



**“Pakistan Society for Biochemistry and Molecular Biology”**

**on**

**Recent Advances & Challenges in Molecular Biology,  
Biochemistry & Biotechnology**

**being hosted by**

**Centre for Advanced Drug Research (CADR)**

**August 25 - 27, 2016**

**Program Book**



**COMSATS Institute of Information Technology, Abbottabad**

# Recent Advances & Challenges in Molecular Biology, Biochemistry and Biotechnology

## Conference Programme

<b>Day 1, Thursday 25-08-2016</b>	
<b>Opening Session</b>	
9:45	Guest to be seated
9:55	Arrival of the Chief Guest at the Venue
10:00	Recitation from the Holy Quran
10:05	Introduction to the conference by Prof. Dr. Jamshed Iqbal, <i>Chairman Conference Organizing Committee</i>
10:20	Welcome address by Prof. Dr. Khan Gul Jadoon, Director, CIIT Abbottabad
10:30	Address by the Chief Guest
10:40	Keynote address by Prof. Dr. S. M. Junaid Zaidi, Rector, CIIT
10:50	Address by General Secretary of Pakistan Society for Biochemistry and Molecular Biology
11:00	Photo session
<b>11:10-11:30 Refreshment</b>	
<b>Chair: Prof. Dr. Edda Tobiasch; Co-Chair: Prof. Dr. M. Waheed Akhtar</b>	
11:30	<b>PROF. M.I.D. CHUGHTAI MEMORIAL LECTURE</b> High efficacy and safety of bioactive phytochemicals based on their interaction at multiple target sites <b>Prof. Dr. Anwar-ul-Hassan Gilani</b> Chairman, Pakistan Council for Science & Technology, Islamabad; Aga Khan University Medical College, Karachi, Pakistan
12:15	<b>PROF. AT-UR-REHMAN MEMORIAL LECTURE</b> Regulation of nucleotide signaling by NTPDase1 coordinates vascular and non-vascular smooth muscle contraction: implication for male fertility <b>Prof. Dr. Jean Sevigny</b> Department of Microbiology-Infectiology and Immunology, Faculty of Medicine, Université Laval, Centre de Recherche du CHU de Québec - Université Laval, Quebec, Canada
<b>13:00-14:00 Lunch &amp; Prayer break</b>	

First Session Hall No. 1, Chair: Prof. Dr. Irfan S Ahmad Co-Chair: Prof. Dr. Nisar ur Rehman			First Session Hall No. 2, Chair: Prof. Dr. Jean Sevigny Co-Chair: Prof. Dr. Arshad Pervez		
14:00	Prevalence of asthma and allergies in children and Adolescents <b>Dr. Birka Lehmann</b> Executive Department EU & International Affairs of the Federal Institute for Drugs and Medical Devices (BfArM), Germany	Germany	14:00	Define a system to improve production of recombinant proteins in plants <b>Dr. Kasra Esfahani</b> National Institute for Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran	Iran
14:30	Micro Factories for Macro Jobs <b>Prof. Dr. Faiz-ul-Hassan Nasim</b> Department of Chemistry, The Islamia University of Bahawalpur, Bahawalpur, 63000, Pakistan	Bahawalpur	14:30	Characterization of mango ( <i>Mangifera indica</i> L.) transcriptome <b>Dr. M. Kamran Azim</b> Dr. Panjwani Center for Molecular Medicine and Drug Research, ICCBS, University of Karachi	Karachi
14:50	Genetic variants of Cholesteryl Ester Transfer Protein Gene effects the development of Cardiovascular Disease in Pakistani patients <b>Dr. Akhtar Ali</b> Department of Molecular Biology, Virtual University of Pakistan, Lahore	Lahore	14:50	Mammary tumor associated HSPB1 mutation and screening of eight cat populations of the world <b>Dr. Rashid Salf</b> Department of Biotechnology, Virtual University of Pakistan, Lahore 54000, Pakistan	Lahore
15:10	High Expression of Chaperone Member 60 in Association with Pro-apoptotic Complex Caspase-3 in Hepatocellular Carcinoma <b>Dr. Rizma Khan</b> Department of Molecular Genetics, Ziauddin University Hospital, Karachi-Pakistan	Karachi	15:10	The Applications of Machine Learning Methods in Genome Analysis <b>Dr. Muhammad Tariq Pervez</b> Department of Bioinformatics and Computational Biology, Virtual University of Pakistan	Lahore
<b>15:30-16:00</b> <b>Tea Break</b>					
Second Session - Hall No. 1, Chair: Prof. Dr. Iftikhar Raja Co-Chair: Prof. Dr. Khalid Mohammed Khan			Second Session - Hall No. 2, Chair: Dr. Birka Lehmann Co-Chair: Prof. Dr. Gul Faraz		
16:00	Diabetic management by biochemical means <b>Prof. Dr. Khalid Mohammed Khan</b> H. E. J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Karachi	Karachi	16:00	Atomic Force Based Morphological Assay for the synergistic action of silver and gold nanoparticles on resistance anti-biotic <b>Dr. Muhammad Raza Shah</b> H.E.J. International Center for Chemical and Biological Sciences, University of Karachi, Karachi-75270, Pakistan	Karachi

16:15	Isolation of a herbicidal constituent (Z)-docos-5-en-1-oiic acid from culture filtrates of <i>Drechslera hawaiiensis</i> for the management of <i>Rumex dentatus</i> <b>Dr. Arshad Javaid</b> Institute of Agricultural Sciences, University of the Punjab, Lahore, Pakistan.	Lahore	16:15	Characterization and Evolutionary Genomics of LTR Retrotransposons in <i>Brassica</i> <b>Dr. Faisal Nouroz</b> Bioinformatics Laboratory, Department of Bioinformatics, Hazara University Mansehra, Pakistan	Mansehra
16:30	Terbufos sulfone, an organophosphate aggravates toxicity in diabetic rats. <b>Dr. Syed Muhammad Nurulain</b> Department of Biosciences, COMSATS Institute of Information Technology, Islamabad	Islamabad	16:30	Attenuation of haloperidol-induced hyperkinetic motor disorders and oxidative stress: effect of rice bran oil <b>Dr. Noreen Samad</b> Department of Biochemistry, BZU, Multan.	Multan
16:45	Tetrazole linked tetrahydronicotinonitriles as cholinesterase inhibitors: Probing the reaction mechanism via computational method <b>Dr. Abdul Hameed</b> H. E. J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi	Karachi	16:45	Antibiotic Stewardship at Charitable Hospital of Karachi, Pakistan <b>Dr. Muhammad Ali Ghoto</b> Affiliation: Department of Pharmaceutics, Faculty of Pharmacy, University of Sindh Jamshoro, Pakistan	Jamshoro
<b>PSBMB Executive Council Meeting 16:00-17:00</b>			<b>Poster Presentation 17:00-18:30</b>		
<b>DAAD Alumni Meeting 17:00-18:00</b>					
<b>GALA DINNER 19:00-21:00</b>					

## DAY 2, Friday 26-08-2016

First Session - Hall No. 1, Chair: Prof. Dr. Maroof Shah Co-Chair: Prof. Dr. Fauzia Yusuf Hafeez			First Session - Hall No. 2, Chair: Prof. Dr. Faiz ul Hassan Nasim Co-Chair: Dr. Taous Khan		
8:30	Adult Stem Cells Combined with Artificial P2 Receptor Ligands are Promising Tools to Functionalize Scaffolds for Future Bone Tissue Engineering <b>Prof. Dr. Edda Tobiasch</b> Department of Natural Sciences, Bonn-Rhine-Sieg University of Applied Sciences, Germany	Germany	8:30	Thermophilic Adaptation of Glycoside Hydrolase <b>Dr. Fu-Li Li</b> Key Laboratory of Biofuels, Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences, Qingdao, China	China
9:15	Understanding Life in Motion; From Atoms to Particles <b>Dr. Zaheer Ul-Haq</b> Dr. Panjwani Center for Molecular Medicine and Drug Research, ICCBS, University of Karachi	Karachi	9:15	Unraveling the pharmacological potentials of ecto-nucleoside triphosphate diphosphohydrolase, ecto-nucleotide pyrophosphatase/phosphodiesterase, ecto-5'-nucleotidase, and alkaline phosphatase inhibitors <b>Mr. Mobasher Ali Abid</b> Centre for Advanced Drug Research (CADR), Department of Pharmacy, COMSATS Institute of Information Technology (CIIT) Abbottabad, Abbottabad-22060, Pakistan	Abbottabad
9:50	Cadmium Resistance Mechanism: <i>Escherichia coli</i> P4 and Its Potential Use in Wastewater Treatment <b>Dr. Abdul Rehman</b> Department of Microbiology and Molecular Genetics, University of the Punjab, Quaid Azam Campus, 54590, Lahore, Pakistan	Lahore	9:50	Immobilization of Thermostable Dextranase on Chitosan Hydrogel Microspheres using Covalent Crosslinking Technique <b>Dr. Afsheen Aman</b> Dr. A. Q. Khan Institute of Biotechnology & Genetic Engineering (KIBGE), University of Karachi, Karachi-75270, Pakistan	Karachi
10:10	Ascorbate deficiency influences the leaf cell wall glycoproteome in Arabidopsis thaliana <b>Dr. Nighat Sultana</b> Department of Biochemistry, Hazara University, Mansehra	Mansehra	10:10	Apolipoprotein E4 Exaggerates Dyslipidemia In Type 2 Diabetic Patients <b>Dr. Sehrish Fatima</b> Dr. A. Q. Khan Institute of Biotechnology & Genetic Engineering (KIBGE), University of Karachi, Karachi, Pakistan	Karachi

10:30-11:00

Tea Break

Second Session - Hall No. 1, Chair: Prof. Dr. Fu-Li Li Co-Chair: Prof. Dr. S. Tufail Hussain Sherazi			Second Session - Hall No. 2, Chair: Prof. Dr. Abid Azhar Co-Chair: Dr. Imran H Khan		
11:00	Bionanotechnology for Agricultural, Food, and Biomedical Systems to Address Global Challenges <b>Prof. Dr. Irfan S Ahmad</b> Center for Nanoscale Science and Technology, Micro and Nanotechnology Laboratory, Prairie Research Institute, University of Illinois at Urbana-Champaign	USA	11:00	Disease Biomarkers for Studies on Tuberculosis (TB) and TB Diagnostic Applications <b>Dr. Imran H. Khan</b> Department of Pathology and Laboratory Medicine, School of Medicine, University of California, Davis	USA
11:45	Green Synthesis, Characterization and Antibacterial Potential of Silver Nanoparticles and Bacteriocins <b>Dr. Asma Ansari</b> Dr. A. Q. Khan Institute of Biotechnology & Genetic Engineering (KIBGE), University of Karachi, Karachi-75270, Pakistan	Karachi	11:45	In silico identification of putative bifunctional PLKI inhibitors by virtual screening and structural dynamics approaches <b>Dr. Nousheen Bibi</b> Department of Bioinformatics, Hazara University Mansehra, Pakistan	Mansehra
12:05	Synthesis of poly-3-hydroxybutyrate by Bacillus cereus FC11 and its biomedical applications <b>Dr. Farha Masood</b> Department of Microbiology, Quaid-i-Azam University (QAU), Islamabad, Pakistan	Islamabad	12:05	High variability of Interferon Alpha Gene of Major Histocompatibility Complex Class I sequences in Endangered Punjab Urial <b>Dr. Tanveer Hussain</b> Virtual University of Pakistan, Lahore,	Lahore
12:25	Transcriptome analysis of parasitic hymenoptera: A novel approach for the development of innovative plant protection strategies <b>Dr. Zain ul Abdin</b> Department of Entomology, University of Agriculture, Faisalabad, Pakistan	Faisalabad	12:25	Biodegradation of toxic organics in industrial effluent using biosimulator <b>Dr. Seema Jilani</b> Institute of Environmental Studies, University of Karachi, Karachi	Karachi
12:45	Homology Modelling and Molecular Docking Studies of Alkaline Phosphatase Inhibitors <b>Dr. Mariya al-Rashida</b> Department of Chemistry, Forman Christian College (A Chartered University), Lahore 54600, Pakistan.	Lahore	12:45	Identification and Characterization of New MHC-Peptide Loading Enhancers from Diverse Chemical Nature for Development of Vaccines <b>Dr. Saifullah Afridi<sup>1,2</sup></b> <sup>1</sup> Centre for Advanced Drug Research (CADR), Department of Pharmacy, COMSATS Institute of Information Technology (CIIT) Abbottabad,	Abbottabad

				Abbottabad-22060, Pakistan. <sup>2</sup> Dr. Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, University of Karachi, Karachi-75270, Pakistan	
13:00-14:00 Lunch & Prayer break					
<b>Third Session - Hall No. 1, Chair: Prof. Dr. G A Miana Co-Chair: Dr. Zaheer ul Haq Qasmi</b>			<b>Third Session - Hall No. 2, Chair: Prof. Dr. Peter Langer Co-Chair: Dr. Nadeem Shaikh</b>		
14:00	Engineering Nanoparticles for Pharmaceutical and Biomedical Applications <b>Dr. Irshad Hussain</b> Department of Chemistry, SBA School of Science & Engineering (SSE), Lahore University of Management Sciences (LUMS), DHA, Lahore, Pakistan	Lahore	14:00	<b>Workshop</b>	
14:30	Current Status, Trends and Opportunities in Animal Genomics in Pakistan <b>Prof. Dr. Masroor Ellahi Babar</b> Virtual University of Pakistan, Lahore	Lahore	14:40	Kynurenine pathway and its metabolites in mental illnesses: Potential therapeutic intervention by manipulation of the pathway <b>Prof. Dr. Samina Bano</b> Clinical Biochemistry and Psychopharmacology Research Unit, Department of Biochemistry, University of Karachi, Karachi, Pakistan	Karachi
14:50	Comparison of maternal serum lipoproteins in normal pregnancy and primiparous patients with eclampsia <b>Dr. Nabila Sher</b> Khyber Girls Medical College, Peshawar	Peshawar	15:00	Role of <i>Lactobacillus delbrueckii</i> ssp <i>bulgaricus</i> to Induction of Probiotics and Antibacterial properties in Dahi <b>Dr. Talat Mahmood</b> University of Haripur, KPK	Haripur
15:10	Genetic diversity of local population of <i>Myrothecium roridum</i> and their relationship with geographical origin and virulence against <i>Myrothecium</i> leaf spot disease of bitter gourd <b>Dr. Salik Nawaz Khan</b> Institute of Agricultural Sciences, University of the Punjab, Lahore, Pakistan.	Lahore	15:15	In perceptive of new multi-targeting neurotherapeutics against Parkinson Disease: discovery of MOA-AChE inhibitors and molecular modelling investigations <b>Dr. Sumera Zaib</b> Centre for Advanced Drug Research (CADR), COMSATS Institute of Information Technology (CIIT) Abbottabad, Abbottabad-22060, Pakistan	Abbottabad

15:30-16:00

Poster presentation & Tea Break

EXCURSION TOUR

16:00-20:00

**DAY 3, Saturday**

**27-08-2016**

**First Session: Hall No. 1**

**Chair: Prof. Dr. Muhammad Ashraf**

**Co-Chair: Dr. Irshad Hussain**

**First Session: Hall No. 2**

**Chair: Prof. Dr. Mukhtiar Hassan**

**Co-Chair: Dr. Kamran Azim**

8:30	Engineering a systems level understanding of cancer: Cells, Matrix and New Models <b>Prof. Dr. Hamid M Zaman</b> Department of Biomedical Engineering and Howard Hughes Medical Institute Boston University Boston, MA, USA	USA	8:30	Microvesicles shed from microglia represent a new pathway of glia-to-neuron communication <b>Prof. Dr. Peter Langer</b> Head of Organic Section, Institut für Chemie, Universität Rostock Albert-Einstein-Str. 3a, 18059 Rostock, Germany	Germany
9:15	Proteomics: Recent trends and Applications <b>Prof. Dr. Shamshad Zarina</b> National Center for Proteomics, University of Karachi	Karachi	9:15	Proteomics for Identification of Cancer Biomarkers <b>Dr. Saima Sadaf</b> Institute of Biochemistry and Biotechnology, University of the Punjab, Lahore-54590, Pakistan	Lahore
9:45	Comparative Study of ADRs due to Hypertensive Medications <b>Dr. Mudassar Iqbal Arain</b> Faculty of Pharmacy, University of Sindh Jamshoro	Jamshoro	9:45	Anti-microbial activities of ZnO nanoparticles synthesized via co-precipitation technique <b>Prof. Dr. Ghosia Lutfullah</b> Centre of biotechnology and microbiology, University of Peshawar, Peshawar	Peshawar
10:00	Overcoming the Biggest Threat and an Emerging Crisis by Natural and Synthetic Inhibitors <b>Dr. Saba Farooq</b> Dr. Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, University of Karachi, Karachi.	Karachi	10:00	Cell Free DNA Quantification and Methylation Status of DCC gene as Predictive Diagnostic Biomarkers of Lung Cancer in Patients Reported at Gulab Devi Chest Hospital, Lahore. <b>Muhammad Shahbaz Aslam</b> Institute of Biochemistry & Biotechnology, University of the Punjab, Lahore	Lahore
10:15	Effects of high energy nutritional supplement drinks on appetite, appetite hormones, gastric emptying and energy intake <b>Dr. Sadiq Fatima</b>	Peshawar	10:15	Application of organometallic compounds: A detailed study of their anticancer potential against Human cancer cell lines and their mechanism of action	Abbottabad



	Khyber Medical University, Peshawar			Syeda Abida Ejaz Centre for Advanced Drug Research (CADR), COMSATS Institute of Information Technology (CIIT) Abbottabad, Abbottabad-22060, Pakistan.	
<b>10:30-11:30</b>					
<b>Poster presentation &amp; Tea Break</b>					
<b>Second Session - Hall No. 1,</b> <b>Chair: Prof. Dr. Hamid M Zaman</b> <b>Co-Chair: Dr. Jabbar Shah</b>			<b>Second Session - Hall No. 2,</b> <b>Chair: Prof. Dr. Shamshad Zarina</b> <b>Co-Chair: Prof. Dr. Irshad Hussain</b>		
11:30	Stem Cell Aging and Antioxidants: Expanding the Possibilities of Cell -based Therapies <b>Dr. Hana Iqbal</b> Panjwani Centre for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, Karachi	Karachi	11:30	Compositional analysis and structural characterization of partially hydrolyzed Sterculia urens gum <b>Dr. Hira Munir</b> Department of Molecular Biology and Biochemistry, University of Gujrat	Gujrat
11:50	Full Genome Phylogenetic and Geographically analysis of Dengue Virus serotype 3 Isolates across the globe. <b>Dr. Abrar Hussain</b> Department of Microbiology, Faculty of life sciences and informatics Balochistan University of Information Technology, Engineering and Management sciences Quetta	Quetta	11:50	Therapeutic potential of <i>Taraxacum officinale</i> against HCV NS5B polymerase: in vitro and in silico study <b>Dr. Sidra Rehman</b> Department of Environmental Sciences, COMSATS Institute of Information Technology (CIIT) Abbottabad, Abbottabad-22060, Pakistan	Abbottabad
12:10	Bio-efficacy of Tea ( <i>Camellia sinensis</i> ) leaves blend with Cinnamon ( <i>Cinnamomum cassia</i> ) <b>Dr. Razia Noreen</b> Department of Applied Chemistry and Biochemistry, GC University, Faisalabad	Faisalabad	12:10	Hydroxyurea induced modifications in plasma proteome of $\beta$ -thalassemia patients <b>Muhammad Zohaib</b> National Center for Proteomics, University of Karachi	Karachi
12:30	Comparison of microbial communities associated with halophyte ( <i>Salsola stocksii</i> ) and non-halophyte ( <i>Triticum aestivum</i> ) <b>Salma Mukhtar</b> Department of Biological Sciences, Forman Christian College (A Chartered University), Ferozpur Road, Lahore 54600, Pakistan.	Lahore	12:30	Elastomeric Free-Form Blood Vessels for Interconnecting Organs on Chip Systems <b>Syeda Mahwish Bakht</b> Centre for Advanced Drug Research (CADR), COMSATS Institute of Information Technology (CIIT) Abbottabad, Abbottabad-22060, Pakistan.	Abbottabad
<b>Closing ceremony/ PROF. ZAFAR H. ZAIDI Best Poster Award/ PSBMB General Body Meeting</b>					



For more information:

## Centre for Advanced Drug Research (CADR)

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