Persons, Smokers and Lung Cancer Patients by Modern Mass Spectrometric Tools for the Identification of Biomarker Compounds.
12.	PSF/Res/C-PINSTECH/Earth (84)	Value Addition to Topaz by Neutron Irradiation.
13.	PSF/ILG/040/10	Investigation and Optimization of Combustion and Emissions Characteristics of Fatty Acid Methyl Esters of Different Origin

i) AGRICULTURAL SCIENCES

Project No:	PSF/RES/P-AU/Agr (319)
Project Title:	Potential Use of CO₂ as Foliar Fertilizer for Wheat Yield Enhancement under Salt Stress Strategies for the Future
Duration:	3-Years
Date of Initiation:	01.10.2007
Date of Completion:	30.09.2010
Total Expenditure:	Rs.598,740/-
Principal Investigator:	Prof. Dr. Abdul Wahid
Name of Institution:	University of Agriculture, Faisalabad

SUMMARY:

Five wheat varieties with known salinity tolerance were used with the aim to determine any shift in the salt tolerance threshold of these varieties at various growth stages. The data were recorded for growth, photosynthetic attributes, water, ionic and yield attributes. Data revealed that high ambient CO₂ at various stages of wheat growth improved the salinity tolerance of wheat at various growth stages. High ambient CO₂ improved the salt tolerance threshold by about 5–8% at seedling and tillering stages and 3–5% at maturity. This improvement was greater in the sensitive than tolerant varieties, as evident from the relative increase and/or decrease in various attributes under CO₂ enrichment. For most growth stages and parameters studied over a period of three years, the varieties × CO₂ interaction was non-significant, which indicated that the CO₂ enrichment was highly effective in improving growth of wheat varieties under salinity stress. Moreover, growth stages under elevated CO₂ had no effect in changing salinity tolerance of the varieties. There was a substantial improvement in the gas exchange properties particularly P_n and WUE and reduction in the tissue ionic concentrations for Na⁺ and Cl⁻ but an improvement in K⁺ and K⁺/Na⁺ ratio at seedling, tillering and grain filling stages. This was due to greater carboxylation efficiency of Rubisco under CO₂ enriched environment. However, this tendency is linked to the salinity tolerance potential of varieties under study. Applied salinity hampered the leaf water relations, while elevated CO₂ levels helped the plants to maintain high turgor by virtue of the accumulation of osmolytes free proline, glycinebetaine and soluble sugars as a result of increased photosynthesis at all growth stages. Improvements produced in the flag leaf for the physiological attributes were of greater significance due to its significance in the grain filling at maturity. The net photosynthesis of flag leaf appeared to play a greater role in the improved grain yield and harvest index under CO₂ enriched environment. However, there was no influence of CO₂ enrichment in enhancing 100 grain weight under salinity. This suggested that enhancement in

grain yield were due to increased grain number. Based on the physiological attributes, although salt tolerance of varieties improved under elevated CO₂ levels, the basic trend of changes was similar under both the CO₂ levels. All the varieties showed markedly changed assimilate (dry matter) partitioning from shoot to root under CO₂ enrichment. Enhanced gas exchange attributes of flag leaf and subsequent assimilate partitioning under CO₂ enrichment and salinity were pivotal in the enhancement of grain yield. More significantly, this character was more prominent in the sensitive varieties. In conclusion, under upcoming environmental changes expected to show higher ambient CO₂ levels, the wheat can be able to thrive relatively better in moderately saline soils. The growth enhancements due to elevated CO₂ levels support the assertion that it acts as foliar fertilizer and supports the plant growth. An upcoming increase in the atmospheric CO₂ is likely to improve the net photosynthesis of the salinity stressed wheat. The out coming information from this project can be used for the future research on wheat and possibly on other crops

Project No:	PSF/RES/P-CABI/Agr (380)
Project Title:	Exploration of Baculoviruses Prevalent in Different Agro-ecological Zones of Pakistan and Their Evaluation against Target Lepidopteran Pests
Duration:	2 Years
Date of Initiation:	01.07.2009
Date of Completion:	30.06.2011
Total Expenditure:	Rs.1,771,399/-
Principal Investigator:	Dr. Aamir Hummayun Malik
Name of Institution:	CABI South Asia Regional Center, Rawalpindi

SUMMARY:

The main objective of the project was to recover NPV/GV from different insect hosts throughout Pakistan, isolation of most virulent strains of the virus against insects of economic importance and their characterization at molecular level. This initial from the natural pool of viral isolates was necessary and important to test and develop them as NPV based bio-pesticide. The survey for the recovery of NPV isolates was completed in three provinces (Punjab, KPK and Sindh) of the country. The project was successful in collection of a number of viral isolates from natural environment from vegetables, cotton, chickpeas, grasses and forest trees. Presence of baculoviruses from sea shores to high altitude areas indicate their varying adaptability to different environmental conditions and their co-evolution with the insect of area during ages. In-vitro (Lab scale) bioassays of field collected isolates indicate a very strong bio-control potential of isolates. Based on efficacy results a list of potential isolates has been developed and presented in the report. Six (6) NPV isolates

showed good potential to be used as bio-control agent against *S. litura*. Original isolates have been preserved for next step studies. Different formulations of MNS2-Cu isolate tested against *Spodoptera litura* recommend the optimal dose 106 POB₅/ml for efficient control at lab scale. *Poih* and *lef8* genes were characterized at molecular level and phylogeny of the isolates was determined. Most of the target genes from resembled with isolates reported from Japan, Germany, China and India. Isolate MNS2-CU is a unique isolate which has one gene identical to isolate from Japan and other with Germany. We assume that it is a recombinant isolate.

ii) MEDICAL SCIENCES:

Project No:	PSF/Res/ C-QU/Med (255)
Project Title:	Effect of Peripheral Administration of Puberty Onset Protein Kisspeptin on Male Sex Hormones and Spermatogenesis in Prepubertal Stages: an <i>in vivo</i> and <i>in vitro</i>
Duration:	2-Years
Date of Initiation:	01.01.2010
Date of Completion:	31.12.2011
Total Expenditure:	Rs.1,735,568/-
Principal Investigator:	Dr. Irfan Zia
Name of Institution:	Quaid-i-Azam University, Islamabad

SUMMARY:

The study intended to investigate if an early maturation of gonads is possible upon kisspeptin administration as this could revolutionized the breeding strategies for domesticated animals. However surprisingly, drug administration to sexually immature or prepubertal rats led instead to excessive degeneration of gonads. Plasma FSH concentration remained unaltered, while plasma LH and testosterone concentrations were significantly lowered. On light and electron microscopic level, excessive abnormalities of spermatogonia and primary spermatocytes were the outcomes. Results showed decreased spermatogonia, primary and secondary spermatocytes, daily spermatid production, decreased gonadosomatic index. Kisspeptin effects were further evaluated indirectly by blocking GnRH action using acyline as an antagonist. All kisspeptin actions were abolished on treatment with acyline confirming that kisspeptin altered reproductive indices. We then focused to investigate the effect at DNA level. DNA ladder assay and DNA quantitation assay on prepubertal rat test were performed. The result demonstrated significantly increased DNA fragmentation in testicular cells.

The maintenance of testes and spermatogenesis is critically regulated by Leydig cell derived testosterone. Evidences as to whether kisspeptin is able to stimulate or modulate testosterone release independent of the HPG-axis from prepubertal or adult testes has been lacking. Our preliminary but pioneering results demonstrate that kisspeptin induces potent and rapid release of testosterone not only from adult testicular slices but also from prepubertal testes.

It is concluded that kisspeptin peptide presumably plays an inhibitory role in premature male gonads rather than initiating early gonadal development in maturing animal. Our study is the first of its kind in the world and reveals for the first time that kisspeptin is inhibitory for premature male gonads.

Project No:	PSF/Res/C-IBGE/Med (271)
Project Title:	Genetic Screening of Pakistani Population for CYP2D6 Genotypes
Duration:	2.5-Years
Date of Initiation:	01.09.2010
Date of Completion:	28.02.2013
Total Expenditure:	Rs.988,269/-
Principal Investigator:	Dr. Atika Mansoor
Name of Institution:	Institute of Biomedical and Genetic Engineering, Islamabad

SUMMARY:

The cytochrome P450 CYP2D6 system has been involved in the metabolism of many different classes of commonly used drugs, such as tricyclic antidepressants, neuroleptics and various cardiovascular agents. Polymorphism of the CYP2D6 gene is responsible for inter individual differences in the metabolism of these drugs. There are some individuals who respond to the drug normally and are called extensive metabolizer. However, some individuals do not metabolize and are known as poor metabolizers. They are at risk due to toxic effect of routine clinical dose of a drug. In contrast, some individuals metabolize such drug rapidly and are called ultra-rapid metabolizer. They may not reach therapeutic plasma concentrations under the same treatment. Significant differences in CYP2D6 allele frequencies have been demonstrated among people from different ethnic groups. However, Pakistani population has not yet been analysed for the polymorphisms. Therefore, a study was designed to find out the frequency of different CYP2D6 alleles in Pakistani ethnic groups.

Four hundred and sixty three individuals of Pathan, Kalash, Sindi, Parsi and Hazara populations were genotyped by using allele-specific PCR primers for CYP2D6 alleles (CYP2D6*3, *4, and *6 and one long PCR for CYP2D6*5). The CYP2D6*4 allele was the

only variant found in different ethnic groups. Rest of the alleles were absent in Pakistani ethnic groups studied. The frequency of CYP2D6*4 allele varied from 7.46% (Kalash population) to 20% (Pathan population). The average allele frequency for all the groups was 13.17%.

This study shows significant difference in the prevalence of alleles in different ethnic groups. The presence of CYP2D6*4 allele in different populations indicate that the genotyping of individuals before starting treatment would help the patient to protect from toxic effects of routine clinical dosage of a drug.

Project No:	PSF/Res/ C-PINSTECH/Med (207)
Project Title:	Helicobacter Pylori in Children: Prevalence and Strain Identification
Duration:	1- Year
Date of Initiation:	01.07.2009
Date of Completion:	30.06.2010
Total Expenditure:	Rs.803,482/-
Principal Investigator:	Dr. Rakhshanda Bilal
Name of Institution:	Pakistan Institute for Nuclear Science & Technology (PINSTECH), Islamabad

SUMMARY:

Management of *Helicobacter pylori* infection is a problem of significant importance in most countries. The main reasons include poorly defined epidemiological conditions and unrecognized mode of bacterial transmission.

The basic aim of this study were to determine the prevalence of *H. pylori* infection by using the non-invasive ¹³C urea breath test in individuals residing in Barakaho, Islamabad and secondly, the genetic analysis of *H. pylori* strains using Polymerase Chain Reaction with specific primers for rRNA, *vacA* and *cagA* genes.

Ninety children were selected as subjects from different schools of Barakaho and urea breath samples of their families (a total of 516 family members) were collected. 384 (74.4%) subjects had positive ¹³C urea breath test. There was no association of prevalence with gender but a statistically significant difference in the prevalence across the five age groups ($p = 0.001$) was observed. The prevalence of infection was more in adults and aged people as compared to children. Significant association of *H. pylori* infection was also found with presence of house hold animals in house ($p = 0.004$) and higher number of family members ($p = 0.025$). Furthermore, no correlation was observed between prevalence of *H. pylori* infection and other risk factors such as education level, drinking water source, number of rooms in house and monthly family income.

Fifty one gastric biopsy specimens from subjects were analysed for genetic analysis of genes associated with *H. pylori* infection. The result indicated that 21 (41.2%) were positive for *H. pylori* DNA using 16S rRNA PCR. In the 21 *H. pylori* positive gastric biopsies, 5 (23.8%) were *vacA*s1a/m1 type, 14 (66.7%) were *vacA* s1a/m2, 1 (4.8) was *vacA* s1b/m2 type and 1 (4.8%) was *vacA* s2/m2. All of these positive *H. pylori* biopsies were negative for *vacA* s1c. The presence of *cagA* gene was investigated in all those gastric biopsies that were positive for 16S rRNA gene of *H. pylori*. The *cagA* gene was found in 13 (61.9%) of 21 *H. pylori* positive gastric biopsies. *vacA* s1 a/m 1 and s1a/m2 genotypes with *cagA* + were found in 4 (30.8%) and 8 (69.2%) while the *vacA* s1 a/m 1 and s1a/m2 genotypes with *cagA* – were detected in 1 (12.5%) and 6 (62.5%) of the 21 cases, respectively. *vacA* genotype s1 b/m 2 and s2/m2 were found in two *cagA*-strains whereas these could not be seen in *cagA*+ strains.

High prevalence of *H. pylori* infection was seen among residents of Barakaho, Islamabad. *H. pylori* infection was associated with age, presence of household animals and more family members, while no statistical difference was found with gender and study variables including education levels, source of water, number of rooms in house and monthly family income. These prevalence results will provide clues to estimate the *H. pylori* associated disease burden of our future population and facilitate our healthcare planning.

H. pylori was detected in 41.2% gastric biopsy specimens of subjects with high frequency of *cagA* gene (61.9%) while s1a/m2 genotype was predominant in *H. pylori* infected gastric biopsies. Current study provides a basis for further investigations to understand genetic diversity of *H. pylori* among Pakistani population.

Project No:	PSF/Res/ P-SKMCH/Med (240)
Project Title:	Metaplastic Breast Carcinoma: Histopathological Characteristics and EGFR/HER2-NEU Genes Expression
Duration:	1-Year
Date of Initiation:	29.06.2009
Date of Completion:	28.06.2010
Total Expenditure:	Rs.1,165,332/-
Principal Investigator	Dr. Samina Mansoor
Name of Institution:	Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore

SUMMARY:

Breast cancer is the most common invasive malignancy among women world wide. It is a heterogeneous disease encircling a large diversity of pathological entities and a range of clinical behavior. These are highlighted at the molecular level by a composite array of genetic

variations that influence cellular processes. Thus the pathological characteristics of breast carcinoma mirror the influence of a variety of biological processes. Metaplastic breast carcinoma (MBC), represent a heterogeneous group of malignancies that constitute between 0.2 and 5% of all breast cancers.

Our study shows that metaplastic breast carcinoma presents with large tumor size, high histologic grade, lacks ER/PR/HER-2 expression and over expresses EGFR. Although initial studies suggested that only tumor harboring EGFR mutation would be sensitive to tyrosine Kinase (TK) inhibitors, there is compelling data that tumor with EGFR gene amplification/high polysomy may also respond well to these agents. EGFR TK inhibitors may represent an alternative therapeutic option for patients with MBC. Further studies to determine the efficacy of EGFR inhibitors in these patients are warranted.

Project No:	PSF/Res/S-PMRC/Med (269)
Project Title:	Health Seeking Behaviour Among Adult Patients Attending OPDs of Public Hospitals in Karachi.
Duration:	1-Year
Date of Initiation:	01.03.2012
Date of Completion:	30.11.2012
Total Expenditure:	Rs.72,288/-
Principal Investigator	Dr. Sultana Habibullah
Name of Insitution:	Pakistan Medical Research Council, Karachi

SUMMARY:

This was a cross sectional hospital based survey conducted on 384 adult patients attending OPDs of two major public sector hospitals in Karachi. Structured questionnaire was used which included age, gender, language spoken, educational and socio-economic status, beliefs regarding illness, autonomy of the patients, symptoms, duration, severity of the illness and type of care sought.

The study was conducted on 384 patients with 53% from Civil Hospital and 47% from Jinnah Post Graduate Medical Center, Karachi. In this study 54% were male and 46% were females, majority 52% were 31-60 years old.

This study found that 98% sought appropriate medical care, 1% inappropriate and 1% prompt care for their illness. About 94% patients believed that headache, common cold and low grade fever and mild illness does not require any treatment where as 96% perceived that hypertension, diabetes mellitus, numbness, fits are serious illness and require treatment, 89%

prefer doctor as their first choice of treatment, only 23% use home remedies, 5% by themselves and 52% were free to select health care provider by themselves.

The study concluded that appropriate care was the choice of care among majority of the studied population. Socio-economic status and health expenditures were two important determinants for health seeking behavior, overriding age, gender, ethnicity and misconceptions regarding illness abound among the patients.

iii) BIOTECHNOLOGY & GENETIC ENGINEERING

Project No:	PSF/Res/ Biotech /P-NIBGE/Ind (32)
Project Title:	Mutation Breeding of <i>Lactobacillus delbrueckii</i> for Hyper Production of Lactic Acid for the Development of Biodegradable Polymers
Duration:	3-Years
Date of Initiation:	1.10.2003
Date of Completion:	30.9.2007 (Extended for one year)
Total Expenditure:	Rs. 378,727/-
Principal Investigator	Dr. Shoukat Pervaiz
Name of Institution:	National Institute of Biotechnology & Genetic Engineering (NIBGE), Faisalabad

SUMMARY:

Lactobacillus delbrueckii strain was isolated from fresh yogurt. It was resistant to 3% Ca-lactate. Various carbon sources such as glucose, fructose, sucrose and lactose were employed at 5, 10 and 15 % (w/v) in the basal medium. Twenty-four hours old inoculum was used at level of 10% (v/v) as seed culture. The bacterial strain was grown in shake flask under different cultural conditions like temperature, pH and substrate to achieve maximum lactic acid production. The optimal conditions for lactic acid production were: temperature = 37 °C, pH = 6.0 and sugars = 15 % (w/v).

Freshly prepared inoculum of *L. delbrueckii* was exposed to different doses (20 Krad, 40 Krad, 60 Krad, 80 Krad and 100 Krad) of gamma rays. The survivors at 3 log kill rate were allowed to express to an absorbance of 0.9 in the presence of 1 % Deoxy-D-glucose (DG) medium to isolate DG-resistant mutants. To determine the minimal growth-inhibitory concentration of DG for *L. delbrueckii*, we cultivated it on media containing DG in several concentrations. The expressed cells were serially diluted and plated on MRS medium containing Bromo Cresol Green (BCG) and DG. The selection plates had approximately 25 colonies per plates. Overall 500 colonies were screened. Each colony was studied for hyper production of (3-galactosidase and lactic acid *in vivo* by measuring the diameter of

yellow zones. The colonies showing larger yellow zones were picked. The putative DG resistant mutant, which produced largest yellow zone, was selected, and grown on MRS medium containing 2% Lactose and 0.5% DG on slants and stored at 4 °C in a refrigerator for further use. Out of total 500 expressed cells, a single DG-resistant mutant strain (M₁) was selected, because it showed the highest lactic acid productivity in shake flask studies. It was confirmed that the mutant strains could not utilize DG as the sole carbon source.

Deoxyglucose resistant mutant (M₁) and its parental culture were allowed to grow on potassium ferrocyanide [K₄Fe(CN)₆ = 0.1% (w/v)] pretreated molasses and samples harvested at various time intervals were analyzed for sugars, dry cell mass and lactic acid formation. The mutant produced maximum amount of lactic acid (70 g/l) at 78 h and parent after 96h, when grown on 15% to sugars in molasses. The process product yields (Y_{ps} and Y_{pr}) from 150g/l sugar concentration and lactic acid productivity were determined. The mutant gave q_p value of 1.45 g lactic acid g⁻¹ cells h⁻¹, which is a 2.2-fold improvement over the q_p of parental strain (0.695 g lactic acid g⁻¹ cells h⁻¹). The $Y_{p,s}$ of mutant was 0.89 g lactic acid g⁻¹ sugars utilized. DG-resistant mutant strain (M₁) showed faster sugar consumption and growth than the parental strain (*L. delbruckii*), and that these properties of the mutant strains caused shortening of the fermentation time from 10 days to 4-5 days. The effect of different substrates (arabinose, glucose, lactose and sucrose) on growth parameters of native and mutant derivative of *L. delbruckii* was also tested and maximum growth occurred with lactose. Various growth parameters for substrate utilization (Q_x , Q_s) $Y_{x/s}$, q , f & Q_{EP}) were determined. Optimum temperature for growth of parent and mutant strain (M₁) was 37 °C, whereas, optimum production of lactic acid occurred at pH 5.0.

Project No:	PSF/Res/ P-NIBGE/Med (50)
Project Title:	Detection of Y-Chromosome Microdeletions Associated with Infertility in Different Geographic/ Ethnic Groups in Pakistan
Duration:	3-Years
Date of Initiation:	01.10.2006
Date of Completion:	30.09.2009
Total Expenditure:	Rs. 522,371/-
Principal Investigator:	Dr. Rubina Tabassum
Name of Institution:	National Institute of Biotechnology & Genetic Engineering (NIBGE), Faisalabad

SUMMARY:

Y-chromosome microdeletions have been reported as a possible genetic factor of male infertility. These microdeletions have been mapped to a region, which is known as Azoospermic Factor region or *AZF*. This region has further been divided into three sub-regions namely *AZF_a*, *AZF_b* and *AZF_c*. The present study is focused to the development of PCR-based mapping strategy using specific STS primers for rapid detection of Y-chromosome microdeletions. A patient history form was designed to record the relevant data of the individual and to report the results. Peripheral blood samples were collected in EDTA (for multiplex PCR) and in sodium heparin (for cytogenetics). Peripheral blood lymphocytes were put to proliferations using Phytohaemagglutinin. The cells were harvested at metaphase and the chromosome spreads were analyzed after Giemsa banding. PCR conditions were optimized to amplify the target sequence using specific primers. Two primer pairs were used as control for male and female DNA, while a "no DNA" negative control was also used. A total of 103 individual from different parts of Pakistan were recruited for this study. These individuals were screened for the presence or absence of microdeletions in Y-chromosome and for chromosomal studies. Six most commonly used loci were first detected in male individuals, but only two persons included in the study in the first year of the project showed microdeletion of two loci. It may be hypothesized that the frequency of microdeletions in Pakistani population may be less than reported from other parts of the world and infections might be playing more important part than expected. To test the hypothesis a large number of infertile individuals have to be included in the study. Hence more loci were included and the patients were screened for 26 STS loci next year. As the frequency of microdeletions in Y-chromosome was found to be low, the five exons of *DAZ* gene were amplified for sequencing. Deletions in *gr/gr* and *b2/b3* regions of *DAZ* gene are reported to be associated with male infertility. Hence, 88 infertile males that did not show any microdeletions in Y-chromosome using primers detecting 26 loci were screened for *gr/gr* and *b2/b3* deletions. The overall deletion frequency of *gr/gr* was 6.8% (6/88) while that of *b2/b3* was 5.6% (5/88). *gr/gr* deletions were detected in 4 men with severe oligozoospermia, 1 with azoospermia and 1 normospermic man. *B2/b3* deletion was found in 3 severe oligozoospermic and 2 azoospermic man. *B2/b3* deletion was found in 3 severe oligozoospermic and 2 azoospermic men. None of the control group had either *gr/gr* or *b2/b3* deletion. Our results indicate that both *gr/gr* and *b2/b3* deletions are a risk factor for spermatogenic failure in our population.

iv) CHEMICAL SCIENCES

Project No:	PSF/Res/P-AU/Chem (406)
Project Title:	Feasibility for Production of Biodiesel from Indigenous Vegetable Oil Resources.
Duration:	1-Year
Date of Initiation:	01.07.2008
Date of Completion:	31.12.2009 (extended)
Total Expenditure:	Rs. 571,363/-
Principal Investigator:	Dr. Farooq Anwar
Name of Institution:	University of Agriculture, Faisalabad

SUMMARY:

In present project biodiesel was prepared from non-food vegetable oils derived from selected non conventional oil seed crops such as Moringa (*Moringa oleifera*), Jatropha (*Jatropha curcas*), Milo (*Thespesia populnea*), Okra (*Hibiscus esculentus*) and high-erucic acid rapeseeds (*Brassica napus*) and agro-waste (rice bran) and used frying oil using optimized transesterification protocol offering glycerine as a valuable by-product.

This is most suitable feedstock for production of good quality biodiesel. It could be declared that production of biodiesel from non-conventional seed oil may not only be useful to reduce the dependence on imported fossil fuels, nevertheless it will also help to get out of the challenge of food versus fuel dilemma.

Project No:	PSF/Res/S-HEJ/Chem(426)
Project Title:	Metabolomics Profiling of Pakistani Healthy Persons, Smokers and Lung Cancer Patients by Modern Mass Spectrometric Tools for the Identification of Biomarker Compounds.
Duration:	2-Years
Date of Initiation:	16.06.2011
Date of Completion:	15.10.2013 (extended)
Total Expenditure:	Rs. 602,435/-
Principal Investigator:	Dr. S. Ghulam Musharraf
Name of Institution:	HEJ Research Institute of Chemistry, Karachi

SUMMARY:

This study is in the field of Proteomics Technology for the identification of biomarkers in various diseases especially cancer. Ten different extraction methods (six one dimensional and four two-dimensional) were used for improvement of metabolite from human plasma. Pooled samples of 50 healthy male plasma (HMP-P), 50 healthy female plasma (HFP-P) and 100 healthy Pakistani pool plasma (HPP-P) were subjected to these extraction methods for

comparison purposes. Comparison was made, based on the numbers and types of metabolites, reproducibility and similarity index. The metabolite profiling was then done by identification of metabolites using GC-MS, proton NMR and DI-ESI-MS and results showed that direct mass spectrometry analysis found to be highly reproducible and can be used in future for high throughput clinical and therapeutic analysis.

Based on observation, 2D fractional approach offers a comprehensive metabolite profile. Four 2D approach and commonly used solvent precipitation applied on pooled sample of lung cancer. Moreover, two controls including pooled sample of 100 healthy (nonsmoker) and smoker were also investigated in order to find out comparative and distinguished metabolite. Metabolites were detected that are significantly different in lung cancer and control groups using a threshold value of $p < 10^{-5}$ by employing Welch's test. 2D-C18 provides most statistically distinguished metabolite (more than 40) for lung cancer biomarker. Up- and down-regulation of marker peaks can be clearly visualized among three groups and therefore, these two solid phase extraction approaches can rapidly and efficiently screen distinctive plasma metabolite of lung cancer patients and controls with relatively high sensitivity and specificity and a potential tool for the detection and the screening of lung cancer.

v) **EARTH SCIENCES**

Project No:	PSF/Res/C-PINTECH/Earth (84)
Project Title:	Value Addition to Topaz by Neutron Irradiation
Duration:	2-Years
Date of Initiation:	01.10.2010
Date of Completion:	30.09.2012
Total Expenditure:	Rs. 732,950/-
Principal Investigator:	Dr. M. Usma Rajput
Name of Institution:	Pakistan Institute for Nuclear Science and Technology (PINSTECH), Islamabad

SUMMARY:

Northern areas of Pakistan are rich in minerals and different types of gemstones. One of these stones, called topaz is quite abundant in the areas of Gilgit, Skardu and Mardan. Topaz is mostly found in colorless form and is not very expensive. However, the value of this stone can be added in multifold by using nuclear methods. Several countries have developed such methods for adding value in gemstones particularly topaz using nuclear reactor.

The Pakistani gemstones are mostly traded in their natural forms and hence at much lower price. Keeping in view of the Pakistan Atomic Research Reactor (PARR-I) facility, we

initiated the R& D project of value addition to Topaz by Neutron Irradiation. Pakistan Science Foundation was kind enough to provide the financial support for this project of two year duration. The main goal was to add value in Pakistani colorless gemstone topaz by establishing methodology for inducing the different shades of blue color which has the high market value. The topaz sampling work was done from the mining areas of Gilgit and Skardu. The irradiation containers/stringers were designed and fabricated. The research reactor at PINSTECH was used as a source of neutrons having neutron flux $\propto 10^{13}$ n/cm²/sec. experiments were performed for the elemental identifications in the local topaz. The project work has resulted in producing the topaz with attractive blue colors i.e., successful value addition to colorless topaz has been accomplished by nuclear reactor method and it was the main goal of the project. The experimental result revealed that the local topaz contains certain long-lived elements. These include Ta-182, Cs-134 and Sb-124 as of greater importance due to their significant half- lives which are respectively 115 d, 2.05 y, and 60 d. at the completion of the project, it was required to share our R & D results with Pakistan Gem and Jewellery Development Company (PGJDC) which is a governmental organization under ministry of Industries and Productions at Karachi (established to see the Gemstone and Jewellery related affairs). The PGJDC was visited with our produced topaz products which were appreciated.

Project No.	PSF/ILG/040/10
Project Title:	Investigation and Optimization of Combustion and Emissions Characteristics of Fatty Acid Methyl Esters of Different Origin
Duration:	1.5-Year
Date of Initiation:	01.09.2011
Date of Completion:	20.02.2013
Total Expenditure:	Rs. 2,370,539/-
Principal Investigator:	Dr. M.G. Bannikov
Name of Institution:	Ghulam Ishaq Khan Institute of Engineering Sciences & Technology, Topi

SUMMARY:

Biodiesel is made from vegetable oil and used as a conventional diesel fuel substitute. In Pakistan, *Jatropha curcas* and *Pongamia pinnata* oils are considered as a potential source of biodiesel. Due to difference in properties of biodiesel and conventional diesel fuel, engine performance and emissions characteristics, mainly fuel conversion efficiency and NO emissions are taken away from optimum values when biodiesel is used. Goal of this research was to investigate the performance and emission of diesel engine, fuelled with *Jatropha* and

Pongamia biodiesels and formulating the methods of using biodiesel with efficiency close to that of diesel fuel and without engine modification.

Jatropha and *Pongamia* biodiesels and their blends with diesel fuel were tested in single cylinder direct injection diesel engine. It was revealed that use of biodiesels and their blends resulted in decreased engine efficiency and increased fuel consumption. In general, emissions of soot, carbon monoxide and unburned hydrocarbons have been reduced when engine ran on biodiesel. Slight increase in carbon monoxide emission was observed at high load. NO_x emissions proved to be very sensitive to testing conditions and, in general, were reduced with both biofuels, but more for *Pongamia* biodiesel.

Blends of *Jatropha* (J20) and *Pongamia* (P20) biodiesels with diesel fuel are recommended for use in diesel engine to provide satisfactory performance and emission without engine modification.

Eighty liters of J20 biodiesel were given to local farmers viz., Mr. Naqib Ahmad and Mr. Nazim Khan for testing biodiesel in their tractors. Farmers reported satisfactory engine operation without decrease in power. The significant reduction of black smoke from tailpipe has been observed. Based on experimental and simulated results it was revealed that engine efficiency with biodiesel can be optimized by using alcohols. Alcohols can be used either in blends or by fumigation.

JB80:20 blends of *Jatropha* biodiesel with butanol showed 1.6% increase in engine efficiency and reduction of smoke and gaseous emissions (except of HC) as compared to J 100. Biodiesel with ethanol fumigation at the rate of JE 77:23 showed 5% increase in engine efficiency in comparison with J 100 with moderate increase (1.06%) in specific fuel consumption. 5% reduction in exhaust opacity and 30% reduction in CO were achieved with only 8% increase in NO_x emissions. Undesirable effect of ethanol fumigation was the 300% increase in HC emissions. But regardless of high relative increase in HC emissions their absolute values were low; maximum brake specific hydrocarbon emissions were of order of 1 g/kWh.

Five percent reduction of CO₂ was observed with ethanol fumigation. That was attributed to lower C/H ratio in ethanol as compared to biodiesel.

It was concluded that alcohol addition is the effective method of optimization of combustion characteristics of biodiesel for better engine efficiency. In this research, fumigation of ethanol in proportion JE 77:23 showed good results with respect to both engine efficiency and

emissions. Alcohol selection (methanol, ethanol, butanol etc.), method of addition (blending or fumigation) and biodiesel/ alcohol ratio depend on engine design and application and require further investigation.

1.1.2 Scientific Publications Produced through PSF Supported Projects

One of the main achievements of any research is the publication of its results in scientific journals. Based upon the results of completed projects, 16 research papers were published in different national/international journals. Detail is at **Annexure-IV**.

1.1.3 Higher Degrees Earned through PSF Supported Projects

One of the major goals of the Foundation is the development of scientific human resource in the country. This results in strengthening of R&D infrastructure of various scientific organizations. The Foundation has been developing scientific manpower through its research projects and the Research Associates employed in the PSF supported research projects to register for higher degrees. Following students working on PSF supported research project were awarded Ph.D/M.Phil degrees:

S. No.	Project No.	Name of the Researcher	Degree awarded
1.	C-QU/Med (255)	Dr. Faiqah Ramzan Mr. Qamar Abbas	Ph.D M. Phil
2.	C-IBGE/Med (271)	Mr. Anwar Ullah	M. Phil
3.	C-PINSTECH/Med (207)	Mr. Faisal Rasheed	M. Phil
4.	Biotech /P-IBGE/ Ind (32)	Mrs. Tayyaba Huma	Ph.D
5.	P-AU/Chem (406)	Ms. Maleeha Manzoor Mr. Muhammad Riaz	Ph.D. M.Phil

1.1.4 R&D-Industry Programme

Focusing on collaborative research and strong industrial linkages, R&D-Industry Programme (previously called Industrial Linkages Programme) is bringing together researchers, end-users and the funding institutions at one platform to create an environment of a unified approach to identify and solve industrial problems through applied research and technology transfer mechanism.

a) Under-Process Projects

During 2013-14, the following project proposals were remained under-process;

1. *“Development of Cost Effective and User Friendly Solar Cookers for Pakistan”* received from National University of Science & Technology, Islamabad. The objective of this project is to introduce user friendly solar cooker which could be replaced with conventional cooking practices of the households in Pakistan. The Alternate Energy Ltd., Karachi has consented to be its end-user after successful completion.
2. *“Design, Fabrication and Commercialization of a Novel Solar Water Heater Hybridized with Conventional Fossil Fuels (Oil, Gas and Biomass) Fulfilling the Domestic and Commercial Water Heating requirements according to Pakistani Climatic Conditions”* received from National University of Science & Technology, Islamabad. The objective of this project is to introduce a hybrid water heating arrangement which could be run and switched between oil, gas and biomass.
3. *“Development of Finishing Techniques for the Improvement of Defective & Low Grade Leather”* from Leather Research Centre, Pakistan Council of Scientific & Industrial Research, Karachi. The objective of this project is to create indigenous techniques of value addition in leather manufacturing to make it internationally competitive. Al-Rehman Processing, Karachi has consented to be its end-user after successful completion.
4. *“Easy Maintainable Leather with Upgraded Properties through Advanced Nanomaterials”* from Leather Research Centre, Pakistan Council of Scientific & Industrial Research, Karachi. The use of nanomaterials in leather have showed improved properties of leather, such as tensile strength, elasticity, wear resistance, stain resistant and fire resistant antimicrobial hydro etc. Aururms Chemicals Ltd., Karachi has consented to be its end-user after its successful completion.
5. *“Synthesis and Evaluation of Doped Phototoxic Nanoparticles based Topical Skin-Care Cream as Novel, Cheap Substitute to Current Treatment for Leishmania Infection”* from Quaid-i-Azam University, Islamabad. The use of nanotechnology has been observed as more effective over skin when used as ointment. This project is envisaged to utilize doped phototoxic nanoparticles for preparation of skin-care to treat Leishmania.
6. *“Geological Signal Processing and Classification through Advanced Machine Learning Methods”* from Pakistan Navy Engineering College, National University of

Science & Technology, Islamabad. The objective of this project is to use advanced machine learning methods to process and classify geological signal which could further be utilized for useful identifications about earth.

7. *"A Test bed for Residential Smart Grids"* from Lahore University of Management Sciences (LUMS), Lahore. The objective of this project is to experiment smart grids in residential sectors to set aside line losses. Sunvolts (Pvt.) Ltd., has consented to be its end-user after successful completion.

b) Projects Approved

Under R&D Industry programme of the Foundation, following projects approved during report period;

1. Project entitled, *"Synthesis and Evaluation of Doped Phototoxic Nanoparticles based Topical Skin-Care Cream as Novel, Cheap Substitute to Current Treatment for Leishmania Infection"* from Quaid-i-Azam University, Islamabad was approved by the Technical Committee on Chemical Sciences held on 26.05.2014. This product would be of immense use in Pharmaceutical Industry.
2. *"Easy Maintainable Leather with Upgraded Properties through Advanced Nanomaterials."* from Leather Research Center, PCSIR Labs. Complex, Karachi was approved by the Technical Committee on Chemical Sciences held on 26.05.2014. The outcome of this project would be beneficial for local leather industry of Pakistan. The use of nanomaterials in leather have showed improved properties of leather, such as tensile strength, elasticity, wear resistance, stain resistant and fire resistant antimicrobial hydro etc.

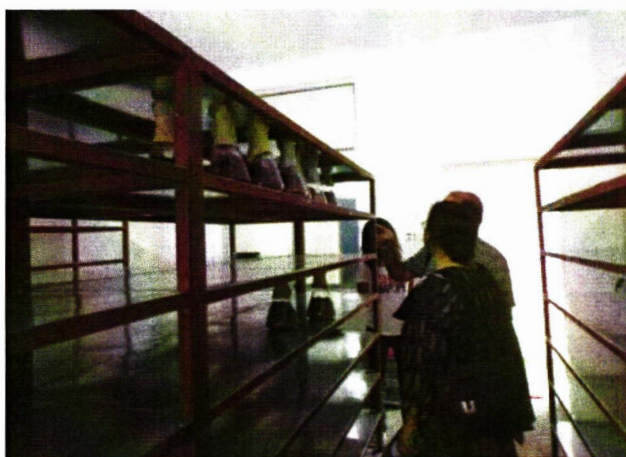
c) On-Going Projects

Following projects remained on-going during the report period with given progress;

1. First Annual Technical Report of the Project Entitled, *"Molecular Characterization, Mass Production and Formulation of Entomopathogenic Nematodes"* was received from P.I and adopted by the Technical Committee on Biological Sciences. This project was approved under the 17th Protocol of S&T Cooperation between Pakistan and China (2012-16) and is being conducted in collaboration with National Nematological Research Center, University of Karachi, Karachi and Guangdong Entomological Institute, Guangzhou, China.

Local Agriculture industry is its end-user. The research activity is being conducted both at Guangdong Entomological Institute Guangzhou (GEI), China and National Nematological Research Center, Karachi. Pakistani isolate 1139 and other nematode isolates (Chinese isolate H06, All, X-7, MEX and L1V2) were analyzed for the control of Formosan Subterranean termite. Morphological and molecular identification of 1139 strain/bacterial symbiont has been conducted which ensured that the studied nematode is a valid new species. So far, two new species of nematodes have been identified from Pakistan and two research papers have also been submitted for publications.

The ultimate objective of this project is mass production and formulation of EPNs at pilot plant level. The partners from both countries are collaborating for inter-faced activity leading to commercialization of research findings. An amount of Rs. 500,000/- has been released on account of partial third installment of this project.



Dr. Richou Han, Director, Guangdong Entomological Institute,

Guangzhou for collaborative research arranged the visit of Dr. Mirza Habib Ali, Team Leader, R&D Industry Programme, PSF and Dr. Shahina Fayyaz, P.I of the project at Biopesticidal product factory in China where entomopathogenic nematodes reared in mass culture and sold as a biopesticidal product.

2. Project Entitled, "*Development of Technology for the Synthesis of Pharmaceutical Raw Materials*" was released an amount of Rs. 200,000/- as partial release 1st installment. The local pharmaceutical industry is the end-user of this technology.
3. Project Entitled, "*Development of Eco-Friendly Products as Larvicidal/Insecticidal against Dengue Vector*" has been released an amount of Rs. 500,000/- as partial 1st installment. M/s Sitara Chemicals and M/s Green Environment (Pvt.) Ltd., have consented to be its end-user after successful completion. M/s Sitara Chemicals has contributed an amount of Rs.200,000/- being 10% of the total cost of the Project. This

project was undertaken by R&D-Industry Programme of the Foundation from PCSIR, Lahore through commercialization cell of Ministry of Science & Technology.

4. Project Entitled, “*Eco-Friendly Alternative Energy Source from Municipal Solid Waste*” was released an amount of Rs. 617,012/- as partial release of 1st installment. M/s Waste Busters (Pvt.) Ltd. has consented to be its end-user has contributed an amount of Rs. 200,000/- for this Project. This project was undertaken by R&D-Industry Programme of the Foundation from PCSIR, Lahore through commercialization cell of Ministry of Science & Technology.

d) Completed Projects:

The project entitled, “*Investigation and Optimization of Combustion and Emissions Characteristics of Fatty Acid Methyl Esters of Different Origin*” was completed. The Final Technical Report was adopted by the Technical Committee on Engineering Sciences held on 25.06.2014 and subsequently, its final settlement was made and the project file has been closed. Pakistan State Oil Ltd., had consented to be its end-user and meeting with PSO officials is underway for commercialization of the outcomes of the project.

1.1.5 International Linkages

i. MoU signed with BIBI, China

Dr. Mirza Habib Ali, Team Leader, R&D- Industry Programme, PSF and Dr. Saima Huma Tanveer, Senior Scientific Information Officer, PASTIC participated in the International Training Workshop on Technological Innovations for Small and Medium-size Enterprises (SMEs) Based on Science & Technology (S&T) at Beijing International Business



Incubator, Beijing, China from September 7-18, 2013. The workshop was organized by Beijing International Business Incubator and sponsored by Administrative Committee of Zhongguancun Science Park of the People's Government of Beijing

Municipality in Partnership with China Association for International Science and Technology Cooperation.

The main objective of the training workshop was to introduce the successful experiences of technological innovation for small and medium-size enterprises based on science & technology in China and to provide an opportunity to the participation the field of Science & Technology to develop and exchange knowledge and ideas related to Innovation and Entrepreneurship. There were 27 participants from 16 countries including Canada, Egypt, Indonesia, Japan, Lao, Libya, Mexico, Mongolia, Nigeria, Pakistan, Filipine, Romania, Thailand, Uganda, Vietnam and Zimbabwe. The training workshop included lectures and presentations by Chinese experts on science parks and incubator management and field visits to local science parks and incubators.

The training workshop was a good platform for all the participants from different countries working in the field of S&T to share and learn from successful experiences of each other which may lead to future collaboration. The contents of the workshop amplified the understanding about the China's most successful entrepreneurial programs specially the Torch Program of the Ministry of Science & Technology, China that kick-started Chinese high-tech innovation and startups. It improved the knowledge and vision about Science Parks, Business Incubators and S&T based SMEs for making them vital tools for development of national economy. Dr. Mirza Habib Ali, on behalf of Pakistan Science Foundation signed a Memorandum of Understanding (MoU) with Beijing International Business Incubator on September 17, 2013 for mutual cooperation to the commercialization of new products and technologies in Pakistan through research.

ii. PSF Team Visits NNSF, China

Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme, PSF and Dr. Saima Tanveer, Senior Scientific Information Officer, PASTIC visited National Science Foundation, China on September 06, 2013. Director Bureau of

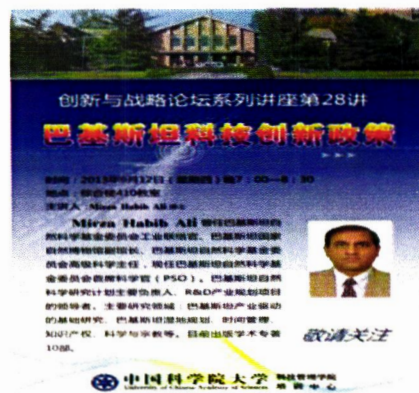


International Cooperation, National Natural Science Foundation delivered

presentation on the activities and initiatives of NSFC. Dr. Mirza Habib Ali also briefed NSFC team about the initiatives and activities of Pakistan Science Foundation. This visit was a continuing episode of the MoU signed between PSF and NSFC on 30.10.1992 after which NSFC Vice President Wang Naiyan visited Pakistan in 2001. NSFC consequently has been visited by the Chairmen of PSF in 2002 and 2004. Two workshops have also been arranged on Chemistry held in Pakistan and China in 2002 and 2006, respectively.

iii. PSF Presentation to Chinese Academy of Sciences

Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme, PSF was invited as a guest speaker by College of Technological Management, University of Chinese Academy of Sciences on 12.09.2013 to deliver a presentation on Scientific & Technological development in Pakistan. Dr. Mirza Habib Ali highlighted salient features of Science, Technology and Innovation Policy of Pakistan and also presented model of applied research projects adopted by Pakistan Science Foundation. About 75 students of PhD and Post-Doctorate attended the presentation in addition to Faculty members.



iv. Advisor to the Secretary of States, USA Visits PSF

Mr. E. William Colglazier, Science & Technology Adviser to the Secretary of State, U.S Department of State visited PSF on June 06, 2014 to meet PSF team. He was briefed about PSF activities and the future initiatives. Mr. Colglazier appreciated PSF initiatives and



pledged to play his role to strengthen Pak-US co-ordination in the field of Science & Technology.

1.1.6 Collaborations/Meeting with Similar Stakeholders

1. M/s Sitara Chemicals has contributed an amount of Rs.200,000/- being 10% of the total cost of the Project Entitled, “Development of Eco-Friendly Products as Larvicidal/Insecticidal against Dengue Vector”. This project was undertaken by R&D-Industry Programme of the Foundation from PCSIR, Lahore through commercialization cell of Ministry of Science & Technology.
2. Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme and Mr. Irfan Ahmad, Scientific Officer, R&D-Industry Programme and Dr. Abdul Hameed, Principal Investigator of the Project and Director, ORIC, Quaid-i-Azam University, Islamabad held a meeting with the representatives of Dynamic Packaging (Pvt.) Ltd, Lahore regarding their collaboration in the project entitled, “Making Environmental Friendly Biodegradable Green Plastics and its Commercial Use in Food Packaging Industry”. Private Sector has offered its services for quality and printability testing and the trials of the final product for marketing.
3. Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme and Mr. Irfan Ahmad, Scientific Officer, R&D-Industry Programme held a meeting on October 04, 2013 with Mr. Rahmat, Coordinator, Institute of Research Promotion (IRP) to discuss feasibility of conducting research projects on Bio-Farming, Food Grade Enzymes and Dairy Management System. IRP shall submit concept papers on these issues and later on the projects will be developed in coordination with IRP.
4. Prof. Dr. Khalil Ahmed Ibupoto, Chairman, Pakistan Science Foundation and Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme of PSF conducted meeting with Christopher De-Veer, Second Secretary, Economic Officer, Embassy of USA & Franklin A. Carrero-Martinez, Science Policy Officer, Embassy of USA on March 11, 2014 to establish PSF-USA collaboration. It was decided in the meeting that PSF



shall coordinate with organized conference in-collaboration with Embassy of USA on “Science, Technology & Engineering”. PSF shall coordinate with network of scientists and engineers and will propose potential speakers from Pakistan. Team of US Embassy and PSF will remain in touch for all arrangements. Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme put forward the idea of establishing Endowment Fund for R&D-Industry Programme in the Foundation for sustainable running of applied projects.

5. Prof. Dr. Khalil Ahmed Ibupoto, Chairman, Pakistan Science Foundation, Dr. H. U. Khan, Chief Scientific Officer and Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme of PSF conducted meeting with Christopher De Veer, Second Secretary, Economic Officer, Embassy of USA on April 3,2014 to Organize a Conference on “Science, Technology and Engineering for Development” from June 2-7, 2014 at NUST and Serena Hotel in collaboration with PSF, HEC, NUST and U.S. Department of State.

6. Prof. Dr. Khalil Ahmed Ibupoto, Chairman, PSF and Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme conducted meeting with Mr. Shahid Najam, and Mr. Siddiq ur Rehman Rana, President & CEO Small Medium Enterprises Development Centre (SDC) on March 10, 2014 to discuss possible collaborations between PSF and SDC to establish R&D based development of Small Medium Enterprises for socio-economic development of the country.

7. Prof. Dr. Khalil Ahmed Ibupoto, Chairman, Pakistan Science Foundation, Dr. Akram Sheikh, Director General, PASTIC and Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme of PSF held meeting with Dr. Arabella Bhutto, Co-Director, Mehran University Institute of Science, Technology and Development (MUISTD), Jamshoro on June 20, 2014 to discuss project on, “Analysis of University-Industry-Government



Linkages in Pakistan”. The purpose of her visit was to review the contributions of public sector organizations towards facilitating University-Industry-Government

Linkages. The Chairman, PSF shared his experiences about PSF initiatives regarding University-Industry Linkages through its R&D-Industry Programme. Several initiatives were discussed to be jointly conducted by PSF and MUET including the establishing of “National Database on R&D Resources”, and signing of MoU among PSF, PASTIC and MUET.

1.1.7 Exhibition Organized

R&D-Industry Programme and PASTIC of Pakistan Science Foundation in collaboration with University of the Punjab, Lahore and Institute of Research Promotion (IRP) organized two day “*Invention to Innovation Summit-2014*” on 19-20th March, 2014 at University of the Punjab, Lahore. Prof. Ahsan Iqbal, Federal Minister/Deputy Chairman Planning Commission inaugurated the summit. Prof. Dr. Khalil Ahmed Ibupoto, Chairman, Pakistan Science Foundation, Prof. Dr. Mujahid Kamran, Vice Chancellor, University of the Punjab, Lahore, Dr. Abid H. K. Sherwani, CEO, IRP and Dr. Hasan Sohaib Murad, Rector, University of Management and Technology, Dr. Aamir Ijaz, Director, Office of Research Innovation and Commercialization, University of the Punjab and several other dignitaries, students, research scholars and industrialists attended the event.

The people having technologies engrossed with local R&D were invited to show their ideas through exhibition, poster presentations, documentaries and physical prototypes etc. The industrial and academia representatives also presented their innovative products and shared their research experiences.

More than 300 technologies engrossed with local R&D were invited to put up to show their ideas through physical prototypes, posters presentations and documentaries etc. The industries and academia personals also presented their innovative products and research experiences. A total of 60 stalls were in place from 60 public and private sector organizations from across the country.

Ten different workshop sessions of industry and academia experts have been arranged in this summit from different technology sectors like Processing Technologies for Industrial Chemicals, Horticulture Sector, Technology Workshop, Biotechnology, Corporate Session at Networking Dinner, Patenting Intellectual Property Rights, Solar Energy & Renewables, Technologies for Mineral Processing, Accelerating Industry Driven Technologies and the Technologies for Medical Textiles etc.



Prof. Ahsan Iqbal, Federal Minister/Deputy Chairman Planning Commission flanked with Prof. Dr. Khalil Ahmed Ibupoto, Chairman, PSF and others

1.1.8 Exhibition Participated

- I. Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme and Mr. Irfan Ahmad, Scientific Officer, R&D-Industry Programme participated in the “DICE Connect 2013” on October 01-02, 2013 jointly organized by University of Gujrat, Gujrat, HEC and PCST. Dr. Mirza



Habib Ali was invited as guest speaker. He delivered a presentation on “University-Industry Linkages: Experiences of PSF”. A prolonged question answer session was followed by the presentation. Institute of Space Technologies (IST) and University of Gujrat (UoG) have requested that Pakistan Science Foundation to conduct a full fledged workshop to train their faculty members to take benefit of the activities of the Foundation. The activities and the success stories of PSF were widely appreciated by the dignitaries. Lot of industrialists, researchers and academicians attended the event and visited stalls exhibiting their products, prototypes and research models.

1.1.9 Documentary to Highlight Success Stories of R&D-Industry Programme

R&D-Industry Programme of the Foundation, since its inception in 2002, has come up with successful projects of national economic importance and it was direly felt to create awareness of such outstanding work among masses through mass media by producing a documentary. This documentary would highlight the model and procedure adopted for the projects of R&D-Industry Programme, which would not only attract private sector towards potential indigenous areas of investment but also help other bodies having similar mandate of commercialization, across the country.

Accordingly, tender was floated to solicit proposals from Media Agencies. The tender opening committee has approved the proposal from M/s Reset Switch, Lahore for an amount of Rs. 745,000/-. It was mentioned in the tender that the 35% of the amount would be paid after pre-production (first deliverable) which amounts to Rs.260,750/-, and the 35% after production i.e., 2nd deliverable and the rest of 30% after successful completion and handing over of the documentary to PSF.

National Tea Research Institute, Shinkiari and tea cultivation areas in AJK were visited to shoot the project entitled, "Establishment of Pilot Green Tea Processing Plant"; one of the selected projects for this documentary wherein a green tea processing plant was established at National Tea Research Institute (NTRI), Shinkiari and its first produce was sold to Tapal Tea (pvt) Ltd. Similarly, other projects of national importance viz., "*Disbondment of Epoxy Coating and Integrity of Gas Transmission Pipelines*", "*Design and Manufacturing of Light Weight Composite Reinforced CNG Cylinders*" and "*Production of Iron and Steel from Kalabagh Iron Ore through Direct Reduction Process*" were also highlighted in the documentary.

This documentary entails the comments from Principal Investigators, Beaucrates, Private Sector Organizations, End-Users, Farmers and other stakeholders. The basic script revolves around the procedure, PSF adopted to establish its funded research projects conclusively successful. These success stories are made available to public to encourage industrialists and researchers to come on-board and to extract maximum possible output out of our indigenous research. With this effort, PSF hopes to harness private sector parties to work more diligently in-collaboration with public sector for socio-economic uplift of Pakistan.

1.1.10 Workshops/ Seminars/ Meetings and Trainings attended

- i. Dr. Mirza Habib Ali, Team Leader, R&D-Industry Programme participated in the University-Industry-Government Linkages organized by Mehran University Institute of Sciences, Technology and Development (MUISTD), Mehran University of Engineering & Technology, Jamshoro on August 22, 2013. Dr. S. M. Qureshi, first Member Science of PSF and former Federal



- Secretary, Ministry of Science & Technology and founding Vice Chancellor of Mehran University of Engineering & Technology, Jamshoro narrated brief history of the programmes of the Pakistan Science Foundation and appreciated efforts of Chairman, PSF to further these programmes. Prof. Dr. Manzoor H. Soomro, Chairman, PSF was invited at the event as the Guest of Honor.
- ii. Mr. Irfan Ahmad, Scientific Officer, R&D-Industry Programme attended Seminar on “Technologies for Coal” at Center of Energy Systems, NUST, H-12, Islamabad on 16.09.2013. Students were guided about how to prepare proposals for their Final Year Projects to submit under Inventions & Innovations Programme of the Foundation.
- iii. Team Leader, R&D-Industry Programme attended meeting of Technical Committee on November 26, 2013 at Ministry of Industries & Production, Islamabad to consider the request of M/s Tuwariqi Steel Mills Limited (TSML) for declaring their Direct Reduced Iron (DRI) plant as pioneer industry in Pakistan. The Secretary, Ministry of Industries and Production presided the meeting.
- iv. Team Leader, R&D-Industry Programme attended a Two-Day Workshop on “Planning, Establishing and Managing Technology Incubators” at Center of Innovation and Entrepreneurship (CIE), NUST, Islamabad on Nov 6-7, 2013.
- v. Team Leader, R&D-Industry Programme attended “Public Private Dialogue on Technology Up-gradation and Foresight (Pharmaceuticals and Surgical Instruments Sector)” on December 31, 2013 organized by United Nations

Industrial Development Organization (UNIDO) in collaboration with the Surgical Instruments Manufacturers Association of Pakistan and Pakistan Pharmaceutical Manufacturers Association.

- vi. Team Leader, R&D-Industry Programme attended a Workshop on “Paradigm Shift towards Financial Sustainability-Fundraising in Higher Education Institutes” organized by Higher Education Commission on February 20, 2014.
- vii. Team Leader, R&D-Industry Programme attended meeting convened by Prof. Ahsan Iqbal, Minister for Planning Development & Reform on 17th April, 2014 at Planning Commission. The focus of this meeting was to get valuable feedback regarding incubation, innovation, entrepreneurship, science parks and similar areas from the officers who have visited China to attend training course at Beijing International Business Incubation (IBI) since 2006.

1.1.11 Inventions and Innovations Programme

The Foundation has initiated programme to translate the concepts into Innovations and Inventions and their movement toward commercialization for the benefit of the national economy. The scientists, researchers and students with innovative ideas are awarded with cash prizes. Students of different universities participate in different international events with their indigenously manufactures prototypes. During the report period, a financial grant of Rs. 0.15 million was provided to 03 different proposals of inventions & innovations. The detail of the proposals is as under:-

- a. An amount of Rs.50,000/- was released to Team Voltex from Pakistan Institute of Engineering and Applied Sciences (PIEAS), Nilore, Islamabad to design four wheel urban concept car for participation in Shell Eco Marathon Asia 2014.
- b. An amount of Rs.50,000/- was released to Team Horizon from Mehran University of Engineering & Technology (MUET), Jamshoro for Designing and Manufacturing of Electric Vehicle for Shell Eco Marathon Asia 2014.
- c. An amount of Rs.50,000/- was released American Institute of AIAA-GIKI Chapter, Ghulam Ishaq Khan Institute of Engineering and Technology, Topi District Swabi for “AirEx ‘13”.

1.2 Pak-US Natural Sciences Linkage Programme (NSLP) Endowment Fund

Natural Sciences Linkage Programme (NSLP) Endowment Fund is an important component of Pakistan Science Foundation (PSF) which is aimed at enhancement of agricultural production through effective research. The outcome of this research will benefit the end user by uplifting the life standard and income of the farmers. The Fund is being managed by PSF through Board of Governors (BoG) and Fund Management Committee (FMC). The Chairman, PSF is the Chief Executive of the Programme/Fund.

Aims and Objectives:

- To enhance cooperation among scientists from Pakistan and the United States of America, in areas of significant mutual interest and benefit relating to natural sciences as applicable to agriculture.
- To increase the contact and collaboration among scientists and institutions of biological research, development and higher learning between the two nations.
- To provide researchers and institutions with opportunities to exchange information, ideas, skills and techniques.
- To enhance opportunities to collaborate in solving problems of common interest relating to natural sciences and to utilize special research and development facilities or opportunities available.
- To identify the researchable areas in natural sciences especially agricultural sciences with aim to increase farmers profitability

Research Priority Areas

Selected priority areas for collaboration may include, but are not limited to; Collection, Evaluation and Exchange of Germplasm, Plant Genomics, Plant Biotechnology, Stress Biology, Bio-Informatics, Application of Information Technology in Agriculture, Identification and Control of Animal/Plant Diseases, Dryland/Sustainable Agricultural Production System; Integrated Pest and Disease Management, Biotechnology, Microbiology, Agribusiness Development, Biophysics, Chemistry, Environment, Energy, Water Resource Management and Climate Change particularly with reference to Agriculture.

Project proposals which highlight main problems of agricultural sector are invited from Universities and R&D organizations across the country. Research work is emphasized on the food production & food security issues in Pakistani scenario. Currently 52 projects are being

funded in different Universities and R&D organizations around the country under this programme.

Projects are received from researchers throughout the year; they undergo tough scrutiny and peer review before presenting to the Technical Committee, which comprises of eminent scientists from different specialized areas of agriculture and natural sciences. The target areas of these projects include germplasm screening of different crops, insect and pest management for the disease free crop production, nutrition management of crops and post-harvest technology. All these research issues are vital component of today's agriculture and are imperative in bringing the value added products in the market. Apart from this, many projects from specialized fields of animal sciences are also being funded. These projects include research in genetic screening of different animal breeds, feed technology and milk quality areas. In future, the fund aims to maintain focus on applied research projects related to Energy, Water resources management, Environment and Climate Change.

1.2.1 Activities and Programmes

1.2.1.1 Research Funding

Research funding is the principal activity of Natural Sciences Linkage Programme (NSLP) efforts are being made to establish linkages between end-users and scientists of different R&D organizations and Universities throughout the country. Projects of applied nature are selected for funding and research proposals received undergo the strict process of scrutiny before the funding. The criteria include the competence of the scientific personnel to carry out the research, institutional capabilities i.e availability of the basic equipment and laboratory facilities, scientific merit of the proposed research proposals and likelihood of completion of proposed research work within the stipulated time and funds requested. The proposals are reviewed by two Pakistani experts along with US experts. The proposals cleared by experts are placed in the Technical Committee for technical evaluation and recommendation. Technical Committee on NSLP comprises of the renowned scientists from various fields of agriculture and natural sciences. The proposals recommended by the Technical Committee are then submitted to NSLP Fund Management Committee (FMC) for administrative and budgetary approval, before the release of funds.

a) Under process Projects:

During the report period, 208 proposals remained under consideration of the NSLP. Out of these 56 projects were presented in four different Technical Committee meetings held during

the report period. Technical Committee recommended 30 new projects for funding at total cost of Rs.124.134 million. List of projects recommended for funding during the report period is given in **Annexure-V**.

b) On-going Projects

During the year, there were 70 ongoing research projects and the progress reports of 64 projects (semiannual, 1st and 2nd annual & final reports) were received. The NSLP staff scrutinized the semiannual reports before releasing of next due installment. Whereas, annual and final reports after initial scrutiny by NSLP team were sent for evaluation to the subject experts to assess the interim progress of the projects before next due installment was released. It is worth mentioning that due installment of the on-going projects are released only if the interim progress of the projects at the end of each year is rated as satisfactory by the subject expert. An amount of Rs.48.885 million was released on account of due installments of ongoing projects. A list of semi annual and annual reports is given in **Annexure-VI**.

c) Completed Projects

During the year eight (08) projects were completed. The subject experts evaluated the final technical reports of the projects which were subsequently placed before the Technical Committee for adoption. The accounts of these projects have been settled. Details of the projects along with the scientific out put are given below;

Project No	PSF/NSLP/S-SAU(64)
Project Title:	Detection of Antibiotic Residues form Milk Meat and Eggs
Duration:	3-Years
Date of Initiation:	23-06-2009
Date of Completion:	31-12-2012 (Extended for six months)
Total Expenditure:	Rs. 1,318,691/-
Principal Investigator:	Dr. Muhammad Khaskheli
Name of Institution:	Sindh Agriculture University, Tandojam

SUMMARY:

Antibacterial drugs have been therapeutic, prophylactic or nutritive applications in both veterinary and human medicine. In most of the livestock and poultry farms at different divisions of Sindh province, quite a wide variety of antibiotics are being frequently and discriminately used for prevention and treatment of infectious diseases. This might be a cause of residual contamination in animal based food (milk, beef, mutton, chicken and eggs). In

addition there was no reliable program for monitoring of drug residues in food of animal origin in the province. Thus present study was conducted to detect antibiotic residues in milk, meat and eggs. In this regard, preliminary, the information regarding the use of different antimicrobial drugs at commercial dairy and poultry farms at the vicinity of Hyderabad, Mirpurkhas, Karachi, Sukkur and Larkana divisions was gathered. A total of 29 brand names with their 15 number of generic names (i.e. Oxytetracycline, Oxytetracycline + Dexamethasone + Triplennamine, Neomycin, Amoxillin, Gentamycin, Gentamycin 10%, Procaine penicillin, Penicillin G + Streptomycin, Benzyl Penicillin + Procaine Penicillin + Streptomycin, Enrofloxacin, Sulfonamide, Trimethoprium+Sulfonamide, Trimethoprim 80mg + Sulphadiazine 400mg, Amoxycillin Trihydrate and Procain pencillin + Neomycin) were the main antimicrobial drugs found to be in use of treating the livestock and poultry suffering from bacterial diseases or disorders, and indiscriminately administered either Intra muscularly, intravenously, Intra mammary, or orally in the feed or in the drinking water by the farmers/owners themselves with or without guidance of veterinarians, or by the labor working there on their will and wish. Further a total of 1625 samples each of market milk (400), beef (275), mutton (275), chicken meat (275) and eggs (400 sets having 6 numbers in each set) collected from the different divisions of Sindh province were examined at the laboratory for occurrence of antimicrobial residues. Among these, a total of 701 samples (43.14%) under which 199 (12.25%) samples of milk, 107 samples (5.58%) beef, 101 samples (6.21%) mutton, 121 samples (7.45%) chicken meat and 173 samples (10.65%) eggs appeared positive to antimicrobial residues. Of the total number of positive samples (701), the highest residual contamination was evident at Karachi (184 samples; 26.61±1.13%) followed by Hyderabad (146 samples; 20.99±1.09%), Sukkur (138 samples; 19.38±1.44%), Mirpurkhas (119 samples; 16.81± 0.82%) and Larkana (144 samples; 16.21±1.23%) divisions.

Furthermore, amongst the residual positive milk samples, thirty five samples from each division were further screened for residues of β -lactam and tetracycline groups and found 38.29% (76) samples positive to group of β -lactam, 21.14% (37numbers) to tetracycline and 40.57% (71numbers) to other unknown antimicrobial residues. The milk samples positive with Penicillin G and Tetracycline groups of antibiotics were further evaluated for the residual level, and estimated that the milk samples of Karachi were found with higher ($P<0.05$) residual concentration (41.86 and 57.07 μ g/Kg) of Penicillin G and Tetracycline followed by samples obtained from Hyderabad (36.26 and 46.03 μ g/Kg), Larkana (29.15 and

45.00µg/Kg), Mirpukhas (27.05 and 42.95µg/Kg) and Sukkur (23.48 and 41.51µg/Kg), respectively. Further, the thermostability of Penicillin G and Tetracycline became high at thermization temperature (60⁰C) and reduced less, while at sterilization temperature (110⁰C), the reduction level of both these drugs appeared high but not completely reduced.

Project No	PSF/NSLP/S-SAU(40)
Project Title	Assessment of Pesticide Residues from Selected Vegetables through Traditional Processing
Duration	3-Years
Date of Initiation	01.05.2010
Date of Completion	30.09.2013
Total Expenditure	Rs. 1,870,254 /-
Principal Investigator	Dr Saghir Ahmed Sheikh
Name of Institution:	Sindh Agriculture University, Tandojam

SUMMARY

Vegetables absorb applied insecticides and often create health hazards to human beings while being consumed fresh either as raw or without being adequately processed, leading to adverse effects on human health. During the reporting period, three vegetables i.e. onion, cauliflower and bitter gourd were grown on University farm and were sprayed with different insecticides/pesticides at recommended dosage. Onion was harvested one week after the application of pesticides, while cauliflower and bitter gourd were harvested one day after the spraying of pesticides. After harvesting, the samples were packed in polythene bags, labeled and brought to the laboratory of Institute of Food Sciences and Technology for traditional processing such as plain water washing, detergent washing, blanching, salt washing, drying under sun and in cabinet dehydrator and boiling/frying etc. The samples were further processed for extraction, clean up and analyses. The results revealed that some traditional processing methods were mildly effective and some others were highly effective. Plain water washing reduced the residues up to 45% where as detergent water washing reduced up to 53%. The blanching treatment of vegetable further removed the pesticide residues up to 63%. The washing was followed by sun drying, drying in cabinet and dehydrator and/or frying which reduced more than 80% pesticide residues from all three vegetables and were found highly effective. The results further suggest that every traditional method played its significant role in reducing the residues depending upon the kind of vegetables and type and nature of pesticides. Thus, it is concluded from this study that traditional/house hold processing methods play a significant role in reducing the insecticides/ pesticides.

Project No: PSF/NSLP/KP-NIFA(82)
Project Title: Development of Package Technology for Poultry Feed Irradiation in Pakistan
Duration: 3-Years
Date of Initiation: 01-11-2010
Date of Completion: 31-10-2013
Total Expenditure: Rs.2,899,082/-
Principal Investigator: Dr. Aurang Zeb
Name of Institution: Nuclear Institute For Food & Agriculture (NIFA), Peshawar

SUMMARY:

Poultry feed is the one of the major carriers of disease causing microorganisms and needs to be decontaminated at source in order to avoid huge losses caused by mortality in the flocks. Gamma irradiation is a relatively newer technology applicable as a cool terminal process to inactivate/kill spoilage and disease causing microorganisms of poultry feeds. Industrial level application studies are needed on adopting this technological intervention for better feed provision system. This three years research project was undertaken with the overall objective to study the technical and economic feasibility of commercial scale production and utilization of antibiotic-free poultry feed, with the ultimate goal to develop/suggest a package of technology for commercial application of irradiation, suitable for integration/incorporation within the prevailing pattern of production, distribution and consumption of poultry feed in Pakistan.

First year's work was aimed at studying the influence of gamma irradiation and storage on the microbial and biochemical quality of poultry feed packed in different packaging materials. Experimental antibiotic-free broiler feed was prepared in SB Feed Mills, Mandra and packed in polypropylene woven + polyethylene (2 layered) bags, polyethylene + cardboard cartons or polypropylene woven bags. The treatment lot of the samples was given 5kGy dose of gamma radiation at Pakistan Radiation Services (PARAS) Lahore and transported to NIFA Peshawar for 3 months storage studies. Moisture content of the experimental feed increased with storage time, more so in irradiated samples than in their respective controls. The packing PP+PE prevented moisture absorption and gave the highest average values for protein solubility ($P < 0.01$); peroxide value of oil was not influenced.

Irradiation reduced the bacterial load and increased the Fe, Na and K solubility. Second year's work was studying the influence of gamma irradiation and packaging materials on the biological performance of the consuming broiler flock. Antibiotic free broiler feed was

prepared at SB Feed Mills, Mandra and packed in 2 layered polypropylene woven + polyethylene (PP+PE) bags, or polypropylene woven (PP) bags. Treatment lot of samples was irradiated at 5kGy dose of gamma radiation at PARAS- Lahore and used in a replicated feeding trial against un-irradiated control feed on broiler chicks in farmer's shed at Peshawar. None of the two factors significantly influenced the bird's weight, FCR, mortality (%), dressing percentage, carcass yield and gizzard weight. Weight gain and feed consumption was higher in control group resulting in an overall similar FCR in both groups. FCR with control feed packed in PP bags was higher than all other groups. The same group had the highest ($P < 0.05$) mortality. Radiation treatment did not have any adverse effect on the broilers' biological performance, whereas mortality was higher in groups fed on control feed packed in commercially in-vogue packing.

During the third year's work antibiotic free feed was prepared During the third year's work antibiotic free feed was prepared at SB Feed mills Mandra, Rawalpindi, irradiated at PARAS Lahore and tested in a replicated trial against commercial feed (containing antibiotics), both packed in similar 2-layered bags, for flock performance at Peshawar. Cost economics of the radiation treatment of broiler feed was also worked out. Feed intake did not differ between treatment and control birds; the final chick weight was 4 % higher ($P = 0.0213$) in the treatment groups; weight gain was also 4.63% higher ($P = 0.0194$) in the treatment group; this culminated in a significant ($P = 0.0157$) difference of 5.96% in the feed conversion ratio (FCR). The radiation processing gave a benefit to cost ration of 1.52. It is concluded from of all the three years' work that radiation treatment at 5kGy as terminal process for broiler feed packed in twin-layered non-porous packaging results in longer storage stability, drastically reducing the microbial load, non-absorption of moisture from the environment during storage, higher biological performance of the consuming birds and higher economic returns.

Project No:	PSF/NSLP/S-PCSIR(272)
Project Title:	To Speed up the Pilot Plant Production of Humic Acid
Duration:	1-Year
Date of Initiation:	23-05-2013
Date of Completion:	24-05-2014
Total Expenditure:	Rs. 3,585,136/-
Principal Investigator:	Mr. Gulzar Hussian Jhatial
Name of the Institution:	Fuel Research Centre, PCSIR-Karachi

SUMMARY:

Humic acid acts as soil conditioner, bio-fertilizer and enhances biological activity making trace elements available which is not possible by the use of synthetic fertilizers. Thus multiplicity of direct as well as indirect benefits of organic fertilizers that include financial, economical, social, environmental, ecological and other benefits, can be met by the use of Humic acid derivatives hence strongly justify the production of Humic acid and its utilization on local fields. Being an agrarian country, the primary object of the proposed Pilot plant is to provide our farmers a more effective, cheaper source for enhancement of crop yield. FRC-PCSIR successfully completed its primary R&D regarding production of liquid Humic Acid from bulk reserves of indigenous ignitic coal available in the country. FRC was producing liquid Humic Acid on lab. scale and the same was supplied to different clients for improvement of crop yield. The establishment of pilot plant at Fuel Research Centre is aimed to enhance the production of Humic Acid locally. After the establishment of the said pilot plant at the centre, FRC is now able to enhance its services through its R&D product.

Project No:	PSF/NSLP/S-KU (65)
Project Title:	Application of Biopesticides Entomopathogenic Nematodes in Vegetable Fields Affected with Root Knot Nematodes
Duration:	3-Years
Date of Initiation:	15-09-2010
Date of Completion:	14-09-2013
Total Expenditure:	Rs. 3,830,485/-
Principal Investigator:	Dr. Shahina Fayyaz
Name of Institution:	National Nematological Research Centre, University of Karachi, Karachi

SUMMARY:

Root-knot nematodes, *Meloidogyne* species are parasite on worldwide variety of vegetable crops causing up to 5% yield losses globally. They form synergy with plant pathogenic fungi and bacteria causing great loss. Entomopathogenic nematode provide better management for plant parasitic nematode due to environmentally safe and their non target effect without the free living nematode that play important role in nutrient cycling. The result of present project revealed that EPN application alone was quite effective but their integration with other management strategies could further lower the cost of management and increase the efficacy of the management strategy. Availability of this important bio-pesticide in Pakistan, in order

to minimize impact of chemicals, we have to adopted advance technology (in pipe line of NNRC) for the production of these valuable infective juveniles as bio-pesticide which will be available to local markets. These findings would be useful for further extension of production from small scale to commercialization of Pakistani EPN strains. In international work shop entitled, “Biological control of root-knot nematodes in vegetables using EPNs” awareness provided to farmers about benefits of EPN and their application in crops instead of chemical pesticides so that the hazardous effects of chemicals be minimized.

Project No:	PSF/NSLP/F-NIFA (76)
Project Title:	Development of slow-acting toxicant bait for elimination of underground colonies of crop and building termites
Duration:	3-years
Date of Initiation:	01-12-2010
Date of Completion:	30-11-2013
Total Expenditure:	Rs. 3,751,475/-
Principal Investigator:	Dr. Abid Farid
Name of Institution:	Nuclear Institute For Food & Agriculture (NIFA), Peshawar

SUMMARY:

Termite is a serious pest of agricultural crops and buildings inflicting huge losses throughout the country. Available option for the control of subterranean termites is soil application of insecticides. Soil application requires expensive and environment-polluting business of using huge quantities of chemicals to drench the soil. Amount of termiticide applied to soil may reach 390 kg per hectare when applied at a concentration of 1%. Along with serious environmental issues caused by the use of soil termiticides, soil termiticides don't prove to be effective. Termite workers which come in direct contact with the termiticides get killed while the rest of workers, on smelling the danger, seal off their tunnels and divert to other feeding sites and continue the damage in the nearby areas.

Use of slow-acting toxicant bait on the other hand, can be used to suppress the populations of subterranean termites in soil. The amount of toxicant needed in this case is far too low as it is applied only as localized baits (a few grams of the bait toxicant can lead to suppression of a colony comprising of several hundred thousands of termite workers). Thus it reduces the cost of control in an environment friendly manner. The slow acting bait, developed through this project will be worked out for commercialization.

Project No: PSF/NSLP/P-UVAS(68)
Project Title: Cytogenetic screening of buffalo bulls and replacement heifers for genetic improvement in Punjab
Duration: 2-years
Date of Initiation: 15.09.2009
Date of Completion: 14.09.2011
Total Expenditure: Rs. 808,822/-
Principal Investigator: Dr. Ahmed Ali
Name of Institution: University of Veterinary and Animal Sciences, Lahore

SUMMARY:

Cytogenetic screening of breeding animals especially the males holds fundamental importance in any dairy or meat breeding programs. Sires/males are especially important to be selected against any genetic dys-morphologies because any carrier male can cause a havoc in the breeding populations due to its extensive use through Artificial Insemination (A.I). Cytogenetic abnormalities may range from numerical to structural in nature both in autosomes as well as sex chromosomes. These abnormalities are implicated to reduced fertility in dairy and other livestock due to low conception rates, abortions, still births, death of neonate just after birth and abnormal births. The animals who live to full term are normally infertile or sterile therefore causing heavy economic losses due to going unnoticed for years. However, if cytogenetic screening along with advanced genetic screening of breeding bulls and replacement heifers is carried out routinely for selection purposes, the economic losses due to infertility, sterility, abortions, still births and death after births in 1% overall population and about 30% animals with fertility problems may be avoided. This research problem was proposed for funding to Pakistan Science Foundation to screen out buffalo populations especially breeding males and females. About 300 males mainly from Buffalo Research Institute, Pattoki as well as buffalo bulls at Semen Production Unit (SPU) Qadirabad and replacement heifers from Livestock Production Research Institute Bahadarnagar Okara, animals with fertility problems at Veterinary Hospital of University of Veterinary and Animal Sciences, Ravi Campus Pattoki were screened out for the presence of any cytogenetic abnormalities. A total of 200 females including young calves, heifers and lactating buffaloes presented at Veterinary hospitals for fertility problems were screened out for any chromosomal abnormalities, of which two females were found to have an evidence of cytogenetic abnormalities. First one was a monosomic for X chromosome aneuploidy with a missing X. The resulting karyotype was 49, XO rather than having a 50,XX diploid complement. The second case was a tetraploid and an XX, XY chimeric in its 10% somitic

cells. The resultant chromosome complement was 100, XXXY. This might have been due to mixing of male/female foetal blood in co-twin born calves and a possible fusion of a small proportion of male/female cells. The buffalo was reported to have fertility problems. This was the first research undertaking of its kind to initiate cytogenetic testing for selection of breeding stock in buffaloes in Pakistan, however, there have been a number of bottlenecks in the execution of the project as well as achieving its objectives. It was due to the complete absence of the concept of genetic or cytogenetic testing of breeding bulls and replacement heifers for selection purposes and therefore trying to find out representative sampling source was being the biggest hurdle to achieving the objectives. Similarly due to the severe lack of selection criteria of breeding animals on genotypic basis, there was no abnormality reporting setup available to obtain representative sampling. The findings of this research undertaking evidenced clearly the role of cytogenetic abnormalities in fertility/reproductive problems and that the incidence of such abnormalities in the population ranges from 1 – 2%. However, in this case this incidence was 4% which obviously was due to the fact that our sampling strategy was to target animals with fertility problems at least from Veterinary hospital. This project clearly highlights the importance of routine and mandatory cytogenetic screening of at least artificial insemination (A.I) bulls before selecting for semen production at all Semen Production and Processing Units (SPUs) either private or public sector.

Project No:	PSF/NSLP/P-NIBGE (19)
Project Title:	Exploration of Cotton Germplasm Potential against Drought Stress Using Genomic Approaches
Duration:	3-Years
Date of Initiation:	01.06.2008
Date of Completion:	31.12.2012
Total Expenditure:	Rs.1,033,346/-
Principal Investigator:	Dr. Mehboob-ur-Rehman
Name of Institution:	NIBGE, Faisalabad

SUMMARY:

Water scarcity is an important factor limiting cotton production worldwide particularly in Pakistan. To identify drought tolerant genotypes, it is vital to understand their genetic variation for different biochemical traits under water limited conditions. In the present study, 24 genotypes of cotton (*Gossypium hirsutum* L.) were evaluated under two irrigation regimes viz. well watered (W₁) and limited water (W₂) conditions. Before physiological maturity, cotton leaves were collected and analyzed for nitrate reductase and nitrite reductase activities,

and total free amino acids. At maturity, data regarding yield and yield parameters were recorded. Significant reduction in case of all the activities of nitrate reductase and nitrite reductase, and yield parameters was observed under W₂ condition in all the genotypes; however, total free amino acids were substantially increased under W₂ condition. Correlation between the yield parameters of cotton and biochemical traits was determined. Lower correlation between nitrate reductase activity and yield parameters was observed under limited water condition. The genotypes evaluated exhibited decrease in the activities of nitrate reductase and nitrite reductase whereas total free amino acids accumulation was higher under drought conditions that showed comparatively higher yield. This study shows that these biochemical traits were regulated genetically and environmentally in the tested cotton genotypes. It was concluded that these biochemical traits can be used as biochemical markers for screening cotton germplasm for drought tolerance as well as for evolving high yielding drought tolerant varieties of this crop. The findings are useful in bridging plant biochemistry and molecular biology for identifying and selecting genes involved in conferring drought tolerance in cotton.

In the second part of the experiment, we targeted more than 16 genes (after short listing from 1000s of genes) based on the known information available in the literature/databanks/NCBI for studying their polymorphisms followed by designing of degenerate and gene specific primers. These primers were surveyed initially on total genomic DNA for their optimization etc., and then three selected pairs (for three genes, Di-19-1, Di-19-2 and DREB) were surveyed on cDNA of the selected cotton genotypes including *G. arboreum*—a known drought tolerant standard genotype. In the third set of experiment, we also included two more genes coded for nuclear-localized Cys2/His2 zinc-finger proteins, Di19-1 and Di19-2 reportedly involved in response to salt/drought stress and ABA signaling during early stages of plant development from cotton. Full length cDNAs of Di 19-1, 19-2 and DREB genes were amplified by using first strand cDNA as a template. We have used 18S RNA primers as an internal control. These genes have shown up to 99% genetic similarity with the already reported genes. Later these genes will be transformed into a plant transformation vectors which are ready for introducing in cotton. These genes can be a useful source for transforming into elite cotton cultivars which need major funding till reaching commercialization.

1.2.1.2 Scientific Publications and Patents Produced through PSF Funded Projects

One of the main achievements and usefulness of any research is the publication or patents of its results in scientific journals. Based upon the results of completed research projects six research papers were published in peer review journals the details of which are given at **Annexure-VII**.

1.2.1.3 Higher Degrees Earned through NSLP Supported Projects

One of the major goals of Foundation is the development of skilled scientific human resource in the Country. Students aspiring for different research degrees complete their research through NSLP funded projects. Following students working on NSLP supported research projects were awarded Following students working on NSLP supported research projects completed their degrees.

S. No	Project No.	Name of Researcher	Degree awarded
1.	NSLP/P-NIBGE (19)	Ms. Tayyaba Shaheen Mr. Kashif S. Sarwar Mr. Fazal Abbas	Ph.D Ph.D MS
2.	NSLP/S-KU (65)	Ms. Salma Javed Mr. Asim Rehan Kazmi Mr. Ismail Bhatti Ms. Salma Javed Ms. Mehreen Gulsher Ms. Tasnem Mujtaba	Ph.D Ph.D Ph.D Ph.D Ph.D M.S
3.	NSLP/P-UVAS (68)	Mr. Muhammad Bilal Bin Mr. Majeed	M.S
4.	NSLP/F-NIFA (76)	Mr. Misbahullah	Ph.D
5.	NSLP/F-NIFA (82)	Mr. Zulqarnain Ms. Midrarullah	M.Sc. (Hon) M.Sc. (Hon)
6.	PSF/NSLP/S-SAU (64)	Mr. Abdul Samad Magsi	Ph.D
7.	NSLP/S-SAU (40)	Ms. Beenish Nawaz Mirani Mr. Asif Ali Jamali Mr. Shahid Abbas Ms. Mahvish Jabeen Ms. Asia Akbar Panhwar	Ph.D Ph.D M.Sc. (Hon) M.Sc. (Hon) Ph.D

1.2.2. Project Formulation Workshops

During the fiscal year 2013-14, three Project Formulation Workshops were organized to enhance the capacity of the researchers for writing project proposals. The workshops were

organized at University of Agriculture Faisalabad on December 3-4, 2013, University of Veterinary and Animal Sciences Lahore on March 27-28, 2014 and Shaheed Benazir Bhutto University, Sheringal, Dir on June, 17-18, 2014 respectively. A total of 142 researchers from Universities benefitted from these workshops. Scientists were trained on different aspects of writing a good quality research proposal by renowned researchers.



Dr. Khalil Ahmed Ibupoto, Chairman PSF and Dr. Talat Naseer Pasha, VC, UVAS



Dr. Khalil Ahmed Ibupoto addressing the participants of workshop at U.A.F



Advisor to VC, University of Dir, Shringal distributing certificate to the Participate

1.2.3 Meetings of Fund Management Committee of NSLP

During the year five meetings of the Fund Management Committee (FMC) were held on 04.07.2013, 05.03.2014, 31.03.2014, 02.04.2014 and 04.04.2014 respectively to review the financial matters of NSLP. The meetings were chaired by the Chairman, PSF/Chief Executive, NSLP and attended by members of the Fund Management Committee. The FMC approved budgets of 28 new projects of worth Rs.80.058 Million, recommended by the NSLP Technical Committee.

1.2.4 Meetings of Technical Committee of NSLP

During the year 2013-14 four meetings of the Technical Committee (TC) were held on 19.09.2013, 19.11.2013, 15-01-2014 and 15-05-2014 respectively to technically evaluate the projects to be funded. The meetings were chaired by the Chairman, PSF/Chief Executive, NSLP and attended by the renowned scientists related to agriculture and natural sciences. A total of 56 new projects were presented to the Technical Committees out of which 30 projects were recommended for funding.

1.2.5 On site Monitoring of NSLP Projects

Natural Sciences Linkage Programme supports the agricultural research throughout the country by funding projects of applied nature. The projects are ongoing at different Universities and R&D organizations across the country. Onsite monitoring of NSLP funded projects is regularly conducted by PSF-NSLP team and members of PSF Technical Committees.

Chairman Pakistan Science Foundation, Prof. Dr. Manzoor H. Soomro and Dr. Mirza Habib



Ali, Principal Scientific Officer, Natural Sciences Linkage Programme visited Karachi on August, 22-23, 2013, to evaluate the technical progress and to address any issues pertaining to project execution. During these visits the projects were monitored onsite and issues regarding implementation were discussed with Principal Investigators. Key factors in project

implementation such as equipment purchased, human resource employed, field / laboratory trails were observed during the visits. Onsite monitoring will help to improve the research quality for better results and in managing the issues related to management and execution of project.

1.2.6 Commercialization of Humic Acid from NSLP Funded Project

Natural Sciences Linkage Programme is actively focusing to curtail the import bill of country by supporting local industry. In this regard, NSLP has funded the project “To Speed up the Pilot Plant Production of Humic Acid” at Fuel Research Centre, PCSIR laboratories Complex, Karachi. Federal Minister for Science and Technology, Mr. Zahid Hamid, inaugurated the reaction tanks on August 29, 2013 purchased under this project. These tanks



will enable the host institute to initiate the pilot scale production of humic acid. Humic Acid is widely known as the soil enhancer and improver and is also known to improve the plant growth. The project is based on the concept of local production of humic acid to be further exploited as an efficient fertilizer.

1.3 SCIENCE PROMOTION

1.3.1 Institutional Support Programme

One of the functions of the Foundation is to support the emerging R&D Organizations/Universities to strengthen their laboratories. During the report period, no case was entertained due to shortage of funds.

1.3.2 Financial Assistance for Holding Science Conferences, Seminars, Symposia and Workshops

Another function of the Foundation is to provide funding for holding conferences/seminar/symposia/ workshops etc. In year 2013-14, an amount of Rs.0.680 million was released to various institutions for organizing 12 conferences seminars and workshops on important scientific topics listed below:

Sr. No	Title of Conference	Name of Organizers	Amount Released (Rs.)
1.	<i>"13th International Symposium on Advanced Materials"</i> on 23-27 September, 2013 at Institute of Space Technology, Islamabad.	Dr. Sara Qaisar Secretary Dr. A. Q. Khan Research Laboratories Rawalpindi	50,000/-
2.	<i>"International Conference on Water, Mineral and Energy Resources"</i> on 05-08 October, 2013 at Hotel Regent Plaza, Karachi	Dr. Viqar Hussain Professor Department of Geology University of Karachi Karachi.	100,000/-
3.	International Workshop on <i>"Commercial Exploitation of Food Irradiation Technology in Pakistan-Potentials, Opportunities and Challenges"</i> on October 2-3, 2013, at PCSIR Laboratories Complex, Lahore.	Dr. Ihsanullah Deputy Chief Scientist/Head Food Science Division, Nuclear Institute for Food and Agriculture (NIFA), Peshawar	40,000/-

4.	International Conference on “ <i>Frontier of Information Technology (FIT-2013)</i> ” on 17-19 December 2013, at Serena Hotel Islamabad	Dr. Imadad Khan Associate Professor/Head of Electrical Engineering Department COMSATS Institute of Information Technology, Abbottabad	50,000/-
5	Two days Symposium on “ <i>Water and Energy Crisis</i> ” Challenges and Opportunities from 23-24 October, 2013 at National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad	Dr. Shahid Mansoor Director, National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad	40,000/-
6.	12 International and 24 th National Chemistry Conference on 28-30 October, 2013 at Bahauddin Zakariya University, Multan	Prof. Dr. Tariq Mahmood Ansari Professor of Analytical Chemistry Director Academics Bahauddin Zakariya University, Multan	75,000/-
7.	“2 nd International Conference on Environmental Horizon “ <i>Greening the Blue</i> ” on 01-03 January, 2014 at University of Karachi, Karachi	Prof. Dr. Syed Azhar Ali, Chairman Department Chemistry University of Karachi, Karachi	50,000/-
8.	Recent Advances in Nanotechnology on January 06,2014 at Preston Institute of Nano Sciences and Technology Preston University Islamabad	Dr.N. M.Butt Chairman Preston Institute of Nano Sciences and Technology Preston University Islamabad	50,000/-
9.	Seminar on “ <i>Lessons from korea Development & New Village Movement (Saemaul Undong)</i> ” on 22 November, 2013 at PMAS Arid Agriculture University, Rawalpindi	Dr. Ghulam Jilani Director Office of Research Innovation & Commercialization PAMS Arid Agriculture University, Rawalpindi	50,000/-
10.	“13 th Nematological Event, Prospective of Nematology in Pakistan” on 24-25 January,2014 at University of Karachi, Karachi	Prof. Dr. Shahina Fayyaz Director/ Secretary National Nematological Research Center University of Karachi Karachi.	50,000/-
11.	International Conference on Stress Biology and Biotechnology Challenges & Management on May 21-23 ,2014 at Institute of	Prof. Dr. M. Saleem Haider Director Institute of Agricultural Sciences University of the	75,000/-

	Agricultural Sciences University of the Punjab Lahore	Punjab Lahore	
12.	Celebrating of International Day for Biological Diversity ON 22 May 2014 at Pakistan Museum of Natural History Islamabad	Dr. Muhammad Rafique Deputy Director General Pakistan Museum of Natural History, Islamabad	50,000/-
Total:			6,80,000/-

1.3.3 Financial Support to Scientific Societies for Holding Scientific Conferences and Publication of Scientific Journals

The Foundation provides funds for Scientific Societies for holding their regular conference, meetings and publication of scientific journals in various disciplines. During the period, an amount of Rs.0.5 million was released to 09 societies/journals:

Sr. No	Name of the Society	Title of Activity	Funds Released (Rs)
1.	Pakistan Thalassaemia Welfare Society	Publication of News latter, Pamphlets/Poster	50,000/-
2.	The Chemical Society of Pakistan	i) Publication of Journal of Chemical Society ii) Symposium	100,000/-
3.	Pakistan Vacuum Society	Symposium	50,000/-
4.	Pakistan Society of Nematologists	i) Publication of Pakistan Journal of Nematology ii) Conference	100,000/-
5.	Pakistan Phytopathological Society	Conference, Journal	50,000/
6.	Pakistan Society for Biochemistry and Molecular Biology	i) Publication of Journal of Biochemistry and Molecular Biology ii) Conference	50,000/-
7.	Pakistan Botanical Society	Publication of Journal of Botany and Other Activities	50,000/
8.	Weed Sciences Society of Pakistan	i) Publication of Weed Science Research ii) Conference(s) and Other Activities	50,000/-
Total			500,000/-

Scientific Journals

Sr. No	Name of the Journal	Correspondence Address	Funds Allocation
1.	Pakistan Oral & Dental Journal	Prof. Dr. Ahmad Iqbal Editor Pakistan Oral and Dental Journal 19, Street 63, F-7/3 Islamabad	50,000/-

1.3.4 Awards and Fellowships

PSF provides a limited number of research fellowships to those M.Phil. and PhD scholars who do not have any other source of income. During the year, no new request was accepted because of shortage of funds.

1.3.5 Financial Support for Scientific Survey

The Foundation also provides funds for the scientific surveys to collect data on important scientific issues/problems. During the year, no new request was entertained because of shortage of funds.

2.0 SCIENCE POPULARIZATION

Need of promotion and popularization of science and technology for economic growth and for improving the quality of life of a nation can never be denied. Even so, an irrational use of science and technology has also contributed to the current environmental, social and economic problems faced by humanity in the 21st century. The dream of scientific and technological development leading to economic self-reliance cannot come true unless all the segments of the society realize the importance of science and technology. Popularization of science through non-formal science education activities can play an important role for creating science awareness among the masses. Need is to initiate sustainable and mega programs for motivating the students of our formal schools to study science from the grass root level.

Under the action plan of the National Science Policy 1984 and National STI Policy 2012, the Government has assigned the task of popularization of science at grass root level to Pakistan Science Foundation. Most of the PSF science popularization programs were initiated in 1987-88. These programs are organized outside the formal education system particularly for the

students to motivate them towards science education. The primary objective of the activities is to increase society's understanding of science. Popularization of Science is broadly understood as the system of measures aimed at the dissemination, appropriation and valuing of science and technology goods, which include critical thought, ideas and values, the history and sociology of scientific knowledge, how science is practiced, and the results of scientific research and technological development. It aims to involve individuals in the excitement of Science, in order to increase the public understanding of science through the use of interactive exhibits and every day life examples. Public should be able to see the link between science and technology that has penetrated into every aspect of our lives.

To achieve the objective of increased science awareness, PSF is undertaking a number of programs including:

- Science Caravan (Mobile Science Exhibition)
- Establishment of Science Centre, Museums, Herbaria & Planetaria.
- Strengthening of the Laboratories of the Govt. High School of rural areas
- Organization of S&T Fairs and Traveling Expos.
- Organizing Science Poster, Essay and Quiz Competitions
- Holding Popular Science Lectures
- Donation of Popular Science Magazines and Scientific Books to Schools Universities and S&T Organizations.
- Preparation and Dissemination of Scientific Literature in the form of leaflets, posters, Booklets and Brochures
- Financial Assistance for publication of Scientific Books
- Financial Assistance for Science Popularization activities of the other organizations.
- Use of Inquiry Based Science Education "la main ala pate"-LAMAP for motivation in students towards science education.
- Establishment of Science Clubs in High Schools

These activities play a significant role in capacity building of the students for adapting and thinking upon the modern scientific inventions and technologies. In addition, popularization of science also helps to enhance personal satisfaction and self-esteem in the population. At present, with the growing importance that science and technology has taken on in all arenas of social life, the popularization of science is increasingly becoming a very significant strategic issue. Detail of the activity is given below;

2.1 Science Popularization Activities

2.1.1 Science Caravans (Mobile Science Exhibition)

Science Caravans are meant for organizing Mobile Science Exhibitions for the students and general public. Science Caravan is a specially designed truck which carries a consignment of scientific and technological concepts displayed through simple exhibits, colorful diagrams and photographs, specimens along with their write-ups, inflatable Planetarium system and working models on various subjects. The science exhibition is installed in a central school/college and the students from the neighboring schools as well as general public visit these exhibitions. The visits are arranged in collaboration with the relevant Directorate of Education. Through these exhibitions, efforts are made to develop the skills of students to think and solve every day problems by application of science and technology in their daily life because a country's ability to develop more sustainably depends on the capacity of its people and institutions to understand complex scientific phenomena and development issues so that they can make the right development choices. Within its institutional framework, PSF stresses upon stimulating and motivating the students towards scientific and technological studies for playing their appropriate role in our social development.

All narration are bilingual (Urdu and English) and accompanied with simple illustrations. Microscopes, computers, laser holograms and working models reflecting various phenomena of physics, chemistry, mathematics and biology through simple exhibits and planetarium/film shows are the main components of Caravan Exhibitions. At present nine Science Caravan Units are in operation. Eight units are stationed in the four provinces (two for each) and one is stationed at Islamabad.

All Caravan Units continued their activities throughout the report period and organized Caravan Exhibitions in various schools countrywide. Summary of exhibitions is given below:

Summary of Exhibitions by PSF Science Caravans

Caravan Unit	No of Schools	No of students & teachers/general Public
Federal Unit	57	14,420
KPK Units	168	17,315
Punjab Units	160	37,771
Sindh Units (Sukkur, Tandojam)	112	26,689
Balochistan Units (Quetta, Jaffarabad)	66	14,984
Total	563	111,179

Detail of the Caravan Exhibitions carried out by all Caravan units is placed at **Annexure-VIII**.

2.1.2 23rd Intra & Inter Board Science Essay and Poster Competitions

Organizing Science Essay & Poster Competitions are regular and very successful activities of the Foundation. PSF in collaboration with all Boards of Intermediate and Secondary Education (BISE) of the country organizes the Competitions between the students of high schools each year. So far the Foundation has conducted 23rd Essay & Poster contests in which thousand of students have participated from all over the country.

In the first phase the Boards of Intermediate & Secondary Education arrange Science Essay and Poster Competition within their jurisdiction on the theme approved by PSF and submit the results of the Intra Board level to the Foundation. After receipt of the results from all Boards. PSF organizes “Inter Board Contest” (the final) at PSF Head Office, Islamabad each year. Judges consisting of professors, scientists and artists evaluate the essays and posters received from all over the country for best three positions (winner of the winners). To encourage the students. PSF awards merit certificates and cash prizes to the winner students. The amount of prize money for the best three students of Intra Board level is Rs.5,000/-, Rs.3,000/- & Rs.2,000/- and that for Inter Board level (Final) is Rs.10,000/- Rs.6,000/- and Rs.4,000.00 respectively.

The topic of Essay Competition was “*Water and Me*” and for Science Poster Competition the topic was “*Living with Solar Energy*”. PSF’s 23rd Annual Intra Board Science Essay and Poster Competitions were completed in all boards (BISE) of the country. Cash prizes were awarded to the winner students. Detail of the winner students is placed at **Annexure-IX** and **Annexure-X**, respectively.

2.1.3 Donation of Scientific Literature to High Schools

Donation of Popular Science Magazines and Scientific Books is one of the regular and important activities for science popularization. 4500 copies of Popular Science magazine “Monthly Global Science” and Quarterly “Urdu Science Magazines” were distributed to 1500 schools during the report period. In addition, more than 12000 copies of scientific brochures were also distributed among the students through science caravans. Scientific Journal “The Fountain” published by The Light Publishing Turkey was provided to Caravan offices, PASTIC offices and PMNH.

2.1.4 Financial Assistance to High Schools and Other Organizations

In addition to its own Science Popularization activities, PSF provides financial assistance to high schools/other institutions for their science propagation activities. PSF also helps the schools in strengthening of the Laboratories. During the report period, an amount of Rs.410,000/- was sanctioned to 07 schools and S & T organizations. List of the schools and organizations provided with financial assistance is placed at **Annexure-XI**.

2.1.5 Popular Science Lecture (Cataract Awareness)

PSF arranges series of lectures where eminent Scientists and educationists express themselves for the benefit of the audience comprising scientists, scholars, students and the general public as one of its mandatory functions. During 2013-14, following lectures were conducted.

1. Science Lecture on “Life Sciences” at Quetta

PSF Science Caravan Unit Quetta organized the Science Awareness lecture on “*Life Sciences*” at Govt. Central Boys High School Quetta on 15.07.2013. About 80 students and teachers attended the programme. Mr. Maqbool Ahmad (Assistant Director Caravan) gave the detailed Introduction about PSF and its science popularization programmes and discussed about usefulness of Science in our daily life and day by day S&T development in the different fields of our life. At the end, question/answer session was held. A set of Science Encyclopedia and UNESCO Disaster Master Kit along with DVD and posters were provided to the Principal, Govt. Central Boys High School Quetta.

2. Science Awareness Lecture on “Planets and Solar System” at Quetta

PSF Science Caravan Quetta Unit organized the Science Awareness lecture and distribution of UNESCO Disaster Master Kit and a set of Science Encyclopedia program at Govt. Railway Girls High School Quetta on 01-08-201. 75 students and Science teachers attended the lecture. Mr. Maqbool Ahmad (Assistant Director) gave the detailed lecture.

3. Popular Science Lecture on Solid Waste Management” at Sukkur

Science Caravan Sukkur Unit arranged the Planetarium show and popular science lecture on “Solid waste Management” conducted by Mr. Ranjeet Kumar, Lecturer , Zoology at Govt. Islamia science college, Sukkur with collaboration of Bab-ul-Islam educational Academy, Sukkur at Govt.(boys) Bab-ul-Islam High school Sukkur on 31.7.2013. Above 150

professors, lecturers, senior teachers and students participated in the event. They appreciated efforts of PSF.

4. Popular Science Lecture on “Science of Disaster”

A Lecture on “*Science of Disaster*” was arranged by the PSF Science Caravan, Punjab in Laboratory Higher Secondary School (Boys), University of Agriculture Faisalabad on 13-09-2013. Mr. Tahir Rashid (*Ex-Union Nazim, Bureau Chief Capital T.V, Faisalabad*) graced the event as a chief guest. Mr. Naeem Abbas (Assistant Director Science Caravan Punjab Unit) delivered lecture on disaster. About Nineteen teacher and approximately 250 students attended the seminar.

5. Awareness Lecture on “Impact of Climate Change on Environment”

PSF Science Caravan Tandojam Unit arranged Awareness Program titled “*Impact of climate change on environment*” on September, 27, 2013 at Govt. Boys High School No. 2 Tando Jam. Mr. Khalid H. Soomro, Assistant Director, Science Caravan Sindh unit Tando jam, Mr.Wali Muhammad Daudpoto, CEO Environmental Protection Initiatives for Community (EPIC), Allah Bux Baloch, Head Master, Govt Boys High School No. 2, teachers, Students and Media People also attended this program. Mr. Khalid H. Soomro, Assistant Director, briefly introduced the motive of programme and activities of PSF. Engr. Wali Muhammad Daudpota CEO, Environmental Protection Initiatives for Community (EPIC) Development delivered presentation on “Impact of Climate Change on Environment”.

6. Popular Science Lecture on “Synthesis and Characterization of Piezo-Electric BaTiO₃ Crystals”

PSF organized popular science lecture on “Synthesis and Characterization of Piezo-Electric BaTiO₃ Crystals” on 31st Oct, 2013 at PSF Auditorium. Dr. Muhammad Muneeb Asim, PSO, Metallurgy Division and Dr. Muhammad Shoaib, Deputy Chief Engineer, Dr. A. Q. Khan Research Laboratories Kahutta, Rawalpindi delivered the lecture. Dr. Anwar Nasim, Eminent Scientist presided over the function. The lecture was attended by more than 120 peoples including students, teachers, scientists and officials of PSF

7. Popular Science Lecture on “Challenging Scenario in S&T and Need of Committed Leadership”

Popular science lecture titled "Challenging Scenario in S&T and Need of Committed Leadership" by Dr. H.U. Khan, Chief Scientific Officer, PSF was organized on 13.12.2013. A

large number of students, teachers and scientists from various scientific institutions of the twin cities attended this interactive lecture. Dr. H.U. Khan in his lecture spoke at length on the role of leadership to revolutionize any entity, organization, society or the country. He said committed leadership is answer to all problems being faced by any organization. Brig. Akhtar Nawaz Malik from the College of Electrical and Mechanical Engineering, Rawalpindi, also spoke on the occasion and advised the students to start feeling responsible for happening anything bad around you then you will become a leader.

8. Lecture on Career Counseling

Science Caravan Sukkur Unit arranged a session/Lecture on Career Counseling on 30.11.2013 at High School and Public School Sukkur. Mr. Ali Gohar Chang, Principal Public School Sukkur briefed the audience (Parents, teachers and Students) about the steps for career planning and study route and highlight the importance of science & Technology in daily life.

9. Science Awareness Lecture on Water at Quetta and Jaffarabad

PSF Science Caravan Unit Quetta arranged a Science Awareness lecture on "Water" and distributed Master Disaster Kits and Urdu Science Encyclopedia at Govt. Girls High School Jinnah Town, Quetta on 25.03.2014. About 50 students of high classes the principal and Science teachers attended the programme. Mr. Maqbool Ahmad (Assistant Director Caravan) gave the detailed Introduction about Pakistan Science Foundation and delivered a lecture on Water, its importance, sources and availability.

Science Caravan Jaffarabad Unit also arranged a lecture on importance of water on 27.03.2014 at Govt. Boys School Rustam Khan Jamali Tehsil Usta Muhammad District Jaffarabad. Mr. Abdul Khaliq Unit Incharge delivered the lecture about Importance of water. 412 students and teachers, participated and they appreciated the efforts of PSF for popularization of science in Rural Areas Balochistan. At the end, unit Incharge gave Encyclopedia and UNESCO Disaster Master Kit along with DVD to principal of the school.

2.1.6 World Science Day for Peace and Development Celebrations

The WSDPD is observed all over the world on November 10 and PSF observes this day every year in a befitting manner. This year PSF celebrated this day on November 21 at International Islamic University, Islamabad Faisal Mosque Campus. This year theme was Science for Water Cooperation: Sharing Data, Knowledge and Innovations. The major activities on this

occasion included a seminar on WSDPD, award ceremony of prizes to winners of science Inter board essay and poster contests and beside all these poster and speech competitions were held among 15 schools of Islamabad. Federal Secretary for Science and Technology, Mr. Kamran Ali Qureshi grace the occasion while the initiator of WSD eminent Pakistani Scientist Dr. Ishfaq Ahmad along with other scientists also participate in the event. All the events were organized in collaboration with Most, Federal Directorate of Education, Embassy of France in Pakistan and UNESCO.

In the morning session, Speech and Poster Competition was organized among the students of 15 schools on the theme “Science for Water Cooperation”. During the session, Dr. Shahnaz Anjum Riaz, DG. FDE was the Chief Guest of the occasion. Mr. Choaki, French attaché, Embassy of France in Pakistan, Dr. Masoom Yasinzai, Rector International Islamic University, Islamabad and Dr. Ata-ul- Mohsin, Director (RS), PSF and Dr. Naushaba Ata, PSO and other officials of PSF were also present. A panel of judges announced three best positions for each competition. At the end PSF Crest was presented to DG FDE.

After the competition, a convention of scientists and award ceremony was held. In which Mr. Kamran Ali Qureshi, Secretary MoST, Dr. Khalil Ahmed Ibupoto Chairman PSF, Dr. K. K. Nagata Director UNESCO and Dr. Ishfaq Ahmed, and representative from FDE participated. All the distinguished guests also spoke to the audience and focused the need of science and technology for the development of one’s country and highlighted the theme of World Science Day. In the end, winner students of Inter Board Essay and Poster Competitions and winners of speech and poster contests held in the morning received medals and cash prizes alongwith certificates.

In the end a technical session was also held in which a renowned Scientist Dr. Shahid Ahmad from IUCN delivered a thought provoking talk on the theme, Science for water Cooperation. A question answer session was held. The event was attended by about 450 students, teachers and scientists. In addition, PSF Science Caravan Units also celebrated this day. The activities by units are highlighted as;

- (i) **Quetta:** Science Caravan Balochistan Unit Quetta arranged Science awareness programme on the occasion of “World Science Day for Peace and Development” on 21st November 2013, at Govt. Boys Model High School Yazdan Khan, Quetta. Mr. Maqbool Ahmad (Assistant Director) has highlighted the importance, history and purpose of celebrating World Science Day and that how we can use the knowledge

and inventions of Science for Peace and Development of our country. He also delivered a detailed lecture on “Science for Water Cooperation”. The Principal Govt. Boys High School Yazdan Khan Quetta, Mr. Khadim Hussain has called upon the students to give their views on important of science. He also delivered informative lecture about science. The Participants/Students got Knowledge and Information about the role of science for peace and development of the country. 150 students and teachers participated in world science day. At the end scientific literature i.e. Urdu Encyclopedia, scientific booklets on different topics, Disaster master kit with DVD and Scientific posters were presented to the Principal.

- (ii) **Tandojam:** A lecture titled “Science for water cooperation” was held on November, 21, 2013 at Govt. Girls High School No. 1 SAU colony Tandojam. Mr. Muneer Ahmed Memon Research Assistant/PhD Scholar deliver lecture on “Science for Cooperation”. 150 students and teachers participated in the event.
- (iii) **Jaffarabad:** Mr. Abdul Khaliq, ASO/ Incharge Science Caravan Unit delivered a lecture on Science for Water Cooperation at Govt. Boys High school, Dera Allah yar on 21.11.2013. The event was attended by 315 students and teachers.
- (iv) **Peshawar:** World Science Day for Peace and Development on the theme “Science for Water Cooperation” was celebrated with the collaboration of GHS- Ibrahimzai Charsadda. To highlight the importance of the day a walk for Science was arranged. In this walk the students of Govt. High School Ibrahimzai and GHS- Boobak participated. In this walk 549 students and 26 teachers took part. Speech and Poster competitions between the students were also held in the said school.
- (v) **Science Centre, Faisalabad:** On the occasion of ‘World Science Day for Peace and Development’ (WSDPD) Science Centre & Science Caravan Punjab Unit, Pakistan Science Foundation Faisalabad organized activity. On November, 12, a Science Exhibition at Science Centre Jail Road Faisalabad was organized. About 357 students of various Schools and Colleges along with large number of Teachers and general public participated in the Exhibition. Deputy Director (STI), emphasized on the importance of Science for Water Cooperation: Sharing Data, Knowledge and Innovations and also Science & Technology. At the end, gifts were distributed among the Students.

- (vi) **Suukur:** Science Caravan Sukkur unit organized speech competition in the connection with world science day on the title “**Science for water cooperation**” on 28 Nov, 2013 at Govt. Boys high school Adilpur Distt. Ghotki, 200 students from different schools participated in the event and Assistant Director Science Caravan Sukkur unit distributed prizes among the winner students.

2.1.7 Inquiry Based Science Education Programme in Pakistan

PSF has initiated an Inquiry Based Science Education Program in collaboration with Academy of Sciences France, Embassy of France in Pakistan, and Federal Directorate of Education. In this regard, number of training workshops and review meetings were conducted time to time. And PSF also established science clubs in selected schools of Rawalpindi/Islamabad.

- **Training Session on Inquiry Based Science Education (IBSE)**

Three training Sessions on IBSE was arranged for the teachers of Rawalpindi, Kallar Syedan and Taxilla on 11.09.2013, 12 Oct, 2013 and 28.12.2013 2013 respectively. In this regard, Miss Zaiban Farooq, AD Caravan and Mr. Asadullah briefed the audience about the PSF activities and IBSE programme in detail. Later on Hands on activities were performed by the students. 55 teachers alongwith 60 students attended the training session. The Principals, teachers and students greatly appreciated the programme and thanked PSF for his contribution regarding introducing the teachers about IBSE.

- **Review Meeting on Inquiry Based Science Education “La main a la pate (LAMAP)” in Pakistan**

To review the impact of previously organized workshops and progress of science clubs, a review meeting was arranged on 23rd April, 2014 at Training Wing, FDE Islamabad. In which teachers and Principals from LAMAP associated schools participated.

In the Inaugural Ceremony, Mrs. Perveen Akhter, Area Education Officer (Urban) delivered welcome address. On the occasion, Dr. Tanveer-uz-Zaman, Dean, Faculty of Education, AIOU, was the Guest of Honor. Dr. Naushaba Atta, PSO, PSF, Mr. Abdul Rauf, SSO/Coordinator LAMAP and Mr. Nadeem Ahmed, Assistant Director (Training) were also present in the inaugural ceremony. During the address, Dr. Tanveer-uz-Zaman appreciated the efforts of PSF and FDE to implement the IBSE in effective way. He stressed that teachers should work with great devotions and should focus on the effective teaching methodology

especially teaching science. Prior to his address Dr. Naushaba Atta, PSO, PSF presented the brief report on IBSE in Pakistan. In the Technical session, teachers and principals gave their feedback about IBSE. Mr. Abdul Rauf, SSO/Coordinator LAMAP conducted the technical session. All the participants acknowledged the effectiveness of the said programme. They also shared their issues and problems regarding implementation of IBSE in the classes. The feedback was provided by the teachers on prescribed proforma. The status/progress of Science Club was also discussed. Teachers also submitted their next academic annual plan for teaching science through IBSE.

In the closing session, Dr. H.U. Khan, CSO/Secretary was the Chief Guest of the Occasion. Mr. Haider Zaman Khattak, Member Finance, PSF was also present. Dr. H U Khan addressed the teachers and Principals and said that PSF is collaborating with Embassy of France and FDE for implementation of IBSE. He thanked the collaborative organizations. He also said that more teachers training workshops will be conducted and PSF will also establish more science clubs. At the end, Mr. Nadeem Ahmed, Assistant Director (Training) gave vote of thanks and also ensured best possible cooperation in Future.

- **Participation of PSF Officer in 5th International Seminar on LAMAP in Paris**

Mr. Abdul Rauf, SSO/Coordinator, PSF participated in 5th International Seminar on LAMAP held on 2-7 June, 2014 at Paris-France. The seminar addressed the inquiry based science education issues, strategies for innovation in educational practices and strategies for generalization into educational systems. The seminar focused especially on the continuous professional development of science teachers. The objective was to support the participants in the renewal of science education and the implementation of an inquiry based science education (IBSE) in their country.

2.1.8 New Activities and Future Plans

International Traveling Expo on Water “*Water at the Heart of Science*”

PSF started arranging International Travelling Expos in 2008 in collaboration with Embassy of France in Pakistan and Centre Sciences-Orleans-France. In this regard, Expos on the themes of Mathematics, Environment, Biodiversity, Chemistry and Energy have already been held in 19 cities/towns of the country catching attention of more than 165,000 visitors. PSF has also inked MoU with Centre Science, Orleans-France for arranging and co-producing Expos in Pakistan.

This year PSF organized International Traveling Expo on Water titled “Water at the Heart of Science” in collaboration with Centre Sciences-CCSTI, Orleans, France and French Embassy in Pakistan. As Water issue is one of the 21st century’s greatest challenges. Abundant but unequally distributed on Earth, this resource is today threatened by climate change and the dangers of overuse. Improving access to water, which is still suffering from glaring disparities, is one of the Millennium Development Goals. This Expo has been prepared by Centre Sciences with support of other stakeholders. The Expo on water is richly illustrated and educational, it gives more insight into the key role that research has to play in the sustainable management of water as a vital, indispensable resource for development.

The Expo traveled from Islamabad, to Sargodha, Mirpur (AJK), Mansehra and will be concluded at Quetta. It is hoped that the Expo will provided a great opportunity to the students, faculty members, researchers and general public to get firsthand knowledge about water, its resources and the proper usage of water.

In this regard, French expert/Master Trainer, Mr. Guy Antoine from Centre Sciences-CCSTI, Orleans, France visited Pakistan and the training sessions were conducted by the Expert on 29-30 April, 2014 at PSF, Auditorium. In the training sessions teachers from FDE schools and PSF’s Officers/officials participated.

Islamabad: The Launching Ceremony of the Expo in Pakistan was held on 6th May, 2014 at PSF Auditorium. Minister of state for Parliamentary Affairs, Mr. Sheikh Aftab Ahmed and French Ambassador H.E. Mr. Philippe THIEBAUD, Additional Secretary Mr. Tahir Maqsood, Vice Chancellor PMAS Arid Agriculture, Rawalpindi, Dr. Rai Niaz Ahmed, Chairman PSF Prof. Dr. Khalil Ahmed Ibupoto and senior officials were present on the occasion. They also addressed the audience.

During the technical session, Dr. A.D. Khan, PCRWR gave his talk on Water quality issues in Pakistan which was very informative and thought provoking. Dr. Jahangir Khan Sial, Professor, PMAS-AAU, Rwp. Delivered a presentation on various dimensions of Hydroponic Agriculture in Pakistan and discussed its various aspects. The technical session was attended by university students, professors and researchers and they greatly appreciated all the speakers and PSF for holding such informative seminar.

The expo started its journey at Islamabad Model School, G-9/3 Islamabad on 7th May, 2014 till 10th May, 2014. In which more than 2500 students and teachers from 20 schools participated. The closing ceremony of the expo was held on 10th May, 2014 in the same

school. In which Mr. Rafique Tahir, Joint Education Secretary, FDE, Prof. Dr. Khalil Ahmed Ibupoto, Chairman, PSF, Dr. H.U. Khan, CSO, PSF, Mr. Haider Zaman Khattak, Secretary, PSF and senior officers from PSF, FDE and teachers/students participated. Mr. Rafique Tahir, Joint Education Secretary, FDE during his address greatly appreciated the activity of PSF and he said these types of exhibitions are main source for creating awareness not only among the students but also in general public. He thanked the management of PSF. Dr. Khalil also addressed the audience and said that PSF in collaboration with other organization intends to expand its activities and he appreciated the active participation of young students in the Expo.

Sargodha: The next station of the expo is Sargodha where it was arranged from 12-18 May, 2014. The inaugural ceremony of this expo was held on May 13, 2014. In this programme high officials of UoS as well as PSF participated. ~500 students also attended the ceremony.

The honorable chief guest Prof. Dr. Zahoor ul Haq, Pro Vice Chancellor UoS, inaugurated the expo along with Dr H. U. Khan, CSO, PSF and Mr. Abdul Rauf, National Coordinator, PSF, and other faculty members of UoS. The guests visited the exhibition and were briefed about the expo by Mr. Nusrat H. Zaidi, PSF and the facilitators from UoS.

After that a formal ceremony also was held in the auditorium of the UoS. The programme started with recitation of the Holy Quran, and then a welcome address by Prof. Dr. Ishtiaq Hussain, Director, ORIC, UoS. A Movie on the last expo i.e. on energy was also shown to the audience for ready reference. Afterwards a Talk on water with slides was presented by Prof. Dr. Shahid Iqbal Rana. An introductory speech about PSF and Expo was delivered by Dr. H. U. Khan, CSO, PSF. The CSO also appreciated the coordination and cooperation of the UoS regarding the arrangements of the expo. Prof. Dr. Zahoor ul Haq, Pro Vice Chancellor also delivered a speech and expressed gratitude to PSF for organizing this event at UoS. At the end Mr. Nusrat H. Zaidi paid a vote of thanks to the audience. Two electronic media channels (Atv & Ptv) also covered the event. The exhibition continued till 17 May, 2014 and nearly 7000 students, teachers and general public visited the expo.

Mirpur (AJK): The next station of the expo was Mirpur (AJK) where it was planned from 19-24 May, 2014 at Mirpur University of Science & Technology with its opening on 20th May, 2014. The Expo was jointly inaugurated by Chief guest Dr. Habib-ur Rahman, Vice Chancellor, MUST, and Prof. Dr. Khalil Ahmed Ibupoto, Chairman PSF. On this occasion Mr. Gilles Angles, Attache for Cooperation, Embassy of France, Pakistan, Dr. H. U. Khan, CSO, PSF and other senior officials were are also present on.

After that a formal ceremony also was held in the auditorium of the MUST. The programme started with recitation of the Holy Quran, and then a welcome address by Prof. Dr. Sarwar Ahmad, Director, ORIC, MUST. A Movie on the previous expo on energy was also screened for the audience. Afterwards a Talk on water with slides was presented by Mr. Rizwanullah, Lecturer, MUST. Dr. Habib ur Rehman expressed thanks to Prof. Dr. Khalil Ahmed and Mr. Gilles Angles to organized traveling Expo on water at MUST, AJK. He has requested the Foundation for further cooperation regarding Science Education for the peoples of Mirpur. Prof. Dr. Khalil Ahmed Ibuputo briefed the Function of PSF and Pay thanks to VC and MUST officials for cooperation for arranging the Expo. The Vice Chancellor presented shield to Chairman PSF, and Mr. Gilles. Dr. Hassan Mujtaba Jaffari thanked PSF and Embassy of France for selecting the Mirpur University for Expo. The expo was closed on 24th May, 2014 which was visited by 3242 Students of Govt. / Private Schools, University Students and General public.

Peshawar: The fourth station of the Expo was Peshawar where it was arranged w.e.f. 26-31 May, 2014. The opening ceremony of the expo was held on 27, May 2014 at University of Agriculture, Peshawar. The Expo was opened by Chief Guest Prof. Dr. Zahoor Ahmed Swati, Vice Chancellor, University of Agriculture Peshawar. At this occasion high officials of Agriculture University and Dean of Faculty Crops Protection Sciences Prof. Dr. Muhammad Afzal, Chairman Deptt. of Water Management Dr. Muhammad Jamal Khattak and other different faculties deans and professors along with Chairman, PSF, Prof. Dr. Khalil Ahmed Ibupoto, Member Finance/ Secretary, PSO, PSF Mr. Mehboob Khan, Mr. Abdul Rauf SSO/Coordinator were also present. During the Expo visit of chief guest Mr. Abdul Rauf Agha SSO/Coordinator & Mr. Nusrat H. Zaidi, Senior Graphic Artist briefed them about Expo as well as the efforts of Pakistan Science Foundation for promotion in different fields of science. A large number of students of different faculties visited the said exhibition. After visiting the expo the formal ceremony was arranged. Dean of FCPSc Agriculture University delivered welcomed address. Dr. Muhammad Jamal Khattak Chairman department of Water Management, University of Agriculture, Peshawar highlighted the importance of Water during his presentation. After the Talk, Prof. Dr. Zahoor Ahmed Swati, Vice Chancellor University of Agriculture Peshawar appreciated the efforts of Pakistan Science Foundation and stressed the teachers & students to visit the expo to get information because this is the golden opportunity for students. The models are full of very precious and compact material and also highlight the importance of Water which is basic need for life. At the end Prof. Dr.

Khalil Ahmed Ibupoto Chairman Pakistan Science Foundation presented the activities Pakistan Science Foundation across in the country for the development and popularization of Science. A large number of students of different schools visited the said exhibition.

Quetta: After catching 14807, visitors and students at Islamabad, Sargodha, Mirpur (AJK) and Peshawar, the last station of the expo was Quetta. Where, it was held w.e.f. 10-12 June, 2014 at Arfa Karim Randhawa Expo Centre, BUIITEMS, Quetta. The expo was inaugurated by Dr. Muhammed Ayaz Khan Malghani, Pro-Vice Chancellor, BUIITEMS. He praised and appreciated the efforts of PSF. The ceremony was attended by Govt. officials, dignitaries, teachers and students. The closing ceremony was held on 12th June 2014 at Arfa Karim Randhawa Expo Center BUIITEMS Quetta. In this Expo large number students and general public were participated to get firsthand knowledge on "Water". The chief guests French Ambassador H.E. Mr. Philippe THEIBAUD, and other honorable guests Federal Secretary, MoST Mr. Kamran Ali Qureshi. PSF Chairman, Prof. Dr. Khalil Ahmed Ibupoto VC BUIITEMS, Engr. Ahmad Farooq Bazai visited the Expo models. In collaboration with Pakistan Education Foundation, students from different schools of Quetta also displayed their models/projects relating to water. The honorable guests also appreciated the students of schools and colleges for preparation of models on water. After that formal closing ceremony was held. Prof. Dr. Khalil Ahmed Ibupoto Chairman PSF welcomed the honorable guests and other participants and briefed the audience about mutual collaborative activities taken by PSF and French Partners so far. The Federal Secretary, MoST Mr. Kamran Ali Qureshi gave his remarks about the activities and appreciated the efforts and he assured his cooperation for this national cause. Afterwards, the chief guest French Ambassador H.E. Mr. Philippe THIEBAUD gave his remarks and appreciated the efforts taken by PSF and BUIITEMS for the arrangement of this traveling Expo and he also appreciated the efforts of students for making exhibits/models on water. At the end VC BUIITEMS, Engr. Ahmad Farooq Bazai thanked the, honorable guests and all participants for sparing their times to attend this ceremony. More than 2093 students, teachers and general public visited the expo.

2.1.9. Participation of Pakistani Students in London International Youth Science Forum (LIYSF)-2013

Pakistan Science Foundation, under its Science Popularization activities in collaboration with British Council sponsored five young science students for Participation in London International Youth Science Forum (LIYSF) which was a two week residential event held at Imperial College London w.e.f 16-30 August, 2012. Prof. Dr. Manzoor H. Soomro, Chairman

PSF lead & guided the participants and discussed possible collaboration for science popularization & promotion activities with the organizers of LIYSF. There were different events, lectures and demonstrations from leading scientists, visits to industrial sites, research centers, scientific institutions and organizations, including world class laboratories and universities. Activities of the LIYSF-2012 were:

- Lectures and demonstrations from leading scientists
- Seminars, debates and discussions on scientific topics of world concern
- Visits to industrial sites and research facilities
- Visits to academic research centres in London, Oxford and Cambridge
- Visits to the Science Museum and the Natural History Museum
- Social activities, including discos, inter-hall competitions, a light-hearted international cabaret and an evening of Songs of Home.
- Optional sightseeing tours of London, Stonehenge and Salisbury, Windsor and Hampton Court
- Optional visits to some of the best shows in London theatres

2.1.10. High School Summer Science Research Programme (HSSSRP)

PSF and Pakistan Society of Computational Science/Biology (PSCSB) jointly organized High School Summer Science Research Programme (HSSSRP). In this regard Inaugural Ceremony was held on 9th July, 2013 at PSF Auditorium. PSF Chairman Prof. Dr. Manzoor H. Soomro, was the Chief Guest of the occasion. The inaugural ceremony was attended by participants of the camp, their mentors, teachers, students and scientists from different organizations. PSCS President Dr. Ismail, PSF Board of Trustees Member Dr. Aslam Baig, PSF Member Science, Dr. Khalil Ahmed Ibupoto and Principal Scientific Officer Dr. Naushaba Atta and Cultural Attache of French embassy Gilles Angles were also present at the inaugural ceremony. Dr. Soomro highlighted PSF activities for promotion of S&T research and popularization of science in the country and spoke about collaborative programmes of the Foundation, especially joint activities of PSF, Intel Pakistan, National Centre for Physics, UNESCO, European Union, British Council, different universities of Pakistan and Embassy of France in Pakistan. Dr. Ismail said the purpose of HSSSRP is to promote science at school level and give high school students hands-on research experience by working on research projects with top class scientists from public and private universities in different parts of Pakistan. Cultural Attaché of French embassy Gilles Angles said the French Embassy is working in partnership with PSF to introduce science to students, which is a major challenge. He hoped that this programme will help to cope with this challenge. PSF Member Science Dr. Ibupoto, Dr.

Aslam Baig and Dr. Naushaba Atta also spoke on this occasion. A group of students also gave a presentation on "Why Sky Looks Dark at Night?" They explained this phenomenon through experiments and left some questions for audience to think and find their answers. As, PSF and Pakistan Society of Computational Science/Biology are collaborating for organizing High Summer School Science Research Programme, a competition was arranged in which 40 students from different cities participated. Pakistan Society of Computational Science/Biology with the support of PSF organized Annual Computational Science Conference 2013 at International Islamic University, Islamabad w.e.f. 21-25 Oct, 2013. Out of 40 students 20 presented in the conference and after evaluation and judgment process best three students were selected and the prize money was awarded to them. In the closing ceremony held on 25.10.2013 at the same venue, Dr. Khalil Ahmed Ibupoto Chairman PSF was the Guest of Honor and Dr. Naushaba Atta, PSO also participated. Dr. Khalil Ahmed Ibupoto also addressed the audience and encouraged the young generation for participation in such type of activities and distributed prizes among winners.

2.1.11 Collaboration with Intel, Pakistan

PSF and Intel are collaborating for Intel Science Fairs in Pakistan. In this regard provincial science fair was arranged on 5-6 Oct, 2013 at Institute of Space Technology, Islamabad. In which some PSF's Officers participated as volunteer judges. The closing ceremony of the same was arranged on 5th Oct, 2013 in the Auditorium of IST. Dr. Khalil Ahmed Ibupoto, Chairman PSF was the Chief Guest of the occasion. He also distributed prizes and medals among the winner students of Provincial Science Fair.

Intel Education in collaboration with Pakistan Science Foundation (PSF) the organized Provincial Science Fair titled as "Inspiring Young Minds to Change our World." in Quetta on the occasion of World Space week arranged the SUPARCO at Arifa Karim Randhawa Expo Center BUIITEMS Quetta from 8th to 10th October, 2013. The World Space Week was inaugurated by Engr. Ahmad Frooq Bazai, Vice Chancellor, and BUIITEMS Quetta. Mr. Maqbool Ahmad (Assistant Director PSF) and Mrs. Khadija Bashir Intel Education (Project Director) PSF Staff Balochistan Unit Quetta were Present at the inaugural ceremony. Mr. Zafar Iqbal (Director) SUPARCO Karachi, Mr. Khalid Hussain yousafzai (Director) SUPARCO Quetta, Pro Vice Chancellor BUIITEMS, Dr. M.A. K Malghani, Registrar BUIITEMS, Mr. Jamal Mustafa were also present. Vice Chancellor BUIITEMS Mr. Ahmad Farooq Bazai visited to the models displayed in the Expo center. Around 1000 students, faculty members and general public visited. Representative of the print and electronic media

were also present on the occasion. The closing ceremony of Provincial Science Fair titled as “Inspiring Young Minds to Change our World.” was held on October 10TH 2013 at Arifa Karim Randhawa Expo Center BUITEMS Quetta. At the end of closing ceremony Mr. Maqbool Ahmad AD distributed medals and certificates to the students and teachers.

Intel with the collaboration of PSF arranged Intel Science Fair-2014 at Sir Syed Memorial Society, Islamabad w.e.f.26-29, Jan, 2014. Some Officers PSF, PASTIC and PMNH participated as volunteer judges in the event. The closing ceremony was held on 29. 01.2014. In which, Mr. Kamran Ali Qureshi, Seceretary, MoST was the Chief Guest of the occasion. PSF’s Chairman, Dr. Khalil Ahmed Ibupoto and some officers also attended the ceremony. They also addressed the audience and distributed medals and certificates among winner students of the event.

Pakistan students shined in the Intel International Science and Engineering Fair (ISEF) held from 11th May to 16th May 2014 at Los Angeles, California, USA. The Wind Turbine Project of three students from Punjab Daanish School (Girls Branch), Hasilpur, won 5th position in ISEF and they got \$1000 prize on May 15. The students included Sana Batool, Iqra Irsahd and Shazia Bibi. Under ISEF 2014 they were awarded Mawhiba’s Special Award 2014 by the King Abdul Aziz and his Companions Foundation for Giftedness and Creativity. Nine students team represented Pakistan in the ISEF. Mr. Ejaz Ahmed Mian, Additional Secretary, Ministry of Science and Technology, Dr. Naushaba Nadeem from Pakistan Science Foundation (PSF) and Adbul Jabbar Shaeen, Secretary School, Punjab, led the Pakistani students.

It is pertinent to mention that Intel Education Initiative Pakistan in collaboration with PSF hold Intel National Science Fair every year to promote research-based learning at an early age so that children can develop 21st century skills and compete effectively in the knowledge based economy of the future. Intel National Science Fair was held from January 26-29, 2014 at Sir Syed Memorial Complex, Islamabad and the students who won at the national level competed in ISEF. These nine students who won at the national level competed with 1,700 students gathered from around the world to showcase their talent and genius in largest pre-college science fair conducted around the globe. ISEF is the only science fair competition that is held on such a huge scale for youth that is enrolled in class 8-12.

As Part of its Science Popularization activities, PSF collaborated with Intel Education, Pakistan and Federal Directorate of Education in organizing Science Excel Camp for the

Science students of class 9th to 12th on June 10, 2014 at Islamabad College for Girls F-6/2, Islamabad. An orientation session was organized for the schools of Islamabad regarding the preparation of Science Fair going to be held in September-October 2014 at Islamabad. In this regard, mentors/resource persons from PSF, PASTIC, PMNH and Pir Mehr Ali Shah, Arid Agriculture University, Rawalpindi (PMAS-AAUR) and other institutions in the field of Biology, Chemistry, Computer Sciences, Mathematics and Physics participated to guide the students for their projects in the relevant subjects.

In the opening ceremony, Mr. Abdul Waheed, Director (training), FDE introduced the students about the purpose of organizing this mentorship camp and emphasized the students to bring new and innovative ideas. Two resource persons from PASTIC and PMNH namely Mr. Saifullah Azim, Sr. System Analyst and Mr. Rafaqat Masroor, Research Associate briefed the teachers and students about research in sciences and how to plan and conduct the research in the relevant field.

After wards mentors in their relevant field guided the students and teachers about their projects and briefed them how to write an abstract or synopsis. More than 300 students and teachers participated in the camp and 60 projects were registered during the camp.

At the end, Mr. Rafique Tahir, Joint Education Advisor, CA&DD appreciated the efforts of PSF, FDE and Intel for this national cause of popularization of science. It is worth to mention here that PSF has signed MoU with Intel, Pakistan for mutual collaborative activities for promotion of Science and also collaborate in organizing provincial, National and International fairs and PSF also provides Judges/Mentors for these Science fairs.

The participants of Intel International Science and Engineering Fair (ISEF) held from 11th May to 16th May 2014 at Los Angeles, California, USA, were awarded cash prizes and gifts at Pakistan Science Foundation (PSF) on June 19, 2014 to appreciate their talent.

Member National Assembly, Chaudhry Munir Azhar was the Chief Guest on this occasion. Ministry of Science and Technology's Additional Secretary, Mr. Azhar Maqsood, PSF Chairman, Prof. Dr. Khalil Ahmed Ibupoto, Intel Education Pakistan Representative, Ms. Khadija Bashir and PSF Chief Scientific Officer Dr. H. U. Khan were also present at this occasion.

Chaudhry Munir Azhar said that such function aimed at encouraging and appreciating talented students to take them towards the heights of success. The MNA said he was proud that the Danish Public School established by Punjab Chief Minister Mian Shahbaz Sharif in a

far flung area of the country won laurels for the country. He hoped that these students will take the country to heights of progress and other students will get inspiration from them.

Ministry of Science and Technology Additional Secretary Mr. Azhar Maqsood highlighted the importance and history of science and technology in the country. He said the PSF and Intel collaboration is resulting into the participation of students from far flung areas of the country into international science fairs and bring forth their hidden talent.

PSF Chairman congratulated the talented students who first won competition at national level and then represented Pakistan at international level. He said PSF in collaboration with Intel is supporting and guiding students to take part in international science events.

Intel Education Pakistan Representative Ms. Khadija Bashir and PSF Chief Scientific Officer Dr. H. U. Khan also spoke on this occasion. They appreciated the cooperation of different S&T organizations and Ministry of Science and Technology. They also congratulated the students who won the International Competition. They also congratulated the teachers/mentors of participating students.

In the end, cash awards and gifts were distributed among winners of Intel National and International Science Fairs.

It is pertinent to mention that these nine students team represented Pakistan in the ISEF and the Wind Turbine Project of three students from Punjab Daanish School (Girls Branch), Hasilpur, won 5th position in ISEF and they got \$1000 prize on May 15. The students included Sana Batool, Iqra Irsahd and Shazia Bibi. Under ISEF 2014 they were awarded Mawhiba's Special Award 2014 by the King Abdul Aziz and his Companions Foundation for Giftedness and Creativity.

2.1.12 Students Fête on Energy

PSF with the support of French Embassy, Islamabad and in collaboration with Private School Network (PSN) organized the two days event titled "Students fête on Energy" at International Islamic University, Faisal Mosque Campus, Islamabad on December 19-20, 2013. Students from over 25 schools of Islamabad and surrounding areas participated in the fête. The main activities included Students Project Competition, Essay Competition, Poster Competition, Speech Competition, Quiz competition, Water Bottle Rocket Competition and Paper Plane Competition. All the competitions were held on 19 Dec, 2013. The closing ceremony was held on 20.12.2013 at International Islamic University, Islamabad. Mr. Najib Khawar Awan, Additional Secretary, Ministry of Science and Technology (MoST) was the Chief Guest on

this occasion. PSF Chairman Prof. Dr. Khalil Ahmed Ibupoto, IIUI's Academic Affairs Vice President Dr. Mumtaz Ahmed and PSF Member Finance Mr. Haider Zaman Khattak were also present.

Speaking on the occasion, Mr. Awan said it is encouraging that PSF, Private Schools Network, Embassy of France, UNESCO and other stakeholders have taken this initiative to create awareness about science, especially on energy, among youth of the country. He said different activities like stalls, speech, essay and quiz, paper planes and water bottle rocket competitions, during the fete covered almost every aspect of the theme. Dr. Khalil Ahmad Ibupoto, Chairman PSF said the young scientists' creations during the fete were remarkable. He said students' interest in the topic demonstrates that they have potential to find ways and means in order to overcome the energy problem. He also said that MoST is fully supporting Pakistan Science Foundation to promote science at grassroots level and the Foundation is grateful for its guidance and support. Dr. Mumtaz said students' knowledge on the topic impressed him very much. He said that energy crisis is the top most problem of the country and exploration of alternative energy resources, long planning and political will is required to cope with it.

Later on, Engr. Anwar Aziz Khan, Technical Director, PCRET delivered a talk/Presentation on Solar Energy. During the ceremony, a quiz competition was also held and gift hampers were distributed among the students. In the end, Mr. Najib Khawar Awan and Dr. Ibupoto distributed cash prizes and certificates among winners of different competitions.

2.1.13 2nd Winter Science Camp-2013

PSF and NCP jointly organized 2nd one day Winter Science Camp-2013 at National Centre for Physics, Islamabad on 18.12.2013. In the event talented and interactive young Pakistani students educational institute participated. The main theme of the event was to develop science culture among youth in Pakistan and to motivate and inspire young Pakistani science students to adopt research careers in high grade science & technology. The programe included thematic lectures, orientation sessions, visit to scientific laboratories, group activities and discussions. During the event, Dr. Hamid Saleem, DG, NCP delivered his lecture on Plasma Physics, while Dr. M. Aslam Baig, H.I., S.I., T.I., NCP gave lecture on Atomic Physics. Dr. Ayesha Kausar Malik, Asstt. Professor, NCP delivered presentation on Nano Sciences.

Science & Mathematics Olympiad (SMO)-2013, A Joint Venture of PSF and FDE

As part of science popularization activities PSF also liaises with FDE for arranging Science Expos, essay and poster competitions. PSF is already undertaking these two important programs in collaboration with FDE. For further expansion of mutual activities PSF collaborated with FDE to conduct Science & Mathematics Olympiad 2013 for the students. The final competition and prize distribution ceremony was held on January 28, 2014 at PSF Auditorium. The Olympiad was aimed at inspiring and inculcating creative approach among the young students.

Prior to this, the competition was arranged at the all the schools associated with FDE at primary level. All students of primary level participated in the competition. Two toppers from each school were selected and competition was held on sector level. From each sector 10 top position-holders were selected for final competition held on January 28, 2014 at PSF and 60 students participated in it. Result of the said competition was announced on the same day. PSF Chairman Prof. Dr. Khalil Ahmed Ibupoto was the Chief Guest at the Prize distribution ceremony, attended by students, teachers and scientists from different R&D organizations. FDE DG Dr. Shahnaz A. Riaz, PSF Member Finance Haider Zaman Khattak, FDE Director Training Mr. Abdul Waheed, PSF Chief Scientific Officer Dr. H.U. Khan and Principal Scientific Officer Dr. Naushaba Atta were also present on this occasion.

PSF Chairman Prof. Dr. Khalil Ahmed Ibupoto, FDE DG Dr. Shahnaz A. Riaz, FDE Director Training Mr. Abdul Waheed, Ms. Farida Yasmeen, Principal, Mr. Riaz Ali, AEO and PSF Chief Scientific Officer Dr. H.U. Khan addressed the prize distribution ceremony.

Addressing the ceremony, the PSF Chairman said the Foundation despite meager financial resources is carrying out different science activities for the students across the country.

Participation of Pakistan Science Foundation in Punjab Youth Festival 2013-14 (1st-3rd March, 2014)

S&T organizations participated in S&T Expo held on 1-3 March, 2014 at Expo Center, Lahore during the Punjab Youth Festival. Mr. Hamza Shahbaz Sharif, MNA/Chairman Steering Committee requested the ministries including Ministry of Science & Technology for participation in the PYF 2014. Ministry of Science & Technology (MoST) Designated Pakistan Science Foundation as Focal organization for S&T organizations regarding arrangements of S&T Pavilion in the Punjab Youth Festival. The basic Purpose of this event to provide an opportunity to the citizens of Pakistan of all ages to indulge in healthy activities

and one of important dazing feature of Punjab Youth Festival 2014 is revival of economic activity in the CountryPSF coordinated with all S&T organizations and obtained their data for participation in S&T Expo. In this regard, number of meetings was arranged regarding arrangements of participation of MoST in Punjab Youth Festival.

All S&T organizations under Ministry of Science & Technology showcased their achievements and products at their kiosks which contained Story Boards, Large Screen LCD Displays, and Touch Screen System for self-oriented learning of students & visitors, Posters, Brochures and Presentations.

PSF and its two Subsidiary Organizations namely PASTIC and PMNH participated in S&T Expo w.e.f. 1-3 March, 2014 and arranged their stalls. The S&T Expo was inaugurated by Federal Minister for S&T Mr. Zahid Hamid Khan on 1st March, 2014 at Expo Center, Lahore. He alongwith Rana Mashhood, Provincial Minister for Sports and distinguished guests visited all stalls including PSF. Dr. Khalil Ahmed Ibupoto, Chairman; PSF briefed him about PSF stall and activities. Dr. Khalil also presented PSF souvenir to S&T Minister. Provincial Minister for Sports Rana Mashhood, DG Sports Mr. Usman Anwar and Advisor for Chief Minister also visited PSF Stall. All the guests showed keen interest in Planetarium, quiz show and dinosaurs models and appreciated PSF stall.

PSF team including Dr. Naushaba Atta, PSO, Dr. Mirza Habib Ali, PSO (NSLP), Mr. Abdul Rauf, SSO, Mr. Iqbal-ud-Din, Sr. MFI, Mr. Nusrat H. Zaidi, Sr. Graphic Artist, Ms. Zaiban Farooq, Assistant Director (Caravan), Ms. Madiha Rafique, SO, Mr. Muhammad Rafiu, SO, Mr. Muhammad Rabnwaz, Sr. Planetarium Assistant, Mr. Zulfiqar Ali Soomro, Science Assistant, Mr. Latif, Sr. Electrician, and supporting staff performed their assigned tasks with devotion in the event and make it a successful participation for PSF.

PSF, PASTIC and PMNH has jointly participated in this event and organized number of activities on this occasion, like Science Caravan Exhibition, Planetarium shows, Quiz Competitions, display of two working dinosaur models, display of PMNH specimens and PASTIC awareness stall. In addition, Dr. Mirza Habib Ali, PSO, NSLP delivered a popular science lecture on "*Career Entrepreneurship*" on 1st March 2014 and Dr. Muhammad Ismail Bhatti, Associate Curator, PMNH also delivered a lecture on "*Medicinal value of Indigenous Plants of Pakistan*". Promotional material was also distributed among the visitors.

The Expo was closed on 3rd March, 2014. The Expo was visited by nearly 30000 people including students, teachers, researchers, and general public. As per obtained data from the Expo Centre, approximately 25500 vehicles visited the site during S&T Expo. All the visitors took keen interest in PSF stall especially in Planetarium show, Quiz Competition and Dinosaurs models and appreciated the efforts of PSF for popularization of science at grassroot level. Feedbacks from the visitors on prescribed forms were also obtained.

2.1.14 Other Activities

Meeting with Head Teacher Ellington Primary School and Nursery

As part of its international liaison for promotion of science education, PSF holds a meeting with Mrs. Rehana Juna, Head Teacher Ellington Primary School and Nursery, Cookham Road, Maidenhead, Bkeshire, UK. The Chairman, PSF presided over the meeting. Possibilities for initiation of mutual activities between Pakistani and UK schools with support of British Council were discussed. Mrs. Rehana assured her full support to PSF in any program for betterment of Pakistani students, specifically under British Council Project "Connecting Classrooms".

Participation in E-village, Training Conference on ICT for Development

PSF Science Caravan Units Incharges and officers from Science Polarization section participated in a two days training workshop/conference held on 1-2 Dec, 2013 at Marriot Hotel, Islamabad which was being organized under the joint initiative of E-village Foundation and 'Pakistan Institute of ICT for Development. The objective of the said workshop was to build required capacity and to create the awareness about Information and Computer Technologies (ICTs) in the areas of Health, Education, Agriculture, Governance etc. within the relevant stake holders in Public and Private organizations and NGOs.

Participation in AFAQ Educational Festival, Rawalpindi

PSF arranged an awareness stall at Rawalpindi Arts Council for two days on 29-30 January, 2014 on the occasion of AFAQ (Association for Academic Qualification) Educational Festival. During this festival variety of academic activities were conducted including science project competitions of the students. Mr. Riaz Ahmed, SO, Mr. Irfan Ahmed, SO and Mr. Muhammad Rafiu, SO from PSF participated as Judges for evaluating the projects. Mr. Tariq Chaudhary, MNA attended the Festival as Chief Guest and appreciates the effort of Pakistan Science Foundation to promote the Science activities. At the end Judges received appreciation shields and certificates.

Participation in UNESCO Event, RAHA: At the Forefront of FATA's Uplift

PSF in collaboration with UNESCO organized Science popularization activities for the students of Jamrud and surroundings, Khyber Agency Science Caravan Peshawar Unit arranged the activities in Govt. Higher Secondary School, Jamrud, Khyber Agency w.e.f. 15-30 April, 2013. Following activities were carried;

- Science Caravan Exhibitions
- Planetarium and Film shows
- Speech Competitions
- Quiz Competitions
- Distribution of Scientific literature
- Science Clubs in selected schools
- Teacher Training Sessions on Inquiry Based Science Education

Besides this, numbers of other activities were also carried out by UN agencies and some other organizations. For the acknowledgment and obtaining feedback of the said activity, UNESCO arranged a ceremony at Serena hotel Islamabad on 23.01.2014. In which heads of UN agencies, Japanese Ambassador to Pakistan, H.E Mr. Hiroshi Inomata participated and Representative from FATA Directorate, Mr. Abdul Rauf, SSO/ Coordinator Caravan, PSF and some other officials also attended the event. Students from Jamrud along with teachers also participated on this occasion and display their projects. Science Caravan Exhibition was also arranged. Mr. Abdul Rauf, SSO/Coordinator Caravan also spoke the audience and give the brief of activities carried out in Khyber Agency. A student from Govt. High School Jamrud also gave his views about Science Popularization activities. All the guests also visited PSF Caravan Exhibition and greatly appreciated the efforts of PSF.

9th Inter School Mathematics Olympiad (ISMO) Prize Distribution Ceremony

PSF in collaboration with Pak-Turk International Schools & Colleges organized 9th edition of Inter Schools Mathematics Olympiads (ISMO). More than 11000 students from all four provinces and capital of Pakistan participated in the mega educational competition. The competition was held in 9 cities at 22 venues simultaneously. The every year increasing number of the participating students showed the credibility and transparency of the event. The competition was open for the students of government Schools as well as those of private schools and for both genders. The cash prizes for the top three positions were Rs.50,000,

40,000 and 30,000 respectively for class 5, 6, 7 and class 8 categories. The total prize money of the event was more than Rs. 1 million.

The prize distribution ceremony was held here at Marriott Hotel Islamabad on Tuesday 11th February 2014. Federal Minister for Science & Technology, Mr. Zahid Hamid was the Chief Guest of this mega Educational event. Dr. Khalil Ahmed Ibupoto, Chairman PSF was the Guest of Honour of the Occasion. High government officials, prominent businessmen, students, teachers, heads of educational institutions, educationists and parents of the winning students also attended the prize distribution ceremony, held here in Marriott Hotel Islamabad. Chairman Pakistan Science Foundation, Dr. Khalil Ahmed Ibupoto and Vice Chancellor of Islamia University Bahawalpur, Professor Dr. Muhammad Mukhtar gave away some of the prizes to the position holders.

In his welcome address, the Chairman, Pak-Turk International Educational CAG Educational Foundation said that in order to arouse interest for the all-important subject of mathematics, PakTurk International Schools & Colleges have been organizing Inter Schools Mathematics Olympiads (ISMO) for the last 9 years. Mr. TOSUR said, "It is a fact that there are not enough chances for our students to exhibit their talent to the world. There is an immense need of such programs for our brilliant youth. This unique competition provides a great chance for the students to show their incredible potential and win handsome prizes."

In his address, Mr. Zahid Hamid expressed his pleasure over this step taken by PakTurk International Schools & Colleges. He said that such events provide our youth the chance to show their talent to the world. He further said that the friendship between Pakistan and Turkey is beyond the time and borders. "I strongly believe in the motto of PakTurk Schools; "TWO COUNTRIES, ONE NATION", Mr. Hamid said. The minister congratulated the students, their parents and teachers for their performance and lauded the administration of PakTurk Schools for organizing such an event for the students.

PSF Participation in the event titled "Mobilizing Youth for Culture of Peace" at NUST, Islamabad

PSF and PMNH arranged a stall during the occasion of an event Mobilizing Youth for Culture of Peace" at NUST, Islamabad on 6th February, 2014. Ms. Irina Bokova, Director General, UNESCO alongwith Dr. Khalil Ahmed Ibupoto, Chairman PSF and Mr. Muhammad Baligh-ur-Rehman, Minister of Education Trainings & Standards in Higher Education visited the National University of Science and Technology (NUST). She met the

students and inspected various stalls from the students and Pakistan Science Foundation. She also addressed the students on "Mobilizing Youth for Culture of Peace". Dr. Naushaba Atta, Principal Scientific Officer briefed about PSF activities she also visit the PMNH Stall.

Participation in 2nd National Quality Policy Forum

Federal Ministry for Science & Technology organized a forum on "Finalization of National Quality Policy" on 20th March, 2014 at Ramada Hotel, Islamabad. Mr. Zahid Hamid, Federal Minister S&T chaired the opening session of the forum. Chairman PSF, Dr. Khalil Ahmed Ibupoto with some other officers from PSF also participated in this forum. Engr. Esam Al.Qararah, Representative, UNIDO made introductory remarks and welcomed all stake holders. Mr. Zahid Hamid, Federal Minister of Science & Technology addressed the participants and also highlighted the need of import and export products to accelerate the economic & social development of Pakistan. He also realized the importance to meet quality and regulatory requirement of International market. He also added that relevant Government policies and actions are required. He concluded that through this quality policy, Government of Pakistan commits to develop and implement a technical regulation framework that will be followed by all ministries. Dr. Martin Kellermann, Internal Expert hold the technical session. At the end, Mr. Kamran Ali Qureshi, Secretary, MoST concluded this forum with the remarks that the quality policy can be considered the best arrangements for National Quality Infrastructure and technical regulation frame work.

2.1.15 Signing of MoUs

PSF & PMAS-AAUR Signed MoU for Scientists Capacity Building

A Memorandum of Understanding (MoU) was signed between Pakistan Science Foundation (PSF) and Pir Mehar Ali Shah Arid Agriculture University Rawalpindi (PMAS-AAUR) on March 14, 2014 at PMAS-AAUR to develop cooperation and collaboration for capacity building of Pakistani scientists, teachers and students through mutual collaborative activities and S&T initiatives in various fields of Sciences including Agricultural Sciences with particular focus on arid and semi arid regions, which can result in betterment of general economic conditions of the masses.

PSF Chairman Dr. Khalil Ahmad Ibupoto and PMAS-AAUR Vice Chancellor Prof. Dr. Rai Niaz Ahmad signed the MoU on behalf of their respective organizations in the presence of Punjab Governor Muhammad Sawar. PSF Member Finance Mr. Haider Zaman Khattak and Chief Scientific Officer Dr. H.U. Khan as well as other dignitaries and University Faculty

members were also present on this occasion. Under the MoU, PSF and PMAS-AAUR mutually agreed that both organizations will work together for promotion of different disciplines of science with special focus on agriculture in arid areas of the country. Both the institutions will undertake joint initiative for attracting students towards science and improve science teaching through training of pre-service teachers.

2.1.16 Future Plans/Targets

- Organizing International Exhibition in Pakistan (in collaboration with French Embassy, Pakistan/UNESCO)
- Training of PSF officers from Centre Sciences-Orleans, France (by support of French Embassy)
- International Training Workshop of Pakistani Teachers on IBSE
- Foreign Trainings of PSF Officers on IBSE
- Strengthening of Science Centre, Faisalabad
- Organizing National Youth Science Forum
- Strengthening and modernization of Science Caravans
- Enhancement of all Science Popularization activities.

3.0 INTERNATIONAL LIAISON

3.1 Collaboration with International Organizations

Liaison with Foundations, Academies, Science Centres, Museums and International bodies around the world provide many benefits and challenges. These include achieving greater awareness of a diverse, complex and interdependent world, exchange of expertise and professional development through undertaking collaborative research projects. During the period under report, 15 proposals of PSF, PASTIC & PMNH for S&T collaboration with Turkey, Argentina, European Union, Uzbekistan, Mexico and Russia were forwarded to MoST for consideration under various S&T Protocols/Agreements/MoUs signed by the Government of Pakistan.

3.2 Other International activities

Following MoU's were taken up with MoST/concerned International bodies

- i. MoU between Pakistan Science Foundation (PSF), Islamabad and National Science Foundation (NSF), Sri Lanka
- ii. Protocol on cooperation in Science and Technology between the Scientific and Technological Research Council of Turkey (TUBITAK) and Pakistan Science Foundation

- iii. MoU between Pakistan Science Foundation, Islamabad and Economic Cooperation organization-Institute of Environmental Science & Technology (ECO-IEST), Iran.

4.0 PLANNING AND DEVELOPMENT ACTIVITIES

4.1 Activities under Development Budget

4.1.1 On-going Development Project

“Participation of Scientists and Technologists in International Science Conferences, Seminars, Workshops and Trainings Abroad (Phase II)”

The project is aimed at providing financial assistance to Pakistani scientists, technologists, doctors and engineers working in R&D organizations and educational Institutions. The objectives of the project are as under:

- To provide financial assistance to Pakistani Scientists, Technologists, Doctors and Engineers working in R&D organizations and educational institutions as well as Ph.D students for,
 - i. participation and presentation of research papers in International Conferences, Seminars & Workshops abroad;
 - ii. attending short term (1-2 weeks) specialized training course or obtaining training on specialized laboratory equipment in laboratories of the advanced countries;
 - iii. undertaking part of research work for which facilities are not available in Pakistan,
- To keep Pakistani scientists and technologists updated about the latest research trends & techniques, enable them to share their experiences, exchange views with scientists in advanced countries.

During the year 2013-14, an amount of Rs. 5.0 million were allocated / released under the PSDP and spent mainly for provision of travel grants to scientists/technologists/ other heads of the project. A total of 308 requests were received from scientists and technologists of the country. After comprehensive scrutiny as per eligibility criteria 174 requests were presented in 08 meetings of Travel Grant Award Committee (TGAC). A total of 134 requests were dropped due to non-confirmation to the eligibility criteria and non-provision of requisite documents by the scientists. Out of the 174 requests presented to the TGAC, 69 were recommended whereas 43 scientists/technologists availed the grant (**Annexure-XII**) and 26

could not proceed abroad due to visa problems and other reasons. However, 105 requests were not recommended by the Committee.

4.1.2 New Development Project Approved

The PSDP project of PMNH entitled “Strengthening of Security and Safety Measures at PMNH, Islamabad” was approved in the DDWP meeting held on 1st January 2014 at the cost of Rs. 15.00 Million for 12 months.

The project is a part of the programme to provide adequate safety and secured environment for various activities meant for the promotion of Science & Technology in the country. The main objectives of the project are as follows,

- To protect government property and valuable natural heritage/ collection of the country, stored and displayed at PMNH.
- To provide safety to the PMNH employees and visitors of PMNH

4.1.3 New Development Projects Submitted to MoST

PC-I of following PSDP projects were submitted to MoST for the consideration/approval of CDWP forum.

Project Title	Duration (months)	Amount (Million)	Status
Establishment of Five Science Centres in Various Cities of Pakistan	36	824.466	The PC-I was forwarded to MoST in February 2014 at a total cost of 812.176 Million. In response MoST forwarded the comments of two reviewers for further revision. PC-I revised in light of reviewers comments have been submitted again to MoST at the cost of Rs. 824.466 Million in September 2014.
Financial Support to Scientific Societies in Pakistan (Phase-II)	36	38.440	The PC-I was deferred in the DDWP meeting held on 1 st January 2014 with some observations. The revised PC-I in light of DDWP observations has been forwarded to MoST/ Ministry of Planning, Development & Reforms in February 2014 for vetting. Response in still awaited.

4.1.4 PC-IV of the completed projects submitted to MoST

- PC-IV alongwith the technical report of the completed project of PASTIC entitled “Strengthening & Enhancement of Reprographic Services of PASTIC” submitted to MoST. The project has been completed at the cost of Rs. 49.438 Million.
- PC-IV alongwith the technical report of the completed project of PSF entitled “Automation of PSF Research Support Programme and Other Activities” submitted to MoST. The project has been completed at the cost of Rs. 17.008 Million

4.2. Activities under Non-Development Budget

4.2.1 International Liaison

Liaison with Foundations, Academies, Science Centres, Museums and International bodies around the world provide many benefits and opportunities for future collaboration. It may also result in greater awareness of S&T programmes of international organizations, exchange of expertise and professional/organizational development through undertaking collaborative research projects. During the period under report, three (03) proposals of PASTIC & PMNH for S&T collaboration with SAARC Development Fund (SDF), Thailand and Tajikistan were forwarded to MoST for consideration under various S&T Protocols/Agreements/MoUs signed by the Government of Pakistan.

Other International activities (submission of reports/ information):

- Protocol on cooperation in Science and Technology between the Scientific and Technological Research Council of Turkey (TUBITAK) and Pakistan Science Foundation was signed on 17th September 2013. The Protocol is aimed to encourage and support co-operation in the field of Science and Technology between research entities, universities and research institutes of Turkey and Pakistan according to the provisions of the Protocol and the existing legislation and regulations of each country. The MoU is under implementation with Research Support Section of PSF.
- High-Tech Innovation, Technology Collaboration; Potential between Pakistan and EU
- Inter Summit Sessions (Maldives, 17-20 February, 2014)
- Following MoU's were taken up with MoST for signing with concerned International bodies
 - i. MoU between National Museum of Natural History, Paris and Pakistan Museum of Natural History (PMNH), Islamabad

- ii. MoU between Pakistan Museum of Natural History (PMNH) and Natural History Museum of Florence University, Italy
- iii. Proposed Collaboration between PSF and Ev-K2-CNR
- iv. MoU for Scientific & Technological Cooperation between Pakistan Science Foundation (PSF), Islamabad and National Science Foundation (NSF), Sri Lanka
- v. MoU between Pakistan Science Foundation, Islamabad and Economic Cooperation Organization-Institute of Environmental Science & Technology (ECO-IEST), Iran

4.3 Other Activities

Submission of important reports to MoST/ Planning Commission

- Analysis/ Recommendations for Cabinet Committee on Restructuring (CCOR)
- Preparation of Pakistan Vision 2025 and 11th Five Year Plan 2013-18
- Fixing of Targets and Submission of Regular Report on Achievements of the Same
- Monthly Progress Report (Short Term and Long Term Targets/Action Plan)
- One Pager Project Brief of PSDP Projects

Technical Views/ Comments on the PC-Is received from MoST

Technical views/comments on the following projects were submitted to MoST.

- Technical Assistance (TA) Grant for Feasibility Study of Establishment of National Science & Technology Park (NSTP)
- Establishment of Pakistan Academy of Science & Technology Management & Planning (PASTMP)

Replies to the National Assembly Question

- Starred National Assembly Question. No. 75, 3rd Group, 4th Session Moved by Mr. Muhammad Riaz Malik, MNA Will the Minister for Science & Technology be pleased to state: The attached department-wise performance made by the Ministry to promote Science and Technology in the country during the last three years?

Compilation of Presentation to the National Assembly Standing Committee Meeting on Science & Technology held on 17th March, 2014 in Committee Room No.2, First Floor, Parliament House Islamabad regarding development projects of PSF and PMNH included in PSDP 2014-15.

**II. PAKISTAN MUSEUM OF NATURAL HISTORY
(PMNH)**

Pakistan Museum of Natural History (PMNH), a subsidiary organization of Pakistan Science Foundation. It has four principal divisions namely, Botanical Sciences Division, Zoological Sciences Division, Earth Sciences Division and Public Services Division. The first three divisions are engaged in the collection, identification and research activities related to plants, animals, fossils, rocks and minerals resources of Pakistan respectively; while the latter is responsible for mass education and popularization of natural history.

1.0 Natural History Research

PMNH researchers carried out research studies in connection with UNESCO-MAB Pakistan collaborative project on Biosphere reserves of Pakistan and environmental study with Hagler-Bailly Pvt. Ltd. To build up the natural history specimens repositories of plants, animals, rocks, minerals and fossils, PMNH researchers conducted field works in many localities of the country throughout the year and collected thousands of specimens. Curation, identification, preservation, cataloguing and digitization of thousands of specimens were carried out. Detailed study of the field papers and submitted to reputed national and international journals. Some 20 research articles were published of which 4 were published in national and 16 in international journals. Two popular articles on mushrooms and rocks were published. PMNH researchers produced over a dozen technical reports on their collaborative research projects. PMNH hosted the 5th meeting of the South and Central Asia MAB Network (SACAM). It organized training workshops on Gemstone and Gemology, and Dendrochronology. The Whale shark exhibit was formally inaugurated by Dr. Qian Tang and Dr. Nagata of UNESCO at PMNH Display Centre. An exhibition on Eight Eminent Chinese of Modern Times was also held in PMNH. PMNH celebrated the 12th International Biodiversity Day, 2014 in which 160 students participated along with international organizations/NGOs.

1.1 Botanical Sciences Division

1.1.1 Field Work

- Carried out one week field work of LalSohanra Biosphere Reserve in September, 2013 under UNESCO-MAB Pakistan Programme.
- Collected 473 higher plants from Muzaffarabad district, AKJ.
- Collected 37 algal samples and 32 fungal specimens from Cholistan area.
- Collected 262 higher plants and 180 algae from plants from Lahore area.

- Conducted field visit to Gilgit-Baltistan valleys for baseline studies of CKNP (Central Karakoram National Park, Gilgit-Baltistan) under the MAB program.
- Carried out eight days fields work to Terbella and Pothowar areas. This field resulted in collection of 125 butterflies and 600 beetles.
- Carried out 12 days' field work of the coastal areas of Karachi. About 600 specimens of marine fishes were collected including two skeletons of Indus Blind Dolphin from Sukkur.
- Carried out 3 days' field work in Sargodha and adjacent areas and collected 90 plant specimens.

1.1.2 Laboratory Work

- Identified 2260 herbarium specimens of different higher plants families.
- Catalogued 904 specimens of higher plants
- Curated 3800 higher plants, deep-frozen 2100 higher plants, transferred data of 596 higher plant specimens from field note book to herbarium sheets;
- Identified more than 1775 algal specimens, prepared microphotographs of 925 algal samples, catalogued 570 algal samples, prepared more than 100 slides of algae.
- Identified 111 specimens of Fungi,
- Indexed 399 fungi samples in Index Register, 763 samples of Macro fungi were rearranged, 234 samples of fungi preserved in air tight plastic bags.
- Catalogued 1150 specimens of Fungi.
- Identified 1000 samples of mosses, catalogued 350 moss specimens.
- Curated over 1450 mycological specimens and.
- Entered data of 1121 fungi and 505 higher plants in the BGN database.

1.1.3 National Collaborative Projects

- Baseline studies of CKNP (Central Karakoram National Park, Gilgit-Baltistan) under the MAB program.
- Baseline studies of algae/phytoplankton and aquatic vegetation of Jhelum and Neelum Rivers, AJK through Hagler Bailly Pvt. Ltd.

1.1.4 Publications

National

- Gilani S.A., Sherwani S.K., Khan A.A. & Sahreen S. 2013. Medicinal plants Diversity and its indigenous use in Pakistan. *Int. J. Adv. Res.*, vol. 1, issue 5: 603-608.

International

- Sherwani, S.K., Khan, R., Bhatti, M.I., Rao, T.A., Bokhari, T.Z., Sualeh, M and Kazmi, S.U. 2013. Diuretic Activity and Cytotoxic Study of Various Extracts of *Ganoderma lucidum*. *World Applied Sciences Journal*, Volume 26 Number 7.
- Sahreen, S., Khan R.A., Khan M.R., Shah N.A. 2013. Effect of *Carissa opaca* leaves extract on lipid peroxidation, antioxidant activity and reproductive hormones in male rats. *Lipids in Health and Disease*, 12:90.
- Sherwani S.K., Bokhari T.Z., Bibi Y, Gilani, S.A. Munir S., Shah M.A and Ikramullah (2013) Organoleptic and wormicidal evaluation of various crude extracts of Pomgranate (*Punicagranatum*) peel. *IRJP* 4(7)80-82. ISSN2230-8407.
- Khan R.A., Khan M.R., Shah N.A., Sahreen, S., Elahi, S.N. 2013. Antitumor characterization of various fractions of *Launaeaprocumbens*. *Toxicology and Industrial Health*. Online. doi:10.1177/0748233713500823
- M. T. Chaudhry, M.T., Mohsin, A., Bhatti, M.I., Javed, R.A. and Abbas, G. 2013. First record of *Anaciaeshnajaspidaea* and *Epophthalmiavittata* (Odonata: Anisoptera) from Pakistan. *Iranian Journal of Science & Technology*, 37A4: 445-448.
- Sahreen, S., Khan R. A., Khan M. R., Shah N. A. 2013. Estimation of flavonoids, antimicrobial, antitumor and anticancer activity of *Carissa opaca* fruits. *BMC Complementary and Alternative Medicine*, 13:372
- Sahreen, S., Khan, M.R., Khan, R.A. 2014. Effects of *Carissa opaca* fruits extracts on oxidative pulmonary damages and fibrosis in rats. *BMC Complementary and Alternative Medicine*, 14:40.
- Sahreen, S., Khan M.R., Khan, R.A. 2014. Comprehensive assessment of phenolics and antiradical potential of *Rumex hastatus* D. Don. roots. *BMC Complementary and Alternative Medicine*, 14:47.
- Khan R. A., Khan M. R., Sahreen, S., Bokhari, J. 2014. Protective effects of *Launaeaprocumbens* against oxidative adrenal molecular, hormonal and pathological changes in rats. *Journal of Medicinal Plants Research*, 8(3):162-166.
- Sahreen, S., Khan M.R., Khan R.A., Alkreathy H. 2014. Cardioprotective role of leaves extracts of *Carissa opaca* against CCl₄ induced toxicity in rats. *BMC Research Notes*. 7:224

Popular articles

- Articles published in "Technology Times" entitled "Edible Mushroom in Pakistan" by Ms. Saadia Munir, published in 1-April: vol. 5, issue 13.

1.1.5 Seminars/Trainings/Workshops/Organized

Organized one day training workshop on dendrochronology at PMNH. More than 50 students and faculty members participated in the event. The participants were from NUST, Quaid-i-

Azam University, Islamic International University, PMAS Arid University and Abdul Wali Khan University Mardan. Prof. Dr. Moinuddin Ahmed (Foreign faculty Professor at department of Botany Federal Urdu University of Arts, Science and Technology, Karachi) was the resource person of the workshop. He demonstrated the dendrochronological methods both in the lab as well as in field.

1.1.6 Seminars/Trainings/Workshops/Attended

- Attended Workshop on “Towards better understanding of gold mineralization of the northern areas of Pakistan” organized by National Centre of Excellence in Geology, Peshawar University
- Participated as Resource person in “Health and Habits” on the role of fungi in children diseases and management organized by Society of Facilitators and Trainers of Pakistan (SOFT), National Agriculture Research Centre (NARC) in collaboration with Food and Agriculture Organization (FAO).
- Attended an awareness Seminar on “Horizon 2020” at National University of Science & Technology (NUST), Islamabad.

1.1.7. National/International Collaboration /Liaison

- Attended workshop on “MEDA/ENTRENEURS for the MAPs cultivation study” at Swat Serena Hotel and discussed the possibilities of the linkages between PMNH and MEDA for future collaborative projects.
- Held discussions with the official and personnel from Shijiazhuang Yiling Pharmaceutical Co. Ltd. China headed by Mr. Danny Gao (Regional Manager) International Business Dept.

1.1.8. Services Rendered to Other Organizations

- Guided six scientists from PINSTECH nominated as co-supervisor in Department of Botany, PMAS Arid Agriculture University, Rawalpindi.
- Identified 80 algal species for Department of Botany, GC University, Lahore.
- Identified 15 higher plant specimens for a student of Hazara University, Mansehra, and 40 for a student of Punjab College for Information Technology, Rawalpindi.
- Guided one M. Phil. student as co-supervisor from PMAS Arid Agriculture University, Rawalpindi.

- Identified 103 higher plant specimens for 3 B. Sc. students from Punjab College of Information Technology, Rawalpindi.
- Facilitated students from Hazara University about collaborative research on macro fungi.
- Guided one M. Phil and two Ph.D. research scholars from NUST, University Islamabad.
- Participated in 2 days' event of Alumni Association Network AAN farmer share Mela jointly organized by FAO and NARC Islamabad.
- Continued supervising an internee of BS level student on the subject of "popular article and research paper writing".
- Evaluated answer books of 104 M.Sc. Botany students of Peshawar University.
- Participated in 2 days' event of Alumni Association Network AAN farmer share Mela jointly organized by FAO and NARC Islamabad.
- Continued supervising an internee of BS level student on the subject of "popular article and research paper writing".
- Evaluated answer books of 104 M.Sc. Botany students of Peshawar University.
- Provided training to an internee of BS level student from COMSATS on "popular article and research paper writing".
- Guided a team of American academicians through the PMNH galleries.
- Facilitated M. S. students from INAM, Islamabad.
- Briefed FAO representatives visiting PMNH.
- Guided International delegates from National Testing Service Pakistan
- Briefed visitors in PSF stall at National University of Science and Technology, Islamabad.
- Guided two professors from Sindh University Jamshoro through the display galleries and Herbaria.
- Guided 150 M.Sc. students of University of Peshawar along with their teachers on PMNH display/ Herbaria.

1.2 Earth Sciences Division

1.2.1 Field Work

- Carried out field work in Sargodha and Chiniot area from for the collection of oldest rocks of Pakistan and collected 50 rock specimens.

- Carried out field work in Potwar plateau and collected 200 vertebrate fossils from Siwalik rocks.
- Collected 108 Shale rock samples from Khewra, Salt Range.
- Carried out one day field work on 27th June, 2014 in the Muzaffarabad, Azad Kashmir and have collected 70 specimens of hard rocks
- Conducted one day tour to Bagh Area, AJK for collection of different rocks samples for the Rock Garden.

1.2.2 Laboratory Work

- Identified and catalogued 1665 fossil samples and 250 rock samples.
- Catalogued and digitized 55 Brachiopod and 30 Gastropod fossils.
- Took digital photographs of 412 fossil specimens.
- Entered data of 893 fossils and 10 hard rock specimens in BGN data base.
- Prepared tables for Comparative studies on Enamel Hypoplasia data of Rhinocerotidae from the Neogene Siwaliks of Pakistan.

1.2.3 Publications

National

- Iqbal, N., Yaseen, A., Agheem, M. H., Munir, M., Solangi, S. H., Dars, H. 2013. Clay mineralogy of the early Permian Warcha Sandstone at Katha Area, Central Salt Range, Pakistan. *Sindh. Univ. Res. Jour. (Sci. Ser.)* Vol.45 (2) 281-288(2013).
- Iqbal, N., Yaseen, A., Munir, M., Ahmad, A. 2013. "The petrographic granulometric studies of Early Permian Warcha Sandstone Salt Range Pakistan". *PAPG Journal* No. PAPG-ATC# 012-13.

International

- Jagoutz, O., Schmidt, M.W., Enggist, A., Burg, J. P., Dawood, H. & Hussain, S. S., 2013. TTG- type plutonic rocks formed in modern arc batholiths by hydrous fractionation in the lower arc crust. *Contrib. Mineral Petrol.*, Vol. 166, PP. 1099-1118.
- Pathan, M.N., Usmani, P.A., Lashari, R.A., Sultana, R., Solangi, I.A., Soomro, F. 2013. Benthic Foraminiferal study of Tiyan Formation KambhuJabal Lower Indus Basin. *Internat. J. Biosciences IJB*, ISSN: 2220-6655 (Print) Vol. 4, No. 5, p. 23-27, 2014: 2222-5234. <http://www.innspub.net>.

Popular article

- Article entitled "Reservoir rocks play an important role to economy" published in *Technology Times Weekly* newspaper.

1.2.4. Seminars/Symposia/Training/Workshop Organized

- Organized 3 days training workshop on Gem & Gemology (Gemstone Identification/ Cutting, Polishing, Grading, Value Assessment and Evaluation) at PMNH from 24th to 26th September, 2013 in collaboration with PSF GGIP, PAPG, IGL, PGJDC, IWCCI & ICCI Secretary MoST Mr. Kamran Ahmed Qureshi was the chief guest of the occasion.
- Arranged one day training for students on Relief Map Study in connection with Celebration of Biodiversity Day on 22nd May, 2014. 120 students from eleven Schools of Islamabad and Rawalpindi participated in this event.

1.2.5. Seminars/Symposia/ Training/Workshop Attended

- Attended one day course on “Environmental Impact Assessment” organized by Pakistan Engineering council.
- Participated in an international seminar on “French Contributions to Pakistan Studies” held at Quaid-i-Azam University.

1.2.6. National/International Collaboration /Liaison

- Pakistan Museum of Natural History and Centre for Pure and Applied Geology, University of Sindh, Jamshoro have signed a Memorandum of Understanding for cooperation in the field of Geology/Paleontology for mutual collaboration on research and education, training of scientists, information sharing, holding of exhibition/ workshop/ conferences/ symposia/ seminars and joint research projects.

1.2.7. Display Work:

- A Diorama of rocks, minerals and fossils is prepared; wherein, the representative rocks such as sedimentary, Metamorphic, igneous rocks and their associated economic minerals are displayed.
- Displayed wood fossils in the galleries of Earth Science Division.
- Model of Baluchitherium was inaugurated by Minister for Science and Technology on 24th October 2012.
- Prepared brochure material for Baluchitherium.

- A souvenir shop was opened in the premises of Virtual Orientation Gallery in PMNH
- Write-up of wood fossils of Pakistan is completed and is presented with the specimens.
- Prepared display write-ups of rock & mineral specimens for display in Urdu & English.
- Completed new rock & mineral display in PMNH gallery.
- Displayed Minerals, Gems, Sedimentary Rocks and vertebrate fossils in Earth Science Division.

1.3. Zoological Sciences Division

1.3.1. Field Work

- A team of ZSD scientists conducted field works in Gilgit-Baltistan w.e.f. 26th June to 9th July 2013, and collected 600 insect 50 Fish, 03 birds and 20 small mammal specimens in connection with MAB programme.
- Carried out one week field work of LalSohanra Biosphere Reserve in September, 2013 under UNESCO-MAB Pakistan Programme.
- Collected 160 specimens of beetles and butterflies from Neelum valley, AJ&K.
- Collected 30 fish, 16 marine snakes and 45 insects.
- Received heads of Urial and Black buck, one specimen of Pelican. Received and cataloged one dead specimen of Hog Deer, Barking Deer from Maraghzar Zoo, Islamabad and one dead specimen of Lion from Lui-Bhair Wildlife Park, Rawalpindi.
- Skinned a Lion, Hog Deer and Leopard.
- Prepared GIS distribution data of 59 species and Journal MAP developed.
- Collected 148 Carabid beetle specimens from pitfall traps and collected other 24 insects/butterflies from Islamabad. Collected 20 insects from local area Islamabad.

1.3.2 Laboratory Work

- Identified 100 butterflies, 90 larger benthic foraminifera, 83 fruit flies, 45 lizards and snakes, 25 mammals, 08 insects, 60 fishes, 23 crabs, 13 beetles, 11 insects.
- Identified and catalogued 200 lizards/ snakes, 03 birds and 29 small mammals, 25 rodent specimens.
- Catalogued 2000 butterflies, 612 insects, 15 mammals, 83 fruit flies, 75 lizards, 10 snakes
- Digitized 50 fishes, 1410 insects, pinned 120 insets, 70 lizards, 90 snakes, 10 marine fishes.
- Identified and prepared checklist with IUCN and CITES status of avian fauna recorded from Central Karakoram National Park.
- Took morphometric data of 65 specimens of *Laudakia* species.
- Preserved skin of Shark and Elephant.
- Entered data of 1765 insects and 74 other animal samples in the BGN database.
- Computerized tagging of 500 beetles, arranged 750 photographs of insects.
- Stuffed 02 Blackbucks, 01 Pelican; 01 pigeon; processed 3 skeleton heads and prepared 3 mammals for study skin; cleaned and tanned a zebra skin, 5 birds and 2 large animals, worked on the skin of elephant and 40 ftWhale Shark.

1.3.3 National Research Project

- Carabidae of Northern Pakistan (continued).

1.3.4 Collaborative Research Project

- Organized 2nd National MAB Committee meeting held in PSF, Islamabad on 27th August, 2013.
- Submitted nomination form for hosting regional node by PMNH for Future Earth programme.
- Attended scientific conference on Karakoram Resources and Climate Change: Glacier, Water and Ecosystem” dated 10th September 2013 organized by Ev-K2-CNR

- Participated in an ongoing project to revise FAO fish identification guide of Pakistan at Karachi during 7-12 October 2013 with the collaboration of Marine Fisheries Department of Pakistan.
- Gave comments on proposed rule to reclassify Straight-Horned Markhor by United States Fish and Wildlife Services requested by Climate Change Division, Cabinet Secretariat.
- Submitted the report to MoST regarding MoU to be signed between PMNH and Natural History Museum of Florence University, Italy

1.3.5. Publications

National

- Amir, S. A., Siddiqui, P. J. A., and Masroor, R. 2014. A New Sparid Fish of Genus *Sparidentex* (Perciformes: Sparidae) From Coastal Waters of Pakistan (North Western Indian Ocean). *Pakistan Journal of Zoology*, 46 (2): 471-477.

International

- Yousefkhani, S.S.H., Pouyani, E.R., Pouyani, N.R., Masroor, R. and Smíd, J. 2013. Modelling the potential distribution of *Mesalinawatsonana* (Stoliczka, 1872) (Reptilia: Lacertidae) on the Iranian Plateau. *Zoology in the Middle East*, 59(3): 220-228, DOI: 10.1080/09397140.2013.841429.
- Yousefkhani, S.S.H., Ficetola, G.F., Pouyani, N.R., Ananjeva, N.B., Pouyani, E.R. & Masroor, R. 2013. Environmental Suitability and Distribution of the Caucasian Rock Agama, *Paralaudakiacaucasia* (Sauria: Agamidae) in Western and Central Asia. *Asian Herpetological Research*, 4 (3): 207-213, DOI: 10.3724/SP.J.1245.2013.00207.
- Mebert, K. and Masroor, R. 2013. Dice Snakes in the western Himalayas: discussion of potential expansion routes of *Natrix tessellata* after its rediscovery in Pakistan. *Salamandra*, 49 (4):229-233.
- Ullah H., Khan U.R., Khan S.A., Mehmood S., Sherwani S.K., Muhammad A., Gilani S.A., Ullah H. & Muhammad Y. (2014) "Estimation of Induced Variability of Yield Contributing Traits in M1 gamma Irradiated Germplasm of Okra (*Abulmoschus Esculentus* L.)". *South Asian Journal of Life Sciences*. 2 (1): 4 – 7. <http://dx.doi.org/10.14737/journal.sajls/2014/2.1.4.7>.

1.3.6 Seminars/Symposia/ Training/Workshop Organized

- Organized in collaboration with PSF, MoST and UNESCO the 5th meeting of the South and Central Asia MAB Network (SACAM) on 26-27 November, 2013. The meeting was attended by MAB program co-coordinators from SACAM member countries including Afghanistan, Bhutan, India, Iran, Kazakhstan, Nepal and Sri

Lanka. During the two-day meeting, participants discussed the SACAM progress and future plans.

- Celebrated the 12th International Biodiversity Day on 22nd May, 2014 in which 160 students from Rawalpindi and Islamabad participated along with international organizations/NGOs.

1.3.7 Seminars/Symposia/ Training/Workshop Attended

- Attended “Experts Meeting on Climate Change and Biodiversity” from 29-30, 2013 in Marriott Hotel, Islamabad.
- Director, ZSD delivered presentation “Biodiversity in Pakistan the Post-2015 discussions” on National Youth Forum on Mountain Issues and Post 2015 Development Agenda, program organized jointly by the APYTF/ICIMOD, and MGPO in Islamabad Hotel.
- Attended 12 days training course on Project Identification, Appraisal and Approval, Implementation Methodologies/MS Project/Development of KPI’s” organized by Ministry of Planning, Development and Reform (Planning Commission of Pakistan) at Pakistan Planning and Management Institute (PPMI), Islamabad.

1.3.8. National/International Collaboration /Liaison

- MoU between sign Pakistan Museum of Natural History and HaglerBailly Pakistan signed to extend collaboration on biodiversity and environmental research.

1.3.9 Services Rendered to Other Organizations

- Participated for review of Identification guide of Field guide of fishery purposes of Pakistan with FAO consultant.
- Assisted French scientist Dr. Pages in identification of butterflies of insect repository of PMNH.
- Working on a publication on Oriental fruit fly *Bactrocera dorsalis* in collaboration with Dr Mark Shultze of QUT, Brisbane.

1.4 Public Education and Display

1.4.1 Exhibits Developed/Organized

- Whale Shark exhibit in PMNH Display Centre was formally inaugurated on 23rd July, 2013 by the UNESCO Assistant Director General for Education Dr. Qian Tang at PMNH on 23rd July, 2013. This is the largest fish sample preserved in a museum. The fish measured 40 feet in length and weighed 6 tons when found floating dead on the Arabian sea. Dr. Kozue Kay Nagata, Country Director, UNESCO (Pakistan) was also present.
- Organized three days exhibition of Eight Modern Time's Eminent Chinese Celebrities at PMNH Display Centre.
- Virtual Orientation Gallery (VOG) Kaosic has been prepared and uploaded in PMNH Website. (www.pmnh.gov.pk)
- A documentary on Whale Shark has been prepared.
- Prepared portable exhibits of Whale Shark, *Baluchitherium* and Blue Whale.
- A large panaflex poster on information regarding dendrochronology has been placed in the display gallery.
- Designed large backdrop for Youth Festival, Lahore.
- Organized poster competition of students themed "Why conserving wildlife in my community is important".
- Arranged certificate and prize distribution ceremony of nature art and photography competition.
- Participated in the Science & Technology Exhibition 2014 along with PSF and PASTIC arranged by the Ministry of Science & Technology (MoST) in association with Punjab Sports Board held in the Expo Centre, Lahore.

1.4.2 Important Visits to PMNH

- Facilitated the visit of Secretary MoST Mr. Kamran Ali Qureshi during his visit to the PMNH display galleries on 24th September.
- Mr. Cesar Guedes, Representative Country office of United Nations on Drugs & Crime visited PMNH on July 27, 2013

- Dr. Philip Grey Kerr, Charles Sturt University of Australia visited PMNH on 17th August, 2013.
- Briefed the Senate Standing Committee on S&T in the PMNH display galleries and divisions on their inspection visit.
- Briefed a 14- member delegation from China led by Dr. Zhao Guo Shun in the PMNH display galleries.
- Explained the PMNH display galleries to a UNSECO delegation comprising Mr. Han Qunli, Secretary, MAB Programme, UNESCO Headquarters, and Mr. Ram Boojh, Secretary SACAM, UNESCO Office India.
- Guided the delegates of Manpower Division, International delegates from International Conference on Climate change (NUST) and 12 female diplomats from various countries at the PMNH display galleries.
- Guided Minister, Forest & Wildlife, Baluchistan, about PMNH display.
- Guided a 5-member team of Sindhi news channel KTN.
- Facilitated a 3-member group of Women Agriculture Development Organization (WADO), Sindh.
- Held a meeting with members from Association for Health Education Arts Development (AHEAD) for mutual collaboration.
- Conducted meeting with Country Coordinator, Human Appeal International, Islamabad regarding joint future activities
- Pakistan Nuclear Regulatory Authority (PNRA) personnel visited the PMNH galleries on 04th May, 2014.

1.4.3 Educational Services

- Briefed PTV on PMNH display and research activities.
- Facilitated the students of International Karakorum University, Gilgit-Baltistan.
- Guided teachers group from PMAS Arid Agriculture University, Rawalpindi.
- Guided a group of 04 members from Wheat Research Institute.

- Facilitated Geo TV team during preparation of PMNH documentary on 14th September 2013.
- During this quarter student groups from various Universities, Schools & Colleges from all over Pakistan visited PMNH display galleries. PMNH provided them technical guidance and arranged film shows.
- Helped COMSATS internee students regarding the fish repository of PMNH. Preparation of Brochure for PMNH Service Promotion Desk for Incubation Centre is in progress. Developed and Uploaded new web of MAB project and updated MAB web regarding the schedule of meetings (www.mab-pak.org).
- Updated PMNH News at PMNH web portal. (www.pmnh.gov.pk).
- MAB Pakistan Website has been developed and uploaded in PMNH Website. (www.pmnh.gov.pk).
- Facilitated the visit of staff/students of Punjab University Lahore.
- Guided teachers Educators of Rawalpindi Division of Punjab Education department through display galleries of PMNH.
- Facilitated PhD student from Quaid-e-Azam University, Islamabad.
- Briefed about the PMNH galleries to groups of students from Fatima Jinnah Women University Rawalpindi and University of Gujarat students/staff.
- During the year a total of 132256 persons visited the PMNH Display Centre which included 289622 students, 42386 general public and 248 foreigners. Students from various schools, colleges and universities of many parts of the country visited PMNH. Some of these are Institute of Geology Kashmir University Muzffarabad, Fauji Foundation Model School Abbottabad, Imperial International School & College, Islamabad, Fauji Foundation Model School Kohat, Faran Academy Mardan, New Age Scholars Science College Kotly AJK, Tamir-e-Millat School Peshawar, Balochistan Residential College Khuzdar, Balochistan, Punjab Group of college Haripur, Punjab Group of Colleges Gujar Khan, NFC IEFR Faisalabad, AmnaBint-ul-Huda Educational Institute Murree, Govt. Girls High School SainthaKallarSyedan, The Citizen Foundation School DhokChoudrian Rawalpindi, Holy Family School of Nursing, Rawalpindi, The

Lasanians School Rawalpindi, Fauji foundation Model School Kahuta, Fauji Foundation Model School Mang (AJK), Iqra Education Academy Peshawar, Peshawar, Dar-e-Arqam High School Samundri, Faisalabad, PMAS-Arid Agriculture University, Rawalpindi, University of Hiripur, University of Wah, WahCantt., Quaid-i-Azam Public Sec. School Hazro, Attock, Govt. Vocational Training Institute for Women, Daska, Dawah Academy, Unique Educational Academy Rawalakot AJK, Women branch International Islamic University, Islamabad Startwell Education Rawalpindi, GDGC No1 Abbottabad. These students were facilitated with the guided tour and video documentaries shown on a large screen.

1.4.4 Man and Biosphere website

The Man and Biosphere (MAB) programme is an interdisciplinary effort directed towards providing information for the solution of natural resources and environmental issues. It is aimed at improving the management of natural resources and presents an opportunity for international cooperation. PMNH has been declared the country secretariat of MAB-Pakistan. To disseminate information about the activities and programmes of MAB-Pakistan, MAB-Pakistan website has been launched. The link of this website is www.mab-pak.org.

1.4.5 Number of Visitors to Display Galleries

The number of visitors to PMNH from July 2012 to June 2013 stood at 73680 people including 51369 students and teachers, 30430 general visitors and 159 foreigners.

2.0 INTERNATIONAL LIAISON

- International collaboration with Global Biodiversity Information Facility (GBIF) was continued during the reporting period.

3.0 PLANNING AND DEVELOPMENT

- Finalized answer of queries raised by plainaing division on approved PMNH PC-1 entitled “strengthening of security and safety measures at pakistan Museum of Natural History Islamabad”

**III. PAKISTAN SCIENTIFIC & TECHNOLOGICAL
INFORMATION CENTRE (PASTIC)**

PASTIC is an ISO 9001: 2000 Certified S&T Information Provider and is the oldest organization in the field of S&T information management and dissemination serving as a gateway for access to and delivery of global S&T information catering to the needs of the researchers in all areas of Science and Technology. Users of PASTIC services include researchers, entrepreneurs, academicians, scientists, engineers, industrialists, policy makers and planners. Collaboration with different organizations and agencies enhances the scope of information that is offered to clients and helps PASTIC to respond to the diverse needs of a broad community of users.

PASTIC National Centre is housed in its own building at Quaid-e-Azam University Campus, Islamabad with comprehensive information resources in different fields of Science and Technology. Its six Sub-Centres are working in different cities, viz. Karachi, Lahore, Peshawar, Quetta, Faisalabad and Muzaffarabad all having access to global information resources and capable of disseminating information to their users. Its sanctioned strength is 163 including Technical and Administrative Staff.

1.0 Aims & Objectives

- To acquire, process and disseminate scientific and technological information to the researchers.
- To provide bibliographic information service and document supply service.
- To interact with regional and international S&T information agencies/networks.
- To develop inter-library cooperation, resource sharing at national level.
- To train information personnel in contemporary techniques and methods of information handling.
- To develop and strengthen the National Science Reference Library.
- To compile and publish reference information publications.

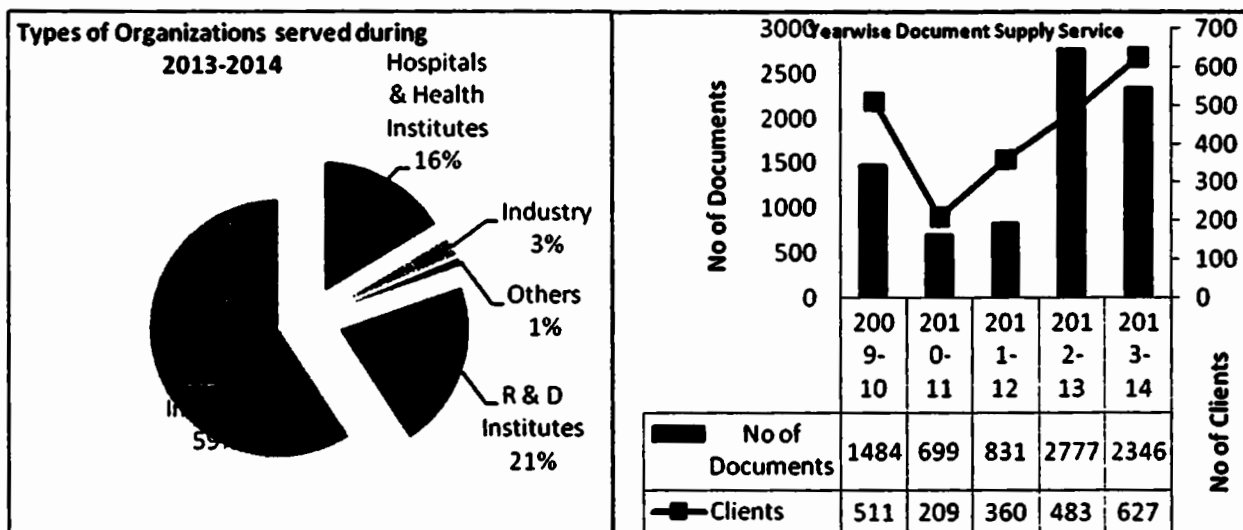
2.0 Activities and Services

PASTIC is a multidisciplinary national S&T information centre and its services and activities are aimed at fulfilling needs of its users by providing the latest information in all fields of Science & Technology. The information services provided by PASTIC are those which are essential for undertaking research and development for socio-economic uplift of the country. The activities undertaken during the period, July 2013 to June 2014 are briefly described below:

2.1 Document Procurement and Supply Service

Under the Document Procurement and Supply Service, requests were received from different individuals of R&D organizations for supply of reprints of research articles, conference papers and reports, etc. In order to fulfill the demand of clients' reprints of 2346 articles were acquired either from local sources or from abroad, and supplied to 627 researchers during the year 2013-14. Besides, digital resources were also used for document supply service. Under digital document supply 27764 documents in digital form (soft copies) were supplied to 1744 users. The Union Catalogue of the S&T libraries of Pakistan compiled by PASTIC was mainly used for locating the literature available in local libraries.

For foreign procurement of articles mainly National Library of Medicine, USA, National Library of Australia and NISCAIR, India were used. For local procurement of articles the resources of HEJ, Karachi and HEC, Islamabad were used. To expedite the procurement process PASTIC uses e-mail contacts so that information delivery is quick and delays are minimized. Major break up of the types of user organizations is as follow:



2.2 Bibliographic Information Service/Literature Search

Literature search is carried out for searching abstracts / references by using online and offline databases and supplied to users on their request according to their research topics under bibliographic information service. A total of 938,555 abstracts/references, 6019 bibliographies on various S&T topics were supplied to 4759 research workers and other users during the period under review for 2013 and 2014.

PASTIC has access to following international online bibliographic information databases subscribed by itself and digital resources of other organizations under collaboration and MoUs with these organizations. The subscription of bibliographic databases of PASTIC was renewed for 2014-15 for strengthening the bibliographic information service and information resources of PASTIC.

1. Wilson Applied Science and Technology Full Text
2. Biological & Agricultural Index Plus
3. Wilson Social Sciences Full Text
4. Green file
5. Library & Information Science and Technology Abstracts

The following online digital resources are also accessible by PASTIC and are used for this service.

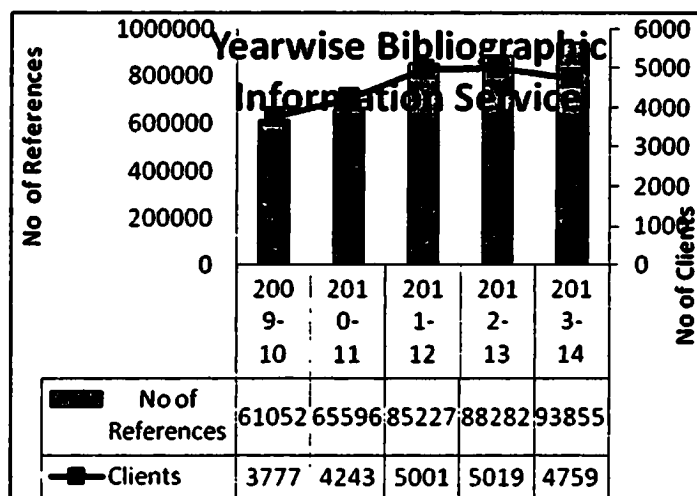
a) HEC Digital Library Resources

- Wiley-Blackwell Journals
- Taylor & Francis Journals
- Springer
- Project Muse

b) LEJ Resources, Karachi

- Science Direct
- Science Finder

The following graph of bibliographic information service shows the progress for the last five years, both number of references supplied and the number of users have increased during 2013-14.



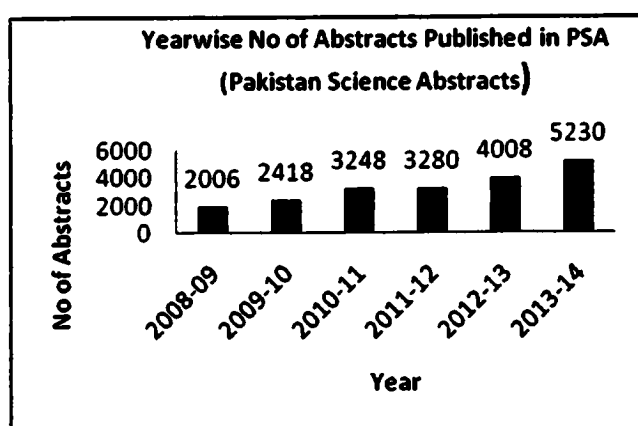
2.3 Abstracting and Indexing Service (Pakistan Science Abstracts)

PASTIC provides abstracting and indexing service by publishing an abstracting journal entitled “Pakistan Science Abstracts” in ten different scientific disciplines, which serves as a secondary information source to give support to research and development activities in the country. The scientific information generated in Pakistan or abroad and published in Pakistani S&T journals is documented in the form of abstracts along with detailed author index and keyword index in this secondary journal.

All processing such as data collection, scanning, typing, formatting, indexing, composing, dummy preparation, proof reading and editing for compilation of ten issues of Pakistan Science Abstracts (PSAs) of 2012 was carried out, completed in all respect and uploaded on PASTIC website which is accessible for on-line search. PSAs 2012 in following ten disciplines were printed and published during the year 2013-14.

1. PSA Agricultural Sciences, 2012, Vol.50-A
2. PSA Animal Sciences, 2012, Vol.50-D
3. PSA Biochemistry & Biotechnology, 2012, Vol.50-B
4. PSA Chemical & Pharmaceutical Sciences, 2012, Vol.50-C
5. PSA Earth & Environmental Sciences, 2012, Vol.50-E
6. PSA Engineering Sciences and Information Technology, 2012, Vol.50-I
7. PSA Mathematics & Statistics, 2012, Vol.50-G
8. PSA Medical Sciences, 2012, Vol.50-H
9. PSA Physics, 2012, Vol.50-F
10. PSA Plant Sciences, 2012, Vol.50-J

During the period under review 5230 abstracts (4300 for 2012 & 930 for 2013) were scanned, downloaded and then uploaded on the PASTIC website. Downloading, processing of articles/abstracts for the PSAs of year 2013 was completed and finalized. This process for the year 2014 remained in progress.



2.4 Directory of Scientific Periodicals of Pakistan

Directory of Scientific periodicals of Pakistan was uploaded on PASTIC website for online searching. For details <http://www.pastic.gov.pk/searchperiodicals.aspx> may be visited.

2.5 Union Catalogue of Scientific Periodicals of S&T Libraries of Pakistan

Serial holding data of 6 S&T libraries was acquired. Data entry and verification was done into the indigenous online database application for Union Catalogue. Records of 12360 issues of Journals were entered in the database. 12556 online searches were made by the users through this database.

2.6 Technology Information Service

This service is rendered by Technology Information Section which is meant for provision and dissemination of Technological Information Services to R&D Workers, Engineers, Entrepreneurs, SMEs and the Industrialists. The aim is to facilitate growth, potential and competitiveness among SMEs at national and international level, build effective coordination between R&D Sector and Industry for enhancing innovations, competitiveness and development & promotion of indigenous technologies and to organize technology based exhibitions and seminars to promote Science & Technology.

Under this service following activities were carried out.

- One day Seminar on “Technologies for Capitalizing Local Coal for Industrial Needs” was organized by PASTIC sub-centre, Lahore in collaboration with IRP and LCCI at Lahore Chamber of Commerce & Industry, Lahore on 4th September, 2013.
- One day Seminar on “Innovative Technologies for Floriculture” was organized at University of Haripur, Haripur as a joint venture of PASTIC, IRP-Lahore & University of Haripur on 3rd October, 2013.
- PASTIC coordinated as managing partner with Institute of Research Promotion (IRP) in holding and organizing “Invention to Innovation Summit 2014” organized by IRP in collaboration with Pakistan Science Foundation and The University of Punjab at University of Punjab Lahore from 19-20 March, 2014.
- PASTIC sub-centre Peshawar in collaboration with Chemical Engineering Department, UET Peshawar & National Academy of Young Scientists (NAYS) organized One day National Workshop on “Sustainability in Process Industries (SPI 2014)” at UET, Peshawar on 22nd May, 2014.
- PASTIC sub-centre Peshawar in collaboration with IRP, PCST & University of Peshawar organized One day Consultative Workshop on “Encouraging Problem-Solving Research R&D Policy for Enabling Environment” at Pharmacy Department, University of Peshawar, Peshawar on 27th May, 2014.

- PASTIC sub-centre Faisalabad in collaboration with IRP, PCST and AARI organized One day Consultative Workshop on "Encouraging Problem-Solving Research R&D Policy for Enabling Environment" at Ayub Agriculture Research Institute (AARI), Faisalabad on 16th June, 2014.
- A bimonthly Trade and Technology news bulletin entitled "Technology Roundup" was regularly published and six issues of this news bulletin were brought out online.
- Dr. Arabella Bhutto, Assistant Professor, Mehran University Institute of Science, Technology and Development (MUISTD), Jamshoro and Co-Principal Investigator of HEC funded Research Project entitled "Analysis of University-Industry-Government (UIG) Linkages in Pakistan" visited PASTIC on 18th June, 2014.

2.7 PASTIC National Science Reference Library

PASTIC National Science Reference Library is aimed at providing reference and referral services to the users and strengthening of all the services of PASTIC particularly document supply service, bibliographic information service, abstracting and indexing service, technological information service, etc. In this context strengthening of library resources, acquisition of published library material and library automation activity remained in progress. PASTIC library has built up a collection of more than 9,075 books on science and allied subjects, over 1,575 titles of national & international journals and 9,100 miscellaneous documents and reports.

During 2013-14, 4402 users/researchers visited PASTIC library for reference purpose, reading, photocopying and internet browsing. Besides, library received 510 issues of different national and international journals. In addition 97 books were purchased and 226 miscellaneous documents, reports etc were received. All this library material was processed and shelved for use.

12 issues of the library bulletin "Fresh Arrivals" of PASTIC library was regularly published on monthly basis during the period under review and distributed among relevant circles.

Consultancy service was provided to following libraries of Islamabad for provision and installation of library automation and management software i.e. KOHA, WINISIS:

- National Institute of Historical & Cultural Research, Quaid-i-Azam University, Islamabad
- Council of Islamic Ideology, Islamabad
- Defense & Strategic Studies Department, Quaid-i-Azam University Islamabad
- Institute of Strategic Studies, Islamabad

Others:

- Records of the books of the libraries of PASTIC, PMNH, and PSF was uploaded on Union Online Public Access Catalogue (OPAC) prepared by PASTIC.
- A development project for PASTIC library entitled “Modernization of PASTIC National Science Reference Library for Effective Resource Sharing among S&T Libraries of Pakistan” was prepared and submitted to Pakistan Science Foundation.

2.8 Reprographic Service

The Reprographic Section of PASTIC has facilities ranging from photocopying to offset printing for its own printing requirements and for providing printing services to other S&T organizations. During the year 2013-14, 150 printing jobs were carried out for 09 R&D organizations.

3.0 International Liaison

PASTIC is the National Focal Point of some Regional/International Information Centres and Networks viz. SAARC Documentation Centre, WHO/CEHANET, IFAP and National distributor for UNESCO developed library management software WINISIS and IDAMS.

3.1 UNESCO Software

PASTIC is responsible for the distribution of UNESCO developed software/package such as WINISIS and IDAMS as well as provides training on this package and ABCD (Automation of Libraries and Documentation Centres) which is a multilingual, open source, web application for the management of libraries. WINISIS was provided to two libraries.

3.2 SAARC Documentation Centre (SDC)

SDC is a regional centre of SAARC established in 1994 at New Delhi, India for developing an effective information system of Member States for exchange of information in various fields of S&T. Another objective of SDC is to develop human resource in the Member States in the area of information science, technology, management systems and services. In this regard following activities were undertaken during the period under review

Procurement of S&T literature and other information from SAARC Documentation Centre was carried out for fulfilling the information requirements of Scientists and R&D workers.

A project proposal on “Networking and Capacity Building of Women Entrepreneurs (SMEs) from SAARC Countries” for funding and execution under SAARC Development Fund was prepared and submitted to PSF/MoST.

Under the efforts for availing the training opportunities offered by SDC under its Human Resource Development Programme, 4 officers/officials of PASTIC, Ministry of Science & Technology and NUST availed the training on Information Technology for Information Management under the training facilities offered by SAARC Documentation Centre.

An online training session on “Use of E-brary for searching” in collaboration with SAARC Documentation Centre, New Dehli, India was organized and arranged at IT Lab, PASTIC, Islamabad on 19th May, 2014. PASTIC officers/officials attended this training session for acquainting themselves with the use of E-brary.

Different titles of research and abstracting journals of 2013 covering major disciplines of science and technology published by National Institute of Science Communication and Information Resources (NISCAIR) were acquired and received in PASTIC free of cost under the facility provided by SDC.

A Workshop on DSpace was organized jointly by PASTIC, SDC and Mehran University of Engineering and Technology (MUET) at Jamshoro, Sindh from December 30, 2013 to January 3, 2014. 30 participants from SAARC countries participated in this workshop and were trained on Dspace.

3.3 KOICA

Dr. Muhammad Akram Shaikh, Director General, PASTIC attended a Training course on “Technology and Policy for Asian Countries” under the Korean International Cooperation Agency (KOICA), Korea from August 15-31, 2013. The training course was aimed at providing government officials with insight into core elements of Science, Technology and Innovation (STI) policy planning and implementation to improve efficiency and effectiveness of public policy management.

4.0 PASTIC Information Service Stalls

41 PASTIC Service Stalls were arranged at Faisalabad, Peshawar, Karachi, Quetta, Muzaffarabad (AJK), Islamabad and Lahore at various departments of different Universities and R&D Institutions on different occasions. The aim of organizing the service stalls was to provide S&T information services at the doorstep of the Universities and other institutions to facilitate faculty members, researchers and R&D workers. Detail of these Stalls is as follows:

Faisalabad

Sr.#	Date	Venue
1.	27-08-13	Faculty of Veterinary Sciences, University of Agriculture, Faisalabad.
2.	28-08-13	Faculty of Animal Husbandry, University of Agriculture, Faisalabad.
3.	03-09-13	National Institute of Food Science & Technology, University of Agriculture, Faisalabad.
4.	25-09-13	Ayub Agriculture Research Institute, Faisalabad
5.	11-11-13	Main Library, University of Agriculture, (World Science Day celebration.)
6.	26-11-13	Emerging Science Block, Govt. College University, Faisalabad
7.	27-11-13	Basic Science Block, Govt. College University, Faisalabad
8.	04-12-13	University of Agriculture, Faisalabad (During Project Formulation Workshop)
9.	08-12-13	Govt. College University, Faisalabad (During 1st job Fair)
10.	12-12-13	NFC Institute of Engineering and Fertilizer Research, Faisalabad.
11.	13-12-13	NFC Institute of Engineering and Fertilizer Research, Faisalabad.
12.	17-12-13	University of Engineering & Technology, Faisalabad.
13.	08-09 Jan, 2014	Faculty of Agriculture, University of Agriculture, Faisalabad
14.	22-01-14	Faculty of Veterinary Sciences, University of Agriculture, Faisalabad
15.	28-01-14	National Institute of Food Science & Technology, University of Agriculture, Faisalabad
16.	18-02-14	National Textile University, Faisalabad
17.	11-03-14	Emerging Science Block, Govt. College University, Faisalabad
18.	12-03-14	Basic Sciences Block, Govt. College University, Faisalabad
19.	23-04-14	Faculty of Agriculture, University of Agriculture, Faisalabad
20.	24-04-14	Faculty of Agriculture, University of Agriculture, Faisalabad

Peshawar

Sr.#	Date	Venue
21.	03-10-13	Haripur University, Haripur.
22.	18-20 Nov, 2013	The University of Agriculture, Peshawar
23.	27-11-13	COMSATS Institute of Information Technology, Abbottabad.
24.	28-01-14	The University of Agriculture, Peshawar

25.	03-02-14	Shaheed Benazir Bhutto Women University, Town Campus, Peshawar.
26.	24-02-14	UET, Peshawar

Karachi

Sr.#	Date	Venue
27.	22-08-13	Ramada Hotel, Karachi
28.	09-11-13	University of Karachi, Karachi
29.	23-25 Jan., 2014	Sheikh Zayed Islamic Centre, University of Karachi, Karachi
30.	22-05-14	Marriott Hotel, Karachi

Quetta

Sr.#	Date	Venue
31.	08-04-14	University of Balochistan, Quetta

Muzaffarabad

Sr.#	Date	Venue
32.	14-10-2013	University of Azad Jammu & Kashmir, Muzaffarabad (City Campus)
33.	17-12-2013	University of Azad Jammu & Kashmir, Muzaffarabad (Department of Chemistry, New Campus)
34.	20-03-2014	University of Azad Jammu & Kashmir, Muzaffarabad (Department of Zoology, New Campus)
35.	13-05-2014	Medical College, Muzaffarabad.

Islamabad

Sr.#	Date	Venue
36.	28-29 Oct, 2013	Central Library Garden, Quaid-i-Azam University, Islamabad
37.	25-27 March, 2014	Ramada Hotel, Islamabad
38.	08-09 April, 2014	Quaid-i-Azam University, Islamabad

Lahore

Sr.#	Date	Venue
39.	13-11-2013	University of Punjab, Lahore.
40.	01-03 March, 2014	Expo Centre, Lahore.
41.	19-20 March, 2014	University of Punjab, Lahore.

5.0 Human Resource Development

Another important activity of PASTIC is to impart training to information professionals on computer applications for library automation and information management as well as organization of workshops and seminars on related diverse topics. In this regard following training workshops / seminars were organized.

5.1 Trainings/Workshops/Seminars/Symposia Organized

- One day Seminar on “Innovative Technologies for Floriculture” at Haripur University, Haripur as a joint venture of PASTIC, IRP-Lahore & University of Haripur on October 3, 2013.
- One Day PASTIC Services Seminar at Sardar Bahadur Khan Women’s University, Quetta, on November 28, 2013.
- PASTIC coordinated in organizing a 5 days Workshop “PASTIC/SAARC-MUET Workshop on DSpace” at Jamshoro from December 30 to January 3, 2014 at Mehran University of Engineering and Technology, Jamshoro, Sindh.
- One day Training Workshop in collaboration with National Academy of Young Scientists (NAYS), American Society of Microbiology (ASM) & Agriculture University, Peshawar (AUP), entitled “3rd Bio Safety Training Workshop for Young Scientists” at Agriculture University, Peshawar on January 28, 2014.
- One day Health Awareness Seminar in collaboration with National Academy of Young Scientists (NAYS) entitled “Cancer Awareness” at Shaheed Benazir Bhutto Women University, Town Campus, Peshawar on February 3, 2014.
- Training Workshop on “Scientific Research Tools” from March 24-28, 2014 at PASTIC National Centre, Islamabad.
- Two days Training Workshop on “Advance Quantitative Analysis through SPSS and AMOS” was organized in collaboration with Institute of Research Promotion, Lahore from April 04-05, 2014 at PASTIC National Center, Islamabad.
- 2nd Training Workshop on “Scientific Research Tools” from May 07-09, 2014 at PASTIC National Centre, Islamabad.
- One day National Workshop on “Sustainability in Process Industries (SPI 2014)”, held in collaboration with Chemical Engineering Department, UET, Peshawar & National Academy of Young Scientists (NAYS) on May 22, 2014, at UET, Peshawar.

- One-Day Consultative Workshop on “Encouraging Problem-Solving Research R&D Policy for Enabling Environment” was organized in collaboration with PASTIC, IRP, PCST & University of Peshawar at Pharmacy Department, University of Peshawar on May 27, 2014.
- One Day Seminar on “Intellectual Property Protection: The Guidelines for Researchers and Industrialists” on May 28, 2014 at Department of Civil Engineering, NED University of Engineering and Technology, Karachi.
- One-day Consultative Workshop on “Encouraging Problem-Solving Research Policy for Enabling Environment” at Ayub Agriculture Research Institute, Faisalabad on June 17, 2014.

5.2 Meetings/Workshops/Trainings/Seminars Attended

- PASTIC Officers attended a presentation delivered by Dr. Mirza Habib Ali, Principal Scientific Information Officer, PSF on “Time Management for Effective Service Delivery” during the Annual Review Meeting on July 5, 2013.
- Deputy Director, PASTIC Sub-Center Faisalabad attended meeting of Faisalabad Research Forum at University of Agriculture under Chairmanship of Commissioner Faisalabad on November 06, 2013.
- Dr. Saima Huma Tanveer, Sr.SIO, Technology Information Service, participated in a Roundtable meeting on “Establishment and Strengthening of Technology Management Offices,” (TMOs) organized by the World Intellectual Property Organization (WIPO) in cooperation with the Intellectual Property Organization of Pakistan (IPO-Pakistan and with the assistance of the European Union (EU) at Islamabad on December 9, 2013.
- Prof. Dr. Muhammad Akram Shaikh, Director General, PASTIC held a meeting with Managing Director, Printing Corporation of Pakistan on December 11, 2013 in connection with Ministry of Science & Technology (MoST) initiative of commercialization of PASTIC reprographic services.
- Dr. Maryum Ibrar Shinwari, Sr. Scientific Information Officer, PASTIC attended a meeting on “Research Strategic Framework” organized by Pakistan Medial Research Council in collaboration with the World Health Organization on December 11, 2013 at Islamabad Hotel.
- Ms. Nageen Ainuddin, Director, PASTIC attended the First meeting of ORIC Forum Rawalpindi/Islamabad Region on January 1, 2014 at CIIT, Islamabad.

- Dr. Muhammad Akram Shaikh, D.G., PASTIC attended Board of Studies meeting of Information and Communication Technology, Engineering and Management Science (BUIITEMS), Quetta on January 9-10, 2014.
- Prof. Dr. Muhammad Akram Shaikh, D.G., PASTIC participated in the meeting of Board of Studies of Computer Systems Engineering held at Islamia University, Bahawalpur (IUB) on February 18, 2014.
- Prof. Dr. Muhammad Akram Shaikh, Director General, PASTIC attended Fourth Meeting of ORIC Forum on IPR (Rawalpindi/Islamabad Region) at ORIC, Quaid-e-Azam University, Islamabad on April 2, 2014.
- Director General, PASTIC held a meeting with IPO Representative on April 10, 2014 to discuss the modalities to formulate an IP Awareness/Training Programme jointly by PASTIC and IPO across the country.
- Director General, PASTIC attended a workshop on Complex Problem Solving on April 24, 2014 organized by Pakistan Engineering Council, Islamabad.
- Director General, PASTIC attended a programme on “Horizon 2020” organized by NUST at Central Campus, H-12, Islamabad on April 25, 2014
- Deputy Director, PASTIC Sub-Centre Peshawar remained involved in different commercialization activities of MoST and arranged a focus Group Meeting with Pharma & Food Sector of Hattar Industrial State in collaboration with Hattar Industrial Association at Haripur on June 18, 2014.
- Prof. Dr. Muhammad Akram Shaikh, D.G., PASTIC attended the Technical Committee meeting on Computer Sciences on June 25, 2014 at PSF, Islamabad.

Workshops/Trainings/Seminars

- Dr. Muhammad Akram Shaikh, D.G., PASTIC attended a “Training Course on Technology and Policy for Asian countries” at Korea under the Korean International Cooperation Agency (KOICA) from August 15-31, 2013.
- Dr. Maryum Ibrar Shinwari, Sr. Scientific Information Officer, PASTIC participated in a Training course “Statistical and Mathematical Tools for Policy Making: Quantitative Analysis” from December 2-5, 2013 at Pakistan Planning and Management Institute, H-8/1, Islamabad, Pakistan

- Mrs. Kausar Sohail, Sr. Scientific Information Officer attended Two Days Seminar on “Women Empowerment” from December 4-5, 2013 at Pakistan Manpower Institute, Islamabad.
- Mr. Javed Mukhtar, MTI, PASTIC National Centre and Ms. Afsheen Tariq Raja, Assistant Scientific Information Officer, PASTIC Sub Centre, Karachi attended a Workshop on “DSpace” from December 30, 2013 to January 3, 2014. The workshop was organized by MUET, PASTIC and SAARC Documentation Centre, New Delhi, India at MUET, Jamshoro.
- Sr. Scientific Information Officer, Mr. Muhammad Ayub Dogar and Mr. Umar Daraz, Steno-typist of PASTIC attended a Training Workshop on “Library Management in virtual Environment” at Akhtar Hameed Khan National Centre for Rural Development (AKH, NCRD) Park Road, Islamabad from January 13-17, 2014.
- Dr. Saima Huma Tanvir, SSIO, attended Training on “Project Preparation / PC-I-PC-V / Monitoring and Evaluation Techniques / Development of KPIs”, from February 10-14, 2014 at Pakistan Planning & Management Institute, Islamabad.
- Mr. Obaid Anwar, Sr. Scientific Information Officer attended Training on "Time Management" held at Pakistan Planning & Management Institute (PPMI), H-8/1 Islamabad, from February 24-25, 2014.
- Mr. Obaid Anwar, Sr. Scientific Information Officer attended Training on “General Management Skills” at the National Institute of Vacuum Science & Technology, (NINVAST), National Center of Physics, QAU University Islamabad, on 17.3.2014.
- Mrs Shazia Perveen, DCA, attended 2 weeks Computer Training course on “MS Access 2010 Advanced” from March 10-21, 2014 at Government of Pakistan, Establishment Division, Secretariat Training Institute, Islamabad
- Director General, PASTIC attended a Workshop on Complex Problem Solving on April 24, 2014 organized by Pakistan Engineering Council, Islamabad.

Lectures / Presentations Delivered

- Prof. Dr. Muhammad Akram Shaikh, D.G, PASTIC delivered a talk on “Social Networks and Access to Global Information using PASTIC Online Resources” during Mega Event of IMTIC’13 at MUET, Jamshoro from December 18-20, 2013.
- Prof. Dr. Muhammad Akram Shaikh, D.G, PASTIC delivered a talk on “Importance & Issues of Digital Libraries” at the closing ceremony of 5 days Workshop “SAARC-MUET Workshop on DSpace” from December 30, January 3, 2014 at Mehran University of Engineering and Technology Jamshoro.
- Mr. Saifullah Azim, Senior System Analyst delivered a talk on “Technology Trends” during “National Cyber Security Seminar” organized by National Telecommunication and Information Security Board (NTISB) on April 15, 2014 at Islamabad.
- Mr. Saifullah Azim, Senior System Analyst and Dr. Saima Huma Tanveer, SSIO, PASTIC presented project proposal for SAARC Development Funds at Ministry of Finance, Islamabad.
- Mr. Saifullah Azim, Senior System Analyst, PASTIC imparted training and delivered his talk during three days National Training Course organized by Pakistan Manpower Institute, Islamabad on “E-Government and Organizational Development” from April 23-25, 2014. Forty Six people across the country participated in the training program.

Presentations on PASTIC activities were given to the following students and faculty members who visited PASTIC.

- 22 Students and 2 Faculty Members, of Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam visited PASTIC on September 03, 2013.
- 28 students from Plant Sciences Department, Quaid-i-Azam University, Islamabad visited PASTIC on February 18, 2014
- 52 students from Plant Sciences Department , Quaid-i-Azam University, Islamabad visited PASTIC on March 4, 2014

6. Other Activities

- Prof. Dr. Muhammad Akram Shaikh, Director General, PASTIC (President, KOICA Alumni Association of Pakistan) received appreciation certificate from Director

General, KOICA, Mr. I Sung Choonki in recognition of the outstanding contribution to the Alumni Activities for the year 2013 and 2014.

- Reprographic Unit signed work agreement with Utility Stores Corporation of Pakistan for the year 2013-14.
- A Science Exhibition organized at Science Centre, Jail Road, Faisalabad on November 12, 2013.
- Dr. Nadeem Shafique Malik, Financial Advisor, Science and Technology visited PASTIC on February 13, 2014.

6.1 PASTIC Membership

1435 new members joined PASTIC and were added to PASTIC Services Users Membership Database.

6.2 Consultancy

PASTIC provided its expert/consultative services to Pakistan Engineering Council for accreditation of different engineering programmes of various universities of Pakistan and to Higher Education Commission of Pakistan for curriculum development in the area of Computer Software Engineering. In this connection Prof. Dr. Muhammad Akram Shaikh, Director General, PASTIC visited the following universities as an expert;

- COMSATS Institute of Information Technology, Lahore in connection with Pakistan Engineering Council (PEC) re-accreditation visit from December 4-5, 2013.
- University of Engineering & Technology, Taxila for re-accreditation of B.Sc. Software Engineering and B.Sc Computer Engineering Programs of the University from April 7-8, 2014.

IV. ORGANIZATION AND ADMINISTRATION

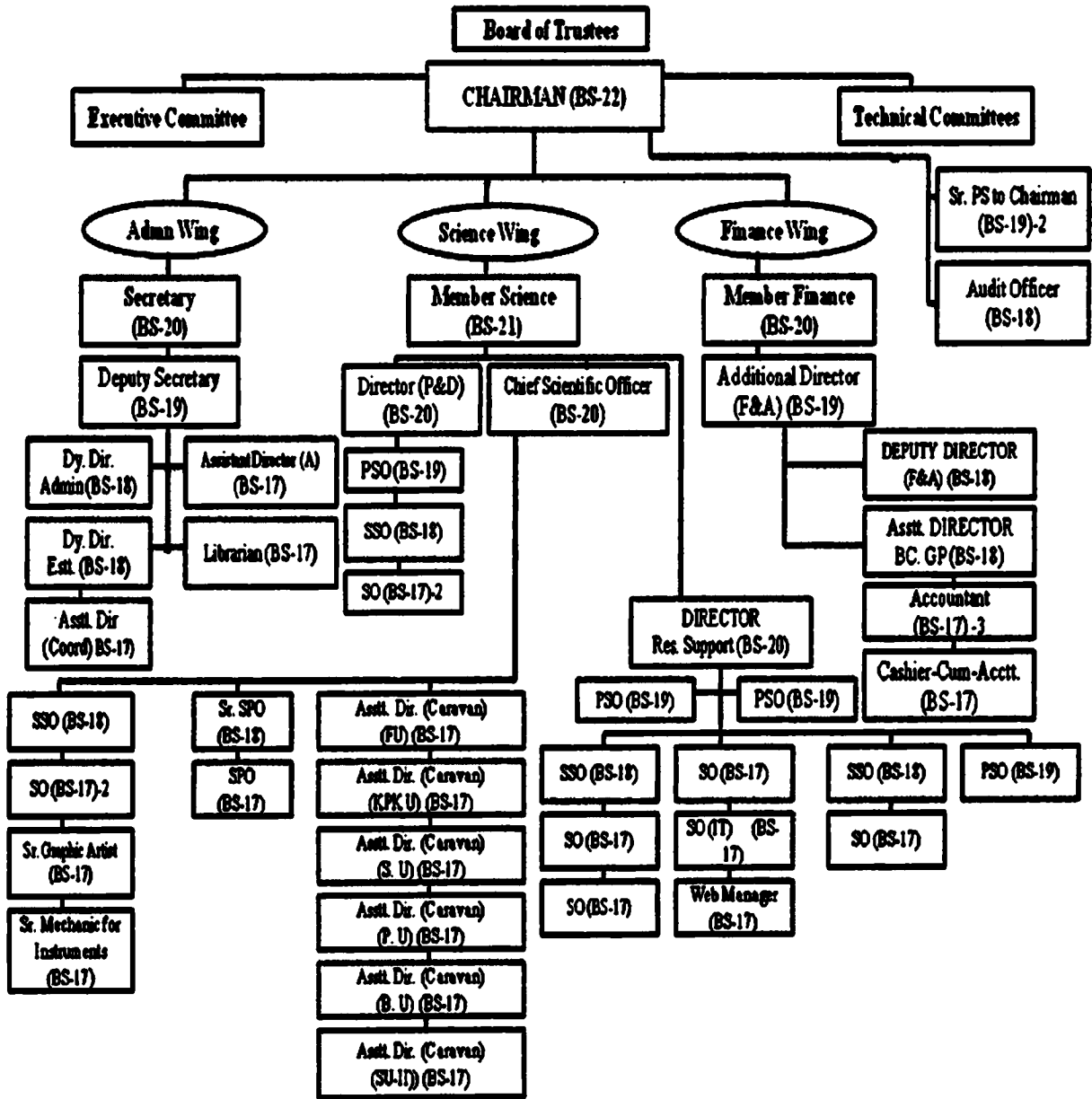
The organizational structure of Pakistan Science Foundation, Pakistan Museum of Natural History and Pakistan Scientific & Technological Information Centre is given in the forthcoming pages. The staff position in the Foundation, PMNH and PASTIC during the report period is as under:

1.0 PSF Sanctioned Posts and Organizational Chart

Sr. No	Name of Post	BPS	Sanctioned Strength
1.	Chairman	22	1
2.	Member Science	21	1
3	Member Finance	20	1
4	Director (RS)	20	1
5	Director (P&D)	20	1
6	Secretary	20	1
7	Chief Scientific Officer	20	1
8.	Additional Director (F&A)	19	1
9.	Principal Scientific Officer	19	4
10	Deputy Secretary	19	1
11.	Sr. PS to Chairman	19	2
13.	Sr. Scientific Officer	18	3
14.	Sr. Science Promotion Officer	18	1
15	Dy. Director (F&A)	18	1
16.	Dy. Director (Admn/Estt)	18	2
17.	Internal Audit Officer	18	1
18	Asstt. Director (Finance)	18	1
19	Scientific Officer	17	8
20.	Scientific Officer (IT)	17	1
21	Asstt. Director (Admn)/Coordination	17	2
22.	Accountant	17	3
23.	Asstt. Director (Caravan)	17	6
24	Science Promotion Officer	17	1
25	Web Manager	17	1
26.	Sr. Graphic Artist	17	1
27.	Mechanic for Instruments	17	1
28.	Cashier-cum-Accountant	17	1
12.	Librarian	17	1
29.	Asstt. Scientific Officer	16	10
30	Superintendent	16	2
31.	Audit & Accounts Assistant	16	2
32	Graphic Artist	16	1
33	Stenographer	16	8
34	Photographer	16 (S.S)	1
35	Calligrapher	16 (S.S)	1

36	Planetarium Assistant	16 (S.S)	4
37	Driver-cum-Mechanic	16 (S.S)	5
Sub Total:-			84
38	Science Assistant (Caravan)	14	14
39.	Science Assistant	14	5
40.	Technical Assistant (IT)	14	1
41.	Assistant	14	5
42.	Stenotypist	14	4
43.	Planetarium Assistant	11	5
44.	Driver-Cum-Mechanic	11	4
45.	Carpenter	9/11	1
46.	Electrician	7/11	1
47.	UDC	9	3
48	LDC/Typist	7	12
49	Driver/D.R	4/5/6/7	18
50.	DMO	5	1
51.	Naib Quasid	1/2/3/4	19
52.	Mali	1/2/3/4	2
53	Caravan Attendant	1/2/3	9
54	Security Guard	1/2/3/4	15
55	Sanitary Worker	1/2/3	4
S. Total:-			123
G. Total:-			207

**PAKISTAN SCIENCE FOUNDATION
ORGANIZATIONAL CHART**



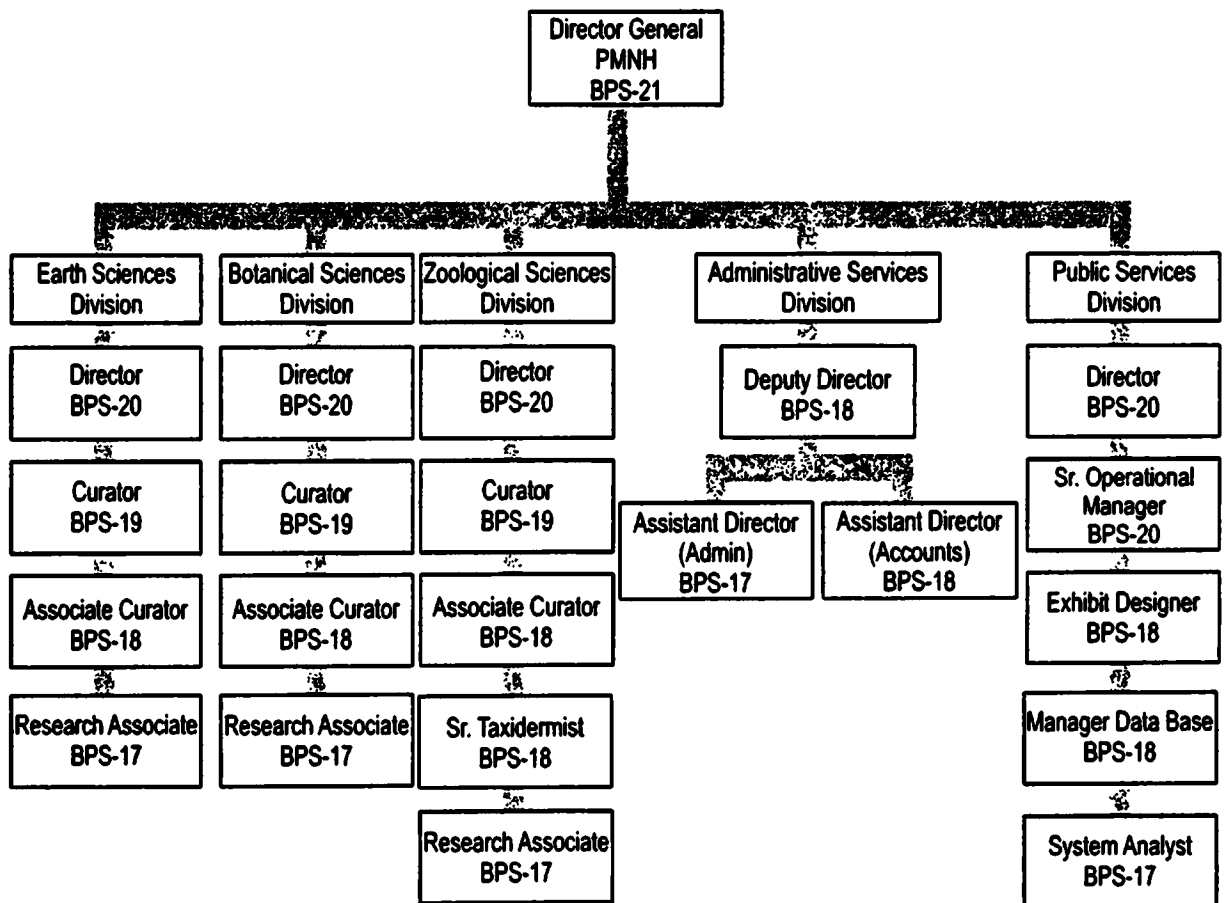
2.0 PMNH Sanctioned Posts and Organizational Chart

Sr. No.	Name of Post	BS	No. of Posts
1.	Director General	21	1
2.	Director	20	4
3.	Sr. Operational Manager	20	1
4.	Curator	19	5
5.	Associate Curator	18	7
6.	Exhibit Designer	18	1
7.	Deputy Director (Admin)	18	1
8.	Manager Data Base	18	1
9.	Sr. Taxidermist	18	1
10.	Assistant Director (Accounts)	18	1
11.	Assistant Director (Admin)	17	1
12.	Research Associate	17	1
13.	System Analyst	17	1
14.	Accountant	17	2
15.	Librarian	17	1
16.	Assistant Research Associate	16	2
17.	P. A to Director General	16	1
18.	Associate Artist	16	2
19.	Teacher Guide	16	1
20.	Accounts Assistant	16	1
21.	Taxidermist	16	1
22.	Superintendent	16	1
23.	Sr. Modeler	16	1
24.	Casting Staff	16	1
25.	Fossil Technician	16	1
26.	Stenographer	16	3
27.	Supporting Staff	1-15	81
			142

<u>Officers</u>	Total	Filled	Vacant
BS-16 & above	61	48	13
<u>Staff</u>			
BS-15 & below	81	67	14
Total	142	115	27

PAKISTAN MUSEUM OF NATURAL HISTORY

ORGANIZATIONAL CHART



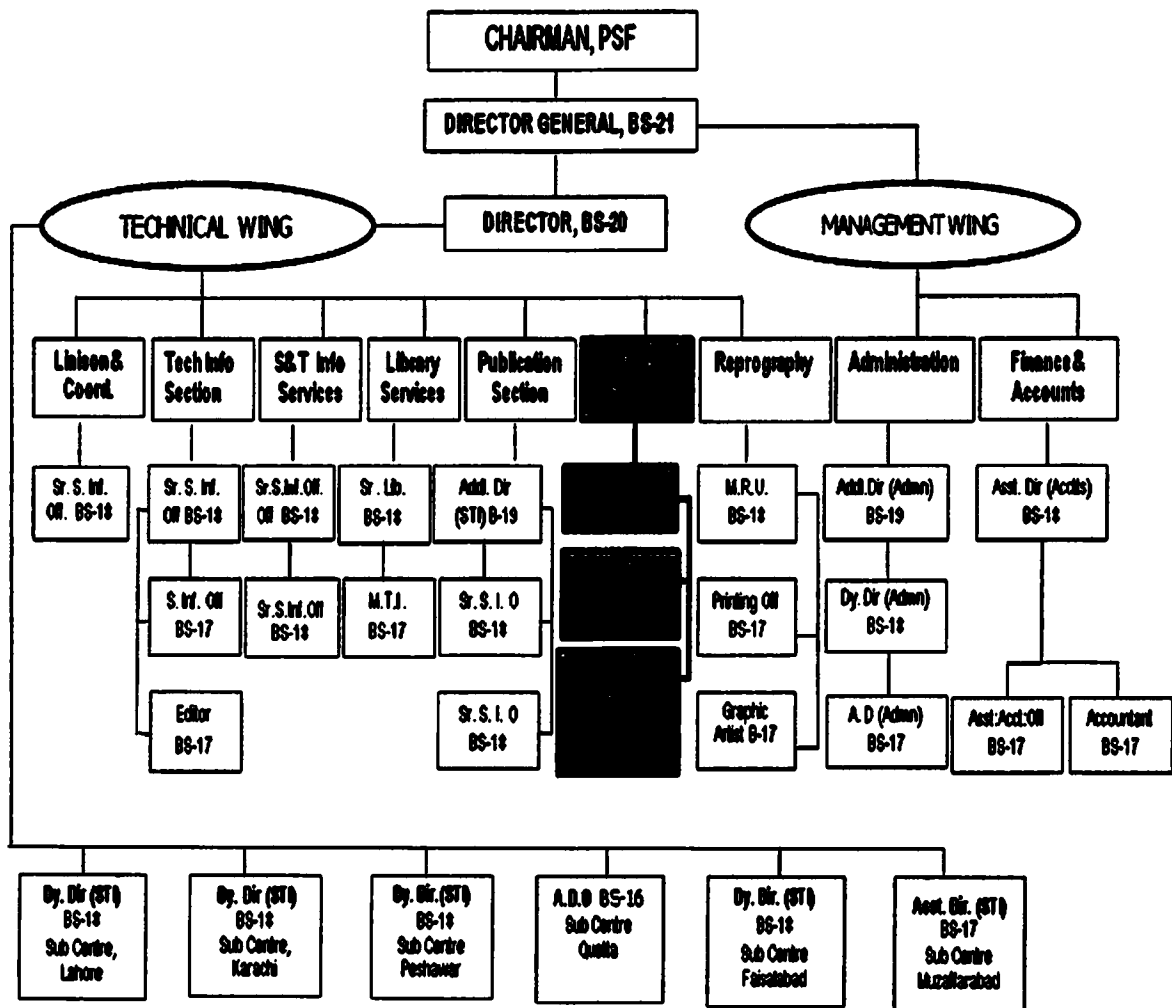
3.0 PASTIC Sanctioned Posts and Organizational Chart

Sr.#	BS	Designation	Total
1	21	Director General	1
2	20	Director	1
3	19	Additional Director (A&F)	1
4	19	Additional Director (STI)	1
5	18	Deputy Director (STI)	4
6	18	Manager Reprographic Unit	1
7	18	Senior System Analyst	1
8	18	Senior Librarian	1
9	18	Senior Scientific Information Officer	9
10	18	Deputy Director (Admin)	1
11	18	Assistant Director (Accounts)	1
12	18	PS to D.G	1
13	17	Assistant Director (STI)	1
14	17	Scientific Information Officer	3
15	17	System Analyst	1
16	17	Web Manager	1
17	17	Manager Technology Information	1
18	17	Printing Officer	1
19	17	Graphic Artist	1
20	17	Assistant Director (Admn)	2
21	17	Technology Information Officer (Marketing)	1
22	17	Editor	1
23	17	Assistant Accounts Officer	1
24	17	Accountant	1
25	16	Superintendent (Admin)	2
26	16	Assistant Scientific Information Officer	3
27	16	Assistant Documentation Officer	1
28	16	Assistant Programmer	3
29	16	Data Processing Assistant	1
30	16	Assistant Web Manager	1
31	16	Assistant Manager Reprographic Unit	1
32	16	Assistant Printing Officer	4
33	16	Stenographer	2
34	16	Assistant Accounts	1
Sub Total			57

Detail of Sanctioned Strength in BS-15 & Below as on 27-11-2013

Sr.#	BS	Designation	Total
1	15	Senior Data Control Assistant	1
2	14	Data Control Assistant	4
3	14	Layout Artist	1
4	14	Marketing/Field Assistant	1
5	14	Graphic Assistant	1
6	14	Mechanical Supervisor	1
7	14	Senior Offset Printer	2
8	14	Assistant	6
9	14	Sub Librarian	1
10	14	Stenotypist	2
11	12	Library Assistant	1
12	12	Data Entry Operator	4
13	11	Technician	1
14	11	Offset Printer	3
15	11	Technical Assistant	1
16	9	Upper Division Clerk	9
17	9	Senior Carpenter	1
18	7	Electrician	1
19	7	Assistant Offset Printer	2
20	7	Lower Division Clerk	11
22	6	Drivers	2
23	5	Bindery Assistant	2
24	5	Offset Machine Assistant	1
25	4	Drivers	6
26	4	Duplicating Machine Operator	1
27	4	Dispatch Rider	1
28	3	Head Mali	2
29	3	Record Sorter	1
30	3	Photo Attendant	1
31	3	Patent Attendant	1
32	3	Security Guard	4
33	3	Qasid	4
34	2	Naib Qasid	4
35	2	Security Guard	2
37	2	Qasid	1
38	2	Photo Attendant	1
39	2	Patent Attendant	1
40	2	Library Attendant	2
41	1	Bindery Helper	1
2	1	Sanitary Workers	3
43	1	Mali	1
44	1	Security Guard	2
45	1	Naib Qasid	9
Sub Total			107
Grand Total			164

ORGANIZATIONAL CHART OF PASTIC

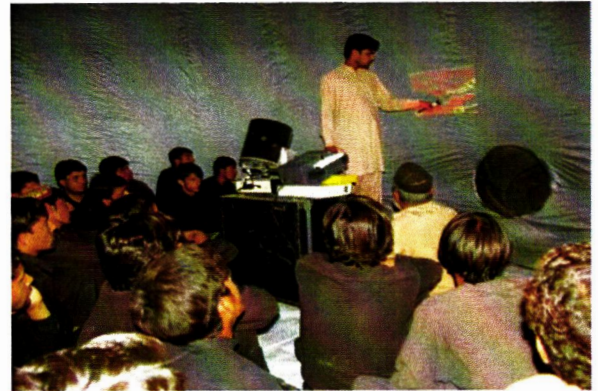


V. PHOTO GALLERY AND PRESS CLIPPING

1.0 PSF Photo Gallery & Press Clipping



Group photo of Students, Mentors/Teachers of HSSSRP



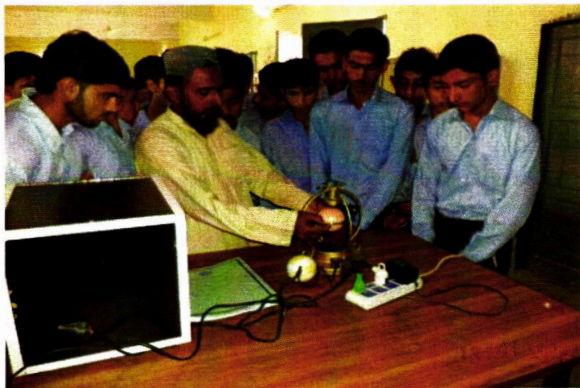
Students are being briefed inside Planetarium (Jaffarabad Unit)



Students and Teachers busy with Scientific Models (Tandojam Unit)



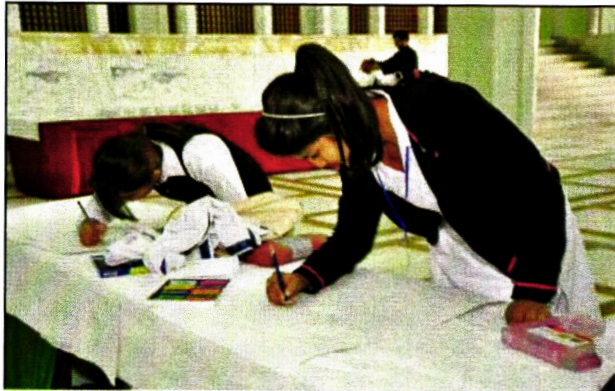
View of Science Exhibition at Layyah



Students are briefing about gravity model (Kallar syedan)



Orientation Session on IBSE at Govt. Girls High School Kallar Syedan



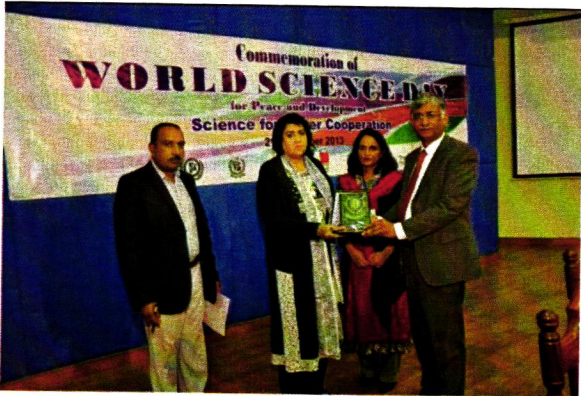
A view of Poster and Speech Competitions on the occasion of World Science Day (Islamabad)



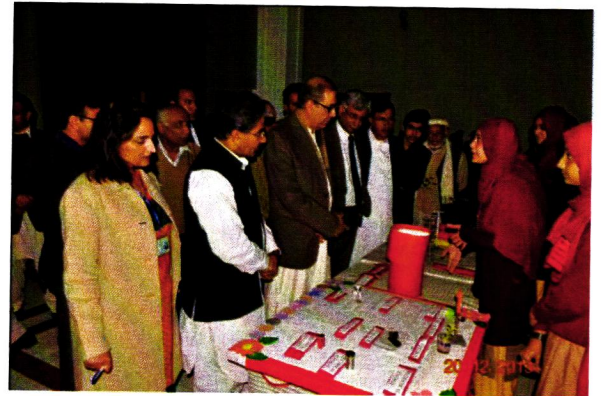
Distinguished Guests and Eminent Scientists speaking on the occasion of World Science Day (Islamabad)



Prize distribution among winner students (Islamabad)



Dr. Shahnaz Anjum Riaz DG, FDE, Islamabad receiving PSF Crest



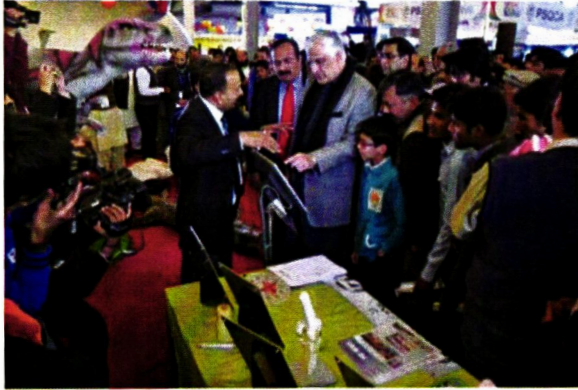
Additional Secretary MoST, Chairman PSF and some officers visiting the students projects



Prize and certificate distribution among winner students



Position Holder students of SMO-2013



Federal Minister S&T, Mr. Zahid Hamid Khan Visiting PSF stall and Mr. Abdul Rauf, SSO briefing about PSF activities



Dr. Khalil, Ahmed Ibupoto, Chairman PSF briefing Mr. Zahid Hamid Khan, Federal Minister S&T about Dinosaurs Models



Visitors are being briefed about Scientific Working Models during S&T Expo



A view of PSF, PASTIC and PMNH Joint Stall during S&T Expo



A view of PMNH specimens kept during S&T Expo



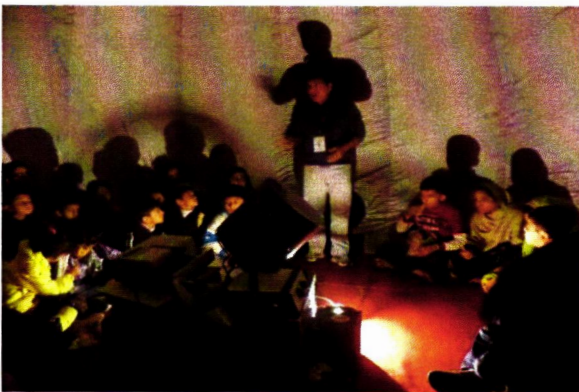
Visitors are being briefed about PMNH and PASTIC activities



A joint stall of PSF, PASTIC and PMNH during S&T Expo in Punjab Youth Festival Lahore



Students taking interest in Quiz Competition using touch screen monitor



An inside view of Planetarium show during Punjab Youth Festival



Mr. Abdul Rauf, SSO conducting the technical session of the review meeting



Signing of MoU with PMAS-AAUR



Launching of Expo by Minister of state for Parliamentary Affairs, Mr. Sheikh Aftab Ahmed and French Ambassador H.E. Mr. Philippe THIEBAUD, Additional Secretary Mr. Tahir Maqsood, Vice Chancellor PMAS Arid Agriculture, Rawalpindi, Dr. Rai Niaz Ahmed and Chairman PSF Dr. Khalil Ahmed Ibutoto

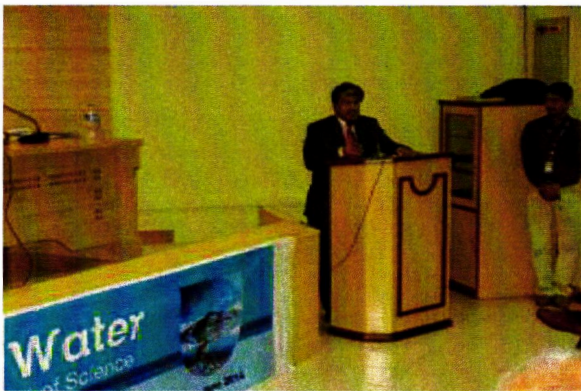


Students busy with the exhibits/models of the expo at Islamabad



The Chief Guest, MNA, Chaudhry Munir Azhar gives cash prize and gifts to a student of Danish School Hasilpur, who along with his two other team member won the prize in ISEF 2014 in USA. Ministry of Science and Technology Additional Secretary Mr. Azhar Maqsood and PSF Chairman Prof. Dr. Khalil Ahmed Ibutoto are also present

The French Ambassador H.E. Mr. Philippe THEIBAUD, Federal Secretary, MoST Mr. Kamran Ali Qureshi, PSF Chairman, Prof. Dr. Khalil Ahmed Ibutoto, VC BUIITEMS, Engr. Ahmad Farooq Bazai visited the Expo



French Ambassador H.E. Mr. Philippe THEIBAUD, Federal Secretary, MoST Mr. Kamran Ali Qureshi, PSF Chairman, Prof. Dr. Khalil Ahmed Ibupoto, VC BUIITEMS, Engr. Ahmad Farooq Bazai addressing the audience during the closing ceremony of the Expo at Quetta

The Nation

A multilingual publication from Lahore, Islamabad & Karachi
Chairman and Editor-in-Chief: Dr Majid Nizami
Editor: Salim Bokhari Managing Editor: Rameeza Nizami

RABI-UL-AWWAL 28, 1435
THURSDAY,
JANUARY 30, 2014

Science, Math Olympiad-2013 winners awarded certificates

OUR STAFF REPORTER
ISLAMABAD

The winners of "Science and Mathematics Olympiad-2013" were awarded certificates and prizes here at Pakistan Science Foundation (PSF).

"Science and Mathematics Olympiad-2013" was a joint venture of PSF and Federal Directorate of Education (FDE).

PSF Chairman Prof Dr Khalid Ahmed Iqbal was the chief guest at the prize distribution ceremony, attended by students, teachers and scientists from different research and development (R&D) organisations. FDE DG Dr Shahnaz A Riaz, PSF Member Finance Haider Zaman Khattak, FDE Director Training Abdul Waheed, PSF Chief Scientific Officer Dr HU Khan and Principal Scientific Officer Dr Naushaba Atta were also present on this occasion.

As part of science popularisation activities PSF also liaises with FDE for arranging Science Expos, essay and poster competitions. PSF is already undertaking these two important programmes in collaboration with FDE. For further expansion of mutual activities

PSF collaborated with FDE to conduct Science & Mathematics Olympiad 2013 for the students. The final competition and prize distribution ceremony was held on January 28, 2014 at PSF Auditorium. The Olympiad was aimed at inspiring and inculcating creative approach among the young students.

Prior to this, the competition was arranged at all the schools associated with FDE at primary level. All students of primary level participated in the competition. Two toppers from each school were selected and competition was held on sector level. From each sector 10 top position holders were selected for final competition held on January 28, 2014 at PSF and 60 students participated in it. Result of the said competition was announced on the same day.

PSF Chairman Prof Dr Khalid Ahmed Iqbal, FDE DG Dr Shahnaz A Riaz, FDE Director Training Mr Abdul Waheed and PSF Chief Scientific Officer Dr HU Khan addressed the prize distribution ceremony.

Addressing the ceremony, the PSF chairman said the Foundation despite meagre financial resources is carrying out different science activities for the students across the country.

THE EXPRESS TRIBUNE

Thursday
JANUARY 30, 2014

Future scientists

Nine students to represent Pakistan in global science competition

Names of winners announced at a ceremony

OUR CORRESPONDENT
ISLAMABAD

Nine students are all set to represent Pakistan at an annual global science competition, after they emerged as winners at a national science fair.

Intel Pakistan announced the names of the winners at a ceremony at the Sir Syed Memorial Complex on Wednesday. The winners will participate in the Intel International Science & Engineering Fair (ISEF)-2014 in Los Angeles in May.

Syeda Minahil from

the Forward Girls College Peshawar, Sidra Riaz from the Katchi Memon Academy Karachi and Jalal Waseem from the Aga Khan Higher Secondary School Karachi won for individual projects related to medical sciences, environment sciences and electronics respectively.

They were joined by a group of three students each from the Sheikh Khalifa Bin Zayed College Karachi and the Punjab Danish School (Girls) Hasilpur, who won for projects on environment sciences and energy respectively. Harris bin Ashraf, Babar Shah and Muhammad Tahir, all pre-engineering students from Sheikh Khalifa Bin Zayed College Karachi, formed

the other group that won the science fair.

The national science fair was adjudicated by a panel of four judges comprising Dr Azhar Hassan, Chaudhry Jameel Ahmed, Eng. Chaffar and Dr Ghazala Ashfaq.

The judges reviewed over 75 projects that had won in provincial and district science fairs to reach the national competition in Islamabad.

Minahil who worked on a cure for piles said the science underlying the cure is a mixture of two herbs that is high in fibre content and prevents constipation to reduce the risk of haemorrhoids. "Arriving at the final solution took over eight months of laboratory work, testing and chemical

"My previous participation helped give me confidence and I'll be able to guide his group to do better at ISEF 2014

Prize winner Harris bin Ashraf

analyses." Minahil's mother, Mohsina Asmat, who is a teacher, said she was extremely proud of her daughter's achievement.

Asmat said the chemistry departments of research institutes in Peshawar were extremely cooperative in letting her daughter test her hypothesis and ultimately win a ticket to represent Pakistan at

the ISEF 2014.

Sana Batool, one of the three girls from Danish School, which won the fair in the group category, said that they had worked on producing electricity from a windmill by refining theoretical power efficiency equations.

"We used destructive distillation to convert plastic garbage into slightly combustible oil that resembles crude oil and can be further refined," said Harris bin Zayed College, who had also won the science fair in 2013 for his individual project on plastic bag decomposition and represented Pakistan at the ISEF 2013 in Phoenix, Arizona.

"My previous participation helped give me confidence

and I'll be able to guide his group to do better at ISEF 2014."

Science and Technology Secretary Kamran Ali Qureshi said he had a renewed sense of hope that Pakistan's future was in the hands of dedicated young people and it was extremely important to build a knowledge economy.

"I request the scientists and academicians gathered here to give me a working plan to popularise the work of Pakistani scientists through broadcast and social media."

Intel Pakistan Country Manager Naveed Siraj said for the past 13 years, Intel has been trying its best to improve literacy in Pakistan through education initiatives.

Inspiring creative approach among students

Our correspondent Islamabad

The winners of 'Science and Mathematics Olympiad-2013' were awarded certificates and prizes at the Pakistan Science Foundation (PSF) Auditorium. The Olympiad 2013 was a joint venture of PSF and Federal Directorate of Education (FDE).



PSF Chairman Professor Dr. Khalil Ahmed Iqbal

Dr. Iqbal was the guest at the prize distribution ceremony, attended by students, teachers and scientists from different R&D organisations. FDE DG Dr. Shahnaz A. Raza, PSF Member Finance Hader Zaman Khattak, FDE Director Training Abdul Waheed, PSF Chief Scientific Officer Dr. HU Khan and Principal Scientific Officer Dr. Naushaba Atta were present on the occasion. Addressing the ceremony, the PSF chairman said the Foundation despite meagre financial resources is carrying out different science activities for the students across the country. He said as part of science popularisation activities PSF also bases with FDE for arranging science expos, essay and poster competitions. PSF is already undertaking these two important programs in collaboration with FDE.

Dr. Iqbal said he felt pleasure being present among the Galaxy of young scientists who will play their role in development of the country in coming days.

The Olympiad was aimed at inspiring and inculcating creative approach among the young students. Prior to this the competition was arranged at all the schools associated with FDE at primary level. All students of primary level participated in the competition. Two top students from each school were selected and competition was held on sector level. From each sector 10 top position holders were selected for final competition held today at PSF and 60 students participated in it.



www.nawaiwaqt.com.pk
editor@nawaiwaqt.com.pk
@nawaiwaqt fb.com/nawaiwaqt

DAILY NAWA-I-WAQT RAWALPINDI ISLAMABAD

روزنامہ نوائے وقت

راولپنڈی اسلام آباد

ایڈیٹر: ڈاکٹر اظہار احمد

ایڈیٹر: ڈاکٹر اظہار احمد

ایڈیٹر: ڈاکٹر اظہار احمد

جلد 59 نمبر 17 ہزاری، ان کی 1435 سے 1851 تک، 2014ء سے 2071ء تک، 12 روپے

UAN 111-222-007

2202641-44 پاکستان اسلام آباد 77-9562676



پاکستان سائنس فائوڈیشن کے چیئر مین ڈاکٹر اظہار احمد اور باراتی یونیورسٹی کے وائس چانسلر ڈاکٹر اظہار احمد میاں نے معاہدے کی یادداشت پر دستخط کر رہے ہیں۔ گورنر صاحب چودھری محمد سرور بھی موجود ہیں۔

سائنس فائوڈیشن اور باراتی یونیورسٹی کے مابین معاہدے کی یادداشت پر دستخط

پاکستان سائنس فائوڈیشن اور باراتی یونیورسٹی کے وائس چانسلر ڈاکٹر اظہار احمد اور باراتی یونیورسٹی کے چیئر مین ڈاکٹر اظہار احمد نے معاہدے کی یادداشت پر دستخط کر رہے ہیں۔ گورنر صاحب چودھری محمد سرور بھی موجود ہیں۔

سائنس فائوڈیشن اور باراتی یونیورسٹی کے مابین معاہدے کی یادداشت پر دستخط

جرمیں اور جرائم سے متعلق ہونے والے اصلاحی اور تعلیمی اقدامات

روپوشی اور اسلام آباد

میں

روزنامہ

بیت

تراہد قازوق ملک

جلد 3 | جمعہ المبارک 18 اپریل 2014ء 17 جمادی الثانی 1435 | شمارہ 213

نیشنل سائنس سوسائٹی پروگرام کے تحت ورکشاپ کا انعقاد

✓ اسلام آباد (اسے پی ٹی) پاکستان سائنس فاؤنڈیشن نے ملک میں سائنس کی استعداد کار میں اضافہ کے سلسلے میں پراجیکٹ جاری کرنے (ہفتی 6 نمبر 42)

42 ورکشاپ

ورکشاپ میں کارکنوں کا توجہ دیا گیا ہے۔ نیشنل سائنس سوسائٹی پروگرام کے تحت ایک ورکشاپ بھارت کو متفقہ کی گئی۔ پاکستان سائنس فاؤنڈیشن کے چیئرمین ڈاکٹر طیب احمد نے ورکشاپ کے شرکاء سے خطاب کرتے ہوئے فاؤنڈیشن کے کردار سائنس سرگرمیوں اور اس شعبے سے وابستہ افراد کی استعداد کار میں اضافہ سے متعلق پروگراموں سے آگاہ کیا۔ ورکشاپ میں سرکاری شعبہ کی جاسات اور تحقیق و ترقی کے اداروں میں کام کرنے والے سائنسدانوں و سائنس دانوں کو تیار کرنے (پہلے) کے سلسلے کی مہارت کی تربیت فراہم کی گئی۔ اس موقع پر پرنسپل سائنس آفیسر ڈاکٹر زاہد امجد نے بھی خطاب کیا۔

The Nation

PAK 2, 1435
FRIDAY,
MAY 2, 2014

World Travel Expo to sensitise masses on water

OUR STAFF REPORTER
ISLAMABAD

International Traveling Expo "Water at the Heart of Science", jointly organised by Pakistan Science Foundation (PSF), Embassy of France, Islamabad, and Centre Sciences, Orleans, France, will be launched in Islamabad at PSF on May 6.

Federal Minister for Science and Technology Zahid Hamid and French Ambassador Philippe THIEBAUD will jointly launch it, said organisers at the inaugural session of a Training Workshop on the Expo.

PSF Chairman Prof. Dr. Khalil Ahmed Iqbal presided over the inaugural session of the training workshop. Martine HAMIDI, French Counselor for Cooperation, and Cultural Affairs, Guy Antoine from Centre Sciences, Orleans, France, were also present on this occasion.

Speaking on this occasion, Dr. Iqbal said that water issue is one of the 21st century's greatest challenges. Abundant but unequally distributed on Earth, this resource is today threatened by climate change and the dangers of overuse, he said, adding, improving access to water, which is still suffering from glaring disparities, is one of the Millennium Development Goals.

The Chairman said the Expo will create awareness on water issues and its conservation. He hoped that the Expo will be as successful as the previous ones.

Martine Herlem Hamidi said Pakistan government is committed to popularisation of science for a better future of the world and we are happy to jointly work with it for the last so many years. She said the Expo is meant to create awareness on water resources and issues and find solutions to them.

Giving an introduction of the Expo, Dr. Nausaba Nadeem, Principal Scientific Officer, PSF, said the Foundation started arranging International Traveling Expos in 2008 in collaboration with Embassy of France in Pakistan and Centre Sciences-Orleans-France.

She said in this regard, Expos on the themes of Mathematics, Environment, Biodiversity, Chemistry and Energy have already been held in various cities and towns of Pakistan. PSF has also inked MoU with Centre Science, Orleans, France for arranging and co-producing Expos in Pakistan.

Dr. Nausaba said this year PSF is going to organize International Traveling Expo on Water titled "Water at the Heart of Science" in collaboration with Centre Sciences-CCSTI, Orleans, France and French Embassy in Pakistan.

She said the Expo will travel from Is-

lamabad to Sargodha, Mirpur (AJK), Mansehra and conclude at Quetta. She said it will provide a great opportunity to the students, faculty members, researchers and general public to get firsthand knowledge about water, its resources and their proper usage. She said the launching ceremony of the Expo in Pakistan will hold on 6th May at PSF Auditorium and the expo will be opened for students and general public from 7th May, 2014 in one of the model schools of Islamabad and then it will travel abroad.

Guy Antoine said this Expo has been prepared by Centre Sciences France, with support of other stakeholders. The Expo on water is richly illustrative and educational, which gives more insight into the key role that research has to play in the sustainable management of water as a vital, indispensable resource for development.



Friday, April 25, 2014



جلد نمبر 20 | جہاں لہارک 24 بجای 1435 نی 25 اپریل 2014 | 12 بجای 2071 | شمارہ نمبر 54
 فون نمبر 051-2891802 : فیکس نمبر 051-2891814 | صفحات 16 | قیمت 12 روپے

یورپین یونین کے پروگرام ہورائزن 2020 سے متعلق سمینار آج ہوگا

اسلام آباد (ڈنیا رپورٹ) یورپین یونین کے تحقیقاتی پروگرام ہورائزن 2020 سے متعلق آگاہی سمینار آج پینٹل یونیورسٹی برائے سائنس و ٹیکنالوجی میں منعقد ہو گا۔ وزارت سائنس و ٹیکنالوجی، پاکستان سائنس فاؤنڈیشن، یورپی یونین پینٹل یونیورسٹی برائے سائنس و ٹیکنالوجی اور ایچ ای سی نے مشترکہ طور پر اس سمینار کا اہتمام کیا ہے۔ ملک بھر سے تعلیمی اور تحقیقاتی اداروں سے وابستہ 300 سے زائد سائنسدان اور ٹیکنالوجسٹ سمینار میں شرکت کریں گے۔ پروگرام کا بنیادی مقصد یورپی یونین کی تحقیقاتی و ایجادی شعبے میں یورپین کو مشغول بنانا ہے۔

ہمارے لئے الٹرنیٹو ایف ایم کے ذریعے سے بہتر دیکھنے کے اختیارات
ABC CERTIFIED | 2331689-90



FRIDAY 25 APRIL 2014

جلد نمبر 24 | جہاں لہارک 24 بجای 1435 نی 25 اپریل 2014 | 14 بجای 2071 | 12 صفحات | قیمت 15 روپے

14 یورپین یونین
 یورپین یونین کے پروگرام ہورائزن 2020 سے متعلق آگاہی سمینار آج پینٹل یونیورسٹی برائے سائنس و ٹیکنالوجی میں منعقد ہو گا۔ وزارت سائنس و ٹیکنالوجی، پاکستان سائنس فاؤنڈیشن، یورپی یونین پینٹل یونیورسٹی برائے سائنس و ٹیکنالوجی اور ایچ ای سی نے مشترکہ طور پر اس سمینار کا اہتمام کیا ہے۔ ملک بھر سے تعلیمی اور تحقیقاتی اداروں سے وابستہ 300 سے زائد سائنسدان اور ٹیکنالوجسٹ سمینار میں شرکت کریں گے۔ پروگرام کا بنیادی مقصد یورپی یونین کی تحقیقاتی و ایجادی شعبے میں یورپین کو مشغول بنانا ہے۔

یورپین یونین کے پروگرام ہورائزن 2020 سے متعلق سمینار کا اہتمام
 اسلام آباد (ڈنیا رپورٹ) یورپین یونین کے تحقیقاتی پروگرام ہورائزن 2020 سے متعلق آگاہی سمینار آج پینٹل یونیورسٹی برائے سائنس و ٹیکنالوجی میں منعقد ہو گا۔ وزارت سائنس و ٹیکنالوجی، پاکستان سائنس فاؤنڈیشن، یورپی یونین پینٹل یونیورسٹی برائے سائنس و ٹیکنالوجی اور ایچ ای سی نے مشترکہ طور پر اس سمینار کا اہتمام کیا ہے۔ ملک بھر سے تعلیمی اور تحقیقاتی اداروں سے وابستہ 300 سے زائد سائنسدان اور ٹیکنالوجسٹ سمینار میں شرکت کریں گے۔ پروگرام کا بنیادی مقصد یورپی یونین کی تحقیقاتی و ایجادی شعبے میں یورپین کو مشغول بنانا ہے۔

Daily Asas

روزنامہ اساس

راولپنڈی

ایڈیٹر: شیخ فاضل احمد

شیخ فاضل احمد

راولپنڈی، اسلام آباد اور فیصل آباد کراچی اور مظفر آباد اور کراچی سے بیک وقت شائع ہوتا ہے

جلد 20 شمارہ 182 | جمعہ المبارک 24 جمادی الثانی 1435ھ 25 اپریل 2014ء 11 بیساکہ 2071 پ

FRIDAY 25 APRIL 2014

یورپیٹین یونین کے پروگرام ہورائزن 2020 سے متعلق سیمینار

ملک بھر سے تنظیم اور تحقیقاتی اداروں سے وابستہ سائنسدان سیمینار میں شرکت کریں گے

اسلام آباد (نامہ نگار خصوصی) یورپیٹین یونین کے تحقیقاتی پروگرام ہورائزن Horizon 2020 سے متعلق آگامی سیمینار 25 اپریل 2014 بروز جمعہ فیصل یونیورسٹی برائے سائنس و ٹیکنالوجی میں منعقد ہو گا۔ وزارت سائنس و ٹیکنالوجی، پاکستان سائنس فاؤنڈیشن، یورپیٹین یونین، فیصل یونیورسٹی برائے سائنس و ٹیکنالوجی اور پائرا بیو ٹیکنالوجی نے مشترکہ طور پر اس سیمینار کا اہتمام کیا ہے۔ ملک بھر سے تنظیم اور تحقیقاتی

یورپیٹین یونین اور پاکستان کی وزارت سائنس و ٹیکنالوجی نے اس کے متعلق آگامی سیمینار کا آغاز کر دیا ہے۔ پروگرام یورپیٹین یونین اور پاکستان کے تحقیقاتی اداروں کو سائنس کے مختلف شعبوں میں مشترکہ طور پر کام کرنے کے مواقع فراہم کرے گا۔

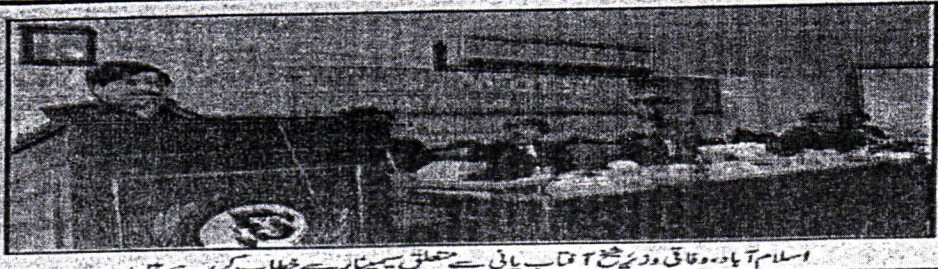
ہر والی سہولت کے متعلق ہوتے ہیں۔ اور اسلام آباد میں مقامی اخبار

راولپنڈی اور اسلام آباد

روزنامہ اسپرڈ

ایڈیٹر: زاہد قاضی ملک

جلد 3 | 7 مئی 2014ء 7 رجب المرجب 1435ھ 23 بیساکہ | شمارہ 232



اسلام آباد وفاقی وزیر شیخ آفتاب یانی سے متعلق سیمینار سے خطاب کر رہے ہیں

The Patriot

Friday, April 25, 2014

Seminar on HORIZON 2020 - EU Research and Innovation Program today

ISLAMABAD (PR) An awareness seminar on HORIZON 2020 - EU Research and Innovation Program will be held Friday at National University of Science and Technology (NUST) on April 25, 2014.

The Seminar is being jointly organized by Ministry of Science and Technology (MoST), Pakistan Science Foundation (PSF), European Union (EU), NUST and HEC for Building a science bridge between the EU and Pakistan. Over 300 Scientists and Technologists from Academia and R&D Organizations will participate in this Seminar on Horizon 2020.

DAILY NAWA-I-WAQT
RAWALPINDI
ISLAMABAD

راولپنڈی
اسلام آباد

ایڈیٹر ڈاکٹر حفیظ نظامی

مینیجنگ ایڈیٹر حفیظ نظامی

روزنامہ نوائے وقت

لاہور، کراچی، راولپنڈی، اسلام آباد اور ملتان سب کے وقت شائع ہوتا ہے



HEDNESDAY 07, MAI

شمارہ 291 | صفحات 16 | قیمت 12 روپے | 20716 2014 | 25 جولائی 2014 | 7 رجب المرجب 1435ھ | 111-222-007 UAN | 2202641-44 اسلام آباد | 5562676-77 راولپنڈی | 59



اسلام آباد: فریونگ ایجنسیوں میں طلبات کو سائنس پراجیکٹس بارے میں بریف کیا جا رہا ہے

جنگ راولپنڈی

پانی میر خلیل الرحمن

تعداد 126

بدھ 7 رجب المرجب 1435ھ 7 مئی 2014ء 25 مئی 2071ء

صفحہ 56

تمنا کش، پانی کا مسئلہ حل کرنے میں اہم کردار ادا کریں گی، شیخ آفتاب

پانی اور توانائی حکومتی ترجیحات میں شامل ہے یا استانی آبیاری نظام بہتر ہے سفیر قلم سنا سید

اسلام آباد (اپنے نامہ نگار سے) پانی کے موضوع پر بین الاقوامی ٹریبونل ایکسپو کا افتتاح کر دیا گیا۔ ایکسپو کا افتتاح وزیر مملکت برائے پارلیمانی امور شیخ آفتاب احمد اور فرانس کے سفیر قلم سنا سید نے کیا۔ ایکسپو کا انعقاد پاکستان سائنس فاؤنڈیشن، فرانس، سفارتخانہ اسلام آباد اور سینٹر سائنسز نیو آریلینز فرانس کے باہمی اشتراک سے کیا گیا ہے۔ وزیر مملکت برائے پارلیمانی امور شیخ آفتاب احمد نے کہا کہ ایکسپو کا موضوع انتہائی اہم ہے کیونکہ پانی انسانی زندگی کیلئے

ناگزیر ہے۔ انہوں نے امید ظاہر کی کہ یہ ممالک پاکستان میں پانی کی کمی کے مسئلہ کو حل کرنے میں اہم کردار ادا کریں گی۔ فرانس کے سفیر قلم سنا سید نے کہا کہ پانی اور توانائی حکومتی ترجیحات میں شامل ہیں۔ انہوں نے پاکستان کے آبیاری کے نظام کی تعریف کی اور کہا کہ اس میں مزید بہتری لائی جاسکتی ہے۔ وزارت سائنس و ٹیکنالوجی کے ایگزیکٹو سیکرٹری طارق مقصود نے کہا کہ یہ ممالک پانی کی قلت پر قابو پانے کیلئے ایک اہم قدم ہے۔

روزانہ

پانی کے عنوان سے تین روزہ تمنا کش 9 جون سے شروع ہوگی

تمنا کش 9 جون سے شروع ہوگی

تمنا کش 9 جون سے شروع ہوگی



WWW.NAWAIWAQT.COM.PK
 Editor@nawaiwaqt.com.pk
 @nawaiwaqt fb.com/nawaiwaqt

DAILY NAWA-I-WAQT
 RAWALPINDI
 ISLAMABAD

راولپنڈی
 اسلام آباد

ایڈیٹر ڈاکٹر حفیظ نظامی

پانی کی تنظیم

روزنامہ نوائے وقت

لاہور کراچی راولپنڈی / اسلام آباد اور ملتان ٹیکسٹ شائع ہوتا ہے

 HINDUSTANI 30.41

جلد 29 جلدی اشاعتی 1435 1306ء پر 18 ستمبر 2014ء ب صلحت ریسرو فیبر این بی آر شمارہ

پانی کے موضوع پر بین الاقوامی ٹریولنگ ایکسپو 6 مئی کو شروع ہوگی

اسلام آباد (نوائے وقت) پانی کے موضوع پر بین الاقوامی ٹریولنگ ایکسپو بھارت میں پانی سائنس کی روح (Water at the Heart of Science) کا افتتاح 6 مئی کو پاکستان سائنس فاؤنڈیشن اسلام آباد میں ہوگا۔ ایکسپو کا افتتاح وفاقی وزیر سائنس و ٹیکنالوجی زاہد سجاد اور فرانس کے سفیر رجب قاسم کریں گے۔ ایکسپو کا انعقاد پاکستان سائنس فاؤنڈیشن، فرانسیسی سفارتخانہ اسلام آباد اور سائنس سوسائٹی آریئنڈ فرانس کے باہمی اشتراک سے کیا جا رہا ہے۔ ایکسپو کے سلسلے میں دو روزہ تربیتی ورکشاپ پاکستان سائنس فاؤنڈیشن میں منعقد ہوگی۔ تربیتی ورکشاپ کی صدارت پاکستان سائنس فاؤنڈیشن کے چیئرمین پروفیسر ڈاکٹر شکیل احمد ایچ یو سے کی۔ جبکہ اس موقع پر فرانسیسی کنسلر برائے تعاون و تعلق امور سائنس میڈی، فرانسیسی سفیر سوسائٹی آریئنڈ فرانس کی اہوئی، پاکستان سائنس فاؤنڈیشن کے ممبر قلمس حیدر زمان عکف اور چیف سائنسٹک آفیسر ڈاکٹر ایچ یو خان بھی موجود تھے۔

"Water at the heart of science" exhibition at BUITEMS

QUETTA: Pakistan Science Foundation & Technology Organization is organizing an exhibition on "Water at the Heart of Science" in Quetta. The exhibition is the first of its kind in the country. It is a joint venture of the Pakistan Science Foundation, the French Embassy in Islamabad, and the French Society of Sciences in Pakistan. The exhibition will be inaugurated by the Honorable Minister for Science and Technology, Government of Sindh, and the French Ambassador to Islamabad. The exhibition will run from 04.00 PM to 09.00 AM.

Traveling Expo at BUITEMS from 04.00 PM to 09.00 AM

The exhibition is a joint venture of the Pakistan Science Foundation, the French Embassy in Islamabad, and the French Society of Sciences in Pakistan. It will feature a wide range of scientific exhibits, including water purification technologies, water conservation techniques, and the latest in water management. The exhibition is free of charge and open to the public. For more information, please contact the Pakistan Science Foundation at 011-33250000.

روزنامہ "اعتماد" کوئٹہ

11. 6. 14.



تین روزہ علمی سلاویج پر عملیات کا علاقہ - ماہرین کے زیر نگرانی

کوئٹہ (پپی) پاکستان سائنس فاؤنڈیشن، فرانسیسی سفارت خانہ اور بلوچستان یونیورسٹی کے تعاون سے تین روزہ علمی سلاویج کا آغاز ہو گیا۔ اس سلاویج میں مختلف شعبوں کے ماہرین نے شرکت کی اور ان کے زیر نگرانی عملیاتی کام کیے گئے۔ اس سلاویج کے دوران مختلف ماڈلز اور تجربے دکھائے گئے اور ان کے بارے میں گفتگو کی گئی۔ اس سلاویج کے دوران مختلف شعبوں کے ماہرین نے شرکت کی اور ان کے زیر نگرانی عملیاتی کام کیے گئے۔ اس سلاویج کے دوران مختلف شعبوں کے ماہرین نے شرکت کی اور ان کے زیر نگرانی عملیاتی کام کیے گئے۔

Daily "Balochistan Times" Quetta.

11. 6. 14.

3-Day scientific exhibition kicks off in BUISTEMS



QUETTA (PPI): Pakistan Science Foundation, French Embassy and Balochistan University of Information Technology, Engineering and Management Science (BUISTEMS) organized three day scientific exhibition began here Tuesday.

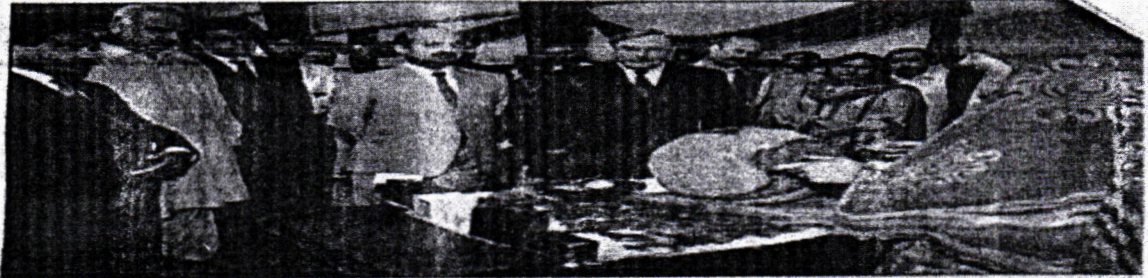
Pro Vice chancellor Muhammad Ayaz Khan Malghani inaugurated the exhibition at BUISTEMS Takatu Campus here Tuesday.

Exhibition is aimed at creating awareness about alternative sources of water, their uses, advantages and losses.

While appreciating models kept at the exhibition Pro VC said that role of water for country's development cannot be denied. He said there is no dearth of talent in girl and boy students. There is need they should be provided maximum opportunities to enable them to mobilize their abilities.

Assistant Director Pakistan Science foundation Quetta Unit Maqbool Ahmed and Nusrat Hussain Zaidi apprised the students of models.

13.6.74.



QUETTA: French Ambassador to Pakistan Philippe Thiebaut visiting the three days Travelling Expo organised by Pakistan Science Foundation at P.U. University.

Water at Heart of Science

QUETTA: Present generation has to overcome wastage of water for coming generators. Water shortage can be overcome by using science and technology.

This was stated by Ambassador of France Philippe Thiebaut in closing of 3-day Travelling Expo organised by Pakistan Science Foundation on the subject of "Water at the Heart of Science" at Balochistan University of Information Technology, Engineering and Management Sciences (BLITEMS) here Thursday.

Chairman Pakistan Science Foundation Professor Dr. Khaleel Ahmed Ahopota, Federal Secretary for Science and Technology Kamran Ali Chaudhry and Vice-Chancellor BLITEMS Ahmad Farooq Basri, provincial secretaries and students from various institutions attended.

French Ambassador regretted that more than one billion people were deprived of clean water that is access of every one of seven people has become impossible. He said in

developing countries situation is more serious for not saving water due to non adoption of science and technology methods. Therefore creating awareness in these countries to adopt modern means of saving water is very much necessary. He said educational institutions can be best source.

Chairman Pakistan Science Foundation said his organization was organising such expos in every city of Pakistan in this regard so that every envisioned citizen can save the most precious asset of life that is water.

Federal Secretary for Science and Technology said that during this age Pakistan facing challenges, water shortage is one. If we did not overcome this most of our population would face drops of water during the coming few years.

Vice-Chancellor Ahmad Farooq Basri said that BLITEMS was carrying out research on environment at its own and a special department is also establish in the University. —PTI

Balochistan
Express

روزنامہ صہرت



پاکستان ہاؤس کے وفد نے پاکستان آسٹریلیا کرکٹ ٹیم کے وفد کو ملتان کے مقام پر استقبال کیا۔

روزنامہ "انتخاب" کوئٹہ

11. 6. 2014

بیوروٹیلیوی کیمپس میں تین روزہ سائنسی نمائش کا انعقاد

سائنسی نمائش کا مقصد پانی کے تباہ کن ذرائع اس کے استعمالات، فوائد اور نقصانات کے مطلق آگاہی ہے۔ کوئٹہ (پ) پاکستان سائنس قادیان، بیورو کوئٹہ اور قراچی سائنس شانہ کے تعاون سے تین روزہ سائنسی نمائش کا بیوروٹیلی کیمپس میں انعقاد کیا گیا ہے۔ سائنسی نمائش کا مقصد پانی کے تباہ کن ذرائع اس کے استعمالات، فوائد اور نقصانات کے مطلق آگاہی ہے۔ اس سال سے قراچی سے تیار شدہ ماڈلز رکھے گئے ہیں۔ نمائش کا افتتاح بیورو کے پروفیسر جاسٹر محمد ایاز خان مغلانی نے کیا۔ جن کے ہمراہ پاکستان سائنس قادیان کے

انجینئر، مہر حسن زیدی، اقبال الدین، جمیل احمد، ریاض اور جمال مغلانی، پروفیسر محمد نواز، ایچ بی جیل ریجنل اور کونسلر کے ساتھ تھے۔ نمائش میں رکے کے مختلف ماڈلز کو سراہتے ہوئے، پروفیسر جاسٹر محمد ایاز خان مغلانی نے کہا، بجلی ترسیل کے لیے پانی کے گرنے سے انکار نہیں کیا جاسکتا، انہوں نے کہا کہ طلباء اور طالبات میں دلچسپی کی کمی نہیں ہے، مگر ضرورت اس بات کی ہے کہ اس کے زیادہ زیادہ مواقع فراہم کیے (پتہ 44 صفحہ 7 پر)

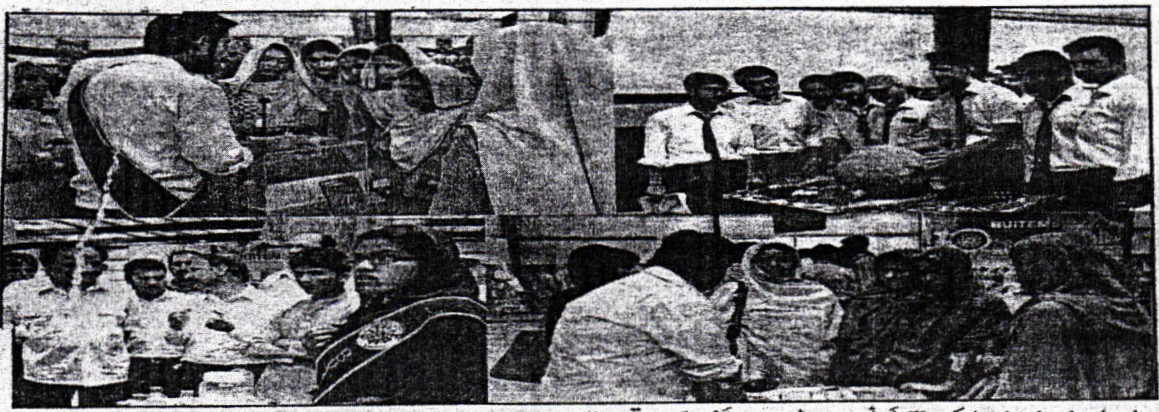
جائیں، تاکہ وہ اپنی صلاحیتوں کو بروئے کار لائیں۔ پاکستان سائنس قادیان کوئٹہ یونٹ کے اسٹیفنڈ ڈائریکٹر جمیل احمد اور مہر حسن زیدی نے طلباء اور طالبات کو ماڈلز کے بارے میں آگاہ کیا۔ سائنسی نمائش میں بیورو میں سکول اور کالج کے طلباء اور طالبات نے شرکت کی، نمائش کے موقع پر پانی سے مطلق ماڈلز رکھے گئے۔



پروفیسر جاسٹر محمد ایاز خان مغلانی نے سائنس قادیان کوئٹہ یونٹ کے پانی کے تباہ کن ذرائع کے موضوع پر مختلف ماڈلز کا افتتاح کیا ہے۔

روزنامہ "میزان" کوئٹہ

11. 6. 14



☆☆☆☆☆☆☆☆☆☆ کوئٹہ آئی ٹی بیوٹیلی کیمپس میں نمائش کے موقع پر طلباء و طالبات مختلف ماڈلز کا افتتاح کر رہے ہیں ☆☆☆☆☆☆☆☆☆☆

روزنامہ "مشرق" کوئٹہ
11.6.14

تین روزہ سائنسی قرائن کا انعقاد پورے ملٹی کس میں کیا گیا

کوئٹہ کے پورے ملٹی کس میں تین روزہ سائنسی قرائن کا انعقاد کیا گیا۔ اس موقع پر سائنس دانوں نے طلباء کو سائنس کے مختلف شعبوں میں دلچسپی دلانے کے لیے مختلف قرائن پیش کیے۔ قرائن میں سائنس کے مختلف شعبوں کی بات چیت کی گئی اور طلباء کو سائنس کے بارے میں مزید جانکاری دی گئی۔



پورے ملٹی کس میں تین روزہ سائنسی قرائن کا انعقاد کیا گیا

Press clippings to Mr.
Magbool Ahmed. A-3.
P.S.F., Quetta. In
please.

روزنامہ "سینچر" ایکسپریس کوئٹہ
11.6.14

پورے ملٹی کس میں 3 روزہ سائنسی قرائن کا انعقاد

کوئٹہ کے پورے ملٹی کس میں 3 روزہ سائنسی قرائن کا انعقاد کیا گیا۔ اس موقع پر سائنس دانوں نے طلباء کو سائنس کے مختلف شعبوں میں دلچسپی دلانے کے لیے مختلف قرائن پیش کیے۔ قرائن میں سائنس کے مختلف شعبوں کی بات چیت کی گئی اور طلباء کو سائنس کے بارے میں مزید جانکاری دی گئی۔



پورے ملٹی کس میں 3 روزہ سائنسی قرائن کا انعقاد کیا گیا

روزنامہ "زمانہ" کوئٹہ

11. 6. 14

طلبا اظہارِ تہذیب کی نئی نئی ترقی و ترقی کے قیام کے لئے جدوجہد کر رہے ہیں

پاکستان سائنس فاؤنڈیشن، چیئرمین اور قریبی سفارت خانہ کے تعاون سے تین روزہ سائنسی نمائش کا یہ نمونہ پیش کیوں میں اہتمام کیا گیا ہے۔

پاکستان سائنس فاؤنڈیشن کے تعاون سے تین روزہ سائنسی نمائش کا یہ نمونہ پیش کیوں میں اہتمام کیا گیا ہے۔

پاکستان سائنس فاؤنڈیشن کے تعاون سے تین روزہ سائنسی نمائش کا یہ نمونہ پیش کیوں میں اہتمام کیا گیا ہے۔



..... کوئٹہ میں سائنس فاؤنڈیشن کے تعاون سے تین روزہ سائنسی نمائش کا یہ نمونہ پیش کیا گیا ہے۔

روزنامہ "بلوچستان نیوز" کوئٹہ

12. 6. 14

"پانی سائنس کا دل" کے عنوان سے سائنسی نمائش جاری

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری ہے۔

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری ہے۔

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری ہے۔

روزنامہ "باختر" کوئٹہ

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری ہے۔

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری ہے۔

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری ہے۔

روزنامہ "میزان" کوئٹہ

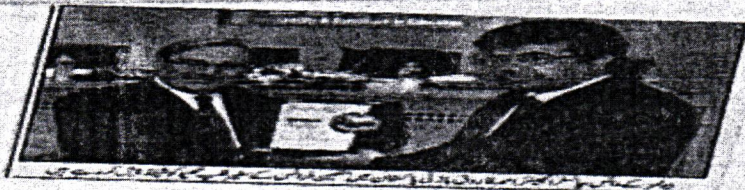
پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری ہے۔

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری ہے۔

پانی سائنس کا دل کے عنوان سے سائنسی نمائش جاری ہے۔

روزنامہ "انتخاب کوئٹہ" 13.6.14



انتخاب کوئٹہ کی تاریخ طے ہوئی

کوئٹہ کی اسمبلی کی تاریخ طے ہوئی اور اس کی نشستوں کی تقسیم ہوئی۔ اس بارے میں ایک اخباری رپورٹ کے مطابق...

10

Water of the House of ...

روزنامہ "انتخاب کوئٹہ" 13.6.14



انتخاب کوئٹہ کی تاریخ طے ہوئی

کوئٹہ کی اسمبلی کی تاریخ طے ہوئی اور اس کی نشستوں کی تقسیم ہوئی۔ اس بارے میں ایک اخباری رپورٹ کے مطابق...



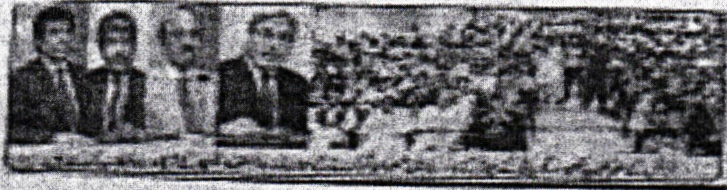
وزارتہ اعجازیہ

13.6.14

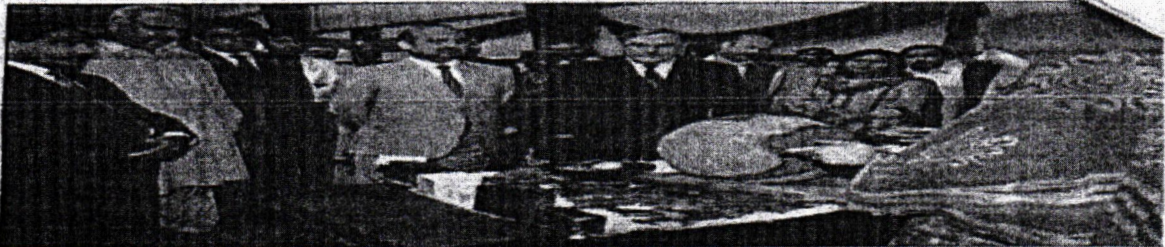
انٹرنیشنل سائنس اور ٹیکنالوجی ٹریولنگ ایکسپو

انٹرنیشنل سائنس اور ٹیکنالوجی ٹریولنگ ایکسپو کی افتتاحی تقریب میں شرکت کرنے والے ممبرانہ کی ایک گروپ کی تصویر دکھائی گئی ہے۔

انٹرنیشنل سائنس اور ٹیکنالوجی ٹریولنگ ایکسپو کی افتتاحی تقریب میں شرکت کرنے والے ممبرانہ کی ایک گروپ کی تصویر دکھائی گئی ہے۔



13.6.14



QUETTA: French Ambassador in Pakistan Philippe Thibault visiting the three days' Travelling Expo organised by Pakistan Science Foundation at FT University.

Water at Heart of Science

QUETTA. Present generation has to overcome shortage of water for coming generations. Water shortage can be overcome by using science and technology. This was stated by Ambassador of France Philippe Thibault at closing of 3-day Travelling Expo organised by Pakistan Science Foundation on the subject of 'Water at the Heart of Science' at Baluchistan University of Information Technology, Engineering, Sciences and Management (BUIEMS) here Thursday. Chairman Pakistan Science Foundation Professor Dr Khaleel Ahmed Ahamad, Federal Secretary for Science and Technology Kamran Ali Chaudhry and Vice-Chancellor BUIEMS Ahmed Farooq Khan, provincial secretaries and students from various institutions attended. French Ambassador remarked that more than one billion people were deprived of clean water that is access of every one of seven people has become impossible. He said in

developing countries situation is more serious for not saving water due to non adoption of science and technology methods. Therefore creating awareness in these countries to adopt modern means of saving water is very much necessary. He said institutions, educational institutions can be best source. Chairman Pakistan Science Foundation said his organization was organizing such expos in every city of Pakistan in this regard so that every envisioned citizen can save the most precious asset of life that is water. Federal Secretary for Science and Technology said that during this expo Pakistan facing challenges water shortage is acute. If we did not overcome this most of our population would face drops of water during the coming few years. Vice-chancellor Ahmed Farooq Khan said that research on environment at its own end a special department is also establish in the University—FTU.

Baluchistan Express

Ramazan ul Mubarik 12 - 18, 1434
July 22 - 28, 2013

PSF takes initiative to promote science at school

STAFF REPORT IBD: Pakistan Science Foundation (PSF) has launched the High School Summer Science Research Programme (HSSSRP) in order to promote science at school level across the country.

It will give high school students hands-on research experience by working on research projects with top class scientists from public and private universities in different parts of the country.

"We hope this experience will encourage our students

for science and have positive impact on student interest in careers in science disciplines," said PSF Spokesperson Rehana Batool while talking to media here.

She said that the one way to enter into the list of developed countries is to promote Science and Technology at all levels in academia and industry.

She explained that the objective of the programme is to develop the habit of thinking among students on various phenomenon of science.

Daily "Independent" Quetta

13-6-14



QUETTA: French Ambassador to Pakistan Philippe Thiebaud visiting three days Travelling Expo organized by Pakistan Science Foundation at IT University.



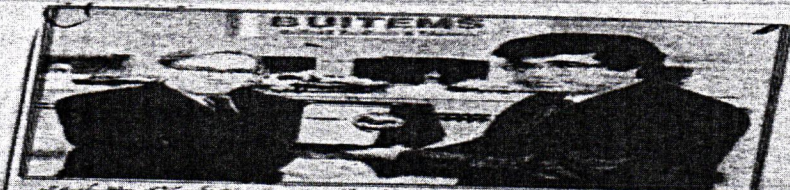
QUETTA: French Ambassador to Pakistan Mr. Philippe Thiebaud, Voice Chancellor of BUIEMS Farooq Bazai and other addressing an Expo on Thursday.

PERISCOPE

PSF to celebrate World Science Day today

ISLAMABAD: Pakistan Science Foundation (PSF) has planned different activities to celebrate World Science Day (WSD) on November 21. The WSD is observed all over the world on November 10 to mark the breath taking achievements of man in science and technology and PSF observes this day every year in a befitting manner, but this year PSF has planned to celebrate this day on November 21 so that maximum number of people and students could actively participate in it, said PSF Chairman, Dr. Khalil Ahmed Ibupoto. This year's theme, Science for Water Cooperation: Sharing Data, Knowledge and Innovations, highlights the key role played by Science, Technology and Innovation (STI) in addressing global water challenges. STAFF REPORT

روزنامہ "سبق" کی ایک سہ ماہی کوئٹہ
13. 6. 14.



سائنس و ٹیکنالوجی کے ذریعے عالمی سطح پر پانی کی قلت کو حل کرنے کے لیے پاکستان سائنس فاؤنڈیشن کی سربراہی میں ایک سہ ماہی کوئٹہ میں پریس کانفرنس ہوئی۔

www.express.com.pk

DAILY EXPRESS

ایکسپریس

پاکستان کے 22 شہروں سے ایک روزانہ شائع ہونے والا سب سے پہلا اخبار

1952

روزنامہ "بلوچستان ٹیوز" کوئٹہ
13.6.14

سائنس دانوں نے پانی کی قلت پر قابو پایا جاسکتا ہے

کوئٹہ 13 جون: ایک نئی سائنس دانوں نے پانی کی قلت پر قابو پایا جاسکتا ہے۔ ان کے مطابق پانی کی قلت کو حل کرنے کے لیے ایک نئی سائنس دانوں نے پانی کی قلت پر قابو پایا جاسکتا ہے۔ ان کے مطابق پانی کی قلت کو حل کرنے کے لیے ایک نئی سائنس دانوں نے پانی کی قلت پر قابو پایا جاسکتا ہے۔

ایک نئی سائنس دانوں نے پانی کی قلت پر قابو پایا جاسکتا ہے۔ ان کے مطابق پانی کی قلت کو حل کرنے کے لیے ایک نئی سائنس دانوں نے پانی کی قلت پر قابو پایا جاسکتا ہے۔ ان کے مطابق پانی کی قلت کو حل کرنے کے لیے ایک نئی سائنس دانوں نے پانی کی قلت پر قابو پایا جاسکتا ہے۔



فرانس کے صدر نیکولا سارکوزی اور دیگر بانی کے بھائی کے بارے میں شہرہ آفاق کرکٹ کے حوالے سے متفقہ ایک چوکھٹ ٹیم کے خطاب کر رہے ہیں

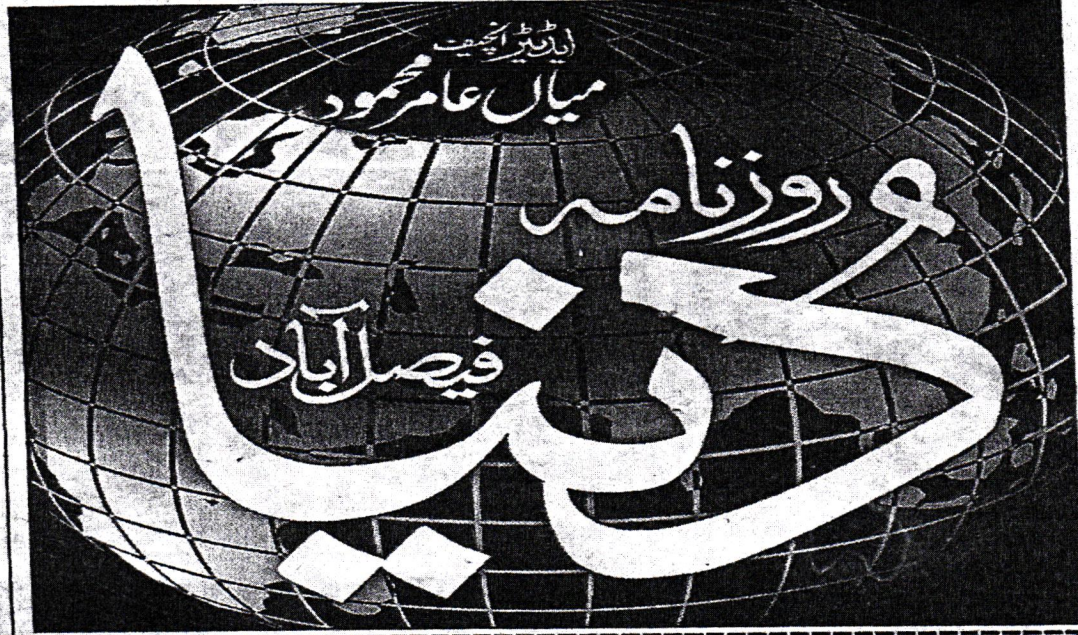
روزنامہ "مشرق" کوئٹہ
13.6.14



روزنامہ "مشرق" کوئٹہ

13.6.14

پریس کلیپس



تعلیم میں سرمایہ کاری صنعتی ترقی کا سبب بنے گی، ڈاکٹر اقرار

ادارے اور معاشرے محنتی و باصلاحیت افرادی قوت سے ہی ترقی کرتے ہیں وائس چانسلر فیصل آباد (سٹی رپورٹر) اعلیٰ تعلیم کے شعبہ میں سرمایہ کاری اور باصلاحیت اساتذہ کی میرٹ پر تین تالی ملک میں صنعتی ترقی اور علم کی بنیاد پر معیشت کے



زری یونیورسٹی میں اساتذہ کیلئے تحقیقی منصوبوں پر منعقدہ ورکشاپ سے وائس چانسلر ڈاکٹر اقرار احمد خاں، پاکستان سائنس فاؤنڈیشن کے چیئرمین ڈاکٹر خلیل احمد، ڈاکٹر آصف علی اور حبیب احمد خطاب کر رہے ہیں

ڈاکٹر اقرار

بقیہ نمبر 10

نے پاکستان سائنس فاؤنڈیشن اور یونیورسٹی کے اشتراک سے منعقدہ ٹریننگ ورکشاپ کے افتتاحی سیشن سے خطاب کرتے ہوئے کیا۔ انہوں نے کہا کہ ہائر ایجوکیشن کمیشن کے ذریعے جامعات میں محنتی اور باصلاحیت اساتذہ کیلئے مراعاتی پیکیج میرٹ کی حوصلہ افزائی اور صحت مند مقابلے کی شروعات ہے جو یقیناً عمر آدرت ثابت ہوگی، میرٹ کی بنیاد پر سامنے آنے والی محنتی اور باصلاحیت افرادی قوت اداروں اور معاشروں کی ترقی کا سبب بنتی ہے۔

وقت و قسط

پندرہ سالہ شاعری کا
73 سالہ



فیصل آباد: ڈاکٹر یو نیورشی فیصل آباد کے وائس چانسلر ڈاکٹر اقرار احمد خاں، پاکستان سائنس فاؤنڈیشن کے چیئرمین ڈاکٹر خلیل احمد، ڈاکٹر آصف علی اور حبیب احمد اساتذہ کیلئے تحقیقی منصوبوں پر منعقدہ تربیتی ورکشاپ سے خطاب کر رہے ہیں

صنعتی ترقی سے معیشت کو استحکام ملے گا: ڈاکٹر یو نیورشی

یو نیورشی کے 70 اساتذہ ٹریننگ کے بعد درجنوں تحقیقی منصوبے حاصل کرینگے

فیصل آباد (مناہٹہ خصوصی) اعلیٰ تعلیم کے شعبہ میں سرمایہ کاری اور باصلاحیت اساتذہ کی میرٹ پر تعیناتی و معاشی بنیادوں پر معاشی حوصلہ افزائی ملک میں صنعتی ترقی اور علم کی بنیاد پر معیشت کے غدو غال ترقیب دینے میں کلیدی کردار ادا کرے گی۔ یہ باتیں ڈاکٹر یو نیورشی فیصل آباد کے وائس چانسلر ڈاکٹر اقرار احمد خاں نے پاکستان سائنس فاؤنڈیشن اور جامعہ زرعیہ کے اشتراک سے منعقدہ ٹریننگ ورکشاپ کے اختتامی سیشن سے خطاب میں کہیں۔ ڈاکٹر اقرار احمد خاں نے کہا کہ پانچ برس قبل یو نیورشی میں صرف 5 ٹیورٹریک پروفیسر تینا تھے۔ آج ان کی تعداد بڑھ کر آج 188 سے تجاوز کر چکی ہے۔ انہوں نے امید ظاہر کی کہ یو نیورشی کے 70 نوجوان اساتذہ ٹریننگ ورکشاپ کے بعد ملکی و

بین الاقوامی سطح پر مقابلہ جاتی سسٹم کے تحت تحقیقی منصوبے حاصل کریں گے۔ پاکستان سائنس فاؤنڈیشن کے چیئرمین ڈاکٹر خلیل احمد ابو پوٹو نے کہا کہ فاؤنڈیشن میں منظوری کیلئے درجنوں تحقیقی منصوبے جمع کروائے جاتے ہیں تاہم پرائیکٹ فارمولیشن میں درپیش مختلف مسائل اور کنڈریوں کی وجہ سے ان میں 70 فیصد منظور نہیں ہو پاتے۔ ڈائریکٹر اور ڈاکٹر آصف علی نے بتایا کہ ان کے دفتر میں تحقیقی منصوبوں کے حوالے سے معلومات کے حصول کیلئے آنے والے زیادہ افراد ایسے نوجوان اساتذہ ہوتے ہیں جو مختلف اوقات میں تحقیقی منصوبوں کی عدم منظوری کے باوجود جذبہ جہنوں کا منہ بولتا ہوتا ہے۔ ورکشاپ کی نقابت کے قرآنس سائنس فاؤنڈیشن سے مرزا حبیب احمد نے ادا کئے۔

روزنامہ ایکسپریس، فیصل آباد، 4 دسمبر، 2013ء

DAILY EXPRESS

ایکسپریس روزنامہ

فیصل آباد

پاکستان کے 11 شہروں سے پیکر وقت شائع ہونے والا واحد اخبار

معاشرہ کی ترقی یا صلاحیت افراد کی مرہون منت ہے ڈاکٹر اقرار

سرمایہ کاری اور اساتذہ کی میرٹ پر تعیناتی کلیدی کردار ادا کرے گی، وائس چانسلر

فیصل آباد (شٹاف رپورٹ) اعلیٰ تعلیم کے شعبہ میں سرمایہ کاری اور باصلاحیت اساتذہ کی میرٹ پر تعیناتی و معاشی بنیادوں پر معاشی حوصلہ افزائی ملک میں صنعتی ترقی اور علم کی بنیاد پر معیشت کے غدو غال ترقیب دینے میں کلیدی کردار ادا کرے گی۔ یہ باتیں ڈاکٹر یو نیورشی نے پاکستان سائنس فاؤنڈیشن اور جامعہ زرعیہ کے اشتراک سے منعقدہ ٹریننگ ورکشاپ کے اختتامی سیشن سے خطاب میں کہیں۔ ان کا کہنا تھا کہ اداروں اور معاشرہ کی ترقی کا



ڈاکٹر یو نیورشی فیصل آباد کے وائس چانسلر ڈاکٹر اقرار احمد خاں، پاکستان سائنس فاؤنڈیشن کے چیئرمین ڈاکٹر خلیل احمد، ڈاکٹر آصف علی اور حبیب احمد اساتذہ کیلئے تحقیقی منصوبوں پر منعقدہ تربیتی ورکشاپ سے خطاب کر رہے ہیں

تعداد بڑھ کر آج 188 سے تجاوز کر چکی ہے۔ انہوں نے امید ظاہر کی کہ یو نیورشی کے 70 نوجوان اساتذہ ٹریننگ ورکشاپ کے بعد ملکی و بین الاقوامی سطح پر مقابلہ جاتی سسٹم کے تحت تحقیقی منصوبے حاصل کریں گے۔ پاکستان سائنس فاؤنڈیشن کے چیئرمین ڈاکٹر خلیل احمد ابو پوٹو نے کہا کہ فاؤنڈیشن میں منظوری کیلئے درجنوں تحقیقی منصوبے جمع کروائے جاتے ہیں تاہم پرائیکٹ فارمولیشن میں درپیش مختلف مسائل اور کنڈریوں کی وجہ سے ان میں 70 فیصد منظور نہیں ہو پاتے۔ ڈائریکٹر اور ڈاکٹر آصف علی نے بتایا کہ ان کے دفتر میں تحقیقی منصوبوں کے حوالے سے معلومات کے حصول کیلئے آنے والے زیادہ افراد ایسے نوجوان اساتذہ ہوتے ہیں جو مختلف اوقات میں تحقیقی منصوبوں کی عدم منظوری کے باوجود جذبہ جہنوں کا منہ بولتا ہوتا ہے۔ ورکشاپ کی نقابت کے قرآنس سائنس فاؤنڈیشن سے مرزا حبیب احمد نے ادا کئے۔

'Research can help solve country's problems'

Comprehensive mechanism devised in the form of the tenure track system

✦ OUR CORRESPONDENT
FAISALABAD

"Research culture needs to be promoted as it can help solve social problems the country faces," University of Agriculture, Faisalabad (UAF) Vice Chancellor Iqbal Ahmad Khan said on Tuesday.

He was speaking at a project formulation workshop organised by the UAF in collaboration with the Pakistan Science Foundation at UAF's New Senate Hall.

Khan praised the Higher Education Commission for taking steps to promote comparative culture. For this, he said a comprehensive mechanism had been devised in the form of the tenure track system (TTS).

"There were only five TTS in the university up until five years ago... now more than 180 faculty members have become part of this system," he added.

Khan said the research portfolio had increased manifold during the last five years which now amounted to Rs2 billion.

Pakistan Science Foundation Chairman Khalil Ahmad called for honing the skills in project formulation among scientists by overcoming deficiencies.

He said only five out of 20 projects submitted for grant before National Scientific Linkage Program (SNLP) were approved owing to deficiencies in the formation. He said PSF had so far conducted six training workshops in several institutions in the country to enhance the professional skills in project formulation and had trained 325 scientists.

Khalil said UAF scientists were working on several research projects worth 36 million rupees awarded by Pakistan Science Foundation.

Office of Research, Innovations and Commercialisation (ORIC) Director Asif Ali Khan said as many as 70 young faculty members were participating in the workshop. He said most of them were young faculty members who could not get their project approved due to missing links in the formulation. He said he hoped that the workshop would yield the benefits and bring more research projects to the University.

The Express Tribune Lahore

4 - 12 - 2013

THE NEWS

Wednesday, December 4, 2013

UAF VC for promoting research culture

From Our Correspondent

FAISALABAD: Research culture in the country needs to be promoted in order to find different solutions to problems in the country, said University of Agriculture Faisalabad, Vice Chancellor Prof Dr Iqrar Ahmad.

He addressed the participants of project formulation workshop organised by UAF in collaboration with Pakistan Science Foundation at New Senate Hall on Tuesday. Dr Iqrar Ahmad lauded the steps of Higher Education Commission (HEC) to promote comparative culture by devising a comprehensive mechanism especially Tenure Track System. He said TTS meant not only best package and financial benefits to the academia but it brought the best brains and keep them performing. He added "Five years back there were only 5 TTS in the university but now more than 180 faculty members become the part of best rewarding system," he added. He hoped more than 450 PhDs had the potential to take challenge and fetch projects of 8 to 10 billion rupees. Chairman Pakistan Science Foundation Dr Khalil Ahmad said only five out of 20 projects submitted for grant before National Scientific Linkage Programme (SNLP) were approved owing to deficiencies in the formation. He said PSF has so far conducted six training workshops in various institutions of the country to enhance the professional skills in project formulation and had given training to 325 scientists. Dr Khalil said UAF scientists were working on numerous research projects worth 36 million rupees awarded by Pakistan Science Foundation. Director, Office of Research, Innovations and Commercialisation Dr Asif Ali Khan said as many as 70 young faculty members were participating in the workshop.

BUSINESS RECORDER

Lahore, Wednesday 4 December 2013, 29 Muharram 143

Research culture needs to be promoted: UAF

KHALID ABBAS SAIF

FAISALABAD: Research culture in the country needs to be promoted in order to find different solutions to the problems facing the country, said University of Agriculture Faisalabad (UAF) Vice Chancellor Prof Dr Iqrar Ahmad.

He addressed at project formulation workshop organized by UAF in collaboration with the Pakistan Science Foundation on Tuesday.

Dr Iqrar lauded the steps of Higher Education Commission being taken to promote the comparative culture by devising a comprehensive mechanism especially Tenure Track System (TTS).

He said the TTS meant not only best package and financial benefits to the academia but it brings the best brains and keep them performing.

He added "five years back there were only 5 TTS in the university but now more than 180 faculty members become the part of best rewarding system".

He said that the research portfolio has increased manifold during the last five years, which is touching 2 billion rupees from Rs400 million.

He hoped that more than 450 PhDs have the potential to take the challenge and fetch projects of 8 to 10 billion rupees.

Chairman Pakistan Science Foundation, Dr Khalil Ahmad Ibupoto called for honing the skills in project formulation among scientists by overcoming deficiencies.

He said only five out of 20 projects submitted for grant before National Scientific Linkage Program (SNLP) was approved owing to deficiencies in the formation.

He said PSF has so far conducted six training workshops in various institutions of the country to enhance the professional skills in project formulation and had given training to 325 scientists.

Khalil said UAF scientists were working on numerous research projects worth 36 million rupees awarded by Pakistan Science Foundation.

Director, Office of Research, Innovations and Commercialization (ORIC) Dr Asif Ali Khan told as many as 70 young faculty members were participating in the workshop.



لاہور: وائس چانسلر ڈیڑی یونیورسٹی پروفیسر ڈاکٹر طلعت نصیر پاشا کا پراجیکٹ فارمولیشن کانفرنس کے شرکاء کے ساتھ گروپ فوٹو

روزنامہ

انصاف

پبلسٹر: جنید سلیم

ایڈیٹر: حافظ محمد اقبال

پتہ: 15، سوسائٹی نمبر 25، پلاٹ نمبر 1435، 27، 20143، 14، پتہ 2071، سوسائٹی نمبر 12، پتہ 10، پتہ 121

ڈیڑی یونیورسٹی میں پراجیکٹ فارمولیشن
 کے موضوع پر تقریبی در کتاب آج ہوگی

لاہور: ڈیڑی یونیورسٹی میں پراجیکٹ فارمولیشن کے موضوع پر تقریبی در کتاب آج ہوگی۔ تقریب میں پروفیسر ڈاکٹر طلعت نصیر پاشا کی سربراہی میں تقریب منعقد ہوگی۔

2.0 PMNH Photo Gallery



Whale shark exhibition was formally inaugurated by Dr. Qian Tang and Dr. Nagata of UNESCO at PMNH Display Centre on 23rd July, 2013.



Training workshop on "Gemstone, Grading, Treatment and Evaluation" organized in PMNH on September 24-26, 2013



Participants and hosts of the 5th meeting of the South and Central Asia MAB Network (SACAM) on November 26-27, 2013.



Federal Minister MoST and Ambassador of People's Republic of China to Pakistan inaugurating exhibition on "Eight Eminent Chinese of Modern Times" in PMNH on 12th November, 2013.



Inauguration of training workshop on Dendrochronology in PMNH on 22nd April, 2014.



PMNH and Institute of Applied Geology, University of Sindh, Jamshoro, signed a Memorandum of Understanding for collaboration on 16th May, 2014.



Biodiversity Day celebrated in PMNH on 22nd May, 2014.



MoU signing between PMNH and Hagler Bailly on 26th June, 2014

3.0 PASTIC Photo Gallery and Press Clipping



Dr. Manzoor H. Soomro, Chairman, PSF presiding over the Annual Review & Planning



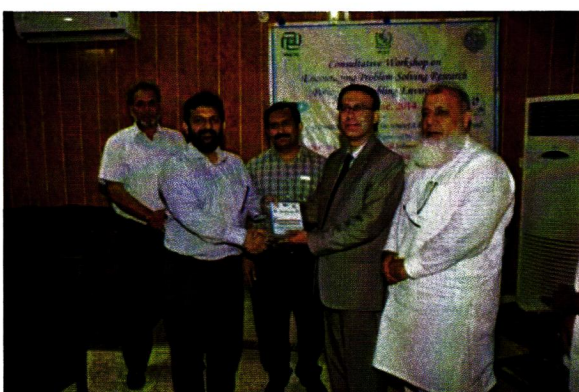
Dr. Muhammad Akram Shaikh, Director General, PASTIC along with KOICA-Participants of TAP Program.



Group photo of participants of workshop at Beijing International Business Incubator, Beijing, China



Mr. Kamran Ali Qureshi, Federal Secretary, MoST, Dr. Eatazaz Ahmad, Vice Chancellor, Quaid-i-Azam University, Dr. Khalil A. Ibupoto, Chairman PSF, and Prof. Dr. Muhammad Akram Shaikh, Director General, PASTIC, Mr. Haider Zaman Khattak, Secretary, PSF, during the Inaugural Ceremony of Training Workshop on "Scientific Research Tools" at PASTIC.



Prof. Dr. Muhammad Akram Shaikh, Director General, PASTIC giving shield to Engr. Sohail Bin Rashid, President FCCI



A glimpse of Workshop on "Encouraging Problem-Solving Research Policy for Enabling Environment," at Faisalabad



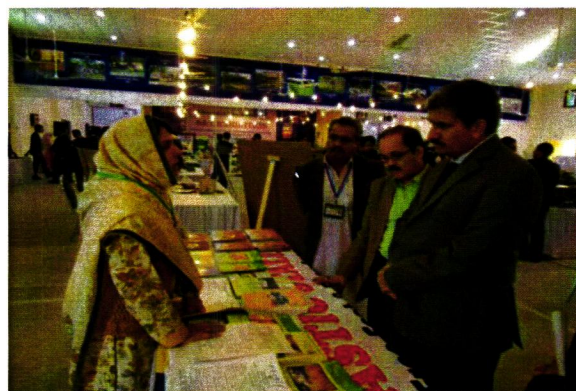
Mrs. Kesang Dechen Dy. Director SDC presenting SAARC shield to Dr. Muhammad Akram Shaikh, Director General, PASTIC



Participants of 5-day SAARC-MUET Workshop on Dspace jointly organised by MUET, Jamshoro and SAARC Documentaion Center (SDC).



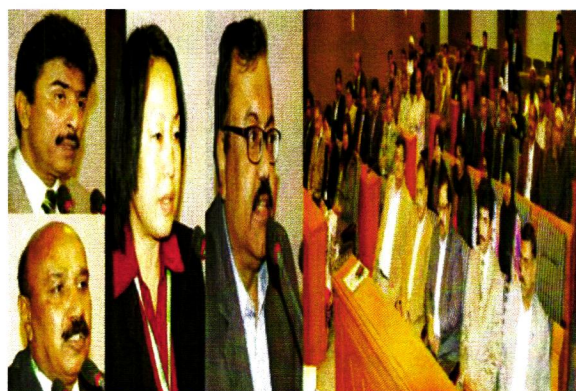
MR. Ali Raza Khan, Deputy Director (STI), PASTIC Sub Centre Lahore briefing the students about PASTIC Services at Technology Invention to Innovation Summit – 2014



Mian Saadud Din Additional Secretary Science & Technology & IT, Government of KPK, Dr. Javed Bangish & Abid Sohail (Deputy Director DOST) at PASTIC Services Stall



Vistors on PASTIC Stall at Muzaffarabad



Opening ceremony glimpses of PASTIC/SAARC MUET workshop at, Jamshoro on "Open source software for digital libraries". Vice Chancellor Muhammad Aslam Uqaili, Mrs. Kesang Dechen, Dy. Director, SDC, New Delhi, India, Dr. Pir Roshan-ud-Din Shah, & Mr. Azam Halenoto. Librarian addressing the audience.

February 2014

PASTIC Sub-Centre, Faisalabad, organized a PASTIC services stall at National Textile



Glimpses of PASTIC S&T Information Services Stall at NTU, Faisalabad.

University, Faisalabad on literature search. The relevant February 18. A number of information was searched and researchers visited the stall and collected for these queries and submitted their requests for forwarded to them through email.

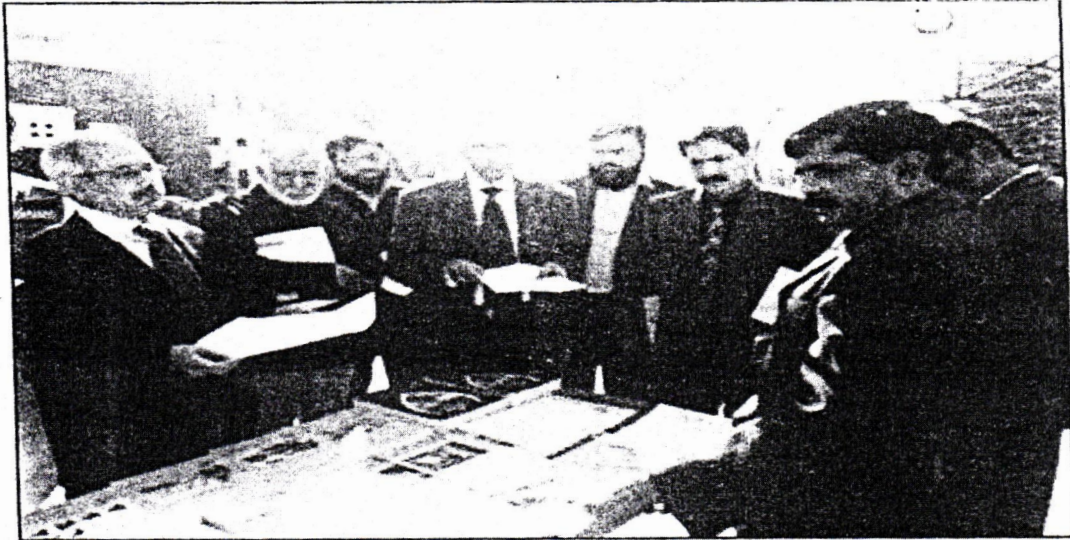
September 2013

PASTIC Services Stalls at Faisalabad

One day PASTIC Services Faisalabad, on September 25th, 2013. Stall was organized at Another Stall was organized Senior faculty members and National Institute of Food at Central Library Ayub several students visited the Science & Technology Agriculture Research stall and submitted their University of Agriculture, Institute (AARI), Faisalabad topics for data search.



Glimpses of services stalls at Faisalabad.



Mr. Muhammad Hasnain, Dy. Director, PASTIC Sub-Centre, Faisalabad briefing to Prof. Dr. Shahid Raza Malik, Director, NFC, Faisalabad about PASTIC S&T activities.



A glimpse of PASTIC Services Stall.

PASTIC Services Stalls

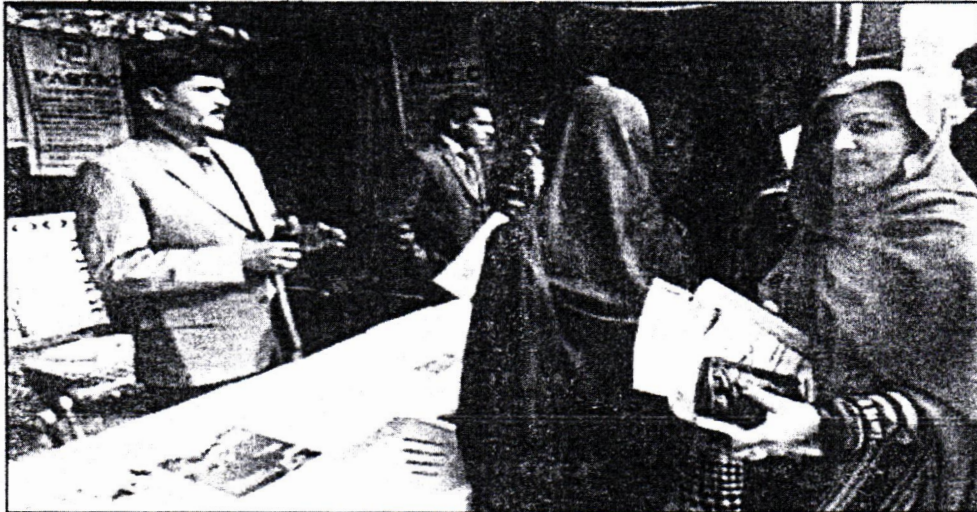
Faisalabad

PASTIC Sub Centre, Faisalabad organized Services stall on December 4, 2013 at University of Agriculture Faisalabad during Workshop "Project formulation Workshop". Prof. Dr. Asif Ali Khan Director, Office of Research, Innovation & Commercialization and other researchers visited the stall.

PASTIC Sub Centre, Faisalabad organized Services stall on December 08, 2013 at Govt. College University, Faisalabad

during 1st Job Fair. Dr. Zakir Hussain, Vice Chancellor Govt. College University, Faisalabad and many researchers visited the stall and acquired their relevant data and Information.

PASTIC Sub Centre, Faisalabad organized Services stall on December 17, 2013 at University of Engineering and Technology Lahore-Faisalabad Campus. Many researchers visited the stall and got their relevant data & related Information.



PASTIC Sub Centre, Faisalabad organized Services stall on December 12-13, 2013 at NFC-Institute of Engineering and Fertilizer Research, Faisalabad. Prof. Dr. Shahid Raza Malik, Director, NFC with his senior colleagues and many researchers visited the stall and obtained their relevant data and S&T information.



Glimpses of PASTIC Services Stall.

August 2013

PASTIC Sub Centre, Faisalabad organized PASTIC Services Stall at Faculty of Veterinary Science and Faculty of Animal Husbandry, University of Agriculture Faisalabad on August 27-28, 2013. Prof. Dr. Laseq Akbar Lodhi, Senior faculty members and several students visited the stall and submitted their topics for data acquisition.



Glimpses of PASTIC services stall at University of Agriculture, Faisalabad.

ہمارے لئے اللہ ہی کافی ہے اور وہی سب سے بہتر مددگار ہے (القرآن)

بانی

پروفیسر
ریاست علی آباد
(۱۹۶۱)

FR-3

041-2612188
041-2626349

Fax:
041-2612105

قیمت 5 روپے

MEMBER
A.P.N.S

سلسلہ اشاعت کا 66 واں سال

ABC
CERTIFIED

The Daily
GHAREEB
Faisalabad.
غریب
روزنامہ

جلد 66 جمعہ المبارک 20 جون 2014ء 21 شعبان 1435ھ 6 ہزار 2070 پم 144

E-Mail: dailyghareeb@yahoo.com

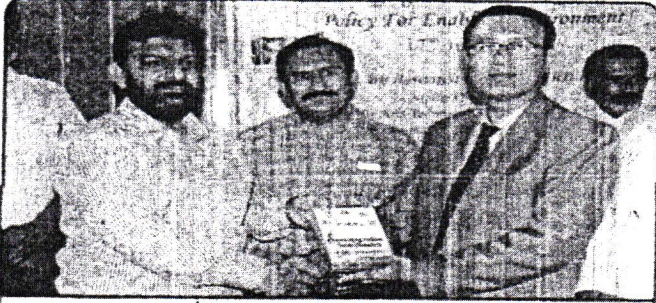
تحقیقی اداروں اور چیئرمین ریلوے کے لئے ڈائریکٹر آراینڈ ڈی کو فوکل پرسن تعینات کر دیا اسمبل بن رشید

با مقصد تحقیق کیلئے سائنسدانوں اور صنعت کاروں میں قریبی تعلقات ہونے چاہئیں

صنعت کاروں کو تحقیقی اداروں سے اشتراک عمل کی اہمیت کا بخوبی ادراک ہے اور اسی لئے فیصل آباد چیئرمین اکنامکس اور پورڈ تکمیل دیا جا رہا ہے

فیصل آباد چیئرمین ریسرچ اینڈ ڈویلپمنٹ ڈیپارٹمنٹ پہلے ہی کام کر رہے ہیں جس کا مقصد جی ایس بی ٹیس کے تناظر میں پیداوار اور برآمدات کو بڑھانا ہے

ہماری صنعتوں میں تحقیق کا فقدان ہے جس کی وجہ سے ہماری پیداوار کیسائٹ کا شکار ہو کر برآمدات اپنی افادیت کھو رہی ہے صدر فیصل آباد چیئرمین



فیصل آباد (نئی رپورٹ) پنجاب کے سائنسی، ٹیکنیکی اور تحقیقی اداروں میں با مقصد اور با سنی اطلاقی تحقیق کیلئے سائنسدانوں (بانی سطح اندرونی نمبر 17)

فیصل آباد ایب اینڈ ایس ایک روزہ شاہدانی اجلاس کے اختتام پر ڈائریکٹر (ایسٹ) آر بی اے اسمبل بن رشید کو شکر اظہار ہے

17
اور صنعت کاروں کے درمیان بہتر تعلقات قائم ہوں۔
یہ بات فیصل آباد چیئرمین آف کامرس اینڈ انڈسٹری کے
صدر راجیو سہیل بن رشید نے پاکستان سائنٹفک اینڈ
ٹیکنالوجی انفارمیشن سنٹر کے زیر اہتمام ایک روزہ
مشاورتی اجلاس کی اختتامی نشست سے خطاب کرتے
ہوئے کی۔ انہوں نے کہا کہ صنعت کاروں کو تحقیقی
اداروں سے اشتراک عمل کی اہمیت کا بخوبی ادراک
ہے اور یہی وجہ ہے کہ فیصل آباد چیئرمین انڈسٹری
میں اکنامکس اور پورڈ تکمیل دیا جا رہا ہے تاکہ صنعت اور
تحقیقی اداروں کے مابین گہری اور سنی ہم آہنگی پیدا کی
جاسکے۔ انہوں نے بتایا کہ فیصل آباد چیئرمین ایک
ریسرچ اینڈ ڈویلپمنٹ ڈیپارٹمنٹ پہلے ہی کام کر رہا
ہے جس کا مقصد جی ایس بی ٹیس کے تناظر میں
پاکستان کی پیداوار اور برآمدات کو بڑھانا ہے۔

18
اشاعت سیکرٹری "سٹیل" جاری کر دیا ہے۔

CPL ABC
 NO. 27 Mob. 0321-7874166, 0300-8892295
 سوئی کب لٹریچر کے علاوہ دیگر شعبوں میں پبلشر ہے

روزنامہ
فیصل آباد رپورٹ
 ڈیجیٹل ایڈیشن
 فیصل آباد

قصر رسول پینل
 ایڈیٹر: جمال عبدالناصر

جلد نمبر 19
 جمعہ 20 جون 2014ء 2 شعبان المعظم 1435ھ 6 مارچ 2070ء شہر نمبر 139



فیصل آباد ایب این جی میں منعقد ہونے والے ایک روزہ مشاورتی اجلاس سے جہان نسیمی صدر رپورٹنگ آف کانسٹبل بن رشید، ڈائریکٹر جنرل (پبلک) اکرم علی، ڈائریکٹر ایب این جی اور دیگر اہل ذمہ داران کی شرکت میں منعقد ہوا۔

آباد خیبر میں اندر سڑکیں میں ایب این جی پروردگی کیلئے دیا جا رہا ہے تاکہ سہولت اور ترقی اداروں میں فکری اور عملی ہم آہنگی پیدا کی جاسکے

ایب این جی اور سڑکیوں کے مابین تعلق کا کیا ہے؟

ان کو حقیقی اداروں سے اشتراک، عمل کی اہمیت کا بخوبی اندازہ ہے اور یہی وجہ ہے کہ فیصل آباد خیبر میں انٹرنیٹ میں ایک ایسا بڑا ہلکا کر دیا جا رہا ہے سبیل بن رشید

ایب این جی میں ایک روزہ مشاورتی اجلاس کی افتتاحی تقریب سے خطاب کرتے ہوئے جی۔ ایب این جی کے سربراہ نے کہا کہ ایب این جی اور سڑکیوں کے مابین تعلق اداروں سے اشتراک کی اہمیت کا بخوبی اندازہ ہے اور یہی وجہ ہے کہ فیصل آباد خیبر میں انٹرنیٹ میں ایک ایسا بڑا ہلکا کر دیا جا رہا ہے سبیل بن رشید



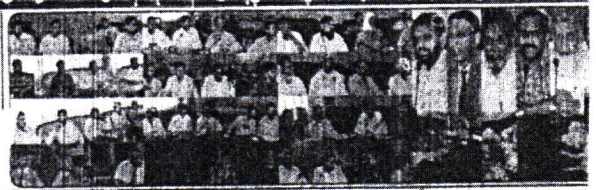


29 جولائی 21 شعبان 1435 20 جون 2014 7-7070 کے صفحات 12 قیمت 10 روپے 170

سرگودھا اور ضلع گجرات میں اسی دن کے لیے ہی کام کر رہا ہے جس کا منصوبہ ایس بی ایس کے تناظر میں پاکستان کی پیولٹور اور برآمدات کو بڑھانا ہے

سرگودھا اور ضلع گجرات میں اسی دن کے لیے ہی کام کر رہا ہے جس کا منصوبہ ایس بی ایس کے تناظر میں پاکستان کی پیولٹور اور برآمدات کو بڑھانا ہے۔

سرگودھا اور ضلع گجرات میں اسی دن کے لیے ہی کام کر رہا ہے جس کا منصوبہ ایس بی ایس کے تناظر میں پاکستان کی پیولٹور اور برآمدات کو بڑھانا ہے۔



سرگودھا اور ضلع گجرات میں اسی دن کے لیے ہی کام کر رہا ہے جس کا منصوبہ ایس بی ایس کے تناظر میں پاکستان کی پیولٹور اور برآمدات کو بڑھانا ہے۔

سرگودھا اور ضلع گجرات میں اسی دن کے لیے ہی کام کر رہا ہے جس کا منصوبہ ایس بی ایس کے تناظر میں پاکستان کی پیولٹور اور برآمدات کو بڑھانا ہے۔

جہان پاکستان

جلد 2 | ایچ اے اے اور ایف اے سے خطاب وقت شہادت | جمعہ 21 شعبان 1435ھ | 20 جون 2014ء

صنعت کاروں اور تحقیقی اداروں کے مابین تعلقات تازگی پر قرار

برآمدات بڑھانے کے لئے چیئرمین ریسرچ ڈیپارٹمنٹ ڈاکٹر پرویز احمد نے صدر فیصل آباد چیئرمین فیصل آباد (سیورہ ریلوے) پنجاب کے سائنسی تعلیمی اور تحقیقی اداروں میں باہمی تعاون اور باہمی مفاداتی تحقیق کے لئے پاکستانیوں اور صنعتکاروں کے درمیان بہتر تعلقات ڈالنے کی بات کی۔ یہ بات فیصل آباد چیئرمین آف کامرس اینڈ انڈسٹری کے صدر انجینئر سکیل بی رشید نے پاکستان سائنٹیفک اینڈ ٹیکنالوجی انڈسٹریز سوشل سٹرکچر کے زیر اہتمام ایک روزہ مشاورتی اجلاس کی افتتاحی نشست سے خطاب کرتے ہوئے کی۔ انہوں نے کہا کہ صنعتکاروں کو تحقیقی اداروں سے اشتراک عمل کی اہمیت کا بخوبی ادراک ہے اور یہی وجہ ہے کہ فیصل آباد چیئرمین انڈسٹری میں ایک نئے پاور فٹنگ عمل درآمد ہے تاکہ صنعت اور تحقیقی اداروں میں گہری اور عملی ہم آہنگی پیدا کی جاسکے۔ انہوں نے بتایا کہ فیصل آباد چیئرمین ایک ریسرچ اینڈ ڈیولپمنٹ ایپریٹس پیگڈ می کام کر رہے ہیں تاکہ صنعتی سائنس میں نئی ترقیوں کے ساتھ ساتھ پاکستان کی پیداوار اور برآمدات کو بڑھانا ہے۔ اس اجلاس میں پنجاب بھر کے صنعتکاروں اور سائنسدانوں نے شرکت کی اور سائنس کے عمل پر اپنی تحقیق پڑھوایا۔



فیصل آباد اور ایف اے ایک اہم سائنسی فیصل آباد چیئرمین صدر سکیل بی رشید کا شیلڈ سے دستہ ہیں



مجلد 74

NAWAIWAQT.COM.PK

editor@nawaiwaqt.com.pk

@nawaiwaqt fb.com/nawaiwaqt

LOCAL

DAILY NAWA-I-WAQT
RAWALPINDI
ISLAMABAD

راولپنڈی

اسلام آباد

ایڈیٹر ڈاکٹر مجید نظامی

بانی مجید نظامی مرحوم

روزنامہ نوائے وقت

لاہور کراچی راولپنڈی / اسلام آباد اور ملتان سبیک وقت شائع ہوتا ہے

★
★
★
★

TUESDAY 25, MARCH

جلد	شکل 23 جمادی الاول 1435ھ 25 مارچ 2014ء؛ 12 بیت 2070 ب	صفحات	رمبرہ نمبر 003	شمارہ
59	UAN 111-222-007	قیمت 12 روپے	249	
	فون۔ راولپنڈی: 77-5562676-44-2202641			

پاسنگ کے زیر اہتمام ”سائنٹیفک ریسرچ ٹولز“ کے عنوان سے تربیتی ورکشاپ

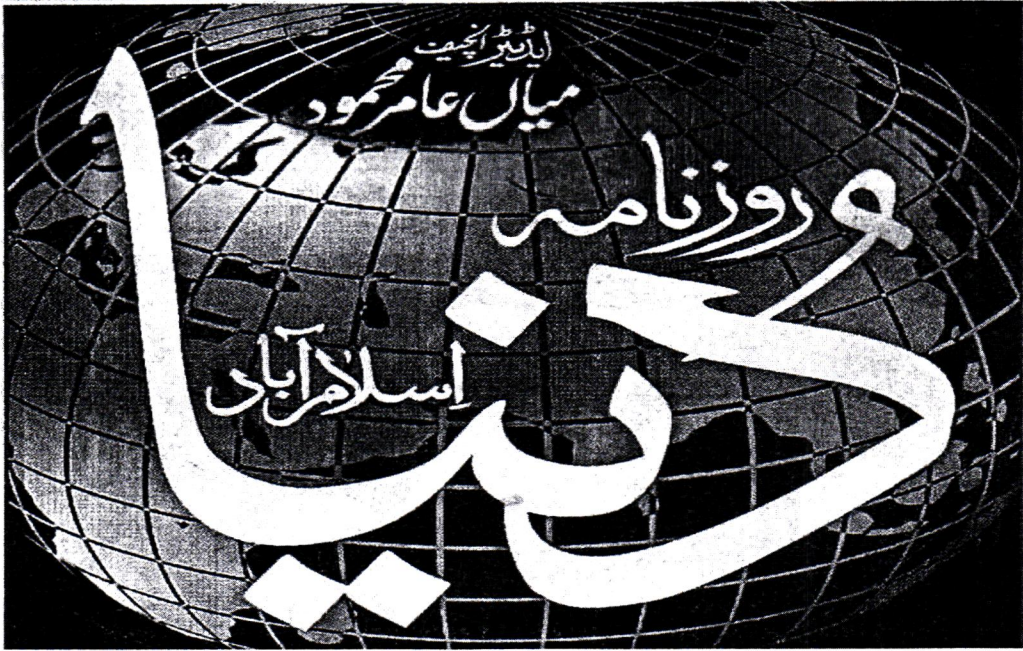
سائنسی تحقیق سے وابستہ افراد کو ریسرچ میں مددگار جدید سافٹ ویئر کے استعمال سے آگاہ کیا جائیگا

اسلام آباد (نیوز ڈیسک) پاکستان سائنٹیفک اینڈ ٹیکنالوجیکل انفارمیشن سنٹر (پاسنگ) نے سائنٹیفک ریسرچ ٹولز کے عنوان کے تحت پانچ روزہ تربیتی ورکشاپ کا اہتمام کیا۔ ورکشاپ کا بنیادی مقصد سائنسی تحقیق سے وابستہ افراد کو ریسرچ میں مددگار جدید سافٹ ویئر کے استعمال سے آگاہ کرنا ہے۔ اس سلسلے میں چند جدید کمپیوٹر سافٹ ویئر کو متعارف کرایا جائے گا جو تحقیق کے عمل کے مختلف مراحل میں معاون ثابت ہوں گے۔ ڈائریکٹر جنرل پاسنگ ڈاکٹر محمد اکرم شیخ نے بتایا کہ پاسنگ پاکستان میں سائنس اور ٹیکنالوجی کی تحقیقی معلومات فراہم کرنے والا ایک منفرد ادارہ ہے جو گزشتہ پچاس سالوں سے پاکستان کے سائنسدانوں کو سائنسی تحقیقی معلومات فراہم کرنے میں کوشاں ہے۔ ورکشاپ کی افتتاحی تقریب میں فیڈرل سیکرٹری کامران علی قریشی نے بطور مہمان خصوصی شرکت کی۔ تقریب میں وائس چانسلر قائد اعظم یونیورسٹی پروفیسر ڈاکٹر اعجاز احمد چیئرمین سائنس فاؤنڈیشن ڈاکٹر خلیل احمد ابوطوب اور ڈائریکٹر جنرل پاسنگ ڈاکٹر محمد اکرم شیخ نے مہمانوں سے خطاب کیا۔



اسلام آباد، پاسنگ کے ڈائریکٹر جنرل محمد اکرم شیخ دیگر شرکاء کے ہمراہ ورکشاپ سے خطاب کر رہے ہیں

روزنامہ دنیا اسلام آباد، منگل، 25 مارچ، 2014ء



پاکستان سائنٹیفک اینڈ ٹیکنالوجیکل انفارمیشن سینٹر کی سائنٹیفک ریسرچ ٹولز کے تحت منعقدہ تربیتی ورکشاپ کے شرکاء

Tuesday

March 25, 2014

Jamadi-ul-Awwal 23, 1435 A.H.

INTERNATIONAL
THE NEWS

PASTIC organises workshop on 'Scientific Research Tools'

Islamabad

Pakistan Scientific and Technological Information Centre, (PASTIC), is organising a 5-day training workshop on 'Scientific Research Tools' at PASTIC National Centre, Quaid-i-Azam University from March 24 to 28, says a press release.

The main objective of the workshop is to build the capacity of young researchers and to enhance their professional skills in data analysis, bibliography management, and preparation of dissertation & research papers through utilization of latest software tools (QIQQA, SPSS, LATEX, End Note & R Language). Thirty three participant including faculty members and M.Phil/ Ph.D research scholars from different S&T universities of Islamabad are among the beneficiary of the workshop.

In the inaugural session Ministry of Science and Technology (MoST) Federal Secretary Kamran Ali Qureshi was the chief guest while Pakistan Science Foundation (PSF) Chairman Dr. Khalil Ahmed Ibupoto and Quaid-i-Azam University VC Dr Eatazaz Ahmad were also present. PASTIC director general in his welcome

address highlighted that PASTIC is a gateway to wealth of Scientific and Technological (S&T) Information across the country. It owns the privilege to be the pioneer in providing S&T information services to Pakistani research community since its inception more than 50 years ago.

Federal Secretary Kamran Ali Qureshi appreciated the role of PASTIC for the capacity building and facilitation of the researchers in different areas of research which would surely lead to economic, social and cultural progress, economic viability and defense capability.

Speaking at the occasion PSF Chairman Dr. Khalil Ahmed Ibupoto hoped that this training will enhance the skills and knowledge of researcher on the latest scientific research tools and will motivate the researcher to pursue their research work. While Quaid-i-Azam University Vice Chancellor Dr Eatazaz Ahmad emphasized that the need based trainings for improvement of the institutional performance are important to fill the gaps between availability of IT tools and their utility for promoting research culture in Pakistan.

VI. AUDITOR'S REPORTS

1.0 PAKISTAN SCIENCE FOUNDATION

Financial Statements

Office # 26, 2nd Floor,
Rese Plaza, I-8 Markaz
Islamabad - Pakistan
Tel: 92-51-4102628, 92-51-4102627
Fax: 92-51-4102628
E-mail: info@ihsaeed.com
www.ihsaeed.com

Ilyas Saeed & Co
Chartered Accountants

INDEPENDENT AUDITORS' REPORT TO THE BOARD OF TRUSTEES

Report on the Financial Statements

We have audited the accompanying financial statements of Pakistan Science Foundation, which comprise the statement of financial position as at June 30, 2014 and the related receipt and expenditure statement, statement of cash flows and statement of changes in accumulated fund together with the summary of significant accounting policies and other explanatory notes forming part thereof for the year then ended.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the approved international financial reporting standards as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973 and for such internal control as management determines necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing as applicable in Pakistan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

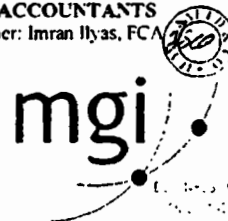
We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Pakistan Science Foundation as of June 30, 2014 and its financial performance, its cash flows and changes in general fund for the year then ended in accordance with the approved international financial reporting standards as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973.

ISLAMABAD: 05/07/2014

Ilyas Saeed & Co.
CHARTERED ACCOUNTANTS
Engagement Partner: Imran Ilyas, FCA



Other Offices: Karachi, Lahore, Gujranwala
A member firm of MGI, an alliance of independent accounting, audit, tax and consulting firms worldwide

**PAKISTAN SCIENCE FOUNDATION
STATEMENT OF CHANGES IN GENERAL FUND
FOR THE YEAR ENDED JUNE 30, 2014**

PARTICULARS	2014 <u>Rupces</u>	2013 <u>Rupces</u>
Opening balance	20,437,979	22,210,164
Deficit for the year	(1,441,771)	(1,772,185)
Closing balance	<u>18,996,208</u>	<u>20,437,979</u>

The annexed notes from 1 to 16 form an integral part of these financial statements.



TRUSTEE



CHAIRMAN

**PAKISTAN SCIENCE FOUNDATION
INCOME AND EXPENDITURE STATEMENT
FOR THE YEAR ENDED JUNE 30, 2014**

INCOME	NOTE	2014 <u> Rupees</u>	2013 <u> Rupees</u>
Grant from federal government	12	149,271,000 149,271,000	158,253,000 158,253,000
EXPENDITURES			
Statutory scientific functions	13	23,929,000	40,550,000
Administrative expenses	14	126,783,771	114,384,900
Prior year adjustment - depreciation	8	-	90,285
		150,712,771	160,025,185
(Deficit) for the year		<u><u>(1,441,771)</u></u>	<u><u>(1,772,185)</u></u>

The annexed notes from 1 to 16 form an integral part of these financial statements.



TRUSTEE

Sis.



CHAIRMAN

PAKISTAN SCIENCE FOUNDATION
STATEMENT OF FINANCIAL POSITION
AS AT JUNE 30, 2014

FUNDS AND LIABILITIES	NOTE	2014 Rupees	2013 Rupees
FUNDS			
General fund	3	18,996,208	20,437,979
Development fund	4	7,066,139	8,344,960
Miscellaneous funds	5	2,159,526	2,033,450
		28,221,873	30,816,389
NON-CURRENT LIABILITIES			
Research support grant - Contra	6	136,455,748	145,708,659
Long term security deposits	7	27,300	27,300
		136,483,048	145,735,959
Total Funds & Liabilities		164,704,921	176,552,348
ASSETS			
NON-CURRENT ASSETS			
Property, plant and equipment	8	16,873,684	18,189,672
Long term security deposits	9	1,917,195	1,917,195
Research projects in progress - Contra	6	136,455,748	145,708,659
		155,246,627	165,815,526
FUNDS INVESTMENTS			
Development Fund	4	7,066,139	8,344,960
Miscellaneous fund	5	2,159,526	2,033,450
		9,225,665	10,378,410
CURRENT ASSETS			
Advances	10	198,214	323,997
Cash and bank balances	11	34,415	34,415
		232,629	358,412
Total Assets		164,704,921	176,552,348

The annexed notes from 1 to 16 form an integral part of these financial statements.


 TRUSTEE


 CHAIRMAN

Office # 26, 2nd Floor,
Rose Plaza, I-8 Markaz,
Islamabad - Pakistan.
Tel: 92-51-4102626, 92-51-4102627
Fax: 92-51-4102628
E-mail: info@ihsaeeed.com
www.ihsaeeed.com

Ilyas Saeed & Co

Chartered Accountants

INDEPENDENT AUDITORS' REPORT TO THE BOARD OF TRUSTEES

Report on the Financial Statements

We have audited the accompanying financial statements of Pakistan Science Foundation, which comprise the statement of financial position as at June 30, 2014 and the related receipt and expenditure statement, statement of cash flows and statement of changes in accumulated fund together with the summary of significant accounting policies and other explanatory notes forming part thereof for the year then ended.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the approved international financial reporting standards as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973 and for such internal control as management determines necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing as applicable in Pakistan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Pakistan Science Foundation as of June 30, 2014 and its financial performance, its cash flows and changes in general fund for the year then ended in accordance with the approved international financial reporting standards as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973.

ISLAMABAD: 05/07/2014

Ilyas Saeed & Co.
CHARTERED ACCOUNTANTS
Engagement Partner: Imran Ilyas, FCA



mgil

Other Offices: Karachi, Lahore, Gujranwala
A member firm of MGIL, an alliance of independent accounting, audit, tax, and consulting firms worldwide

PAKISTAN SCIENCE FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2014

		2014 Rupees	2013 Rupees
12. GRANT FROM FEDERAL GOVERNMENT			
Grant received		<u>149,271,000</u>	<u>158,253,000</u>
		<u>149,271,000</u>	<u>158,253,000</u>
13. STATUTORY SCIENTIFIC FUNCTIONS			
Research support grant	6.1	13,353,957	18,502,273
Scientific societies and professional bodies		510,348	975,282
Scientific conferences, meetings and seminars		680,348	3,460,610
Operation of science caravan		2,289,351	4,821,924
Science promotion activities		4,956,737	8,362,465
International liaison		7,000	-
Science fair		1,204,069	1,475,732
Awards, prizes and fellowship		-	1,275,000
Innovations & Inventions		500,116	1,493,594
Special scientific survey & collection of statistics		-	108,120
Subscription to international organization and UNESCO coupons		117,628	75,060
Science centre herbaria planetarium		<u>309,446</u>	-
		<u>23,929,000</u>	<u>40,550,000</u>

13.1. Science promotion activities include Rs 50,000 (2013 Rs 72,000). Research support grant includes Rs 13,000 (2013 Rs.25,000) and Scientific conferences, meetings & seminars includes Rs.Nil (2013 Rs 100,000) for which cheques were issued but not presented by the recipients upto year June 30. Resultantly, the said cheques have been lapsed and the amounts stand transferred to GoP.

14. ADMINISTRATIVE EXPENSES

Salaries and other benefits		104,282,215	95,990,778
Traveling		557,000	493,919
House rent facilities		13,296,000	13,613,447
Rent Rates & Taxes		112,000	102,461
Electricity, Gas & Water		1,160,000	1,228,099
Communication		1,420,000	1,817,529
Printing and stationery		329,000	442,558
Vehicle running		2,300,000	2,084,338
Newspapers and magazines		105,000	107,359
Liveries and uniforms		52,000	75,000
Entertainment		175,000	166,604
Repair and maintenance		684,000	664,784
Audit fee		40,000	52,000
Legal charges		1,000	135,000
Staff welfare fund		533,251	602,515
Advertisement and publicity		140,000	99,427
Miscellaneous		281,317	187,884
Depreciation	8	<u>1,315,988</u>	<u>1,520,298</u>
		<u>126,783,771</u>	<u>119,384,900</u>

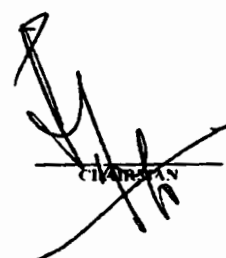
15. DATE OF AUTHORIZATION FOR ISSUE

These financial statements have been authorized for issue by the Management on SEPT. 05, 2014.

16. FIGURES

In these financial statements figures have been rounded off to the nearest rupee.


TRUSTEE


CHAIRMAN

PAKISTAN SCIENCE FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2014

6.3 EXPENSES FOR PROJECTS

	2014 Rupees	2013 Rupees
Board Committee meetings	2,291,255	1,402,626
Evaluation fee	613,000	544,599
	<u>2,904,255</u>	<u>2,046,626</u>

7. SECURITY DEPOSITS

	2014 Rupees	2013 Rupees
Zargoon Traders	750	750
Mak Traders	22,000	22,300
EGS Limited	1,550	1,550
PSF Cmteec	3,000	3,600
	<u>27,300</u>	<u>27,300</u>

8. PROPERTY, PLANT AND EQUIPMENT

PARTICULARS	COST			R A T E %	DEPRECIATION			W.D.V.	
	AS AT JULY 01, 2013	ADDITIONS (DELETIONS)	AS AT JUNE 30, 2014		AS AT JULY 01, 2013	ADJUSTMEN -	FOR THE YEAR	AS AT JUNE 30, 2014	AS AT JUNE 30, 2014
	Land - Leasehold	3,713,418	-		3,713,418	-	-	-	-
Building	19,484,542	-	19,484,540	5	11,745,001	-	366,977	12,131,578	7,352,962
Motor vehicles	9,770,952	-	9,770,952	20	7,483,426	-	457,325	7,940,931	1,830,021
Office equipment	5,508,012	-	5,508,012	15	4,94,301	-	128,557	4,722,457	785,555
Science equipment	6,558,040	-	6,558,040	15	5,125,347	-	215,654	5,336,601	1,221,439
Furniture and fixtures	3,039,314	-	3,039,314	6	1,758,298	-	7,366	1,835,974	1,204,340
Air conditioners	194,974	-	194,974	20	194,343	-	126	194,469	505
Library books and films	1,794,815	-	1,794,815	5	968,768	-	40,302	1,029,876	765,939
TOTAL 2014 (Rs.)	50,864,065	-	50,864,065		31,874,393	-	1,315,988	33,190,381	16,873,694

PARTICULARS	COST			R A T E %	DEPRECIATION			W.D.V.	
	AS AT JULY 01, 2012	ADDITIONS (DELETIONS)	AS AT JUNE 30, 2013		AS AT JULY 01, 2012	ADJUSTMEN -	FOR THE YEAR	AS AT JUNE 30, 2013	AS AT JUNE 30, 2013
	Land - Leasehold	3,713,418	-		3,713,418	-	-	-	-
Building	19,484,540	-	19,484,540	5	11,337,657	-	407,344	11,745,001	7,739,539
Motor vehicles	9,770,952	-	9,770,952	20	6,821,260	90,285	571,882	7,483,426	2,287,526
Office equipment	5,508,012	-	5,508,012	15	4,421,293	-	163,008	4,584,301	623,711
Science equipment	6,558,040	-	6,558,040	15	4,866,636	-	253,711	5,120,347	1,437,693
Furniture and fixtures	3,039,314	-	3,039,314	6	1,676,425	-	81,773	1,758,298	1,281,016
Air conditioners	194,974	-	194,974	20	194,185	-	158	194,343	631
Library books and films	1,794,815	-	1,794,815	5	946,344	-	42,424	988,768	806,047
TOTAL 2013 (Rs.)	50,064,065	-	50,064,065		30,263,810	90,285	1,520,298	31,874,393	18,189,671

9. LONG TERM SECURITY DEPOSITS

	2014 Rupees	2013 Rupees
Electricity	1,472,195	1,472,195
Gas	145,000	145,000
CMH Rawalpindi	300,000	500,000
	<u>1,917,195</u>	<u>1,917,195</u>

10. ADVANCES

	2014 Rupees	2013 Rupees
Advance to staff for vehicles	198,214	323,097
	<u>198,214</u>	<u>323,097</u>

11. CASH AND BANK BALANCES

	2014 Rupees	2013 Rupees
Cash in hand	34,415	34,415
	<u>34,415</u>	<u>34,415</u>

PAKISTAN SCIENCE FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2014

2014
Rupees

2013
Rupees

4.3. INTANGIBLE ASSETS

PARTICULARS	C O S T		R A T E %	D E P R E C I A T I O N			W.D.V		
	AS AT JULY 01, 2013	ADDITIONS/ (DELETIONS)		AS AT JUNE 30, 2014	AS AT JULY 01, 2013	ADJUSTMEN T	FOR THE YEAR	AS AT JUNE 30, 2014	AS AT JUNE 30, 2014
Software	750,000	-	750,000	10	203,250	-	54,675	257,925	492,075
TOTAL 2014 (Rs.)	750,000	-	750,000		203,250	-	54,675	257,925	492,075
TOTAL 2013 (Rs.)	750,000	-	750,000		142,500	-	66,750	203,250	546,750

5. MISCELLANEOUS FUNDS

Endowment	1,377,730	576,026
PSF Mutual Collaboration Activities	727,575	916,048
UNESCO	54,221	541,376
	<u>2,159,526</u>	<u>2,033,450</u>

REPRESENTED BY:

Cash at bank	2,162,526	2,036,450
Tender money payable	(3,000)	(3,000)
	<u>2,159,526</u>	<u>2,033,450</u>

6. RESEARCH PROJECTS IN PROGRESS

Opening balance		145,708,659	156,417,975
Add Disbursements during the year	6.1	13,353,957	18,502,273
		159,062,616	174,920,248
Less: Projects completed during the year	6.2	19,702,613	27,164,763
Expenses for projects	6.3	2,904,255	2,046,826
		<u>22,606,868</u>	<u>29,211,589</u>
		<u>136,455,748</u>	<u>145,708,659</u>

6.1 DISBURSEMENTS DURING THE YEAR

Bio-tech sciences	1,015,340	695,549
Evaluation fee	613,000	644,000
Physical sciences	265,857	458,797
Chemical sciences	1,296,683	2,263,687
Biological sciences	1,341,295	4,213,302
Earth sciences	579,175	188,000
Environmental sciences	523,381	217,539
Engineering sciences	587,420	76,787
Agricultural sciences	2,346,422	1,767,173
Medical sciences	1,231,574	2,745,092
Math and Computer science	209,343	313,294
Board/Committee meetings	2,291,255	1,402,826
Utilization of results of research and transfer of technology and pilot plant study	1,053,212	3,516,227
	<u>13,353,957</u>	<u>18,502,273</u>

6.2 PROJECTS COMPLETED DURING THE YEAR

Agricultural sciences	3,029,562	-
Chemical sciences	3,545,137	1,103,358
Environmental sciences	1,642,905	4,281,754
Biological sciences	4,937,476	2,554,785
Medical sciences	4,764,939	2,386,061
Earth sciences	643,619	1,997,025
Physics	-	2,372,214
Utilization of results of research and transfer of technology and pilot plant study	1,138,975	12,469,568
	<u>19,702,613</u>	<u>27,164,763</u>

PAKISTAN SCIENCE FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2014

		2014 Rupees	2013 Rupees
3. GENERAL FUND			
Opening balance		20,437,979	22,210,164
(Deficit) for the year		(1,441,771)	(1,772,185)
		<u>18,996,208</u>	<u>20,437,979</u>
4. DEVELOPMENT FUND			
Opening balance		8,344,960	9,883,097
Grants received during the year for Participation of scientists and technologists in conferences		5,000,000	4,500,000
		13,344,960	14,383,097
Expenditure incurred during the year	4.1	(6,278,821)	(6,638,137)
Closing balance		<u>7,066,139</u>	<u>8,344,960</u>
REPRESENTED BY:			
Property, Plant & Equipment	4.2	6,523,945	7,749,090
Intangibles	4.3	492,075	546,750
Cash at Bank		50,120	50,120
		<u>7,066,140</u>	<u>8,344,960</u>

4.1 EXPENDITURE INCURRED DURING THE YEAR FOR:

Participation of scientists and technologists in conferences TA / DA and evaluation fee		3,360,833	2,940,320
Registration fee		952,239	820,463
Postage and stationery		25,659	19,554
Depreciation	4.2	1,224,146	1,477,387
Amortization	4.3	54,675	60,750
Miscellaneous		208,432	178,448
Living expenses		405,690	541,215
Advertisement expenses		47,147	-
		<u>6,278,821</u>	<u>6,038,137</u>

4.2. PROPERTY, PLANT & EQUIPMENT

PARTICULARS	COST			R A T E %	DEPRECIATION			W.D.V	
	AS AT JULY 01, 2013	ADDITIONS / (DELETIONS)	AS AT JUNE 30, 2014		AS AT JULY 01, 2013	ADJUSTMEN -	FOR THE YEAR	AS AT JUNE 30, 2014	AS AT JUNE 30, 2014
	DEVELOPMENT PROJECTS								
Motor vehicles	6,494,293	-	6,494,293	20	5,856,073	-	127,644	5,983,717	510,576
Office equipments	24,950,380	-	24,950,380	15	18,352,082	-	989,745	19,341,826	5,608,554
Computer equipments	2,571,218	-	2,571,218	33	2,289,505	-	92,965	2,382,470	188,748
Furniture and fixtures	381,907	-	381,907	6	152,048	-	13,792	165,840	216,067
TOTAL 2013 (Rs.)	34,397,798	-	34,397,798		26,649,708	-	1,224,146	27,873,853	6,523,945

PARTICULARS	COST			R A T E %	DEPRECIATION			W.D.V	
	AS AT JULY 01, 2012	ADDITIONS / (DELETIONS)	AS AT JUNE 30, 2013		AS AT JULY 01, 2012	ADJUSTMEN -	FOR THE YEAR	AS AT JUNE 30, 2013	AS AT JUNE 30, 2013
	DEVELOPMENT PROJECTS								
Motor vehicles	6,494,293	-	6,494,293	20	5,696,519	-	159,555	5,856,073	638,220
Office equipments	24,950,380	-	24,950,380	15	17,187,676	-	1,164,406	18,352,082	6,598,298
Computer equipments	2,571,218	-	2,571,218	33	2,150,350	-	138,754	2,289,505	281,713
Furniture and fixtures	381,907	-	381,907	6	137,376	-	14,672	152,048	226,859
TOTAL 2012 (Rs.)	34,397,798	-	34,397,798		25,172,321	-	1,477,367	26,649,708	7,748,090

**PAKISTAN SCIENCE FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2014**

1. THE FOUNDATION AND ITS OPERATIONS

Pakistan Science Foundation is a statutory organization established under Pakistan Science Foundation Act, 1973 on February 02, 1973. The main objects are to promote and finance scientific activities having a bearing on the socio-economic needs of the country.

2. SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies which have been adopted in the preparation of these financial statements are summarized as under:

2.1 ACCOUNTING CONVENTION

These financial statements have been prepared under the historical cost convention.

2.2 BASIS OF PREPARATION

Statement of Compliance

These financial statements have been prepared in accordance with the approved accounting standards as applicable in Pakistan. Approved Accounting Standards comprise of International Financial Reporting Standards (IFRSs) issued by the International Accounting Standards Board (IASB) as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973. In case, the requirements differ, the provisions or directives of the Pakistan Science Foundation Act, 1973, shall prevail.

2.3 PROPERTY, PLANT AND EQUIPMENT

These are stated at cost less accumulated depreciation except leasehold land which is stated at cost. Cost of tangible assets consists of historical cost and other directly attributable costs of bringing the asset to working condition. Depreciation is charged on reducing balance method at the rates specified in the relevant notes. Depreciation on additions is charged from the month in which the asset is put to use, whereas depreciation on disposals is charged upto the month the asset remained in use.

2.4 INTANGIBLE ASSETS

These are stated at cost less accumulated amortization. Amortization is charged on reducing balance method from the year of commercial use at the annual rate of 10%. Gain or loss, if any, on disposal of intangibles are included in the current income.

2.5 REVENUE RECOGNITION

Grant is recognized on actual receipt basis from the GoP.

2.6 RESTRICTED FUNDS

Funds received directly as grants for development or received as contribution from the donor for specific functions are classified as restricted funds. Restricted funds representing direct grants are classified as grant funds. Expenses incurred out of grant funds are reflected in the notes to the financial statements.

2.7 EXPENDITURE

Expenses are recognized on actual payment basis except non cash expenses such as depreciation and amortization which is charged on accrual basis. Expenses incurred out of restricted funds or grant funds are adjusted against the outstanding balance without being routed through the income & expenditure account.

2.0 PAKISTAN MUSEUM OF NATURAL HISTORY

Financial Statements

PAKISTAN MUSEUM OF NATURAL HISTORY STATEMENT OF CHANGES IN GENERAL FUND FOR THE YEAR ENDED JUNE 30, 2014

PARTICULARS	GENERAL FUND <u>Rupees</u>	TOTAL <u>Rupees</u>
Closing Balance as at June 30, 2012 - Restated	130,309,692	130,309,692
Transferred to GoP	(81,500)	(81,500)
(Deficit) for the year	(12,770,724)	(12,770,724)
Closing Balance as at June 30, 2013	<u>117,457,469</u>	<u>117,457,469</u>
(Deficit) for the year	(14,587,180)	(14,587,180)
Closing Balance as at June 30, 2014	<u><u>102,870,289</u></u>	<u><u>102,870,289</u></u>

The annexed notes from 1 to 15 form an integral part of these financial statements. *[Signature]*

[Signature]
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad
ASSISTANT


[Signature]
Director General
 Pakistan Museum of Natural History
DIRECTOR GENERAL

PAKISTAN MUSEUM OF NATURAL HISTORY
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED JUNE 30, 2014

	<u>2014</u> <u>(Rupees)</u>	<u>2013</u> <u>(Rupees)</u>
CASH FLOWS FROM OPERATING ACTIVITIES		
(Deficit) for the year	(14,587,180)	(12,770,724)
Adjustments for non-cash changes and other items:		
Depreciation	11,374,936	14,589,478
Loss / (Gain) on sale of fixed assets	-	753,122
Cash generated from operations before working capital cha	(3,212,244)	2,571,877
Working capital changes		
(Increase) / Decrease in receivables	275,000	398,751
Net working capital charges	275,000	398,751
Net cash generated from / (used in) operating activities	(2,937,244)	2,970,628
CASH FLOWS FROM INVESTING ACTIVITIES		
Capital expenditure on Property, plant and equipment	-	(9,000)
Proceeds from sale of Property, plant and equipment	-	81,500
Net cash (used in) / generated from investing activities	-	72,500
CASH FLOWS FROM FINANCING ACTIVITIES		
Transfer to government of Pakistan	-	(81,500)
Net cash (used in) / generated from financing activities	-	(81,500)
NET INCREASE IN CASH AND CASH EQUIVALENTS	(2,937,244)	2,961,628
CASH & CASH EQUIVALENTS AT BEGINNING OF YE.	3,038,228	76,600
CASH AND CASH EQUIVALENTS AT END OF THE YE.	100,984	3,038,228

The annexed notes from 1 to 15 form an integral part of these financial statements.


ASSISTANT DIRECTOR
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad



Director General
 Pakistan Museum of Natural History
 General Avenue Islamabad

**PAKISTAN MUSEUM OF NATURAL HISTORY
INCOME AND EXPENDITURE STATEMENT
FOR THE YEAR ENDED JUNE 30, 2014**

PARTICULARS	NOTE	2014 (Rupees)	2013 (Rupees)
INCOME			
Grant from GoP - Non-Development	8	90,734,000	86,695,000
Miscellaneous account	9	273,753	4,464,452
		91,007,753	91,159,452
EXPENDITURE			
Non-Development	10	93,402,496	89,860,982
Development	11	9,192,927	12,168,008
Miscellaneous Account	12	2,724,510	1,901,186
		105,319,933	103,930,176
Less: Prior Year Adjustment		275,000	-
(DEFICIT) TRANSFERRED TO GENERAL FUND		<u>(14,587,180)</u>	<u>(12,770,724)</u>

The annexed notes from 1 to 15 form an integral part of these financial statements.


ASSISTANT DIRECTOR
Assistant Director (Accounts)
Pakistan Museum of Natural History
Islamabad


Director General
DIRECTOR GENERAL
Pakistan Museum of Natural History
33-B, Ben Avenue Islamabad.


PAKISTAN MUSEUM OF NATURAL HISTORY
STATEMENT OF FINANCIAL POSITION
AS AT JUNE 30, 2014

FUNDS AND LIABILITIES	NOTE	2014 (Rupees)	2013 (Rupees)
ACCUMULATED FUNDS	3	102,870,289	117,457,469
		102,870,289	117,457,469
ASSETS			
NON-CURRENT ASSETS			
Property, plant and equipment - Development	4	94,384,938	103,577,865
Property, plant and equipment - Non-Development	5	8,134,367	10,316,376
		102,519,305	113,894,241
Long term deposits - PIMS	6	250,000	250,000
CURRENT ASSETS			
Receivables		-	275,000
Cash & bank balances	7	100,984	3,038,228
		102,870,289	117,457,469

The annexed notes from 1 to 15 form an integral part of these financial statements.

Visa


ASSISTANT DIRECTOR
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad


Director General
 Pakistan Museum of Natural History
DIRECTOR GENERAL
 Garden Avenue Islamabad

Office # 26, 2nd Floor,
Rose Plaza, I-S Markaz,
Islamabad - Pakistan
Tel: 92-51-4102626, 92-51-4102627
Fax: 92-51-4102628
E-mail: info@ilyassaeed.com
www.ilyassaeed.com

Ilyas Saeed & Co

Chartered Accountants

INDEPENDENT AUDITORS' REPORT TO THE MANAGEMENT

Report on the Financial Statements

We have audited the accompanying financial statements of Pakistan Museum of Natural History, which comprise the statement of financial position as at June 30, 2014 and the related income and expenditure statement, statement of cash flows and statement of changes in accumulated fund together with the summary of significant accounting policies and other explanatory notes forming part thereof for the year then ended.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the approved international financial reporting standards as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973 and for such internal control as the management determines necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing as applicable in Pakistan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Pakistan Museum of Natural History as of June 30, 2014 and its' financial performance, its cash flows and changes in general fund for the year then ended in accordance with the approved international financial reporting standards as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973.

Ilyas Saeed & Co.

CHARTERED ACCOUNTANTS
Engagement Partner: Imran Ilyas, FCA
ISLAMABAD: 11/07/2014.

Imran



PAKISTAN MUSEUM OF NATURAL
NOTES TO THE FINANCIAL
FOR THE YEAR ENDED JUNE 30, 2014

	2014 <u>(Rupees)</u>	2013 <u>(Rupees)</u>
10.1. W.D.V. of fixed assets	-	119,791
Sale proceeds of disposal	-	(14,033)
Loss on disposal of fixed assets	-	105,758
11. EXPENDITURE - DEVELOPMENT FUND		
Depreciation	9,192,927	11,520,254
Loss on disposal of fixed assets	-	647,365
Bank balance written off	-	389
	<u>9,192,927</u>	<u>12,168,008</u>
11.1. W.D.V. of fixed assets	-	714,832
Sale proceeds of disposal	-	(67,467)
Loss on disposal of fixed assets	-	647,365
12. EXPENDITURE - MISCELLANEOUS ACCOUNT		
Misc Expenses	19,228	103,557
Geological Symposium	-	8,807
Biodiversity Symposium	33,822	77,155
MAB Project	-	94,772
33rd Zoology Congress	2,494,193	1,616,554
Refund of Function	134,084	341
Pay & Allowances	21,748	-
Medical	21,435	-
	<u>2,724,510</u>	<u>1,901,186</u>

13. PRIOR YEAR ADJUSTMENT


This represent an amount of Rs. 275,000/- given to CMII. The amount was received back and was surrendered to the GoP.

14. DATE OF AUTHORIZATION FOR ISSUE

These financial statements have been authorized for issue by the Board of Trustees on *SEP. 11, 2014*.

15. FIGURES

In these financial statements figures have been rounded off to the nearest rupee. *Wise*


Assistant Director (Accounts)
Pakistan Museum of Natural History
Islamabad


Director General
Pakistan Museum of Natural History
Islamabad

PAKISTAN MUSEUM OF NATURAL
NOTES TO THE FINANCIAL
FOR THE YEAR ENDED JUNE 30, 2014

	2014 <u>(Rupees)</u>	2013 <u>(Rupees)</u>
6. SECURITY DEPOSITS		
Security Deposits at PIMS	<u>250,000</u>	<u>250,000</u>
7. CASH & BANK BALANCE		
Cash at bank - Miscellaneous Acco 7.1.	<u>100,984</u>	<u>3,038,228</u>
7.1. This amount represents cash kept in current account for miscellaneous receipt & payments and is termed as CD-70 A/c.		
8. GRANT FROM GOP - NON-DEVELOPMENT		
Grant From Government of Pakistan	<u>90,734,000</u>	<u>86,695,000</u>
9. MISCELLANEOUS ACCOUNT		
Miscellaneous Receipts	<u>273,753</u>	<u>4,464,452</u>
10. EXPENDITURE - NON-DEVELOPMENT		
Pay and allowances	61,829,000	53,282,000
Overtime allowance	150,000	100,000
Honorarium	200,000	200,000
Rent of residential accommodation	10,618,000	11,248,000
Medical expenses	1,800,000	1,500,000
CPF & GLI contribution	210,000	-
Gratuity	35,000	131,000
Pension contribution	6,595,000	12,522,000
Leave encasement	2,754,000	500,000
Ground rent	6,000	6,000
Travelling expenses	77,000	106,000
Repair and maintenance	665,000	760,000
Communication	645,384	910,000
Printing and stationery	105,000	110,000
Electricity, gas and water	1,077,154	740,000
Entertainment	65,333	80,000
Vehicle running (POL)	1,238,616	1,685,000
Uniform expenses	35,000	40,000
Audit Fee	20,000	45,000
Advertisement	28,000	32,000
Newspapers and magazines	56,000	70,000
Other function/research activity	2,800,000	2,334,000
Miscellaneous expenses	210,000	135,000
Cost of Other Store	1,000	150,000
Depreciation	2,182,009	3,069,224
Loss on disposal of fixed assets 10.1.	-	105,758
	<u>93,402,496</u>	<u>89,860,982</u>

[Signature]

PAKISTAN MUSEUM OF NATURAL HISTORY
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2014

5 PROPERTY, PLANT AND EQUIPMENT - NON-DEVELOPMENT

PARTICULARS	2014					DEPRECIATION				W.D.V.
	COST			AS AT JUNE 30, 2014	RAT E %	DEPRECIATION			AS AT JUNE 30, 2014	AS AT JUNE 30, 2014
	AS AT JULY 01, 2013	ADDITIONS	DELETIONS			AS AT JULY 01, 2013	ADJUSTMENT	FOR THE YEAR		
Land	1,050,000	-	-	1,050,000	-	-	-	-	-	1,050,000
Machinery	1,152,472	-	-	1,152,472	20	542,819	-	121,931	664,749	487,723
Motor vehicles	3,648,926	-	-	3,648,926	20	1,775,009	-	374,783	2,149,792	1,499,134
Furniture and fixture	1,627,649	-	-	1,627,649	20	755,147	-	174,500	929,648	698,001
Office laboratory equipmer	4,487,385	-	-	4,487,385	33.3	3,122,005	-	455,081	3,577,086	910,299
Computer equipments	3,866,849	-	-	3,866,849	33.3	1,330,948	-	845,216	2,176,164	1,690,685
Books	543,412	-	-	543,412	10	146,694	-	39,672	186,366	357,046
Camera	67,300	-	-	67,300	33.3	26,170	-	13,709	39,878	27,422
Baluchitherium Life Side N	1,740,000	-	-	1,740,000	10	187,050	-	155,295	342,345	1,397,655
Whales and elephant skelet	25,000	-	-	25,000	10	6,775	-	1,823	8,598	16,403
TOTAL (Rs.) - 2014	18,208,993	-	-	18,208,993		7,892,617	-	2,182,009	10,074,626	8,134,367

PARTICULARS	2013					DEPRECIATION				W.D.V.
	COST			AS AT JUNE 30, 2013	RAT E %	DEPRECIATION			AS AT JUNE 30, 2013	AS AT JUNE 30, 2013
	AS AT JULY 01, 2012	ADDITIONS	DELETIONS			AS AT JULY 01, 2012	ADJUSTMENT	FOR THE YEAR		
Land	1,050,000	-	-	1,050,000	-	-	-	-	-	1,050,000
Machinery	1,215,683	9,000	(72,211)	1,152,472	20	418,464	(34,469)	158,824	542,819	609,653
Motor vehicles	3,648,926	-	-	3,648,926	20	1,306,529	-	468,479	1,775,009	1,873,917
Furniture and fixture	1,639,515	-	(11,866)	1,627,649	20	537,813	(2,880)	220,214	755,147	872,502
Office laboratory equipmer	4,487,385	-	-	4,487,385	33.3	2,439,417	-	682,588	3,122,005	1,365,380
Computer equipments	4,103,535	-	(236,686)	3,866,849	33.3	194,669	(163,624)	1,299,903	1,330,948	2,535,901
Books	543,412	-	-	543,412	10	102,615	-	44,080	146,694	396,718
Camera	67,300	-	-	67,300	33.3	5,608	-	20,562	26,170	41,130
Baluchitherium life size mc	1,740,000	-	-	1,740,000	10	14,500	-	172,550	187,050	1,552,950
Whale & elephant skeleton	25,000	-	-	25,000	10	4,750	-	2,025	6,775	18,225
TOTAL (Rs.) - 2013	18,520,756	9,000	(320,763)	18,208,993		5,024,365	(200,972)	3,069,224	7,892,617	10,316,376

PAKISTAN MUSEUM OF NATURAL HISTORY
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2014

4 PROPERTY, PLANT AND EQUIPMENT - DEVELOPMENT

PARTICULARS	2014									
	COST				RAT E %	DEPRECIATION				W.D.V.
	AS AT JULY 01, 2013	ADDITIONS	DELETIONS	AS AT JUNE 30, 2014		AS AT JULY 01, 2013	ADJUSTMENT	FOR THE YEAR	AS AT JUNE 30, 2014	AS AT JUNE 30, 2014
Land	2,576,000	-	-	2,576,000	-	-	-	-	-	2,576,000
Building	87,150,893	-	-	87,150,893	5	12,429,896	-	3,736,050	16,165,946	70,984,947
Motor vehicles	5,691,447	-	-	5,691,447	20	2,777,426	-	582,804	3,360,230	2,331,217
Display centre	10,370,351	-	-	10,370,351	10	2,810,365	-	755,999	3,566,364	6,803,987
Generator	8,990	-	-	8,990	10	2,436	-	655	3,092	5,898
Audio visual equipment	13,235,840	-	-	13,235,840	30	8,695,947	-	1,361,968	10,057,915	3,177,925
Laboratory equipment	11,589,153	-	-	11,589,153	30	7,614,074	-	1,192,524	8,806,597	2,782,556
Computer equipments	9,477,774	-	-	9,477,774	30	6,391,960	-	925,744	7,317,704	2,160,070
Books	4,242,784	-	-	4,242,784	20	2,070,479	-	434,461	2,504,940	1,737,844
Furniture and fixture	1,862,967	-	-	1,862,967	10	504,864	-	135,810	640,674	1,222,293
Air conditioners	917,850	-	-	917,850	10	248,737	-	66,911	315,649	602,201
TOTAL (Rs.) - 2014	147,124,049	-	-	147,124,049		43,546,184	-	9,192,927	52,739,111	94,384,938

PARTICULARS	2013									
	COST				RAT E %	DEPRECIATION				W.D.V.
	AS AT JULY 01, 2012	ADDITIONS	DELETIONS	AS AT JUNE 30, 2013		AS AT JULY 01, 2012	ADJUSTMENT	FOR THE YEAR	AS AT JUNE 30, 2013	AS AT JUNE 30, 2013
Land	2,576,000	-	-	2,576,000	-	-	-	-	-	2,576,000
Building	87,150,893	-	-	87,150,893	5	8,497,212	-	3,932,684	12,429,896	74,720,997
Motor vehicles	5,691,447	-	-	5,691,447	20	2,048,921	-	728,505	2,777,426	2,914,021
Display centre	10,370,351	-	-	10,370,351	10	1,970,367	-	839,998	2,810,365	7,559,986
Generator	8,990	-	-	8,990	10	1,708	-	728	2,436	6,554
Audio visual equipment	13,235,840	-	-	13,235,840	30	6,750,278	-	1,945,668	8,695,947	4,539,893
Laboratory equipment	11,778,903	-	(189,750)	11,589,153	30	6,007,241	(122,341)	1,729,174	7,614,074	3,975,079
Computer equipments	10,825,224	-	(1,347,450)	9,477,774	30	5,520,864	(703,706)	1,574,802	6,391,960	3,085,814
Books	4,242,784	-	-	4,242,784	20	1,527,402	-	543,076	2,070,479	2,172,305
Furniture and fixture	1,867,967	-	(5,000)	1,862,967	10	354,914	(1,321)	151,272	504,864	1,358,103
Air conditioners	917,850	-	-	917,850	10	171,392	-	74,346	248,737	669,113
TOTAL (Rs.) - 2013	148,666,249	-	(1,542,200)	147,124,049		32,853,298	(827,368)	11,520,254	43,546,184	103,577,865

Handwritten signature

3.0 PAKISTAN SCIENTIFIC & TECHNOLOGICAL INFORMATION CENTRE Financial Statements

Plot 126, 2nd Floor,
F-7/1, Plaza, F-8 Markaz,
Islamabad - Pakistan
Tel: +92-51-4102626, 92-51-4102627
Fax: +92-51-4102628
E-mail: info@iysaeed.com
www.iysaeed.com

Ilyas Saeed & Co
Chartered Accountants

INDEPENDENT AUDITORS' REPORT TO THE MANAGEMENT

Report on the Financial Statements

We have audited the accompanying financial statements of Pakistan Scientific And Technological Information Centre which comprise the statement of financial position as at June 30, 2014 and the related income and expenditure statement, statement of cash flows and statement of changes in accumulated fund together with the summary of significant accounting policies and other explanatory notes forming part thereof for the year then ended.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the approved international financial reporting standards as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973 and for such internal control as management determines necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

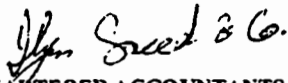
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing as applicable in Pakistan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Pakistan Scientific And Technological Information Centre as of June 30, 2014 and its financial performance, its cash flows and changes in fund for the year then ended in accordance with the approved international financial reporting standards as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973


IYAS SAEED & CO.
CHARTERED ACCOUNTANTS
Engagement Partner: Imran Ilyas, FCA
ISLAMABAD: 24/07/2014.



Other Offices: Karachi, Lahore, Gujranwala.
A member firm of MGI, an alliance of independent accounting, audit, tax and consulting firms worldwide.

PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
 NOTES TO THE ACCOUNTS
 FOR THE YEAR ENDED JUNE 30, 2014

	2014 (Rupees)	2013 (Rupees)
12. EXPENDITURE REPROGRAPHIC & DOCUMENTATION		
Reprography expense	6,820,647	1,569,344
Documentation expenses	915,002	161,397
Bank charges	116	-
Miscellaneous	795,032	614,171
	8,530,797	2,344,912
13. EXPENDITURE STRENGTHENING REPROGRAPHIC SERVICES OF PASTIC		
Establishment Expenditure	-	1,266,043
Operational Charges including POL	-	125,000
Miscellaneous	-	210,765
	-	1,601,808
14. EXPENDITURE PASTIC SERVICES COMMERCIALIZATION		
Printing & Binding Material	3,892,515	-
Withholding Tax	1,453	-
Salary & Wages	19,448	-
Overtime	44,840	-
Profit allocation at 4%	9,082	-
	3,967,338	-

15. DATE OF AUTHORIZATION FOR ISSUE

These financial statements have been authorized for issue by the Board of Trustees on SEP. 24, 2014.

16. FIGURES

In these financial statements figures have been rounded off to the nearest rupee.




 ASSISTANT
 DIRECTOR


 ADDITIONAL DIRECTOR (A
 & F)


 DIRECTOR GENERAL

GHAFFAR AHMAD
 Assistant Director (Accounts)
 PASTIC National Centre, Quaid-e-Azam
 University Campus, Islamabad


Dr. Raja Razi-ul-Hussain
 Additional Director (A&F)/DDO
 PASTIC National Centre
 Quaid-e-Azam University Campus
 Islamabad

Dr. Muhammad Akram Shaikh
 Director General, PASTIC
 Quaid-e-Azam University Campus,
 Islamabad


PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
 NOTES TO THE ACCOUNTS
 FOR THE YEAR ENDED JUNE 30, 2014

11.1. EXPENDITURE NON-DEVELOPMENT ACCOUNT - CENTRE WISE

PARTICULARS	Islamabad Rupees	Karachi Rupees	Lahore Rupees	Peshawar Rupees	Quetta Rupees	Faisalabad Rupees	Muzafarabad Rupees	2014 Rupees	2013 Rupees
RECEIPTS									
Government grants	99,608,000	-	-	-	-	-	-	99,608,000	88,162,000
Transferred to sub-centres	(18,982,261)	8,688,572	3,293,844	2,438,219	1,823,705	1,711,385	1,026,536		
	<u>80,625,739</u>	<u>8,688,572</u>	<u>3,293,844</u>	<u>2,438,219</u>	<u>1,823,705</u>	<u>1,711,385</u>	<u>1,026,536</u>	<u>99,608,000</u>	<u>88,162,000</u>
PAYMENTS									
Salaries and allowances	50,973,613	7,237,948	2,646,375	2,060,643	1,403,104	1,322,187	989,089	66,632,959	53,411,503
House rent (residential)	9,230,439	861,180	466,680	161,400	322,410	147,720	-	11,189,829	12,085,214
Printing and stationery	234,484	9,030	13,980	7,800	5,060	5,658	1,995	277,956	243,960
Newspapers/books/journals	172,817	5,454	3,382	4,626	4,692	4,662	2,200	197,833	65,786
Entertainment	46,138	700	-	-	-	6,475	-	53,313	77,884
Communication/ Internet	1,007,408	70,314	40,053	60,760	46,535	59,167	14,800	1,299,097	1,172,727
Electricity, water and gas	895,193	85,792	45,427	36,182	-	-	-	1,062,594	1,286,376
Vehicle running/POI charges	1,417,643	16,000	30,618	20,989	15,250	4,500	-	1,505,000	1,310,000
Travelling Allowance (TA/DA)	327,964	-	-	-	-	7,900	-	335,864	199,378
Medical Facility	1,213,524	90,001	-	-	1,580	81,704	-	1,386,809	1,245,187
Pension contribution	9,651,000	-	-	-	-	-	-	9,651,000	12,865,582
Financial Assistance to Deceased	200,000	-	-	-	-	-	-	200,000	500,000
Advertisement	114,723	-	-	-	-	-	-	114,723	40,000
Repair and maintenance:									
-Office equipment	126,152	15,300	860	13,700	5,650	16,570	-	172,172	180,000
-Transport	304,350	8,035	14,850	11,999	5,300	2,350	-	349,884	309,600
-Furniture and fixtures	-	-	-	-	-	-	-	-	50,000
-Building	535,053	320	-	2,000	-	10,700	-	548,073	350,000
Computer expenses	111,912	1,030	11,800	1,560	5,400	7,380	4,677	143,759	712,900
Staff welfare fund/uniforms/liveries	343,885	2,560	-	830	-	-	-	347,275	328,108
Conference, seminars and workshops	192,151	112,271	14,158	43,300	-	30,800	6,000	398,680	186,931
Rent- office building	-	102,000	-	-	-	-	-	102,000	102,000
Purchase of office equipment	-	-	-	-	-	-	-	-	1,000
Purchase of furniture and fixtures	-	-	-	-	-	-	-	-	1,000
Data bases journals and annual subscription	2,000,000	-	-	-	-	-	-	2,000,000	1,727,000
National Bureau TISD (Tech Info Service Depart)	60,000	-	-	-	-	-	-	60,000	-
Foreign expert assistance	375,827	-	-	-	-	-	-	375,827	-
Miscellaneous / unforeseen expenses	129,546	70,628	5,721	12,430	5,784	9,612	7,715	241,436	199,164
	<u>79,663,822</u>	<u>8,688,572</u>	<u>3,293,844</u>	<u>2,438,219</u>	<u>1,823,705</u>	<u>1,711,385</u>	<u>1,026,536</u>	<u>98,646,083</u>	<u>88,162,000</u>
CAPITAL PAYMENTS									
Purchase of Fixed Assets	961,917	-	-	-	-	-	-	961,917	-
	<u>80,625,739</u>	<u>8,688,572</u>	<u>3,293,844</u>	<u>2,438,219</u>	<u>1,823,705</u>	<u>1,711,385</u>	<u>1,026,536</u>	<u>99,608,000</u>	<u>88,162,000</u>


Assistant Director (Accounts)
 PASTIC National Centre, Quid-e-Azam
 University Campus, Islamabad


Dr. Raja Razi-ul-Hussnain
 Additional Director (A&F)/DDO
 PASTIC National Centre
 Quid-e-Azam University Campus
 Islamabad


Dr. Muhammad Akram Shaikh
 Director General, PASTIC
 Quid-e-Azam University Campus,
 Islamabad



STATE UNIVERSITY OF SCIENCES AND TECHNOLOGY
 NOTES TO THE ACCOUNTS
 FOR THE YEAR ENDED JUNE 30, 2013

6. CASH AND BANK BALANCES

	2012 (Rupees)	2013 (Rupees)
Cash in hand		
Documentation account	4,730	9,830
Cash at bank		
Reprographic account	4,459,478	4,498,293
Documentation account	1,758,439	1,207,673
Services Commercialization Account	2,860,312	-
Miscellaneous account	242,796	290,879
	9,321,025	5,996,845
	9,325,755	6,006,675

7. NON DEVELOPMENT ACCOUNT

Grant	99,608,000	88,162,000
-------	------------	------------

7.1. This represents amount received from GoP for non-development / recurring expenses

8. REPROGRAPHIC AND DOCUMENTATION

Reprography	6,547,164	1,548,789
Documentation	1,460,784	58,043
Profit on bank account	234,668	175,582
Miscellaneous	855,344	511,485
	9,097,960	2,293,899

9. STRENGTHENING OF REPROGRAPHY

Grant	9.1.	12,438,000
-------	------	------------


9.1. This represent development grant from AGPR for strengthening and enhancement of reprographic services.


10. This represents income from printing & stationery services to Utility Stores Corporation (Private) Limited.

11. EXPENDITURE NON-DEVELOPMENT ACCOUNT

Salaries, and allowances	66,632,959	53,431,503
House rent (Residential)	11,189,829	12,055,214
Printing, stationery and consumable stores	277,956	243,960
Newspaper /Book/Journals	197,833	65,786
Entertainment	53,313	77,884
Postage, telegrams, Internet and telephone	1,299,097	1,172,727
Electricity, water and gas	1,062,594	1,286,376
Vehicle running/POL charges	1,505,000	1,310,000
Travelling Allowance (TA/DA)	335,864	199,378
Medical Facility	1,386,809	1,245,187
Advertisement	114,723	40,000
Repair and maintenance-office equipment	172,172	180,000
Repair and maintenance-transport	349,884	300,000
Repair and maintenance-furniture & fixtures	-	50,000
Repair and maintenance-building	548,073	350,000
Computer expenses (Hardware, software, IT Equipment & Cc	143,759	212,909
Staff welfare funds & Uniforms	347,275	328,108
Conferences, seminar & workshops	398,680	186,931
Financial assistance (who expires during service)	200,000	500,000
Rent Office building	102,000	102,000
Data bases, journals and annual subscriptions	2,000,000	1,727,091
National bureau (TISD)	60,000	-
Pension contribution	9,651,000	12,865,582
Foreign expert assistance	375,827	-
Miscellaneous / audit & unforeseen	241,436	201,364
	98,646,063	88,162,000


GHAFFAR AHMAD
 Assistant Director (Production)
 PASTIC National Centre, Quaid-e-Azam
 University Campus, Islamabad


Dr. Raja Razi-ul-Hussain
 Additional Director (A&F)/DDO
 PASTIC National Centre
 Quaid-e-Azam University Campus
 Islamabad


Dr. Muhammad Akram Shaikh
 Director General, PASTIC
 Quaid-e-Azam University Campus,
 Islamabad

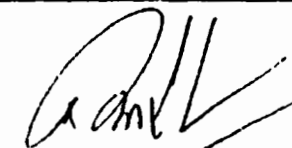
PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
 NOTES TO THE ACCOUNTS
 FOR THE YEAR ENDED JUNE 30, 2014


5. PROPERTY, PLANT AND EQUIPMENT

PARTICULARS	2014			R A T E	DEPRECIATION			W D V AS AT JUNE 30, 2014
	C O S T		AS AT JUNE 30, 2014		AS AT JULY 01, 2013	FOR THE YEAR	AS AT JUNE 30, 2014	
	AS AT JULY 01, 2013	ADDITIONS / (DELETION)						
Building	7,585,261	-	7,585,261	10%	7,263,713	32,155	7,295,867	289,394
Machinery	47,792,512	-	47,792,512	10%	4,282,375	4,351,014	8,633,389	39,159,123
Motor Vehicles	7,136,470	-	7,136,470	20%	4,562,042	514,886	5,076,928	2,059,542
Computers	7,339,050	915,702	8,254,752	30%	6,123,727	390,415	6,514,141	1,740,611
Furniture and Fixtures	856,188	102,095	958,283	10%	567,579	29,970	597,549	360,734
Office Equipments	573,812	-	573,812	10%	344,076	22,974	367,050	206,762
Electric Equipments	3,052,022	52,515	3,104,537	10%	1,281,253	177,567	1,458,820	1,645,717
UPS	24,500	-	24,500	10%	4,655	1,985	6,640	17,861
Books	3,046,784	-	3,046,784	10%	1,636,430	141,035	1,777,465	1,269,319
TOTAL 2014 (Rs.)	77,406,599	1,070,312	78,476,911		26,065,850	5,661,999	31,727,849	46,749,062

PARTICULARS	2013			R A T E	DEPRECIATION			W D V AS AT JUNE 30, 2013
	C O S T		AS AT JUNE 30, 2013		AS AT JULY 01, 2012	FOR THE YEAR	AS AT JUNE 30, 2013	
	AS AT JULY 01, 2012	ADDITIONS / (DELETION)						
Building	7,585,261	-	7,585,261	10%	7,227,985	35,728	7,263,713	521,548
Machinery	5,542,070	42,250,442	47,792,512	10%	2,577,578	1,704,797	4,282,375	43,510,137
Motor Vehicles	7,136,470	-	7,136,470	20%	3,918,435	643,607	4,562,042	2,574,128
Computers	7,339,050	-	7,339,050	30%	5,602,874	520,853	6,123,727	1,215,323
Furniture and Fixtures	856,188	-	856,188	10%	535,511	32,068	567,579	288,609
Office Equipments	573,812	-	573,812	10%	318,550	25,526	344,076	229,736
Electric Equipments	1,914,222	1,137,800	3,052,022	10%	1,200,388	80,865	1,281,253	1,770,769
UPS	24,500	-	24,500	10%	2,450	2,205	4,655	19,845
Books	3,046,784	-	3,046,784	10%	1,479,721	156,706	1,636,430	1,410,354
TOTAL 2013 (Rs.)	34,018,357	43,388,242	77,406,599		22,863,495	3,202,355	26,065,850	51,340,743


GHAFFAR AHMAD
 Assistant Director (Accounts)
 PASTIC National Centre, Quaid-e-Azam
 University Campus, Islamabad


Dr. Raja Razi-ul-Hussnain
 Additional Director (A&F)/DDO
 PASTIC National Centre
 Quaid-e-Azam University Campus
 Islamabad


Dr. Muhammad Akram Shaikh
 Director General, PASTIC
 Quaid-e-Azam University Campus
 Islamabad

PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED JUNE 30, 2014

1. BACKGROUND AND OBJECTIVES

Pakistan Scientific and Technological Information Centre (PASTIC) is the premier organization established under the Pakistan Science Foundation Act, 1973 for dissemination of Scientific and Technological Information to the Scientists, Researchers, Engineers, Entrepreneurs, Industry and Citizens of Pakistan

2. SIGNIFICANT ACCOUNTING POLIC

The principal accounting policies which have been adopted in the preparation of these financial statements are summarized as under:

2.1 ACCOUNTING CONVENTION

These financial statements have been prepared under the historical cost convention.

2.2 BASIS OF PREPARATION

Statement of Compliance

These financial statements have been prepared in accordance with the approved accounting standards as applicable in Pakistan. Approved Accounting Standards comprise of International Financial Reporting Standards (IFRSs) issued by the International Accounting Standards Board (IASB) as applicable in Pakistan and the requirements of the Pakistan Science Foundation Act, 1973. In case, the requirements differ, the provisions or directives of the Pakistan Science Foundation Act, 1973, shall prevail.

2.3 PROPERTY, PLANT AND EQUIPMENT

These are stated at cost less accumulated depreciation except leasehold land which is stated at cost. Cost of tangible assets consists of historical cost and other directly attributable costs of bringing the asset to working condition. Depreciation is charged on reducing balance method at the rates specified in the relevant notes. Depreciation on additions is charged from the month in which the asset is put to use, whereas depreciation on disposals is charged upto the month the asset remained in use.

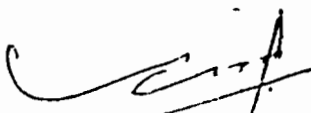
2.4 REVENUE RECOGNITION


Profits and grants are recognized on actual receipt basis. Other income is also recognized on actual receipt basis.

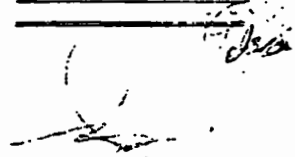
2.5 RESTRICTED FUNDS

Funds received directly as grants for development or received as endowment from the collaborating partners are classified as restricted / endowment funds. Restricted funds representing direct grants are classified as grant funds.

	2014 (Rupees)	2013 (Rupees)
3. ACCUMULATED FUNDS		
Opening balance	57,347,424	49,371,035
Surplus for the year	(4,267,565)	7,582,824
Prior period adjustment	-	393,565
	53,079,859	57,347,424
4. PAYABLES		
Sales Tax payable	338,836	-
Salary of daily wage Employees	19,448	-
Payable to M/S Recto	2,576,752	-
Payment in respect of Binding work	6,000	-
Employees Profit (4%)	9,082	-
Employees Overtime	44,840	-
	2,994,958	-


M. Iqbal
Director


Dr. Amir
Chairman


Dr. Muhammad
Secretary

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
STATEMENT OF CHANGES IN ACCUMULATED FUND
FOR THE YEAR ENDED JUNE 30, 2014**

PARTICULARS	NOTE	2014 (Rupees)	2013 (Rupees)
Opening balance		57,347,424	49,371,035
(Deficit) / Surplus for the year		(4,267,565)	7,582,824
Prior year adjustment		-	393,565
Closing balance		53,079,859	57,347,424

The annexed notes from 1 to 16 form an integral part of these financial statements.



ASSISTANT
DIRECTOR

GHAFFAR AHMAD
Assistant Director (Accounts)
PASTIC National Centre, Quaid-e-Azam
University Campus, Islamabad



ADDITIONAL DIRECTOR (A
& F)

Dr. Raja Razi-ul-Hussnain
Additional Director (A&F)/DDO
PASTIC National Centre
Quaid-e-Azam University Campus
Islamabad



DIRECTOR GENERAL

Dr. Muhammad Akram Shaikh
Director General, PASTIC
Quaid-e-Azam University Campus
Islamabad

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED JUNE 30, 2014**

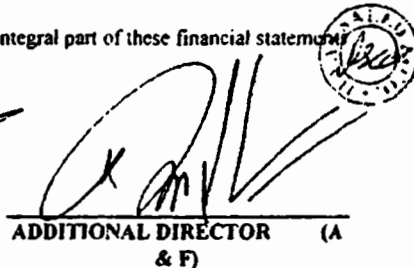
	2014 (Rupees)	2013 (Rupees)
CASH FLOW FROM OPERATING ACTIVITIES		
Surplus/ (Deficit) for the year	(4,267,565)	7,582,824
Prior year adjustment	-	393,565
Adjustments for non cash charges:		
Depreciation	5,661,999	3,202,355
Surplus before working capital changes	1,394,434	11,178,744
Working capital changes:		
Payables	2,994,958	-
Advances	-	32,552,050
Net cash generated from operating activities	4,389,392	43,730,794
CASH FLOW FROM INVESTING ACTIVITIES		
Property, plant and equipment	(1,070,312)	(43,388,242)
Net cash used in investing activities	(1,070,312)	(43,388,242)
NET CHANGE IN CASH AND CASH EQUIVALENTS	3,319,080	342,552
CASH & CASH EQUIVALENTS AT THE BEGINNING	6,006,675	5,664,123
CASH & CASH EQUIVALENTS AT THE END	9,325,755	6,006,675

The annexed notes from 1 to 16 form an integral part of these financial statements.



**ASSISTANT
DIRECTOR**

GHAFFAR AHMAD
Assistant Director (Accounts)
PASTIC National Centre, Quaid-e-Azam
University Campus, Islamabad



**ADDITIONAL DIRECTOR (A
& F)**

Dr. Raja Razi-ul-Hussnain
Additional Director (A&F)/DDO
PASTIC National Centre
Quaid-e-Azam University Campus
Islamabad



DIRECTOR GENERAL

Dr. Muhammad Akram Shaikh
Director General, PASTIC
Quaid-e-Azam University Campus,
Islamabad

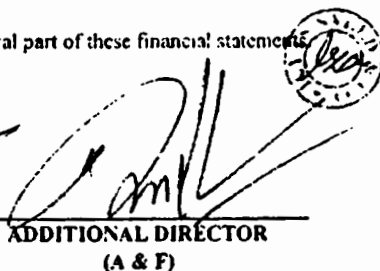
**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED JUNE 30, 2014**

PARTICULARS	NOTE	2014 (Rupees)	2013 (Rupees)
INCOME			
Non-development account	7.	99,608,000	88,162,000
Reprographic and Documentation	8.	9,097,960	2,293,899
Strengthening of Reprography	9.	-	12,438,000
Pastic Services Commercialization	10.	3,832,692	-
		112,538,652	102,893,899
EXPENDITURE			
Non- development account	11.	98,646,083	88,162,000
Reprographic and Documentation	12.	8,530,797	2,344,912
Strengthening of Reprography	13.	-	1,601,808
Pastic Services Commercialization	14.	3,967,338	-
Depreciation	5	5,661,999	3,202,355
		116,806,217	95,311,075
(DEFICIT) / SURPLUS FOR THE YEAR		(4,267,565)	7,582,824

The annexed notes from 1 to 16 form an integral part of these financial statements.


ASSISTANT
DIRECTOR

GHAFFAR AHMAD
Assistant Director (Accounts)
PASTIC National Centre, Quaid-i-Azam
University Campus, Islamabad


ADDITIONAL DIRECTOR
(A & F)

Dr. Raja Razi-ul-Hussnain
Additional Director (A&F)/DDO
PASTIC National Centre
Quaid-e-Azam University Campus
Islamabad


DIRECTOR GENERAL

Muhammad Akram Shaikh
Director General, PASTIC
Quaid-i-Azam University Campus,
Islamabad

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
STATEMENT OF FINANCIAL POSITION
AS AT JUNE 30, 2014**

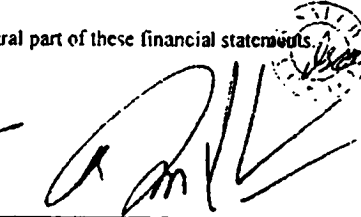
FUNDS AND LIABILITIES	NOTE	2014 <u>(Rupees)</u>	2013 <u>(Rupees)</u>
ACCUMULATED FUNDS	3.	53,079,859	57,347,424
CURRENT LIABILITIES			
Payables	4.	2,994,958	-
		<u>56,074,817</u>	<u>57,347,424</u>
ASSETS			
NON-CURRENT ASSETS			
Property, plant and equipment	5.	46,749,062	51,340,749
CURRENT ASSETS			
Cash & bank balances	6.	9,325,755	6,006,675
		<u>56,074,817</u>	<u>57,347,424</u>

The annexed notes from 1 to 16 form an integral part of these financial statements.



ASSISTANT
DIRECTOR

GHAFFAR AHMAD
Assistant Director (Accounts)
PASTIC National Centre, Quaid-e-Azam
University Campus, Islamabad



ADDITIONAL DIRECTOR
(A & F)

Dr. Raja Razi-ul-Hussain
Additional Director (A&F)/DDO
PASTIC National Centre
Quaid-e-Azam University Campus
Islamabad



DIRECTOR GENERAL

Dr. Muhammad Akram Shaikh
Director General, PASTIC
Quaid-i-Azam University Campus.
Islamabad

ANNEXURES

Pakistan Science Foundation Act 1973

National Assembly of Pakistan

Islamabad, the 2nd February, 1973

The following Acts of the National Assembly received the assent of the President on the 31st January, 1973, and are hereby published for general information:-

ACT NO. III OF 1973

An Act to provide for the establishment of the Pakistan Science Foundation

WHEREAS it is expedient to provide for the establishment of the Pakistan Science Foundation and for matters ancillary thereto;

It is hereby enacted as follows:-

1. Short title, extent and commencement.-(1) This Act may be called the Pakistan Science Foundation Act, 1973.

(2) It extends to the whole of Pakistan.

(3) It shall come into force at once.

2. Definitions – In this Act, unless there is anything repugnant in the subject or context,-

- a). “Board” means the Board of Trustees of the Foundation;
- (b). “Chairman” means the Chairman of the Foundation; and
- (c) “Foundation” means the Pakistan Science Foundation established under this Act.

3. **Establishment of the Foundation.**— (1) As soon as may be after the commencement of this Act, the Federal Government may, by notification in the official Gazette, establish a Pakistan Science Foundation to promote and finance scientific activities having a bearing on the socio-economic needs of the country.

(2) The Foundation shall be a body corporate by the name of the Pakistan Science Foundation, having perpetual succession and a common seal, with power, subject to the provisions of this Act, to acquire, hold and dispose of property, both movable and immovable, and shall by the said name sue and be sued.

(3) The head office of the Foundation shall be at Islamabad.

4. **Functions of the Foundation.**—(1) The Foundation shall function as a financing agency for —

- (i) the establishment of comprehensive scientific and technological information and dissemination centres;
- (ii) the promotion of basic and fundamental research in the universities and other institutions on scientific problems relevant to the socio-economic development of the country;
- (iii) the utilization of the results of scientific and technological research including pilot plant studies to prove the technical and economic feasibility of processes found to be promising on a laboratory scale;
- (iv) the establishment of science centres, clubs, museums, herbaria and planetaria;
- (v) the promotion of scientific societies, associations and academies engaged in spreading the cause of scientific knowledge in general or in the pursuit of a specific scientific discipline or technology in particular;
- (vi) the organization of periodical science conferences, symposia and seminars;
- (vii) the exchange of visits of scientists and technologists with other countries;
- (viii) the grant of awards, prizes and fellowships to individuals engaged in developing processes, products and inventions of consequence to the economy of the country ; and
- (ix) special scientific surveys not undertaken by any other organization and collection of scientific statistics related to the scientific effort of the country.

(2) The Foundation shall also—

- (i) review the progress of scientific research sponsored by it and evaluate the results of such research;
- (ii) maintain a National Register of highly qualified and talented scientists of Pakistan, including engineers and doctors, in or outside the country and to assist them, in collaboration with the concerned agencies in finding appropriate employment; and
- (iii) establish liaison with similar bodies in other countries.

(3) In the performance of its functions, the Foundation shall be guided on questions of policy by the instructions, if any, given to it by the Federal Government which shall be the sole judge as to whether a question is a question of policy.

5. Board of Trustees.- (1) The general direction, conduct and management of the affairs of the Foundation, including administration of its funds, shall vest in a Board of Trustees consisting of the following members, namely:-

Whole-time members

- (i) the Chairman ;
- (ii) one eminent scientist;
- (iii) the Director of Finance;

to be appointed by the President;

Part-time members

- (iv) the Chairman of the National Science Council;
- (v) four scientists to be nominated by the National Science Council; and
- (vi) eleven eminent scientists to be nominated the President.

(2) The remuneration and other terms and conditions of service of Chairman and the two other whole-time members of the Board shall be such as may be determined by the President.

6. Chairman of the Foundation.- (1) The Chairman of the Board shall be the Chairman of the Foundation and shall be appointed from amongst eminent scientists of the country having experience of research and scientific administration

(2) The Chairman shall, subject to sub-section (3), hold office for a term not exceeding three years and shall be eligible for re-appointment.

(3) The President may at any time terminate the appointment of the Chairman without notice and without assigning any reason.

7. Members of the Board.- (1) The members of the Board, other than the ex-officio member shall, subject to sub-section (3), hold office for a term not exceeding three years and shall be eligible for re-appointment or re-nomination, as the case may be.

(2) A member, other than an ex-officio member, may at any time resign his office by writing under his hand addressed to the President but shall continue to perform his functions until his resignation has been accepted.

(3) The President may at any time terminate the appointment or, as the case may be, nomination of any member of the Board without notice and without assigning any reason

(As amended vide Ordinance No XIII of 1979, published in the Gazette of Pakistan, Extra, Feb, 24, 1979) Part I,

8. Meetings of the Board.---(1) The meetings of the Board shall be held at least twice a year and shall be presided over by the Chairman or, in his absence by its whole-time scientist member.

(2) All decisions at a meeting of the Board shall be taken by a majority of the votes of the members present and voting.

9. Quorum at the meeting of the Board.—To constitute a quorum at a meeting of the Board not less than nine members shall be present.

10. Executive Committee.- There shall be an Executive Committee consisting of the Chairman and the two other whole-time members of the Board.

11. Delegation of powers.—The Board may, from time to time, delegates to the Chairman or the Executive Committee such of its powers and functions as it may consider necessary.

12. Adhoc Committees.—The Foundation may set up ad hoc committees consisting of university professors and other leading scientists and experts to scrutinize applications for financial assistance for carrying out scientific research submitted to the Foundation by the universities or other institutions or by individual scientific workers or groups of scientific workers and to review ;and evaluate the results of research sponsored by the Foundation.

13. Funds.—The funds of the Foundation shall consist of—

- (a) grants made by the Federal Government and the Provincial Government donations and endowments ; and
- © income from other sources.

14. Budget.—The Foundation shall cause to be prepared and approve a statement of its receipt and expenditure for each financial year.

15. Accounts and audit.—(1) The funds of the Foundation shall be kept in a personal ledger account of the Foundation with the State Bank of Pakistan or with any Branch of the National Bank of Pakistan acting as an agent of the State Bank.

(2). The accounts of the Foundation shall be maintained in such form and manner as the Auditor-General of Pakistan may determine in consultation with the Federal Government.

(3) The accounts of the Foundation shall be audited by one or more auditors who are chartered accountants within the meaning of the Chartered Accountants Ordinance, 1961 (X of 1961), and are appointed by the Foundation in consultation with the Auditor-General of Pakistan.

16. Appointment of officers and servants.—(1) The Foundation may appoint such officers and servants, and engage such consultants or experts, as it may consider necessary for the efficient performance of its functions, on such terms and conditions as it may deem fit.

(2) In fixing the terms and conditions of service of its officers and servants, the Foundation shall as nearly as may be conform to the scales of pay, allowances and conditions of service applicable to the corresponding class of employees of the Federal Government.

17. Annual report.—(1) The annual report of the Foundation, which shall, among other things, clearly bring out the benefits accruing to the nation as a result of the activities sponsored by the Foundation, shall be prepared by the Chairman and submitted, through the Board, to the Federal Government alongwith the audited accounts of the Foundation.

(2) The annual report alongwith the audited accounts of the Foundation shall be laid before the National Assembly.

18. Regulations.—The Foundation may make Regulations for the efficient conduct of its affairs.

19. Repeal.—The Pakistan Science Foundation Ordinance, 1972 (LII of 1972), is hereby repealed.

List of Projects Approved in 2012-13

S. No.	Project Title & No.	P.I. Name, Designation & Address	Total Cost in (in Rs.)
1.	Identification of Risk Factors for Hepatitis C Virus Infection and HCV Genotyping in Hemophiliac Patients of Khyber Pakhtunkhwa PSF/Res/KPK-KUST/Med (283)	Mr. Sanaullah Khan Assistant Professor Department of Zoology Kohat University of Science and Technology (KUST) Kohat	1,049,070/-
2.	Next Generation Granular Biomedical Ceramics for Rapid Bone Defect Repair PSF/Res/C-CIIT/Med (297)	Dr. Aqif Anwar Chaudhry Assistant Professor Interdisciplinary Research Center in Biomedical Materials COMSATS, Institute of Information Technology Lahore	1,783,123/-
3.	Identification and Characterization of Biochemical Markers of Cerebrospinal Fluid (CSF) and Serum in Bacterial and Viral Meningitis PSF/Res/S-KU/ Med (299)	Prof. Dr. Nikhat A. Siddiqui Chairperson Department of Biochemistry University of Karachi Karachi	1,574,676/-
4.	Carbohydrate Analysis of Cysts of <i>Balamuthia</i> and <i>Acanthamoeba</i> PSF/Res/S-AKU/Med (305)	Prof. Dr. Naveed A. Khan Chairman Department of Biological and Biomedical Sciences The Aga Khan University Karachi	2,075,144/-
5.	<i>In-Vitro</i> Drug Sensitivities and Single Nucleotide Polymorphism in Determining Antimalarial Resistance in <i>Plasmodium falciparum</i> Isolates PSF/Res/S-AKU/Med (347)	Dr. Najia Ghanchi Instructor Section of Microbiology Department of Pathology and Microbiology The Aga Khan University Karachi	2,219,316/-
6.	Identification of Potential Serotonin Compounds for Extending Therapeutic Use of Morphine PSF/Res/S-KU/Med (353)	Dr. Darakhshan Jabeen Haleem Meritorious Professor Dr. Panjwani Center for Molecular Medicine And Drug Research University of Karachi Karachi	1,343,340/-

7.	Mechanism[s] by which Vitamin E Supplementation could be Enhancing Blood Hemoglobin in Apparently Healthy Mildly Anemic Adults PSF/Res/S-AKU/Med (354)	Dr. Tanveer Jilani Senior Instructor Department of Biological and Biomedical Sciences The Aga Khan University Karachi	1,618,332/-
8.	Developing Nomograms for Age, Gender and Void Volume Dependency of Peak Urinary Flow Rate and Uroflowmetry Nomogram as Measured in Two Institutions of Sindh-Pakistan PSF/Res/S-AKU/Med (355)	Dr. Raheela Mohsin Assistant Professor Department of Obstetrics & Gynecology The Aga Khan University Karachi	1,022,856/-
9.	Functional Effects of Visfatin and Leptin on Human Myometrial Contractility <i>in-Vitro</i> PSF/Res/C-SCM/Med (341)	Dr. Sadaf Mumtaz Assistant Professor Department of Physiology Shifa Tameer-e-Millat University Islamabad	1,643,886/-
10.	Genetic Resistance to Internal Parasitic Infestation in Sheep Breeds of Pakistan PSF/Res/P-UVAS/Biotech (114)	Prof. Dr. Masroor Ellahi Baber Institute of Biochemistry and Biotechnology University of Veterinary and Animal sciences Lahore	2,329,476/-
11.	Extraction of Functional Polysaccharides from Chick Pea (<i>Cicer arietinum</i>) and Application as Edible Coating and Cheddar Cheese PSF/Res/P-UVAS/Biotech (115)	Muhammad Nadeem Lecturer Department of Dairy Technology University of Veterinary and Animal Sciences Lahore	341,700/-
12.	Screening and Hybridization of Promising Genotype of Common Bean (<i>Phaseolus vulgaris</i>) Land Races of Azad Jammu and Kashmir Using Molecular and Biochemical Markers PSF/Res/AJK-UAJK/Biotech (132)	Dr. Asad Hussain Shah Lecturer Molecular Biology & Biotechnology Research Laboratory The University of Azad Jammu & Kashmir (Kotli Campus), District Kotli, Azad Jammu & Kashmir	1,627,757/-
13.	Phylotyping and Clonal Group A (Cg A) Screening of <i>Escherichia coli</i> Isolates from Pakistan & Development of Method for Selective Detection Of Causative Agent of Urinary Tract Infections PSF/Res/C-CIIT/Biotech (145)	Dr. Syed Habib Bokhari Associate Professor Department of Bio-sciences, COMSATS Institute of Information Technology Park Road Islamabad	2,225,640/-

14.	Pyramiding Antifungal Genes into Sugarcane by Retransformation of Transgenic Lines Already Transformed with Couple of Anti-Fungal Genes for Increasing Disease Resistance PSF/Res/P-AU/Biotech (158)	Dr. Iqrar Ahmad Rana Assistant Professor Centre of Agricultural Biochemistry & Biotechnology (CABB) University of Agriculture, Faisalabad	1,581,204/-
15.	Synthesis of C-Nucleosides Starting from Naturally Occurring Carbohydrates and their Biological Activities PSF/Res/S-KU/Chem (449)	Dr. Firdous Imran Ali Assistant Professor Department of Chemistry University of Karachi Karachi.	2,332,944/-
16.	Metal ions Imprinted Polymers (MIPs) Novel Material for Pre-concentration and Separation of Total Arsenic in Aqueous System PSF/Res/S-SU/Chem (465)	Dr. Aamna Balouch Assistant Professor National Centre of Excellence in Analytical Chemistry University of Sindh Jamshoro.	2,472,684/-
17.	Bioremediation of Endocrine Disruptor Phthalate Ester from Local Water Streams PSF/Res/S-SU/Chem (470)	Dr. Farha Naz Talpur Assistant Professor National Centre of Excellence in Analytical Chemistry University of Sindh Jamshoro.	2,066,275/-
18.	Formulation and Testing of Pharmaceutical Products and Synthesis of Heterocyclic Organic Compounds for drug Development PSF/Res/S-PCSIR/Chem (478)	Dr. Shahnaz Perveen Principal Scientific Officer PCSIR, Laboratories Complex Karachi.	1,933,818/-
19.	Development of Novel Homogeneous catalysts of Petrochemical Interests PSF/Res/P-UOG/Chem (491)	Dr. M. Naveed Zafar Assistant Professor Department of Chemistry University of Gujarat Gujarat.	2,243,123/-
20.	Bacteriostatic application of Iron Oxide Doped in tin Oxide Loaded with Metals (Zn, Cu and Ag) Nano-particles Synthesized via Hydrothermal Method. PSF/Res/P-GCUL/Chem (497)	Dr. M. Akhyar Farrukh Registrar Public Information Officer Govt. College University Lahore.	1,598,194/-
21.	Synthesis, Structure Determination and Hydrogen Storage Capacity of Trizole Based Metal Organic Frame Works (MOFs) PSF/Res/C-QU/Chem (499)	Dr. M. Arif Nadeem Lecturer Quaid-i-Azam University Islamabad.	2,174,844/-
22.	Compressed Air Powered Bike. PSF/Res/P-HITECU/Engg (113)	Prof. Dr. Syed Kamran Afaq Chairman Department of Mechanical Engineering HITEC University, Taxila	438,000/-

23.	Chlorine Decay Modeling in a Prototype Distribution Network PSF/Res/C-NUST/Envr (112)	Dr. Imran Hashmi Assistant Professor Institute of Environmental Science & Engineering National University of Science & Technology, H-12, Islamabad	1,050,000/-
Total:-			36,745,402/-

List of Projects Recommended By Technical Committees in 2013-14

Sr. No	Project Title & No.	P.I. Name, Designation & Address
1.	Century model simulation for sustainable soil and crop management under climate change scenarios in Pothwar. PSF/Res/P-PMAS.AAU/Agr (426)	Dr. Shahzada Sohail Ijaz Assistant Professor Department of Soil Sciences PMAS-Arid Agriculture University Rawalpindi.
2.	Introduction and Acclimatization of Sweet Sorghum in Coastal and Marginal Lands of Sindh Province. PSF/Res/S-PARC/Agr (443)	Mr. Abdul Fateh Soomro Senior Scientific Officer Plant Introduction Centre (PIC) Quaid Abad, Landhi, Karachi.
3.	Occurrence, Pathological Characterization and Management of Citrus Scab (<i>Elsinoe fawcettii</i>) Disease. PSF/Res/P-US/Agr (452)	Dr. Muhammad Usman Ghazanfar Assistant Professor Department of Plant Pathology University College of Agriculture University of Sargodha, Sargodha.
4.	Integrated Management Of Lentil Wilt. PSF/Res/P-PMAS.AAU/Agr (448)	Prof. Dr. Abdul Rauf Department of Plant Pathology PMAS, Arid Agriculture University, Rawalpindi.
5.	Identification and Integrated Management of Mango Fruit/Shoot Borer in Southern Punjab. PSF/Res/P-PARC/BZU/Agr (459)	Mr. Muhammad Asif Zulfiqar Scientific Officer Entomology PARC Research and training Station Faculty of Agriculture Science & Technology, Bahauddin Zakariya University Multan.
6.	Ghrelin in levels in Obese Children of Type 2 Diabetic Patients and its Correlation with Risk Parameters of Metabolic Syndrome. PSF/Res/P-UHS/Med (317)	Dr. Sumbra Ghaznavi Assistant Professor Department of Allied Health Sciences University of Health Science Lahore
7.	Elucidation of cis-acting Gene Regulatory Networks of Human GL12 Gene by Employing Comparative Genomic and Functional Approaches PSF/Res/C-QU/Biotech (131)	Dr. Amir Ali Abbasi Assistant Professor National Centre for Bioinformatics Faculty of Biological sciences Quaid-i-Azam University Islamabad
8.	Identification of Pathogenic Mutations in the Myeloid Precursor Protein in Alzheimer's Disease Patients from	Dr. Touqeer Ahmad Assistant Professor NUST Centre of Virology and Immunology

	Pakistani Population PSF/Res/C-NUST/Biotech (150)	NUST, Islamabad
9.	Effect of non-catalytic domain on characteristics of Endogluconase (Ce19 A) from locally Isolated <i>Bacillus licheniformis</i> PSF/Res/AJK-MUST/Biotech (161)	Prof. Dr. Rehana Asghar Department of Biotechnology, Mirpur University of Science & Technology (MUST) Mirpur, Azad Jammu & Kashmir
10.	Functional characterization of IRES Elements(internal ribosomes entry sites) against biotic abiotic stresses PSF/Res/C-CIIT/Biotech (164)	Prof. Dr. Rehana Asghar Department of Biotechnology Mirpur University of Science & Technology (MUST) Mirpur, Azad Jammu & Kashmir.
11.	“Synthesis, Characterization and Applications of Gold Complexes” PSF/Res/KPK-UM/Chem (482)	Dr. Ezzat Khan Assistant Professor Department of Chemistry University of Malakand, Malakand.
12.	“Synthesis, Characterization and Biological Applications of Sulphanilamide Compounds”. PSF/Res/KPK-MU/Chem (485)	Dr. Muhammad Zahoor Assistant professor Department of Chemistry University of Malakand, Malakand.
13.	Indigenous Development of Lab Scale Tube Furnace and Temperature Controller. PSF/Res/P-KRL/Engg (109)	Mr. Saleem Akhtar Deputy Director Metallurgy Division Dr. A.Q.Khan Research Labs. Rawalpindi
14.	Development of Seismic Site Response Amplification Contour Maps for Karachi. PSF/Res/S-NEDUET/Engg (118)	Dr. Mukesh Kumar Associate Professor Department of Earthquake Engineering NED University of Engineering & Technology, Karachi.
15.	Plamons Effects in Nano-Structures of Inorganic Polycrystalline Materials (ZnS, CdTe, CdS) by Embedding Different Metallic NanoParticles (Ag, Au,Cu) for Improving Photovioltaic Efficiency in Photovoltaic Industry. PSF/Res/C-NUST/Engg (136)	Dr. Iftikhar Hussain Gul Associate Professor Materials Engineering Department School of Chemical & Materials Engineering (SCME) National University of Sciences and Technology H-12 Sector, Islamabad.
16.	Indigenous Advancement of Three Dimensional Weaving Machine and Material Manufacturing for Fiber Reinforced Composites. PSF/Res/S-MUET/Engg (140)	Dr. Mazhar Hussain Peerzada Chairman Department of Textile Engineering Mehran University of Engineering & Technology Jamshoro.

17.	Chlorine Decay Modeling in a Prototype Distribution Network PSF/Res/C-NUST/Envr (112)	Dr. Imran Hashmi Assistant Professor Institute of Environmental Science & Engineering NUST, Islamabad
18.	Evaluation of metal tolerant non-edible crops for public health and economic viability of small farmers PSF/Res/P-AU/Envr (100)	Dr. Muhammad Sabir, Assistant Professor, Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad.
19.	Model Carbon Sequestration for calculation of Carbon Credits of Major Agro-Forestry Components PSF/Res/P-GCU/Envr (117)	Dr. Farhat Abbas Chairman Department of Environmental Sciences GC University, Faisalabad
20.	Ecological interactions in the mangrove ecosystem of the river Indus delta creeks, using biomarker approach PSF/Res/S-NIO/Envr (121)	Dr. Samina Kidwai Research Officer (Scientist) National Institute of Oceanography Karachi.
21.	Phytoplankton community composition in relation to environmental conditions in mangrove eco system at sandspit back waters, Karachi. PSF/Res/S-UK/Envr (127)	Zaib-un-Nisa Burhan Lecturer Center of Excellence in Marine Biology University of Karachi Karachi.
22.	Characterization of Organic Semiconductor Based Electronic and Optoelectronic Devices PSF/Res/KPK-UP/Phys (160)	Dr. Mutabar Shah Associate Professor, Institute of Physics and Electronics, University of Peshawar, Peshawar
23.	Antimicrobial treatment of heat sensitive materials via RF driven plasma jet PSF/Res/C-COMSATS/Phys (161)	Dr. Najeeb-ur-Rehman COMSATS, Institute of Information Technology, Islamabad
24.	Investigation on Thermo-Physical Properties of Nano Fluids Prepared by Pulsed Laser Ablation PSF/Res/P-UET/Phys (163)	Prof. Dr. Muhammad Shahid Rafique Chairman Department of Physics University of Engineering and Technology, Lahore
25.	Dielectric Properties of $Cu_{0.5}Ti_{0.5}Ba_2(Ca_{n-1-x}N_x)(Cu_{n-y}M_y)O_{2n+4-\delta}$ [n=2,3,4,5; x=0.25, 0.5, 0.75, 1.0; N=0,Be,Mg;M=Zn, Ni, Cd, Ti] Superconductors PSF/Res/C-QU/Phys(164)	Dr. Nawazish Ali Khan Associate Professor Department of Physics Quaid-i-Azam University, Islamabad
26.	Study of Ions Generated by Single/Double Laser Pulse Induced	Dr. Raheel Ali Associate Professor

	Plasma PSF/Res/C-QU/Phys (165)	Department of Physics Quiad-i-Azam University, Islamabad.
27.	Direct Liquid (ethanol/methanol) Solid Oxide Fuel Cell (DLSOFC) =PSF/Res/P-COMSATS/Phys (166)	Dr. Rizwan Raza Assistant Professor Department of Physics COMSATS Institute of Information Technology, Lahore.
28.	Surface Modification of Titania to make visible light sensitive Photo Catalyst. PSF/Res/C-IIU/Phys (171)	Dr. Shamaila Sajjad Assistant Professor Department of Physics, Islamic International University, Islamabad.
29.	Development of Graphene based high sensitive and low cost glucose biosensor PSF/Res/C-PINSTECH/Phys (172)	Dr. Mashkooor Ahmad Senior Scientist, Physics Division, Pakistan Institute of Nuclear Science & Technology (PINSTECH), Nilore, Islamabad.
30.	To Control the Depletion of Ozone Layer using Nanotechnology PSF/Res/P-UG/Phys (180)	Dr. Abdul Majid Sindhu HOD Physics University of Gujrat Gujrat.
31.	Development of Fluorosensor for in vivo Tissue Characterization PSF/Res/C-NILO/Phys (183)	Dr. Muhammad Saleem Principal Scientist National Institute of Laser and Optronics, Islamabad.
32.	Stratigraphic Architecture, Sequence Stratigraphy and Petroleum Potential of the Jurassic Datta Formation, Pakistan. PSF/Res/KPK-UP/Earth (91)	Dr. Irfan Ullah Jan Assistant Professor National Centre of Excellence in Geology University of Peshawar Peshawar.

Details of Monitoring and Evaluation of On-Going Projects in 2012-13**A. Non-Development Budget****a. Semi Annual Technical Reports**

Sr. No	Project No.	Project title	Reports
1.	PSF/Res/P-UET/Agr (376)	Assessment of Agricultural Drought Prone Areas of Pothwar and Agro-Ecological Zoning (AEZ) Using Remote Sensing Techniques	3 rd
2.	PSF/Res/S-SAU/Agr (383)	Management of Pests of Chilies in Sindh	3 rd
3.	PSF/Res/P-PMAS/Agr (396)	Studies on Characterization and management of leaf crinkle virus infecting black gram	2 nd
4.	PSF/Res/P-PMAS/Agr (396)	Studies on Characterization and management of leaf crinkle virus infecting black gram	3 rd
5.	PSF/Res/P-AU/Agr (405)	Parasitoid wasps as source of novel insecticides molecules	2 nd
6.	PSF/Res/P-NUST/Comp (38)	Indigenous Development of Multi-Biometric Authentication System	1 st
7.	PSF/Res/C-NUST/Comp (37)	Enhancing the Scope of Pakistan Science Abstracts (PSA) to Improve Research Infrastructure in Pakistan	1 st
8.	PSF/Res/S-AKU/Med (336)	Vitamin D Binding Protein to (VDPP) Gene Polymorphism and <i>Diabetes mellitus</i> in a Pakistan Population	1 st
9.	PSF/Res/S-KU/Med (261)	Computer Aided Identification of Cholinesterase Inhibitors for the Treatment of Alzheimer's Disease and Related Dementias	2 nd
10.	PSF/Res/C-IBGE/Med (318)	House Dust Mite Species and Allergen Levels in Pakistan Population :Molecular Characterization and a Phylogenetic Analysis	2 nd
11.	PSF/Res/S-SU/Chem (437)	Detoxification/Degradation of Organic Pollutants using Enzyme Immobilized Organogel Silica Nanocomposites.	2 nd
12.	PSF/Res/P-GCU/Chem (436)	Synthesis, Characterization and	2 nd

		Biological Evaluation of Bimetallic Sn (IV) and Pd (II) Complexes with Legands having O-and S-Donor Sites.	
13.	PSF/Res/F-UET/Engg (104)	Design and Development of a Solar Energy Air Type heating system for warming up farm structures and poultry houses in KPK, Pakistan	2 nd
14.	PSF/Res/ P-AU/Earth (82)	Sedimentological Studies of the Lower Eocene Sakesar Limestone Salt Range, Pakistan.	2 nd

b. First Annual Technical Reports

Sr. No	Project No.	Project title
1.	PSF/Res/C-NUST/Comp (37)	Enhancing the Scope of Pakistan Science Abstracts (PSA) to Improve Research Infrastructure in Pakistan
2.	PSF/Res/S-AKU/Med (336)	Vitamin D Binding Protein to (VDPP) Gene Polymorphism and <i>Diabetes mellitus</i> in a Pakistan Population
3.	PSF/Res/P-PMAS-UAAR/Biotech (93)	Determination of Biological Activities and Micropropagation of <i>Polygonum amplexicaulis</i> : a Popular Medicinal Plant in North Pakistan
4.	PSF/Res/C-QU/Biotech (99)	Cloning and Characterization of Plastic Degrading Microbial Isolates
5.	PSF/Res/S-HEJ/Chem (425)	Synthesis of Novel Piperidine like Compounds for Anticancer Activity
6.	PSF/Res/S-SU/Chem(439)	Gas Chromatographic Analysis of Amino Acid in Skin Samples Psoriatic and Arsenicosis Patients.

c. Second Annual Technical Reports

Sr. No	Project No.	Project title
1.	PSF/Res/P-UET/Agr (376)	Assessment of Agricultural Drought Prone Areas of Pothwar and Agro-Ecological Zoning (AEZ) Using Remote Sensing Techniques.
2.	PSF/Res/P-AU/Agr (381)	Entomopathogenic Fungi and Diatomaceous Earths for the Control of <i>Tribolium castaneum</i> (Herbst.) (Coleoptera: Tenebrionidae) on Stored Wheat.
3.	PSF/Res/S-SAU/Agr (383)	Management of Pests of Chilies in Sindh

4.	PSF/Res/P-PMAS-/Agr (396)	Studies on Characterization and management of leaf crinkle virus infecting black gram.
5.	PSF/Res/P-AU/Agr (405)	Parasitoid wasps as source of novel insecticides molecules.
6.	PSF/Res/ S-KU/Med (282)	New Approaches to Effective Pain Management: Clinical Potential of GABA Receptors Modulators in the Development of Chronic Pain
7.	PSF/Res/ S-KU/Med (261)	Computer Aided Identification of Cholinesterase Inhibitors for the Treatment of Alzheimer's Disease and Related Dementias
8.	PSF/Res/ P-UAAR/Med (259)	Prevalence Of Non-Alcoholic Liver Disease in Local Population of Pakistani Origin
9.	PSF/Res/C-QU/Phys(152)	Gas Mixture Optimization study of pulsed DC-plasma for Surface Hardening of Metals.

d. Final Technical Reports

Sr. No	Project No.	Project Title
1.	PSF/Res/P-PMAS.AAU/Agr (373)	Disease Mapping and Characterization of Lentil Wilt Pathogen in Pakistan
2.	PSF/Res/S-AKU/Med (293)	Association Between Neuregulin-1 Mutations and Schizophrenia in a Pakistani Population : A Case-Control Study
3.	PSF/Res/C-CIIT/ Med (280)	Assessment of Genetic Risk Factors of Glaucoma
4.	PSF/Res/P-NUST/Med (274)	Cloning and Characterization of Full Length Dengue Virus Genome of Pakistani Origin
5.	PSF/Res/P-SKUCH/Med (243)	Human Papillomavirus Associated with Esophageal Cancer IN Pakistan- A Retrospective Analysis
6.	PSF/Res/S-AKU/Med (242)	Studies on the Lead Detoxifying Effect of Ascorbic Acid in Urban Adolescent Population
7.	PSF/Res/P-SKMCH/Med (240)	Metaplastic Breast Carcinoma: Histopathological Characteristics and EGFR/HER2-NEU Genes Expression
8.	PSF/Res/S-AKU/Med(230)	Evaluation of Tumor Behavior in Breast Cancer
9.	PSF/ Res/Biotech/C-IBGE/ Med (87)	Prevalence and Molecular Genetics Studies of Fragile X Mental Retardation in Pakistan
10.	PSF/Res/S-KU/Biotech (92)	Preconditioning of the Stem and Progenitor Cells to Increase their Cardiomyogenic Potential
11.	PSF/Res/S-LUMHS/	Study of Genetic and Molecular Basis of Primary

	Biotech (101)	Congenital Glaucoma in Patients of Sindh
12.	PSF/Res/P-PU/Biotech (104)	Production and Characterization of Recombinant Laccase From Locally Isolated Thermophilic Geobacillus Strain SBS-4S
13.	PSF/Res/S-HEJ/Chem (417)	Studies on Hepatoprotive effects of Bioactive Secondary Metabolites of Plants by using Antioxidant and Relevant Bioassays.
14.	PSF/Res/S-HEJ/Chem(426)	Metabolomics Profiling of Pakistani Healthy Persons, Smokers and Lung Cancer Patients by Modern Mass Spectrometric Tools for the Identification of Biomarker Compounds.
15.	PSF/Res/P-SU/Chem(427)	Asymmetric Induction through Wittig Reaction of Phosphonium Salts Carrying Chiral Auxiliaries
16.	PSF/Res/F-UM/Chem(434)	Efficiency of Iron Supported on Porous Material (Prepared from Peanut Shell) for Liquid Phase Aerobic Oxidation of Alcohols.
17.	PSF/Res/P-GCU/Chem(436)	Synthesis, Characterization and Biological Evaluation of Bimetallic Sn (IV) and Pd (II) Complexes with Legands having O and S Donor Sites.
18.	PSF/Res/S-SU/Chem (437)	Detoxification/Degradation of Organic Pollutants using Enzyme Immobilized Organogel Silica Nanocomposites.
19.	PSF/Res/S-SU/Chem(439)	Gas Chromatographic Analysis of Amino Acid in Skin Samples Psoriatic and Arsenicosis Patients.
20.	PSF/Res/S-SU/Chem (441)	Analytical Application of FT-IR Spectroscopy in the Pharmaceutical Formulations.
21.	PSF/Res/F-GIK/Engg (101)	Development of a GPS & Sensor based Mobile Robot; a Test bed for Research in Autonomous Navigation & GPS Applications.
22.	PSF/Res/F-GIK/Engg (107)	Battery based Micro hydropower plant on catamaran for free water flow operation.
23.	PSF/Res/P-FJWU/Envr (92)	Using GIS Models for Design and Development of Effective Air Quality Management System.
24.	PSF/Res/C-PINSTECH/ Phys (145)	Fabrication of Nanowires by Electro-chemical Deposition in Porous Membranes.
25.	PSF/Res/P-UA/Phys (153)	Analysis of High Frequency Field in Focal or Caustic Region of An Inhomogeneous Slab of Chiral Medium.

e. **Technical Reports Adopted by Technical Committees**

Sr. No	Project No.	Project title	Reports
1.	PSF/Res/P-UVAS/Agr (387)	Exploring Nutritional Potentials of <i>Moringa Oleifera</i> as Poultry Feed Ingredient	1 st annual report
2.	PSF/Res/P-UET/Agr (376)	Assessment of Agricultural Drought Prone Areas of Pothwar and Agro-Ecological Zoning (AEZ) Using Remote Sensing Techniques.	2 nd annual report
3.	P-AU/Agr (405)	Parasitoid wasps as source of novel insecticides molecules.	2 nd annual report
4.	PSF/Res/P-PMAS-AAU/Agr (373)	Disease Mapping and Characterization of Lentil Wilt Pathogen in Pakistan	Final technical report
5.	PSF/Res/S-AKU/Med (232)	Molecular Epidemiology of HIV/AIDS in Pakistan	Final technical report
6.	PSF/Res/P-SKMCH/Med (240)	Metaplastic Breast Carcinoma: Histopathological Characteristics and EGFR/HER2-NEU Genes Expression	Final technical report
7.	PSF/Res/S-KU/Med (278)	Transcription Factor as Potential Molecular Target for Cancer Chemotherapy in Human Pancreatic & Hepatic Cancer Cell Line	Final technical report
8.	PSF/Res/C-QU/Med (255)	Effect of Peripheral Administration of Puberty Onset Protein Kisspeptin on Male Sex Hormones and Spermatogenesis in Prepubertal Stages: an <i>in vivo</i> and <i>in vitro</i>	Final technical report
9.	PSF/Res/S-PMRC/Med (269)	Health Seeking Behaviour Among Adult Patients Attending OPDs of Public Hospitals in Karachi.	Final technical report
10.	PSF/Res/C-IBGE/Med (271)	Genetic screening of Pakistani Population for CYP2D6 Genotypes	Final technical report
11.	PSF/Res/S-KU/Med (278)	Transcription Factor as Potential Molecular Target for Cancer Chemotherapy in Human Pancreatic & Hepatic Cancer Cell Line	Final technical report

12.	PSF/Res/C-CIIT/ Med (280)	Assessment of Genetic Risk Factors of Glaucoma	Final technical report
13.	PSF/Res/S-AKU/Med (242)	Studies on the Lead Detoxifying Effect of Ascorbic Acid in Urban Adolescent Population	Final technical report
14.	PSF/Res/S-DUHS/Med (290)	Toxic Metals Lead (Pb) & Cadmium (Cd) & Trace Elements Zinc, (Zn), Copper(Cu), Iron (Fe) & Aluminum (Al) in Mothers Blood, Cord Blood & Meconium of New Born from Industrial Areas of Karachi.	Final technical report
15.	PSF/Res/P-UAAR/Med (259)	Prevalence Of Non-Alcoholic Liver Disease (NAFLD) In Local Population of Pakistani Origin	2 nd annual technical report
16.	PSF/Res/S-KU/Med (261)	Computer Aided Identification of Cholinesterase Inhibitors for the Treatment of Alzheimer's Disease and Related Dementias	2 nd annual technical report
17.	PSF/Res/S-KU/Med (282)	New Approaches to Effective Pain Management: Clinical Potential of GABA Receptors Modulators in the Development of Chronic Pain	2 nd annual technical report
18.	PSF/Res/Biotech/P-NIBGE/Ind (47)	Development of Hyper Producer Cephalosporin C Producing Strain of <i>Acremonium Chrysogenum</i> by RNA Interference Technique	Final technical report
19.	PSF/ Res/Biotech/C-IBGE/Med (87)	Prevalence and Molecular Genetics Studies of Fragile X Mental Retardation in Pakistan	Final technical report
20.	PSF/Res/S-KU/Biotech (92)	Preconditioning of the Stem and Progenitor Cells to Increase their Cardiomyogenic Potential	Final technical report
21.	PSF/Res/ P-PMAS-UAAR/Biotech (93)	Determination of Biological Activities and Micropropagation of <i>Polygonum amplexicaulis</i> : a Popular Medicinal Plant in North Pakistan	1 st Annual Technical Report
22.	PSF/Res/C-QU/ Biotech (99)	Cloning and Characterization of Plastic Degrading Microbial Isolates	1 st Annual Technical Report
23.	PSF/Res/S-LUMHS/ Biotech (101)	Study of Genetic and Molecular Basis of Primary Congenital	1 st Annual Technical

		Glaucoma in Patients of Sindh	Report
24.	PSF/Res/P-PU/Biotech (104)	Production and Characterization of Recombinant Laccase From Locally Isolated Thermophilic Geobacillus Strain SBS-4S	Final Technical Report
25.	PSF/Res/P-CIIT/Chem (416)	Synthesis and Characterization of Novel Composites Based on Carbon Nanotubes and Carbonated Hydroxyapatite.	1st annual
26.	PSF/Res/C-QU/Chem (419)	Computer-Aided Identification and Synthesis of α-Glucosidase Inhibitors.	2nd annual
27.	PSF/Res/S-HEJ/Chem (425)	Synthesis of Novel Piperidine like Compounds for Anticancer Activity	1st annual
28.	PSF/Res/S-HEJ/Chem (426)	Metabolomics Profiling of Pakistani Healthy Persons, Smokers and Lung Cancer Patients by Modern Mass Spectrometric Tools for the Identification of Biomarker Compounds.	Final Report
29.	PSF/Res/P-SU/Chem (427)	Asymmetric Induction through Wittig Reaction of Phosphonium Salts Carrying Chiral Auxiliaries	1st annual and Final
30.	PSF/Res/F-UM/Chem (434)	Efficiency of Iron Supported on Porous Material (Prepared from Peanut Shell) for Liquid Phase Aerobic Oxidation of Alcohols.	1st annual
31.	PSF/Res/P-GCU/Chem (436)	Synthesis, Characterization and Biological Evaluation of Bimetallic Sn (IV) and Pd (II) Complexes with Legands having O-and S-Donor Sites.	1st annual and Final
32.	PSF/Res/S-SU/Chem (437)	Detoxification/Degradation of Organic Pollutants using Enzyme Immobilized Organogel Silica Nanocomposites.	1st annual and Final
33.	PSF/Res/S-SU/Chem (439)	Gas Chromatographic Analysis of Amino Acid in Skin Samples Psoriatic and Arsenicosis Patients.	1st annual
34.	PSF/Res/S-SU/Chem (441)	Analytical Application of FT-IR Spectroscopy in the Pharmaceutical Formulations.	1st annual and Final
35.	PSF/Res/F-GIK/Engg (101)	Development of a GPS & Sensor	Final

		based Mobile Robot; a Test bed for Research in Autonomous Navigation & GPS Applications.	Technical Report
36.	PSF/Res/F-GIK/Engg (107)	Battery based Micro hydropower plant on catamaran for free water flow operation.	Final technical report
37.	PSF/Res/P-FJWU/Envr (92)	Using GIS Models for Design and Development of Effective Air Quality Management System.	Final technical report
38.	PSF/Res/C-QU/Phys (152)	Gas Mixture Optimization study of pulsed DC-plasma for Surface Hardening of Metals.	2 nd Annual report
39.	PSF/Res/C-PINSTECH/Phys(145)	Fabrication of Nanowires by Electro-chemical Deposition in Porous Membranes.	Final Report
40.	PSF/Res/P-UA/Phys (153)	Analysis of High Frequency Field in Focal or Caustic Region of An Inhomogeneous Slab of Chiral Medium.	Final Report
41.	PSF/Res/P-PU/Earth (82)	Sedimentological Studies of the Lower Eocene Sakesar Limestone Salt Range, Pakistan.	1 st annual report
42.	PSF/Res/P-PU/Earth (85)	Petrology, Mineralogy, Geochemistry and Economic Geology of the Hangu Formation of Salt Range Pakistan.	2 nd annual report
43.	PSF/Res/P-PU/Earth (242)	Sedimentology of Petroleum-Bearing Carbonate Rocks of Paleocene Age, Kohat- Potwar Area, Upper Indus Basin, Pakistan.	Final Report
44.	PSF/Res/S-SU/Earth (251)	Paleoenvironmental Study of Early Cretaceous Lower Goru Formation, Sindh Monocline, Lower Indus Basin, Pakistan.	Final Report

**List of Scientific Publications Produced through PSF Supported Completed
Projects in 2013-14**

Sr. No.	Project No.	Publication
1.	C-QU/Med (255)	<ol style="list-style-type: none"> 1. Faiqah Ramzan, Irfan Zia Qureshi (2011). Intraperitoneal kisspeptin-10 administration induces dose-dependent degenerative changes in maturing rat testes. <i>Life Sciences</i> 88: 246-256. [IF=2.57] 2. Ramzan F, Qureshi IZ, Ramzan M, Ramzan MH, Ramzan F. (2012). Kisspeptin-10 induces dose dependent degeneration in prepubertal rat prostate gland. <i>The Prostate</i>. Doi:10.1002/pros.22609. [Epub ahead of print]. [IF=3.485] 3. Ramzan F, Qureshi IZ, Ramzan M, Ramzan MH, Ramzan F. (2012). Immature rat seminal vesicles show histomorphological and ultrastructural alterations following treatment with kisspeptin-10. <i>Reprod Biol Endocrinol</i> 10 (1): 18 [IF=2.05] 4. Qamar Abbas, Irfan Zia Qureshi (2012). Stimulated release of testosterone from rat testicular slices incubated <i>in vitro</i> with kisspeptin-10 (submitted to Animal Reproduction Science)
3.	C-PINSTECH/Med (207)	<ol style="list-style-type: none"> 5. Faisal Rasheed, Tanvir Ahmed, Muhammad Ali, Salman Ali, Safia Ahmed and Rakhshanda Bilal. 2011. "High frequency of <i>cagA</i> and <i>vacA</i> s1a/m2 Genotype among <i>Helicobacter pylori</i> Infected Gastric Biopsies of Pakistani Children". <i>Malaysian Journal of Microbiology</i>. 7(3): 167-170. 6. Faisal Rasheed, Tanvir Ahmed and Rakhshanda Bilal. 2011. Frequency of <i>Helicobacter pylori</i> Infection Using 13C UBT in Asymptomatic Individuals of Barakaho, Islamabad, Pakistan. <i>Journal of College of Physicians and Surgeons Pakistan</i>. 21 (6): 379-381. 7. Faisal Rasheed, Tanvir Ahmed and Rakhshanda Bilal. 2012. High Prevalence and risk Factors of <i>Helicobacter pylori</i> Infection among Pakistani Population. <i>Pakistan Journal of Medical Sciences</i>, 28 (4)... (Manuscript in Press)
5.	P-NIBGE/ Med (50)	<ol style="list-style-type: none"> 8. Mujtaba N, Siddiqui RT. Spectrum of <i>gr/gr</i> and <i>b2/b3</i> Y Chromosome Microdeletions in Pakistani Population. <i>Pakistan Journal of Medical Sciences</i> 2011;27(2):384-387 9. Mujtaba N, Naz M, Perveen S, Yasmin M, Haider F, Siddiqui RT. The incidence of Y-chromosome microdeletions in Pakistani infertile men. <i>Current Opinion in Biotechnology</i> 2011; 22(Supplement 1):S42

		10. Siddiqui RT, Mujtaba N, Naz M. The Incidence of Y chromosome microdeletions in Pakistani infertile men. <i>Iranian Journal of Reproductive Medicine</i> (Accepted for publication)
6.	P-AU/Chem (406)	11. F. Anwar, U. Rashid, M. Ashraf, and M. Nadeem, (2010), "Okra (<i>Hibiscus esculentus</i>) Seed Oil for Biodiesel Production", <i>Applied Energy</i> , 87, 779-785. 12. U. Rashid, F. Anwar, T.M. Ansari, M. Arif and M. Ahmed, (2009) "Optimization of Alkaline Transesterification of Rice Bran Oil for Biodiesel Production using Response Surface Methodology", <i>J. Chemical Technology and Biotechnology</i> , 84, 1364-1370. 13. U. Rashid, F. Anwar, G. Knothe, (2011), "Biodiesel Potential of Milo (<i>Thespesia Populnea</i>) Seed Oil in Pakistan", <i>Biomass and Bioenergy</i> , 35(9), 4034-4039.
7.	S-HEJ/Chem (426)	14. S. G. Musharraf, S. Mazhar, A. J. Siddiqui, M. I. Choudhary and A. Rahman (2013). "Metabolite Profiling of Human Plasma by Different Extraction Methods through Gas Chromatography-Mass Spectrometry-An Objective Comparison" <i>Analytica Chimica Acta</i> , 804, 180-189. 15. S. G. Musharraf, A. J. Siddiqui and S. Mazhar (2014). "Direct Infusion Electrospray Ionization Mass Spectrometry (DI-ESI-MS) Analysis for Metabolites Profiling of Human Plasma using Various Fractionation Techniques" <i>Bioanalysis</i> (accepted). 16. S. G. Musharraf, S. Mazhar and M. I. Choudhary, (2014), "Plasma Metabolite Profiling and Chemometric Analyses of Lung Cancer along with Three Controls through Gas Chromatography-Mass Spectrometry" <i>Molecular Oncology</i> (submitted)

List of NSLP Projects Recommended by Technical Committee in 2013-14

Sr. No.	Project Title	Name, Designation & Address of PI	Approved Cost (Rs.)
1.	Development of Homozygous Lines of Transgenic Wheat and Screening for Phosphorus Use Efficiency PSF/NSLP/P-FCCU (244)	Dr. Asma Maqbool Assistant Professor, Department of Biological Sciences, Forman Christian College University, Lahore.	2976156
2.	Improving Yield, Quality and Storage Life of Bell Pepper by Use of Food Grade Chemicals. PSF/NSLP/P-UAAR (264)	Prof. Dr. Nadeem Akhtar Abbasi Chairman, Department of Horticulture, PMAS Arid Agriculture University, Rawalpindi	2875176
3.	Synthesis of Combinatorial Libraries of Cyclic Peptides in Search of Novel Medicinal Agents PSF/NSLP/S-HEJ (290)	Dr. Farzana Shaheen Associate Professor, H.E.J Research institute of Chemistry international centre of chemical Science University of Karachi.	4238936
4.	Utilization of Maggots as an Alternative Animal Origin Protein on the Production Performance of Meat and Egg-Type Bird PSF/NSLP/KP-AU (293)	Prof. Dr. Sarzamin Khan Chairman, Department of Poultry Sciences, The University of Agriculture, Peshawar	2893944
5.	Development of Conditioned (Omega-3 Rich) Meat & Eggs through Modifications in Feed Ingredients PSF/NSLP/P-AU (296)	Dr. Muhammad Issa Khan Assistant Professor, National Institute of Food Science & Technology, University of Agriculture, Faisalabad	3038784
6.	Development of Genetic Evaluation Model for Dhanni Cattle as Potential Beef Cattle in Potohar Region of Punjab PSF/NSLP/P-UAAR (308)	Dr. Ghulam Bilal Assistant Professor, Faculty of Veterinary and Animal Sciences, PMAS Arid Agriculture University, Rawalpindi	3086724
7.	Mosquito Fauna of Pothwar Region: A Resource-Based Approach PSF/NSLP/P-UAAR (311)	Prof. Dr. Muhammad Naeem Chairman, Department of Entomology, PMAS Arid Agriculture University, Rawalpindi.	1796781
8.	Diagnosis of Acaricide Resistance in Ticks of Cattle and Management of Acaricide Resistant Ticks by Using Medicinal Plant Extracts PSF/NSLP/P-AU (357)	Dr. Zia ud Din Sindhu Assistant Professor, Department of parasitology, University of Agriculture, Faisalabad.	2544084

9.	Biological Control of Okra Mealy Bug by Fungal Bio-Control Agents PSF/NSLP/S-SAU (236)	Dr. Muhammad Ali Khanzada Assistant Professor, Department of Plant Protection, Sindh Agriculture University, Tandojam.	3096516
10.	Development of Cost Effective and Potential Biocontrol Agents for Area Wide Management of Sucking Pests in Bt Cotton PSF/NSLP/P-NIAB (277)	Dr. Nazia Suleman Senior Scientist, Nuclear Institute for Agriculture & Biology, Faisalabad.	1805400
11.	Biological Control of Haemonchus contortus by Fungal Antagonists in Small Ruminants PSF/NSLP/KP-KUST (298)	Dr. Baharullah Khattak Assistant Professor, Department of Microbiology, Kohat University of Science & Technology, Kohat	2105688
12.	Agronomic Efficacy of Rock Phosphate Applied to Alkaline Calcareous Soils of Azad Jammu and Kashmir: Impact of Phosphate Solubilizing Bacteria and Agronomic Amendments PSF/NSLP/AJK-UoP (301)	Dr. Muhammad Kaleem Abbasi Director, Directorate of Advance Studies & Research, The University of Poonch, Rawalakot	3258696
13.	Nematodes Infecting Temperate Fruits in Pakistan and their Management PSF/NSLP/P-UAAR (314)	Dr. Tariq Mukhtiar Associate Professor, Department of plant Pathology, PMAS Arid Agriculture University, Rawalpindi.	5220564
14.	Characterization of Wheat Germplasm Diversity for Complete and Partial Resistance Against the Prevalent Races of Wheat Yellow Rust in Pakistan PSF/NSLP/KP-AU (269)	Dr. Sajid Ali Assistant Professor, Institute of Biotechnology & Genetic Engineering, KP Agricultural University, Peshawar.	2000000
15.	Study of the Mechanism Responsible for Adherence in Bifidobacterial Species: its Relevance to the Development of Bifidobacterial Strains of Probiotic Products PSF/NSLP/P-NIBGE (273)	Dr. Arsalan Zaidi Senior Scientist, Health Biotechnology Division, NIBGE, Jhang Road, Faisalabad.	4217996
16.	Ants-aphid's Mutualistic Association its Impact on Biological Parameters of Aphids and Predation of Coccinelids PSF/NSLP/P-UAAR (313)	Dr. Imran Bodhla Assistant Professor, Department of Entomology, PMAS Arid Agriculture University, Rawalpindi.	1953504
17.	Diversity of Symbiotic and Free-living Plant Growth Promoting Rhizobacteria in the Root Nodules and Rhizosphere	Mr. Muhammad Sajjid Mirza Principal Scientist, NIBGE, Jhang Road, Faisalabad.	3352944

	of Chickpea PSF/NSLP/P-NIBGE (315)		
18.	Surveillance & Characterization of Pathogens Infecting Loquat in Pakistan PSF/NSLP/P-UAAR (501)	Dr. Farah Naz Assistant Professor, Department of Plant Pathology, PMAS Arid Agriculture University, Rawalpindi	2271540
19.	Genetic Engineering of Sugarcane with the Rice Tonoplast H ⁺ PPase Gene to Improve Sucrose Content and Salt Tolerance PSF/NSLP/KP-AU (281)	Mr. Sayyar Khan Kazi, Assistant Professor, Institute of Biotechnology & Genetic Engineering, The University of Agriculture, Peshawar.	2242164
20.	Survey and Detection of Wolbachia in Natural Insect Population of Pakistan. NSLP/P-GCU (291)	Dr. Bilal Rasool Assistant Professor, Department of Wild life and Fisheries, GC University, Faisalabad.	4492998
21.	Isolation and structure elucidation of the antimicrobial compound effective against the wilt pathogens from penicillium sp EU0013 PSF/NSLP/KP-AU(421)	Dr. Zafar Iqbal Assistant Professor Agriculture chemistry KP Agriculture University Peshawar.	1801116
22.	Assessment of yeast species efficacy for the biological control of post harvest fungal diseases of fresh fruits of Balochistan PSF/NSLP-B-BUITEMS (488)	Dr. Muhammad Mushtaq Associate Professor FLS&I, BUITEMS Quetta	3615084
23.	Evaluation of Potassium Nutrition of Crops in Agricultural Soils of Punjab with Variable Texture and Mineralogy, Using Potassium Release Rates from Mica Mineral Weathering PSF/NSLP/P-AU (295)	Dr. Irshad Bibi Assistant Professor, Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad	6235355
24.	Moringa: A Potential Oilseed Crop for Sustainable Economic Growth PSF/NSLP/P-AU (339)	Dr. Shahzad M.A. Basra Professor, Department of Crop Physiology, University of Agriculture, Faisalabad.	2719116
25.	Development of Technology Rich Seeds for Improving the Performance of Crops PSF/NSLP/P-AU (489)	Dr. Arfan Afzal Assistant Professor, Department of Crop Physiology, University of Agriculture, Faisalabad.	3322344
26.	Evaluation of Intravenous Hyperosmotic Sodium Bicarbonate Solution as an Adjunct to Antibiotic Therapy on Acid-base Status and Cardiovascular Functions in Buffalo Calves with Induced and Spontaneous	Dr. Muhammad Arif Zafar Assistant Professor, Department of Clinical Sciences, Faculty of Veterinary & Animal Sciences, PMAS Arid	2589576

	Neonatal Diarrhoea Associated with Escherichia Coli. PSF/NSLP/P-UAAR (346)	Agriculture University, Rawalpindi.	
27.	Detection and Innovative Management of Postharvest Disease Incursions in Citrus PSF/NSLP/P-US (382)	Dr. Zafar Iqbal Principal, University College of Agriculture, Sargodha.	4142530
28.	Comparative Analysis of Residual Effects of Chloramphenicol Derivatives (Florfenicol and Thiamphenicol) and Antimicrobial Growth Promoters in Poultry Birds PSF/NSLP/P-AU (457)	Dr. Bilal Aslam Assistant Professor Dept of Physiology and Pharmacology University of Agriculture Faisalabad	2520216
29.	Developing Various Dimensions of Indigenous Hydroponics System PSF/NSLP/P-UAAR (543)	Prof. Dr. Rai Niaz Ahmad Vice Chancellor, PMAS Arid Agriculture University, Rawalpindi	7504344
30.	Development of Dipsticks for Transgenic Bt Testing PSF/NSLP/P-FCCU (553)	Prof. Dr. Aftab Bashir Department of Biological Sciences, FC College University, Lahore.	19755156

Detail of Monitoring & Evaluation of NSLP On-Going Projects in 2012-2013**a. Semiannual Reports**

Sr. No.	Project No.	Project Title	Reports
1.	PSF/NSLP/KP-NIFA (203)	Development & Validation of Technologies for Pesticide Residue Management in Fruit and Vegetable Produce	1 st
2.	PSF/NSLP/P-BZU (246)	Role of Nucleopolyhedrovirus in Management of Cotton Bollworm (<i>Helicoverpa armigera</i> Hubner)	1 st
3.	PSF/NSLP/P-AU (185)	Evaluation of Some Cereal Derived Polysaccharides and Natural Biological Response Modifiers and their Therapeutic Efficacy Against Coccidiosis in Chicken	1 st
4.	PSF/NSLP/KP-AU (219)	Prevalence & Molecular Characterization of Contagious <i>Caprine pleuropneumonia</i> in small Ruminants in Khyber Pakhtunkhwa	1 st
5.	PSF/NSLP/S-SAU (231)	Screening of Cotton Germplasm for Viral Resistance Using DNA Molecular Markers	1 st
6.	PSF/NSLP/S-SAU (252)	Population Biology and Management of Papaya Mealybug, <i>Paracoccus marginatus</i> - A Threat to Papaya Cultivation in Coastal Areas of Pakistan	1 st
7.	PSF/NSLP/KP-NIFA (253)	Nutrient Management of Deciduous Orchards (Plum) Through Foliar Feeding	1 st
8.	PSF/NSLP/P-NIAB (155)	Isolation, Characterization & Bioremediation Potential of the EPS-Producing Bio-film Bacteria from Brackish & Polluted Irrigation Waters	1 st
9.	PSF/NSLP/P-AU(167)	Development of Information Management System for Commercial Broiler and Layer Farm Data.	1 st
10.	PSF/NSLP/C-QU(77)	In Vivo Evaluation of Anti Sense Poly Phenol Oxidase Gene Construct Under the Control of a Wound Inducible Promoter	1 st
11.	PSF/NSLP/P-AU(245)	Effect of Protein, Probiotics, Vitamin-C & E, on Semen Quantity & Quality, Health Biomarkers and Immunological Status of	1 st

		Retired Male Layer Breeders after Molting	
12.	PSF/ NSLP/GB-PCSIR (437)	Processing of Fruits and Vegetables and its Utilization in the Development of Value Added Products	1 st
13.	PSF/NSLP/P-AU(120)	Studies on the Effect of Estrogen and Progesteron Along With Insulin in <i>In Vitro</i> Gonadotrophin Secretarion from Buffalo Adenohypophysis	2 nd
14.	PSF/ NSLP/P-FCCU (179)	Phytochemical and Biotechnological Studies on Antioxidant and Antimicrobial compounds in <i>Lagenaria siceraria</i> (Molina) Standl”	2 nd
15.	PSF/NSLP/P-UAAR (147)	Biotreatment of Industrially Discharged Azo Dye Contaminants Using Bioaugmentation	2 nd
16.	PSF/NSLP/S-PARC (187)	Occurrence and Control of Nematodes Associated with Fruit Nurseries in Baluchistan	2 nd
17.	PSF/NSLP/C-NARC (213)	Investigation on Fertility-Related Biomarkers in Buffalo Semen to Reduce Male Factor Loss (MFLs)	2 nd
18.	PSF/NSLP/KP-NIFA (202)	Development of locally adapted canola (<i>brassica napus</i> l.) F1 hybrid using induced mutations and double haploidy techniques”	2 nd
19.	PSF/NSLP/S-KU (140)	Assesment Of Groundwater Quality And Soil Salinity In Parts Of Thatta District, Sindh: Impact Of Recent Floods On Agricultural Productivity And Options To Manage Salinity In Irrigated Lands	2 nd
20.	NSLP/P-AU(78)	Escalating the Feed Value of Wheat Straw through Ensiling with Rumen Digesta as an Inoculant in Ruminant Animals	2 nd
21.	PSF/NSLP/KP-AU (161)	Production of Genetically Engineered Oilseed rape for Enhanced disease Resistance	2 nd
22.	PSF/ NSLP/KP-NIFA (178)	Development of Innovative Nutraceuticals Products from Indigenous Herbal Ingredients for Improving Socio-Economic Status of the Communities”	2 nd
23.	PSF/NSLP/P-NIAB (164)	Development of High Yielding and Disease Resistant Hybrids of Tomato	2 nd
24.	PSF/NSLP/S-SAU (142)	Study of the Long Term Impact of Farmer’s Field School for Cotton Regarding Integrated Pest Management Practices in Sindh & Punjab Provinces of Pakistan	2 nd

25.	NO.PSF/ NSLP/P-PU (196)	Development of Gluten Free Flour from Indigenous Sources and its Biological Evaluation on Celiec Patients”	2 nd
26.	PSF/NSLP/KP-NIFA (203)	Development & Validation of Technologies for Pesticide Residue Management in Fruit and Vegetable Produce	2 nd
27.	PSF/NSLP/P-PCSIR (195)	Biosynthetic Pathway and the Appearance of Anthocynins in small Tropical Fruits of Nutraceutical Significance Grown in Pakistan	2 nd
28.	NSLP/F-CIIT(51)	Wheat Improvement by the use of Targeted Genomic Approaches	3 rd
29.	NSLP/P-UAAR(74)	Pre and Post-harvest Treatment of Food Grade Chemicals to Improve Peach Fruit Quality and Shelf-Life	3 rd
30.	NSLP/KP- NIFA (128)	Breeding for Bruchids resistance in Mung bean (<i>Vigna radiate</i> L Wlcizek)	3 rd
31.	KP-NIFA 160	Improvement of Stevia (<i>Stevia rebaudiana</i> Bertoni) through Induced Mutations and in Vitro Somaclonal Variations	3 rd
32.	S-KU 134	Am Fungi as Potential Biocontrol Agent for Crop Improvement and Bioprotectant Against Root-Knot Nematodes	3 rd
33.	NSLP/KP-NIFA (171)	Integrated Management of Peach Flat-Headed Borer, sphenoptera dadkhani (Oben.) Damaging Trees of Stone Fruit Orchards	3 rd

b: First Annual Reports

Sr. No.	Project No.	Project Title
1.	PSF/NSLP/C-NARC (213)	Investigation on Fertility-Related Biomarkers in Buffalo Semen to Reduce Male Factor Loss (MFLs)
2.	PSF/NSLP/KP-NIFA (202)	Development of locally adapted canola (<i>brassica napus</i> l.) F1 hybrid using induced mutations and double haploidy techniques
3.	PSF/NSLP/P-LPRI (151)	Sero-Prevalence and Molecular Diagnosis of Caprine Mycoplasmosis in Different Districts of Punjab”
4.	PSF/NSLP/P-NIAB (149)	Improvement of Low Phytate Basmati Rice
5.	PSF/NSLP/P-AU (175)	Physical Forms of Feed & Feeding Regimes as a Measure to Combat the Environmental Stress and its Effect on Growth, Performance and Meat Quality in Goats
6.	PSF/NSLP/P-NIAB (164)	Development of High Yielding and Disease Resistant Hybrids of Tomato

7.	PSF/NSLP/P-BZU (130)	Breeding for impact of different temperatures on bt cruciferous crops and development of resistance to insecticides in <i>plutella xylostella</i> "
8.	PSF/NSLP/P-AU(167)	Development of Information Management System for Commercial Broiler and Layer Farm Data.
9.	PSF/NSLP/P-NIAB (155)	Isolation, Characterization & Bioremediation Potential of the EPS-Producing Bio-film Bacteria from Brackish & Polluted Irrigation Waters
10.	PSF/NSLP/P-UAAR (147)	Biotreatment of Industrially Discharged Azo Dye Contaminants Using Bioaugmentation
11.	PSF/NSLP/S-SAU (231)	Screening of Cotton Germplasm for Viral Resistance Using DNA Molecular Markers
12.	PSF/NSLP/KP-AU (219)	Prevalence & Molecular Characterization of Contagious <i>Caprine pleuropneumonia</i> in small Ruminants in Khyber Pakhtunkhwa
13.	PSF/NSLP/KP-NIFA (203)	Development & Validation of Technologies for Pesticide Residue Management in Fruit and Vegetable Produce

c. Second Annual Reports

Sr. No.	Project No.	Project Title
1.	PSF/NSLP/KP- NIFA (160)	Improvement of Stevia (<i>Stevia rebaudiana</i> Bertoni) through Induced Mutations and in Vitro Somaclonal Variation
2.	NSLP/S-KU (134)	AM Fungi as Potential Biocontrol Agent for Crop Improvement and Bioprotectant Against Root-Knot Nematodes
3.	NSLP/KP-NIFA (171)	Integrated Management of Peach Flat-Headed Borer, sphenoptera dadkhani (Oben.) Damaging Trees of Stone Fruit Orchards
4.	NO.PSF/ NSLP/P-PU (196)	Development of Gluten Free Flour from Indegenous Sources and its Biological Evaluation on Celiec Patients"
5.	NSLP/C-CIIT (141)	Biological Control of Blast & Bakanae Diseases of Rice by Using Improved Formulation of Native Bio-antagonists
6.	PSF/NSLP/P-FCCU (186)	Subterranean Termite Management through Baiting Technology without Environmental Contamination

d. Final Technical Reports

Sr. No.	Project No.	Project Title
1.	NSLP/P-UVAS(68)	Cytogenetic Screening of Buffalo Bulls & Replacement Heifers for Genetic Improvement in Punjab
2.	NSLP/S-KU(65)	Application of Biopesticides Entomopathogenic Nematodes in Vegetable Fields Affected with Root Knot Nematodes

3.	PSF/NSLP/S-PCSIR (272)	To Speed up the Pilot Plant Production of Humic Acid
4.	NSLP/S-SAU (40)	Assessment of Pesticide Residues form Selected Vegetables through Traditional Processing
5.	NSLP/F-NIFA(82)	Development of Package of Technology for Poultry Feed Irradiation in Pakistan
6.	PSF/NSLP/S-SAU (64)	Detection of Antibiotic Residues form Milk Meat and Eggs
7.	NSLP/F-NIFA(76)	Development of Slow Acting Toxicant Baits for Elimination of Underground Colonies of Crop & Building Termites
8.	PSF/NSLP/P-PU (53)	Natural compounds from allelopathic Trees as Antifungal Agents against <i>Ascochyta Rabiei</i> (PASS)
9.	NSLP/P-UAF (89)	Comparative evaluation of single phosphate and di calcium phosphate in cows and buffaloes (i) effect on production of health (ii) Treatment of phosphorus associated clinical disorders.
10.	NSLP/C-CIIT(79)	Field Evaluation of Biopesticides/Bio-inoculants for Red Rot (<i>Colletotrichum falcatum</i> Went) Suppression & Enhanced Sugarcane Production
11.	PSF/NSLP/P-AU(120)	Studies on the Effect of Estrogen and Progesteron Along With Insulin in <i>In Vitro</i> Gonadotrophin Secretarion from Buffalo Adenohypophysis
12.	NSLP/KP- NIFA (128)	Breeding for Bruchids resistance in Mung bean (<i>Vigna radiate</i> L Wlcizek)

ANNEXURE-VII**List of Scientific Publications through NSLP Supported Projects in 2013-14**

Sr. No	Project No	Publication
1.	PSF/NSLP/S-SAU (40)	<ol style="list-style-type: none"> 1. Saghir Ahmed Sheikh, Shafi Muhammad Nizamani, Benish Nawaz Mirani and Nasir Mahmood. 2013. Decontamination of Bifenthrin and Profenofos residues in edible portion of bitter gourd (<i>Momordica Charntia</i>) through house hold traditional processing methods. Journal of Food Science and Technology Letters 4 (1): 32-35 2. Aasia Akbar Panhwar and Saghir Ahmed Sheikh. 2013. Assesment of pesticide residues in cauliflower through gas charomatogra-phy uECD and high performance liquid chroma-torgraphy (HPLC) analysis. International Journal of Agriculture Science and Reseach 3 (1): 7-16.
2.	PSF/NSLP/S-SAU (64)	<ol style="list-style-type: none"> 1. Abdul Samad Mangsi, Muhammad Khaskheli, Aijaz Hussain Soomro and Muhammad Ghayasudin Shah. 2014, Detection of antimicrobial drug residues in milk marketed at different areas of Sindh province. IOSR J. Agri. Vet. Sci. 7(5): 65-69. (Impact Factor: 1.485) 2. Abdul Samad Mangsi, Muhammad Khaskheli, Aijaz Hussain Soomro and Muhammad Ghiasuddin Shah. 2014. Antibiotic residues detection in raw beef meat sold for human consumption in Sindh, Pakistan. IMPACT: Int. J. Res. in Applied, Natural and Social Sci. 2(7): 15-20. (Impact Factor: 1.4507)
3.	PSF/NSLP/KP-NIFA(82)	<ol style="list-style-type: none"> 1. Zulqarnain, Aurang Zeb, Hamid Ullah Shah, Zafar Iqbal And Fazal Mahmood 2013: Irradiation decontaminated poultry feed in different packaging materials, SJA Vol 29 (4)
4.	PSF/NSLP/S-PCSIR(272)	<ol style="list-style-type: none"> 1. FTIR - A Didactic Approach for the Study of Humic Acid - Chromium Chelation. During the Environmental Remediation", Zakiuddin Ahmed*, Syed Arif Kazmi**, Mateen Muhammad Khan, Gulzar Hussain Jhatial and Nadir Buksh, Pak.j. Sci. Ind. Res. Ser. A: phys. Sci. 56 (1) 1 - 5 (2013)

Annexure-VIII**Detail of Science Caravan Exhibitions in 2013-2014**

FEDERAL UNIT				
Exhibition Sites	Date	No of Days	No. of Schools	No of Students
Khayaban-e- Sir Syed	11.09.2013 to 15.09.2013	04	05	23245
Institute of Space Technology, Islamabad.	4.10.2013 to 06.10.2014	03	01	700
Kaller Syedan	7.10.2013 to 12.10.2013	06	03	4500
Taxila	18.12.2013	05	02	3150
National Centre for Physics	20.01.2014 to 24.01.2014	01	01	340
Gujar Khan	14.10.2013 to 18.10.2013	05	03	2700
	Total	24	15	34635
PUNJAB UNIT				
Islam nagar Faisalabad	28.8.2013 to 30.8.2013	03	01	1336
Layyah	16.9.2013 to 28.9.2013	13	44	9295
Jaranwala	30.9.2013 to 12.10.2013	13	10	5467
Khan mela UAF	24.10.2013 to 27.10.2013	04	03	7000
Faisalabad	25.10.2013 to 5.11.2013	12	11	3416
Khanewal	25.10.2013 to 06.11.2013	13	13	5413
NMST Lahore	19.11.2013 to 28.11.2013	10	05	8445
Lodhran	11.12.2013 to 23.12.2013	13	05	3550
Faisalabad	23.01.2014 to 24.01.2014	02	01	475
Chichawatni	10.02.2014 to 15.02.2014	06	12	3560
Sambrial	16.2.2014 to 23.2.2014	08	20	5625
	Total	97	125	53582
KPK UNIT				
Upper Dir&ziarat Talash	19.8.2013 to 12.9.2014	24	35	4280
Peshawar	30.9.2013 to 05.10.2013	06	10	5619
Nahaqi Peshawar	23.10.2013 to 7.11.2013	15	17	1751

Charssada	18.11.2013 to 27.11.2013	10	17	1911
Shab-e-Qadar fort	02.12.2013 to 14.12.2013	13	26	1395
Peshawar Cantt:	27.01.14 to 04.02.14	09	25	1430
Hayatabad Peshawar	21.04.2014 to 22.04.2014	02	01	950
Cantt: Peshawar	01.01.2014 to 11.01.2014	11	13	1840
Dalazak road Peshawar	01.2.2014 to 19.2.2014	19	15	2460
	Total	109	159	21636
JAFFARABAD UNIT				
Usta Mohammad	16.9.2013 to 19.10.2013	34	22	5383
Dera Allahyar	18.11.2013 to 28.11.2013	11	10	2354
Naseer abad	02.12.2013 to 17.12.2013	16	20	4828
	Total	61	52	12565
QUETTA UNIT				
NIL				
SINDH UNIT-II, TANDOJAM				
Samaro/Pithoro	20.08.13 to 04.9.13	16	15	4359
Mirpur Khas	11.9.13 to 24.9.13	14	18	3293
Tandojam	27.9.2013	01	01	100
Matiari	01.10.2013 to 11.10.2013	11	13	2700
Tando M.Khan	15.12.2013 to 21.12.2013	06	06	1000
Tandojam	20.11.2013 to 23.11.2013	04	06	2410
Tandojam	21.01.14 to 29.01.2014	09	10	2258
	Total	61	69	16120
SINDH UNIT-I, TANDOJAM				
Kot-Diji	21.8.2013 to 10.9.2013	20	36	3900
Thul	24.9.2013 to 11.10.2013	17	37	3620
Adilpur	18.11.2013 to 28.11.2013	11	16	2100
Sukkur	12.12.2013 to 23.12.2013	12	12	2750
Sukkur	23.01.2014 to 31.01.2014	09	15	1400
	Total	69	116	13770

ANNEXURE-IX**Detail of 23rd Intra Board Science Essay Competition, 2013-14****1. BISE QUETTA**

Sr. #	Name of Winner Student	Name & Address of School	Medium	Position	Amount
1.	Ms Bisma Sadiq D/O M. Sadiq	Islamia Girls High School ART School Road Quetta	Urdu	1st	Rs.5000/-
2.	Ms. Farheen Ali D/O M. Ali	Ummat Public high School Alamdar Road, Quetta	English	2nd	Rs.3000/-
3.	Ms. Ayesha Gul Shah D/O Farman Gul Shah	Govt. Girls Model High School Mission Road, Quetta	English	3rd	Rs.2000/-

2. BISE KOHAT

Sr. #	Name of Winner Student	Name & Address of School	Medium	Position	Amount
1.	Mr. Hasnain Hamid S/O Mr. Hamid Ali	Cadet College Kohat Rawalpindi Road Kohat	English	1st	Rs.5000/-
2.	Mr. Umer Munir S/O Dr. Akhtar Munir	Cadet College Kohat Rawalpindi Road Kohat	English	2nd	Rs.3000/-
3.	Mr. Muhammad Ekrama S/O M. Saleem Awan	Cadet College Kohat Rawalpindi Road Kohat	English	3rd	Rs.2000/-

3. BISE MIRPUR AJK

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Ms. Mahnoor Arshad D/O Arshad Mahmood	Govt. Girls High School F/1 Sector Mirpur AJK	English	1st	Rs.5000/-
2.	Ms. Saleha Javaid D/O Javaid Akhtar	Govt. Girls Degree College Panjeri Mirpur AJK	English	2nd	Rs.3000/-
3.	Ms Saira Aslam D/O Mohd Aslam	Govt. Girls High School Kalyal Mirpur AJK	English	3rd	Rs.2000/-
4.	Mr. Muhammad Waqas S/O Muhammad Yousaf	Govt. Pilot Model Secondary School No.1 Mirpur AJK	English	3rd	Rs.2000/-

4. BISE GUJRANWALA

Sr. #.	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Alisha Asghar D/O M. Asghar Nisar	The city School, Daska	English	1st	Rs.5000/-

2.	Nabgha Zahid D/O Zahid Pervaiz	Young Scholar High School for Girls Rahwali Gujranwala	English	2nd	Rs.3000/-
3.	Nimra Naeem D/O M. Naeem	Spring Field Public School Gujranwala	Urdu	3rd	Rs.2000/-

5. FBISE FAISALABAD

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Aqsa Shafiq D/O Muhammad Shafiq	Green Dots H/S Shadman Road Faisalabad	English	1st	Rs.5000/-
2.	Arsal Naseem S/O Naseem Haider	Chiniot Islamia G/H/S/S West Canal Road Faisal Town Faisalabad	English	2nd	Rs.3000/-
3.	Ariba Ijaz D/O Ijaz Ahmad	Govt. Muslim Girls High School Eid Gah Road Faisalabad	English	3rd	Rs.2000/-

6. BSE SUKKUR

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Hamad Ullah S/O M Sharif Maitlo	Bahria Foundaton College Khairpur Pirjo Goth Road Old Naka Mohallah Luqman Khairpur	English	1st	Rs.5000/-
2.	Sadam Hussain S/O Hussain Bux Narejo	Waqar Public High School New Shahbaz Colony Khairpur	English	2nd	Rs.3000/-
3.	Mehboob Ayoob S/O M Ayoob Solongi	Mazhar Muslim Model H/S School Ranipur Distt Khaipur	English	3rd	Rs.2000/-

7. BISE KARACHI

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Maham Shafiq D/O Muhammad Shafiq	Bahria Sec. School No.2, Majeed SRE, Stadium Road, Karachi	English	1st	Rs.5000/-
2.	Rehma Raza Khan D/O M Raza Khan	St. George's School, North Nazimabad, Karachi	English	2nd	Rs.3000/-
3.	Areej Fatima D/O Noor E Islam	Bahira Model School No.1, Majeed SRE, Stadium Road Karachi	English	3rd	Rs.2000/-
4.	Anum Hayat D/O M Hayat	Bahira Model School No.II, Majeed SRE, Stadium Road Karachi	Urdu	1st	Rs.5000/-
5.	Sheher Bano D/O Maddah Hussain	Bahira Model School No.I, Majeed SRE Karachi	Urdu	2nd	Rs.3000/-

6	Ujala Nadeem D/O M Nadeem	B.M.B Toddlers Girls Sec. School Frere Road Karachi	Urdu	3rd	Rs.2000/-
7	Neha Khan D/O Javed Khan	Bahira Model Sec. School No.II, Majeed SRE, Stadium Road Karachi	Sindhi	1st	Rs.5000/-
8	Sualeha M. Saleem D/O M Saleem	F.C. Moriswala Girls Sec School, Campbell Street, Karachi	Sindhi	2nd	Rs.3000/-
9	Osama Abrar S/O Abrar ul Haq	Iqra Huffaz Boys Sec School, Ts.2/1,BI-T, North Nazimabad	Sindhi	3rd	Rs.2000/-

8. BISE ABBOTTABAD

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Ahmad Ali S/O Mehmood Ali	Feroz Memorial PS& College Baffa Mansehra	English	1st	Rs.5000/-
2.	Syed Uzair Shah S/O Wajid Shah	Quaide-e-Azam PS & College KTS Haripur	English	2nd	Rs.3000/-
3.	Sardar Shahzeb Ajab S/O Sardar Alamzeb Khan	PIPS&C Mandian Abbottabad	Urdu	3rd	Rs.2000/-

9. BISE SWAT

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Ibrahim Khan	Pearl Public School and College Saidu Road Amankot Swat	English	1st	Rs.5000/-
2.	Sadar Hussain S/O Farid Khan	Pearl Public School and College Saidu Road Amankot Swat	English	2nd	Rs.3000/-
3.	Nasir Khan S/O Aziz-ur-Rahman	Pearl Public School and College Saidu Road Amankot Swat	English	3rd	Rs.2000/-

10. BISE LARKANA

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Zubair Ahmed Rind	Cadet College Larkana	English	1st	Rs.5000/-
2.	Hina Kharani	Govt. Girls H/S Jacobabad	English	2nd	Rs.3000/-
3.	Suhail Qurban	Cadet College Larkana	English	3rd	Rs.2000/-

11. BISE MULTAN

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Aqsa Yaseem	Multan Cambridge High School Qasim Bela Multan	English	1st	Rs.5000/-
2.	Eshrat Zulfiqar	Govt Girls High School Haram Gate Multan	English	2nd	Rs.3000/-
3.	Muhammad Faseeh Ur Rehman	Young Scholars School & College (Boys) Khanewal	English	3rd	Rs.2000/-

12. BISE HYDERABAD

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Miss Afsheen D/O Ali Ahmed	Govt.(N) APWA Girls High School Latifabad No.8, Hyderabad	English	1st	Rs.5000/-
2.	Waleed Bin Khalid S/O Khalid Akhter	Govt. Comprehensive H/Sec School Latifabad No.10, Hyderabad	English	2nd	Rs.3000/-
3.	Muhammad Ossama Basharat S/O Basharat Ali	Cadet College Petaro	English	3rd	Rs.2000/-
4.	Miss Kanwal D/O Noor Muhammad	Govt. (N) Sir Syed Girls High School, Hyderabad	Urdu	1st	Rs.5000/-
5.	Manahil Kazmi D/O Ismail Shah	Govt. Girls H/Sec School Hussainabad, Hyderabad	Urdu	2nd	Rs.3000/-
6.	Nida Nasir D/O Nasir Shaikh	Govt.(N) APWA Girls High School Latifabad No.8, Hyderabad	Urdu	3rd	Rs.2000/-
7.	Mr. Hassan Ali S/O Muhammad Eidan	M.G. Govt. High School Hala	Sindhi	1st	Rs.5000/-
8.	Mr. Sanaullah S/O Nabi Bux Jamali	Darul Uloom High School Tando Muhammad Khan	Sindhi	2nd	Rs.3000/-
9.	Mr. Shoaib Ali S/O Abdullah	Govt. Boys High School Tando Muhammad Khan	Sindhi	3rd	Rs.2000/-

13. BISE BAHAWALPUR

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Fareeha Saleem	GGHS Model Town (A) Bahawalpur	English	1st	Rs.5000/-
2.	Hafiz Sami Ul Hassan	GHS Fazil, Ahmadpur East Bahawalpur	Urdu	2nd	Rs.3000/-
3.	Fahad Inam	GHS Technical, Bahawalpur	Urdu	3rd	Rs.2000/-

14. BISE DG KHAN

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Tahseen Faisal	GBH/S No.1, D.G Khan	English	1st	Rs.5000/-
2.	Bakhtower Baloch	GG Central Model School DG Khan	English	2nd	Rs.3000/-
3.	Misbah Nazeer	GG H/S No.1, Jam Pur	English	3rd	Rs.3000/-
4.	Anisha Atta	GG High School No.2 Jampur	Urdu	1st	Rs.5000/-
5.	Muhammad Asif Ismail	Govt. High School Ali Pur	Urdu	2nd	Rs.3000/-
6.	Muhammad Azeem Khan	Govt. High Shool Muzaffar Ghar	Urdu	3rd	Rs.2000/-

15. BISE PESHAWAR

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Sara Akbar	Agriculture University Public School & College (Girls) Peshawar	English	1st	Rs.5000/-
2.	Shahana	Agriculture University Public School & College (Girls) Peshawar	Urdu	2nd	Rs.5000/-
3.	Abdul Samad Khan Wazir	Agriculture University Public School & College (Boys) Peshawar	English	3rd	Rs.3000/-

16. BISE BANNU

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Soha Murad	GCMS for Girls Bannu	English	1st	Rs.5000/-
2.	Noora	GGHSS SK Bala Bannu	English	2nd	Rs.5000/-
3.	Mubashra Jamil	Army Public School and College Bannu	English	3rd	Rs.3000/-

17. BISE SARGODHA

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount
1.	Mr. Ali Haider S/O Haji Gull Muhammad	Sanai School System 104-A Satellite Town Sargodha	English	1st	Rs.5000/-
2.	Ms. Tahreem Fatima D/O Tasleem Khan	Sanai School System 104-A Satellite Town Sargodha	English	2nd	Rs.5000/-
3.	Mr. Rubab Jahangir S/O Hussain Khan	Govt. Girls Pilot Secondary School, Sargodha	English	3rd	Rs.3000/-

23rd Inter Board Science Essay Competition 2013-14

1. URDU ESSAY

Sr. No	Students Name	Address	Board	Position	Prize Money
1	Nimra Naeem	Spring Field Public School Gujranwala	Gujranwala	1st	10,000
2	Hafiz Sami Hassan	GHS Fazil, Ahmad pur East Bahawalpur	Bahawalpur	2nd	6,000
3	Anisha Atta	GG High School No.2 Jampur	DG Khan	3rd	4,000
TOTAL A					20,000.0

2. ENGLISH ESSAY

Sr. No	Students Name	Address	Board	Position	Prize Money
1	Mr. Hasnain Hamid	Cadet College Kohat Rawalpindi Road Kohat	Kohat	1st	10000
2	Ahmad Ali	Feroz Memorial PS& College Baffa Mansehra	Abbottabad	2nd	6000
3	Hamad Ullah	Bahria Foundaton College Khairpur Pirjo Goth Road Old Naka Mohallah Luqman Khairpur	Sukkur	3rd	4000
TOTAL B					20,000.0

3. SINDHI ESSAY

Sr. No	Students Name	Address	Board	Position	Prize Money
1	Neha Khan	Bahira Model Sec. School No.II, Majeed SRE, Stadium Road Karachi	Karachi	1st	10000
2	Sualeha M. Saleem	F.C. Moriswala Girls Sec School, Campbell Street, Karachi	Karachi	2nd	6000
3	Ms. Maryam	Govt. (N) S.K Rahim Gigs H/S Hyderabad	Hyderabad		4000
TOTAL C					20,000.0

Detail of 23rd Intra Board Science Poster Competition, 2013-14**1. BISE KOHAT**

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount
1.	Mr. Shaeer Jan S/O Ayaz Jan	St. Joseph's Convent High School & College Kohat	1st	Rs.5000/-
2.	Meheryar S/O Muhammad Arshad	St. Joseph's Convent High School & College Kohat	2nd	Rs.3000/-
3.	Sobia BB D/O Abdul Musawar Khan	St. Joseph's Convent High School & College Kohat	3rd	Rs.2000/-

2. BISE MIRPUR AJK

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount
1.	Muhammad Azlan Haider S/O Nisar Ahmed	Kashmir Model College Mirpur AJK	1st	Rs.5000/-
2.	Ms. Muneeba Ansar D/O Ansar Hussain Zia	Govt. Girls High School F/1, Mirpur AJK	2nd	Rs.3000/-
3.	Ms Aamina Chaudary D/O Khalid Mehmood	Govt. Girls Higher Secondary School Chitter Pari Mirpur AJK	3rd	Rs.2000/-

3. BISE FAISALABAD

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount
1.	Ms. Ishrat Bano D/O M. Iqbal	Govt. Girls H/S Chak No. 60 JB Faisalabad	1st	Rs.5000/-
2.	Ms. Khadija Tahir D/O Tahir Sadiq	Um-ul-Madaris Model High School, Gulberg A Faisalabad	2nd	Rs.3000/-
3.	Awas Kashif S/O Kashif Mahmood	Govt. M.C Higher Secondary School Allama Iqbal Road, Faisalabad	3rd	Rs.2000/-

4. BISE QUETTA

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount
1.	Ms. Rida Hashim D/O M. Hashim	Ummat Public High School Alamdar Road, Mari Quetta	1st	Rs.5000/-
2.	Ms. Nazia Malik D/O Haji Abdul Malik Daui	Islamia Girls High School Art School Road Quetta	2nd	Rs.3000/-
3.	Mr. Zeeshan Abbas S/O Aman Ali	Yazdan Khan Govt. Model H/S Alamdar Road Quetta	3rd	Rs.2000/-

5. FBISE ABBOTTABAD

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount
1.	Hussnain Javed S/O M. Javed	Hazara PS & College Haripur (Male Campus)	1st	Rs.5000/-
2.	Muhammad Akram S/O Iftikhar Afzal Khan	Jinnah Basic School and College Mansehra	2nd	Rs.3000/-
3.	Sundas Altaf D/O Altaf Ahmed	. GCMS for Girls Mansehra	3rd	Rs.2000/-

6. BISE GUJRANWALA

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount
1.	Momina Shafique	GEPCO Grammar Girls High School Gujranwala	1st	Rs.5000/-
2.	Kanwal Akram	Govt. Municipal Model Girls High School M.B. Din, Gujranwala	2nd	Rs.3000/-
3.	Hassan Ali	Govt. Atta Muhammad Islamia High School No.1 Gujranwala	3rd	Rs.2000/-

7. BISE HYDERABAD

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount
1.	Miss Laiba D/O M. Tariq	Jinnah Mission High School Ghumanabad, Hyderabad	1st	Rs.5000/-
2.	Wajahat Ali Khan S/O Shoukat Ali Khan	Cadet College Petaro	2nd	Rs.3000/-
3.	Miss Maryam D/O Akhter Ali	Govt. (N) S.K Rahim Girls H/S School Hyderabad	3rd	Rs.2000/-

8. BISE SUKKUR

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount
1.	Muhammad Hussain S/O Muneer Hussain	Govt. (N) M.K High School Sukkur near D.C Office Sukkur	1st	Rs.5000/-
2.	Zunaira D/O Muhammad Ashfaq	APWA excellent World School APWA Complex, Minara Road near GPO Sukkur	2nd	Rs.3000/-
3.	Shaher Bano D/O Sajjad Abbasi	Mikaza Royal Academy Bhurgri Near Shadi Shaheed Road Khairpur	3rd	Rs.2000/-

9. BISE KARACHI

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount
1.	Esha D/O Abdul Qadeer	Glamour Children Secondary School, Karachi	1 st	Rs.5000/-
2.	Hafsa Ayaz D/O Ayaz Bukh	Nasra Secondary School Darussalam Housing Society Sector F, Sub Sector 31, Korangi, Karachi	2 nd	Rs.3000/-
3.	M. Fahad S/O Jamil Ahmed	Ida Rieu Welfare Association School & College for Blind and Deaf Nizami Road Adjacent Quaid-e-Azam Mausoleum Karachi	3 rd	Rs.2000/-

10. BISE LARKANA

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount
1.	Sehrish Shaikh	Public School Larkana	1st	Rs.5000/-
2.	Soomal Habibullah Kandhro	Govt. Girls High School Larkana	2nd	Rs.3000/-
3.	Aqsa Meerani	Ahmed Ali Soomro Grammar High School Sheikh Zaid Colony, Larkana	3rd	Rs.2000/-

11. BISE BAHAWALPUR

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount
1.	Farhan Farooq	GHS Technical	1st	Rs.5000/-
2.	Noman Shoukat	GHSS Abbasia	2nd	Rs.3000/-
3.	Mehmood Bhatti	GHS Sadiq Dane	3rd	Rs.2000/-

12. BISE D.G. KHAN

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount
1.	Noor-e-Fajir	Govt. Girls Central Model School DG Khan	1st	Rs.5000/-
2.	Areeba Nisar	Govt. Girls High School Normal Muzaffar Ghar	2nd	Rs.3000/-
3.	Munaza Batool	Govt. Girls High School Mula Quaid Shah DG Khan	3rd	Rs.2000/-

13. BISE MULTAN

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount
1.	Shahzaib Manzoor	Govt. Pilot Secondary School, Multan	1st	Rs.5000/-
2.	Rabia Iqbal	Govt. Girls High School Haram Gate Multan	2nd	Rs.3000/-
3.	Mubashar Iqbal	Govt. Rafe Aam H/S Multan	3rd	Rs.2000/-

14. BISE PESHAWAR

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount
1.	Ibad Ullah	Govt. Centennial Model Higher Secondary School, Nahaqi Peshawar	1st	Rs.5000/-
2.	Usman	Govt. High School Ibrahimzai Charsadda	2nd	Rs.3000/-
3.	Nimra Ayaz	Agriculture University Public School & College (Boys) Peshawa	3rd	Rs.2000/-

15. BISE SARGODHA

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount
1.	Ms. Tahira Aslam D/O M. Aslam	G.G.H.S, 42 Gillwala Sargodha	1st	Rs.5000/-
2.	Mr. M. Fuzail Zia S/O Shahbaz Khan	PAF Public School Sargodha	2nd	Rs.3000/-
3.	Raja M. Omer Farooq S/O Raja M. Saddique	Sanai School System 104-A Satellite Town Sargodha	3rd	Rs.2000/-
4.	Ms. Nimra Zahid D/O Muhammad Zahid	Sanai School System 104-A Satellite Town Sargodha	3rd	Rs.2000/-

List of Schools/Organizations Provided Financial Assistance in 2013-14

Sr. #	Name of Schools/College	Purpose	Amount
1.	Children Library Complex, Lahore	Prize Money for Winners of Earth Day	Rs.50,000/-
2.	Private School Network, Islamabad	Prize money for winners of 5 th Annual Science Exhibition	Rs.50,000/-
3.	Private School Network, Islamabad	Prize money for students	Rs.100,000/-
4.	Karlot Residential College Bhara Kahu, Islamabad	Science Lab Equipment	Rs.50,000/-
5	National Centre for Physics	“2 ND Winter Science Camp 2013”	Rs.50,000/-
6	Govt. Boys High School, Tando Muhammad Khan	Science Lab Equipment	Rs.50,000/-
7	International Islamic University, Islamabad.	Prize money for “High School Summer Science Research Programme”.	Rs.60,000/-
8	PakTurk International School and College, Islamabad	For Holding ISMO	Rs.100,000/-
9	Iqra Residential School and College Murree	Science Lab Equipment	Rs.50,000/-
10	FAST National university of Computer and Emerging Sciences, Islamabad	To Hold Students Competition	Rs.50,000/-
11	IMS, G-9/3, Islamabad	Organizing traveling expo on “Water at the Heart of Science”	Rs.10,000/-
Total:-			Rs.620,000/-

List of Scientists availed Travel Grants under Development Budget in 2013-14

Sr. No.	Name of the Applicant	Title of the Conference / Workshop / Seminar / Meeting / Symposium / Training Course	Amount Released (Rs.)
I. Meeting of TGAC held on 6th August 2013			
1.	Ms. Sabiha Sultana PhD (Research Scholar), Polymer Lab, National Center for Excellence in Physical Chemistry, University of Peshawar. TG-II (890)/13	“44 th IUPAC World Chemistry Congress 2013” held from 11-16 August, 2013 at Istanbul, Turkey. <i>“Study on morphological, thermal and mechanical properties of PEO/PMMA/LiClO₄ / Coal ash blend composites”.</i>	100,000/-
2.	Dr. Saima Huma Tanveer, SSIO, (BS-18), PASTIC, Islamabad TG-II(945)/13	“International Training Workshop on Technological Innovations for Small and Medium Size Enterprises (SMEs) Based on Science & Technology” held from 7 – 18 September 2013 at Beijing Intentional Business Incubator, Beijing, China	85,000/-
3.	Mr. Muhammad Azam Ph. D Scholar, COE in Solid State Physics, University of the Punjab QAC, Lahore TG-II(915)/13	The 2013 World Congress on Advances in Nano, Biomechanics, Robotics, and Energy research (ANBRE13) held from 25-28 August, 2013 at COEX, Seoul, South Korea <i>Electrical Properties of Iron Oxide coated carbon nanotubes</i>	125,000/-
4.	Ms. Erum Baloch Research Associate, ICARDA Cotton Project, Central Cotton Research Institute Sakrand, District Shaheed Benezirabad, Sindh TG-II(940)/13	Doctor’s Degree held from 1 st September 2013 to 31 st July 2016 at Huazhong Agriculture University China	52,000/-
5.	Mr. Aatta ur Rehman Scientific Officer (BS-17), Central Cotton Research Institute Sakrand, District Shaheed Benezirabad, Sindh TG-II(941)/13	Doctor’s Degree held from 1 st September 2013 to 31 st July 2016 at Huazhong Agriculture University China	52,000/-

6.	Dr. Khan Muhammad Assistant Professor (BS-19) Mining Engg. Deptt. University of Engineering & Technology Peshawar TG-II(911)/13	Introductory Minesight Training course held from 12-16 August 2013 at United Kingdom London Training Course	67,550/-
II. Meeting of TGAC held on 31st October 2013			
7.	Dr. Amber Rehana Solangi Associate Professor (BS-20) Centre of Excellence in Analytical Chemistry University of Sindh Jamshoro TG-II(1006)/13	9 th International Conference and Exhibition on Chemistry in Industry (CHEMINDIX 2013) held from 4-6 November , 2013 at Kingdom of Bahrain <i>“Evaluation of Cantaloupe Peels Based Biosorbent for the Simultaneous Removal of Phthalates from Aqueous System”</i>	79,275/-
8.	Ms. Sumaira Yousaf Senior Scientist, SPS-XI, NIAB PO Box # 128, Faisalabad TG-II(994)/13	7 th International Geminivirus Symposium/ 5 th International ssDNA Comparative Virology Workshop held from 3-9 November, 2013 at Hangzhou, China. <i>“Control of cotton leaf curl disease related begomoviruses by a single-stranded DNA- binding protein (VirE2) and a synthetic replication associated protein (Rep_{syn130}) in Nicotiana Benthaniana”</i>	99,000/-
9.	Mr. Muhammad Adnan Qureshi Lecturer, COMSATS, Islamabad. TG-II(1021)/13	“International Training Workshop on FPGA Design for Scientific Instrumentation and Computing” held from 11-22 November, 2013 at ICTP Trieste, Italy.	75,000/-
10.	Mr. Tariq Masood Ali Khan Professor (BPS-21) Institute of Environmental Studies, University of Karachi Karachi TG-II(998)/13	International Conference on Oceanography and Sustainable Marine Production: A Challenge of Managing Marine Resources in a Changing Climate ICOSMaP-2013 held from October, 29- 31, 2013 at Malaysia <i>“Release of Municipal and Industrial Waste into Open Sea through marine Outfall and its Impact on Marine Environment”</i>	55,000/-

11.	Dr. Zawar Hussain Shah Assistant Professor, School of Electrical Engineering & Computer Science (SEECS), NUST, Islamabad TG-II(949)/13	IEEE 38 th Local Computer Networks (LCN) Conference, held from October, 21-24 at Sydney, Australia Capacity Analysis of Combined IPTV and VoIP over IEEE802.11n	74,350/-
III. Meeting of TGAC held on 13th December 2013			
12.	Dr. Nazar Abbas Shah Associate Professor Physics Department, Thin Films Technology Research Lab, COMSATS Institute of Information Technology, Islamabad. TG-II(1056)/13	International Conference on Nanotechnology, Non materials & Thin Films for Energy Applications (NANO Energy 2014) held from 19-21 February, 2014 at London, United Kingdom. <i>Synthesis and Characterization of Nanostructure ZnSe Thin Films for Energy Applications</i>	120,000/-
13.	Ms. Nida Shaikh Institute of Food Sciences & Technology, Sindh Agriculture University, Tandojam. TG-II(1038)/13	1 st International Conference on Food properties (ICFP 2014), held from 24-26 January, 2014 at Kuala Lumpur, Malaysia. "Detection of adulterants and their effect on the quality characteristic of market milk"	130,000/-
14.	Dr. Ahmad Ali Shahid Assistant Professor Institute of Agricultural Sciences, University of the Punjab, Lahore. TG-II(1032)/13	International Conference of Intelligent Agriculture (ICOIA 2014) held from 13-14 February, 2013 at Hong Kong, China. <i>"Monitoring of Plant Products as Mutagenic agents against phytopathogens of Potato using RAPD"</i>	150,000/-
15.	Dr. Imtiaz Khan Assistant Processor Department of Weed Science, The University of Agriculture –Peshawar TG-II(1047)/13	1 st Africa-International Allelopathy Congress held from 6-9 February, 2014 at Sousse, Tunisia. <i>"Environment friendly tactics for controlling noxious weed (Asphodelus tenuifolius L.) in Chickpea"</i>	126,400/-
IV. Meeting of TGAC held on 30th January 2014			
16.	Mr. Muhammad Anwar Principal Scientists National Institute of Lasers	"4 th International Advances in Applied Physics & Materials Science Congress Exhibition" held from 24-27 April, 2014 at Fethiye, Turkey	150,000/-

	and Optronics Nilore, Islamabad TG-II(1078)/14	<i>“Experimental Nonlinear Dynamical Studies in cesium magneto-optical trap using Time-series analysis”</i>	
17.	Prof. Dr. Abdul Latif Institute of Water Resources Engineering & Management, Mehran University of Engineering & Technology, Jamshoro, Sindh TG-II(1065)/13	“International Conference on Computer Engineering and Applications ICCEA 2014” held from 13-14 February, 2014 at Kuala Lumpur, Malaysia <i>“Verification and Application of Finite Element Model Developed for Flood Routing in Rivers”</i>	147,250/-
18.	Dr. Muhammad Ishfaq Khan Assistant Professor (19) The University of Agriculture, Peshawar TG-II(1063)/13	“1 st Africa-International Allelopathy Congress” held from 6-9, February, 2014 in Sousse Tunisia <i>“Effect of Jhonson Grass (Gorghum halepense) Water Extracts on the Seed Germination of Economically Important Crops in Pakistan”</i>	42,000/-
19.	Dr. Musadiq Idris Lecturer University College of Veterinary & Animal Sciences The Islamic University of Bahawalpur TG-II(1067)/13	6 th ASEAN Congress of Tropical Medicine and Parasitology (GLOBAL CHALLENGES IN TROPICAL DISEASES: Bridging Gaps and Building Partnerships)” held from 05-07 March, 2014 at Kuala Lumpur, Malaysia <i>“Epidemiological Survey of Gastrointestinal Parasites in Cholistani Cattle”</i>	130,000/-
20.	Ms. Summer Siddiqui PhD Scholar National Centre for Proteomics, University of Karachi Karachi TG-II(1064)/13	“6 th International Conference on Drug Discovery and Therapy” held from 10 -12 February, 2014 at Dubai, UAE <i>“Fluoroquinolones: Anti HCV drugs of the future”</i>	95,705/-
V. Meeting of TGAC held on 14th March 2014			
21.	Mr. Mushtaque A. Jatoi Ph. D Scholar Date Palm Research Institute Shah Abdul Latif University, Khairpur TG-II(1099)/14	“5 th International Date Palm Conference (FIDPC, 2014)” held from 16-18 March, 2014 at Abu Dhabi, UAE <i>“Micropropagation of some Pakistani cultivators of Date Palm (Phoenix dactylifera L.) through Inflorescence Technique”</i>	97,000/-
22.	Mr. Muhammad Faisal	“International Training Workshop on	110,000/-

	Paracha Senior Research Officer, National Institute of Electronics Islamabad TG-II(1100)/14	Technological Innovation for small and Medium Sized Enterprises Based on Science and Technology ” held from 14-25 June, 2014 at Beijing, China Training	
23.	Dr. Umer Farooq Assistant Professor, University College of Veterinary & Animal Sciences, The Islamia University of Bahawalpur TG-II(1092)/14	“International Conference on Poverty & Sustainable Development From MDGs to SDGs” held from 17-18 June, 2014 at Colombo Sri Lanka <i>“A pathway to Sustainable Agriculture through Protection and Propagation of Indigenous Livestock Breeds of Pakistan-Cholistani Cattle as a Case Study ”</i>	110,000/-
24.	Dr. Shujaul Mulk Khan Lecturer, Department of Botany Hazara University, Mansehra TG-II(1105)/14	“International Symposium on Biology of Rare and Endemic Plant Species-III (BIORARE- 2014) ” held from 19-23 April, 2014 at Antalya, Turkey <i>“Use of Medicinal and Edible Plants in the Turmik Valley in Baltistan, Karakoram Range of Mountains causing rarity of species”</i>	140,990/-
25.	Dr. Amjad Ali Assistant Professor, University College of Agriculture, University of Sargodha, Sargodha TG-II(1093)/14	“International Conference on Agricultural, Environmental and Biological Sciences (AEBS, 2014) ” held from 24-25 April, 2014 at Phuket, Thailand <i>“Plant population and nitrogen effects on achene yield and quality of sunflower (Helianthus annuus L.) hybrids ”</i>	110,000/-
26.	Dr. Shahzada Arshad Saleem Food Technologist Food Technology Section Agricultural Research Institute Dera Ismail Khan TG-II(1084)/14	“Fifth International Date Palm Conference” held from 16-19 March, 2014 at Abu Dhabi, UAE <i>“Production of Fragrant Vinegar from Date Waste Applying Submerged Acetification Technique”</i>	120,800/-
27.	Dr. Mumtaz M. Shah Assistant Professor Department of Earth Sciences Quaid-i-Azam University, Islamabad TG-II(1089)/14	AAPG-Europe Conference on “ Mesozoic and Cenozoic carbonates of the Neo-Tethys: old and New Concepts for Petroleum exploration” held from 25-26 March, 2014 at Naples, Italy <i>“Fault related dolomite in the Kawagarh Formation (Turonian) and Damana Suk Formation (Calloviaian) in the Margalla Gill Ranges (N. Pakistan): Implication on Reservoir Characterization”</i>	145,615/-

VI. Meeting of TGAC held on 5th May 2014			
28.	Mr. Muhammad Maqsood Lecturer Department of Weaving, National Textile University, Faisalabad TG-II(1111/14	“14 th World Textile Conference, Autex 2014, Bursa, Turkey ” held from 26-28 May, 2014 at Bursa, Turkey <i>“Prediction of Wrap and Weft from Crimp in Cotton Woven Fabrics”</i>	109,700/-
29.	Ms. Shan-e-Fatima Junior Engineer Scientific Engineering Services Directorate, Pakistan Atomic Energy, Islamabad TG-II(1131)/14	“International Symposium on Metallurgy and Welding Technology 2014 (ISMWT 2014)” held from 13-16 May, 2014 at Kuala Lumpur, Malaysia, <i>“Optimization of Process Parameters of Austenitic Stainless Steel 304 L with Low Carbon Steel A-36 by using Plasma Arc Welding (PAW).”</i>	80,000/-
30.	Mr. M. Saqib Qayyum Simulation Engineer Foundry Service Centre Lahore TG-II(1105/14	“23 rd International Conference on Metallurgy and Materials” held from 21-23 May, 2014 at Brno, Czech Republic <i>“Cost Effective Production of a Permanent Mold Gravity Die Cast A356.0 Aluminum Alloy Motorbike using Casting Simulation”</i>	66,700/-
31.	Dr. Tabassum Ara Khanum Research Officer National Nematological Research Centre , University of Karachi, Karachi TG-II(1134)/14	“Sixth ICN International Congress of Nematology” held from 4-9 May, 2014 at Cape Town, South Africa <i>“Status of Entomopathogenic Nematodes as Bio-Control Agent in Pakistan”</i>	126,000/-
32.	Dr. Muhammad Saeed Assistant Professor Department of Weed Sciences, The University of Agriculture, Peshawar TG-II(1121)/14	“International Conference on Chemical, Biological and Environmental Sciences (ICCBES, 2014 ” held from 12-13 May, 2014 at Kuala Lumpur, Malaysia <i>“Allelopathic Potential of Different Plant Extracts against <i>Trianthema portulacastrum</i> L.”</i>	89,000/-
33.	Dr. Ramesh Kumar Instructor/ Assistant Professor (BPS-17) Department of Health System Strengthening & Policy Health Service Academy, Islamabad TG-II(1070)/14	“7 th International Conference on Environmental Science and Technology” held from June, 9-13, 2014 at Houston, Texas, USA <i>“Situation of infectious Waste management Practices among Health Care Workers working at Tertiary Hospitals of Rawalpindi, Pakistan”</i>	100,000/-

VII. Meeting of TGAC held on 29th May 2014			
34.	Dr. Muhammad Sohaib Principal Medical Officer Department of Medical Sciences, Pakistan Institute of Engineering and Applied Sciences, Islamabad TG-II(1173)/14	“2 nd International Conference and Exhibition on Physical Medicine & Rehabilitation” held from 14-16 July, 2014 at Linthicum, Maryland, USA <i>“Labeling of Hydroxyapatite particles with β- Emitting Lanthanides for Radiosynovectomy: Formulation, Quality Control and Bio- evaluation”</i>	200,000/-
35.	Ms. Hira Syed Assistant Divisional Engineer National Telecom Corporation, Islamabad TG-II(1177)/14	“2014 IMRA-ABRM International Conference” held from 23-24 June, 2014 at Cambridge, UK <i>“Comparative Study of Effect of Culture of Technology Adoption in Pakistan and USA”</i>	92,466/-
36.	Dr. Noreen Sher Akber Assistant Professor College of EM&E NUST, Islamabad TG-II(1151)/14	“The 10 th AIMS Conference on Dynamical Systems, Differential Equations and Applications” held from 07-11 July, 2014 at Madrid, Spain <i>“Single wall and multi wall carbon nanotubes analysis in stenosed arteries”</i>	150,000/-
37.	Dr. Abdul Matin Associate Professor Department of Medical Lab. Technology, University of Haripur, Haripur TG-II(1181)/14	“International Conference on Nanotechnology” held from 05-06 July, 2014 at Singapore <i>“Impact on Carbon nanotubes in Acanthamoeba adhesion and cytotoxicity to human brain microvascular endothelial cells in vitro model systems”</i>	161,610/-
38.	Dr. Maqsood Ahmad Professor Department of Biotechnology Mirpur University of Science and Technology (MUST), Mirpur AJK TG-II(1178)/14	“Training Course on High Quality Fruit Production Techniques in Efficient and Safe Way” held from 25 June-10 July, 2014 at Xingcheng, China Training	98,000/-
39.	Dr. Ashfaq Khan Assistant Professor Deptt. of Mechanical Engineering University of Engineering and Technology, Peshawar TG-II(1152)/14	<i>“International Manufacturing Science and Engineering Conference (MSEC 2014)” held from 9-13 June, 2014 at Detroit, Michigan, USA</i> <i>“Laser Micro Processing of Carbide Tool Insert”</i>	25,000/-

40.	Dr. Sadia Javed Assistant Professor Department of Chemistry and Biochemistry, G C University, Faisalabad TG-II(1160)/14	“Global Biotechnology Congress 2014” held from 16-19 June, 2014 at Boston USA <i>“Kinetic and thermodynamic properties of Bovine Aldose1-Epimerase and its application in Glucose Diagnostic Kit”</i>	181,850/-
VIII. Meeting of TGAC held on 9th June 2014			
41.	Dr. Shamaraiz Firdous Principal Scientists National Institute of Lasers and Optronics, Nilore, Islamabad TG-II(1187)/14	“International Conference on Raman Spectroscopy (ICORS)” held from 10-15 August, 2014 at Jena ,Germany <i>“Diagnostic of Dengue Viral Infection using Human Blood Spectroscopy and Confocal Microscopy”</i>	180,875/-
42.	Dr. Khalid Mehmood Lecturer University College of Veterinary & Animal Sciences, The Islamia University of Bahawalpur TG-II(1190)/14	“Wayamba International Conference- WinC 2014” held from 29-30 August, 2014 at Kuliyapitiya, Sri Lanka <i>“A Pilot Epidemiological Survey of Parasitic Problems of Bovine in Derawar Fort Area, Cholistan”</i>	123,423/-
43.	Dr. Ambreen Bhatti Lecturer Department of Agriculture PMAS Arid Agriculture University, Rawalpindi TG-II(1166)/14	“The 29 th International Horticulture Congress, Sustaining Lives, Livelihoods and Landscapes” held from 17-22 August, 2014 at Brisbane, Australia <i>“Use of The Gaia Hypothesis to explain Controls on Mineral-N leaching in Summer from Soils Under Turf Grassland”</i>	144,203/-
Total			4,718,762/-