

REPORT  
ON  
FIRST INDO-RUSSIAN MEET  
&  
“SECOND INTERNATIONAL CONFERENCE ON BIOTECHNOLOGICAL  
ADVANCEMENTS IN FREE RADICAL BIOLOGY AND MEDICINE (ICBAFM-2017)”  
23-25 JANUARY, 2017



DEPARTMENTS OF BIOSCIENCES  
INTEGRAL UNIVERSITY, LUCKNOW

A three-day international conference on Biotechnological Advancements in Free Radical Biology and Medicine (**ICBAFM-2017**) was organised at the Integral University, Lucknow from **Jan 23-25, 2017** in the presence of a galaxy of invited guests and delegates. Scientists from different countries participated in the ICBAFM-2017 like United States of America,

United Kingdom, Russia, South Korea and Saudi Arabia. Dr. M. Salman Khan along with Dr. Mohd. Sajid Khan and Dr. Saheem Ahmad were the Organising Secretaries of the conference and Prof. Neelam Pathak and Dr. M. Haris Siddiqui was the Programm Co-ordinators of the said event. The conference had got the clearances from all three ministries; i.e., Ministry of External Affairs (MEA); Ministry of Home Affairs (MHA) and Ministry of Science and Technology (MST) in order to get the legal status of the conference. The conference was divided into plenary session, thematic sessions, Young Scientist Award and Poster Presentation Session.

The conference was inaugurated in the presence of Prof. Syed Waseem Akhtar, the Vice Chancellor of Integral University, who welcomed the guests, stressed on the need for scientific inquiry, on day one. Following the Inaugural Session, Plenary Session was organised. The chair persons for this session Prof. Tamara Amstislavskaya (Scientific Research Institute of Physiology & Basic Medicine, Novosibirsk, Russia), Prof. Tariq M. Haqqi (Department of Anatomy and Neurobiology, Northeast Ohio Medical University, Rootstown, Ohio) and Prof. Jamal M. Arif (Dean, Research & Development, Integral University, Lucknow) In this session, Prof. Prof. Monika Pischetsrieder from Department of Chemistry and Pharmacy, University of Erlangen, Nuremberg, Germany delivered his talk entitled “Protein Profiling to Detangle the Interplay between Oxidative Stress, Glycation, and Nutrition” followed by a very interesting talk by Dr. Shahid Jameel (CEO, Wellcome Trust DBT India Alliance) who talked on “Among the Viruses- A Life in Virology and Beyond” and a talk by Prof. Casper Schalwijk (Department of Internal medicine, Faculty of Health, Medicine and Life Sciences (FHML), Maastricht University Medical Centre, Netherland) on “The Critical Role of Methylglyoxal and AGEs in Ageing, Diabetes and its Complications”.

**The Thematic Session 1 (Oxidative Insult and Cancer)** was chaired by Prof. Monika Pischetsrieder (Emil Fischer Center, University of Erlangen Nuremberg, Erlangen, Germany) Prof. Najmul Islam (Department of Biochemistry, JN Medical College, AMU, Aligarh)

Dr. Syed Nadeem Akhtar (Director, Planning and Research, Integral University, Lucknow). In this session, , delivered his lecture on “Prof. Natarajan Sakthivel (Department of Biotechnology, Pondicherry University, India)”. Moreover, Prof. Sandeep K Bandopadhyay (Dr. B. C. Roy Postgraduate Institute of Basic Medical Sciences and Institute of Postgraduate Medical Education and Research, Kolkata, India) also enlightened the audience with lecture on “Intracellular GSH Depletion Plays a Vital Role in Mitochondrial Bax Translocation for Resveratrol-Induced Apoptosis in U937 Cell Line”. Further, Prof. Asna Urooj (Department of

Studies in Food Science & Nutrition, University of Mysore, India), also delivered his talk entitled “Prospects for Cell Line Studies as Screening Tools for Biological Activity”, followed by a presentation of Mr. Jayant Dewangan ( Genotoxicity Lab, Division of Toxicology, CSIR- Central Drug Research Institute, Lucknow, India), on “Chetomin Induces cell death in Human Breast cancer cells via inhibition of Pi3k/Mtor Pathway.”

**The Thematic Session II (Cancer Therapeutics)** was chaired by Prof. Casper Schalkwijk (Faculty of Health, Medicine and Life Sciences (FHML) of Maastricht University Medical Centre, Netherlands) and Prof. Sadhana Sharma (Department of Biochemistry, All India Institute of Medical Sciences, Patna, India) and Prof. Aqeel Ahmad (Senior Professor Biostatistics, Integral University, Lucknow ). In this session, Prof. Manoj Kumar Singh (Department of Mechanical Engineering, University of Aveiro, Portugal) delivered his lecture on “Graphene based polymer Nanocomposites for sensors and Biomedical applications” followed by the informative lecture of Prof. Mohammad Owais (Interdisciplinary Biotechnology Unit, Aligarh Muslim University, U.P., India) on “Nanovaccines: Potential in Prophylaxis Against Intracellular Pathogens” and Dr. Anil K Balapure (Department of Biochemistry, CDRI, Lucknow, India) on “Synergistic Action of Centchroman with Genistein in Breast Cancer: An *in vivo* study”. Furthermore Dr. Mohammad Kaleem Ahmad (Department of Biochemistry, King George’s Medical University, Lucknow, India) delivered an informative lecture on “Identification and Validation of MicroRNA 711 as a Novel Biomarker in Prostate Cancer” and Dr. Shalini Gupta (Department of Oral Pathology & Microbiology, King George’s Medical University, Lucknow, India) on “Genetic Polymorphism of Tumor Necrosis Factor Alpha (TNF- $\alpha$ ) and Tumor Necrosis Factor Beta (TNF- $\beta$ ) genes and risk of Oral Pre Cancer and Cancer”.

**On day-2, 24 Jan 2017** Prof. Majeda Sabri Hammoud (Faculty of Medicine , Kuwait University, Kuwait), Prof. Sandeep K Bandopadhyay (Dr. B. C. Roy Postgraduate Institute of Basic Medical Sciences and Institute of Postgraduate Medical Education and Research, Kolkata, India) and Prof. Abdur Rahman Khan (Dean, Faculty of Sciences, Integral University, Lucknow) chaired **the Thematic Session III (Endogenous & Dietary Antioxidants)**. In this session, Prof. Tariq M. Haqqi (Department of Anatomy & Neurobiology, Northeast Ohio Medical University, Rootstown, Ohio) delivered his informative lecture on “Parkin and Regulation of Oxidative Stress in Human Chondrocytes” which was very useful for the entry level researchers, followed by an interesting talk on “The Role of Redox Mediators in the Treatment of Aromatic Pollutants from Wastewater by Using

Peroxidases” by Prof. Qayyum Husain (Department of Biochemistry, Faculty of Life Sciences, Aligarh Muslim University, Aligarh, India). Prof. Syed Ibrahim Rizvi (Department of Biochemistry, Allahabad University, Allahabad, India) also delivered his lecture on “Caloric Restriction Mimetics as Anti-aging Agents: Studies on Metformin” followed by the lecture of Dr. Mohd. Arshad (Department of Zoology, Lucknow University, Lucknow, India) on “Promising Anticancer Compounds from Nutrition: Mechanisms and Actions” and Dr. Safia Habib (Department of Biochemistry, Faculty of Medicine, J N Medical College, Aligarh Muslim University, Aligarh, India) on “Reactive Nitrogen Species May Have a Role in Performance of Sportspersons” also a lecture on “Smoking Induced Oxidant Anti-oxidant Imbalance in COPD-assessment of Auditory Evoked Potential: A Comparative Study Between Non Smokers and Smokers With or Without COPD” by Dr. S M A Waseem (Department of Physiology, IIMS & R, Integral University, Lucknow, India) and “Antitaupathic properties of Shankapushpi Attenuate the Alzheimer's Pathology in Human MAP TauInduced *Drosophila* model” by Ms. Anupama K P (School of Biological Sciences, Central University of Kerala, Kerala, India).

**Thematic Session IV basically deals with Reactive Oxygen Species: Role in Disease Biology.** Prof. Abbas A. Mahdi (Department of Biochemistry, King George’s Medical University, Lucknow, India), Prof. Tariq M. Haqqi (Department of Anatomy and Neurobiology, Northeast Ohio Medical University, Rootstown, Ohio) and Prof. Monowar Alam Khalid (Prof. Environmental Conservation, Integral University, Lucknow) was the Chairpersons. In this session, Prof. Abbas A. Mahdi (Department of Biochemistry, King George’s Medical University, Lucknow, India) presented her webinar talk on “Silica Nanoparticles Causes Cholinergic Dysfunction in Exposed Rats: Involvement of Mitochondrial Stress and Down Regulation of M2-mAChR” followed by an important lecture by Dr. Deena ElSORI (Department of Applied Sciences and Mathematics, Abu Dhabi University, UAE) on “Regulation of Monocyte NADPH Oxidase: Role of Pattern Recognition Receptors”. Dr. Subhash Chandra Gupta (Institute of Science, Banaras Hindu University, Varanasi, India), also delivered his talk entitled “Reactive Oxygen Species Regulate Breast Cancer Invasion in Acidic Microenvironment” followed by the talks of Dr. Imteyaz Qamar (Gautam Buddha University, Greater Noida, U.P., India) on “Gene Regulation and Physiological Role of an Androgen Receptor Co-Repressor-19KDa (ARR19) in Testicular Leydig Cells” and Dr. Mohammad Israil Ansari (Department of Botany, University of Lucknow, U.P., India) on “Involvement of GABA Shunt in Free Radicals Scavenger Mechanism During Stress Conditions in Plants”. Furthermore Dr. GGHA Shadab

(Department of Zoology, Aligarh Muslim University, Aligarh, India) also delivered an informative talk on “Cytogenetic Assessment of the Genotoxic Effect of Bisphenol-A *in vivo*” followed by talk of Dr. Md. Zahid Kamal (National Centre for Cell Science, Pune, India) on “Unconventional Ways to Increase Enzyme Activity” and of Dr. Neelam Yadav (Department of Biochemistry, Dr. R. M. L. Avadh University, Faizabad, INDIA) on “Repopulation of liver with Transplanted Liver Sinusoidal Endothelial Cells (LSEC) Benefits from Prior Disruption of Native Endothelial Cells as Well as Endothelin-1 Receptor Blockade in Donor Cells”.

**Thematic Session V (Diabetes Mellitus: Role of Free Radical & Glycation)** was Chaired by Prof. Svetlana Ivanova (Mental Health Research Institute, Tomsk, Russia), Prof. Moinuddin (Department of Biochemistry, Faculty of Medicine, JN Medical College, Aligarh Muslim University, Aligarh, India) and Dr. Aqeel Ahmad (Director, Academic Staff College, Integral University, Lucknow). In this session, Prof. Moinuddin (Department of Biochemistry, Faculty of Medicine, JN Medical College, Aligarh Muslim University, Aligarh, India) presented his talk on “Hydroxyl Radical Modification of Glycated IgG: Possible Role of Glycoxidatively Modified IgG in Type 2 Diabetes Mellitus”. Moreover, Prof. kauser usman (Department of internal medicine, king George Medical University, Lucknow.) also delivered his talk on “Effect of High Dose Zinc Supplementation with Oral Hypoglycemic Agents on Glycemic Control and Inflammation in Type -2 Diabetic Nephropathy patients.” followed by the talk of Dr. Zarina Arif (Department of Biochemistry, Faculty of Medicine, JN Medical College, Aligarh Muslim University, Aligarh, India) on “Peroxynitration of Albumin Creates Binding Site for Autoantibodies in Diabetes Mellitus Sera” and Dr. Ahmad Ali (University Department of Life Sciences, University of Mumbai, Mumbai) on “Acesulfame Potassium: An Artificial Sweetener with Anti-glycating Potential”. Dr. Kaiser Younis (Department of Bioengineering, Integral University, Lucknow) also delivered a lecture on “Incorporation of Dietary Fibre in High Glycemic Index Foods: A Novel Approach to Feeding Diabetic Patients”.

**Thematic Session VI (Young Scientist Award)** was the next session for the day. This session was chaired by Prof. Moinuddin (Department of Bio-Chemistry, J.N. Medical College, A.M.U., Aligarh, India), Prof. Tamara Amstislavskaya (Scientific Research Institute of Physiology & Basic Medicine Novosibirsk, Russia) and Prof. T. Usmani (Department of Electronics & Communication Engineering, Integral University, Lucknow). The first lecture of this session was delivered by Km Neelofar (Department of Biochemistry, JN Medical

College, AMU, Aligarh, India) entitled “Study of IL6-174G/C Gene Polymorphism in Type2 Diabetes Patients with Chronic Kidney Disease in North Indian Population” followed by a lecture of Mr. Mohsin Wahid Khan (Interdisciplinary Biotechnology Unit, AMU, Aligarh, India) entitled “Polyols (glycerol and ethylene glycol) mediated Amorphous Aggregate Inhibition and Secondary Structure Restoration of Metalloproteinase-conalbumin (ovotransferrin)”. After these valuable presentations of Ms. Nishat Fatima (King George’s Medical University, Lucknow 226003, U.P., India) on “Anti-radical and Anticancer Compounds from Non Polar Fraction of *Wrightia tinctoria* Roxb (R.Br.): A Bioassay Guided Approach”. After some other valuable talks by Ms. Peerzada Shariq Shaheen Khaki , Dr. Rahul Singh, Ms. Sidra Islam, Ms. S. Sivaranjani, Ms. Somaiya Mateen, Dr. Uzma Shahab, Ms. Faiza Ismail, Ms. Minhal Abidi this session was ended up after the presentation of Ms. Naureen Fatima (Department of Biochemistry, JN Medical College, AMU, Aligarh) entitled “Influence of Age and Gender on the Oxidant-Antioxidant Status in the Plasma and Erythrocytes of Type 2 Diabetic Patients”.

**Day-3, 25 Jan, 2017**, Prof. Natarajan Sakthivel (Department of Biotechnology, Pondicherry University, India) ,Prof. Qayyum Husain (Department of Biochemistry, Faculty of Life Sciences, AMU, U.P., India) and Prof. Mohammad Zafar Idris (Dean, Integral Institute of Medical Sciences& Research, Lucknow) chaired the **Thematic Session VII (Cardiovascular & Neurodegenerative Disease)**. In this session, Prof. Svetlana Ivanova (Mental Health Research Institute, Tomsk, Russia, Tomsk, Russia) delivered her talk entitled “The Search for Peripheral Biomarkers of Schizophrenia” followed by an important talk by Prof. Tamara Amstislavskaya (Scientific Research Institute of Physiology & Basic Medicine Novosibirsk, Russia), entitled “Cognitive Disturbances Induced by Genetically Defined Overexpression of Alpha-synuclein in a Mouse Model”. After these lectures Dr. Amal Chandra Mondal (School of Life Sciences, Jawaharlal Nehru University, New Delhi, India)presented his research work on “Neuroprotective and Anti-oxidative Effects of *Bacopa monnieri* on CUS Induced Model of Depression in Rat” followed by a lecture on “Understanding Age Associated Neurodegenerative Diseases Employing Functional Genomics and Epigenetics Studies in Transgenic *C. elegans*” by Dr. Amir Nazir (Division of Toxicology, CDRI, Lucknow, U.P., India). Moreover Dr. Khustar A Salman (Department of Biochemistry, J.N. Medical College, A.M.U., Aligarh, India) delivered a lecture on “Study of Acute Phase Protein in COPD Patients” followed by talk of Dr. Wahid Ali (Department of Pathology, King George’s Medical University, Lucknow, India) entitled “Clinical Utility of

Small Dense LDL Cholesterol in Metabolic Syndrome” and by Dr. Suchit Swaroop (Department of Zoology, University of Lucknow, Lucknow-226007, India) entitled “Association of Pro-inflammatory Cytokine IL-6 with Chronic Obstructive Pulmonary Disease (COPD)”

**The Thematic Session VIII (Nanomedicine and Nanotechnology: An advanced therapeutic approach)** was chaired by Prof. Vladimir N. Silnikov (Institute of Chemical Biology & Fundamental Medicine, Siberian Branch of Russian Academy of Sciences, Russia), Prof. Absar Ahmad (Director, Interdisciplinary Nanotechnology Centre, AMU, Aligarh, India) and Prof. V. S. Chandel (Professor & Head, Department of Physics, Integral University, Lucknow). Prof. Absar Ahmad (Director, Interdisciplinary Nanotechnology Centre, AMU, Aligarh, India) delivered his talk entitled “Endophyte-mediated Fabrication of Biomedically and Technologically Important Nanoparticles”. After these talks Prof. Vladimir N. Silnikov (Institute of Chemical Biology & Fundamental Medicine, Siberian Branch of Russian Academy of Sciences, Russia) delivered his informative talk entitled “Conjugates of SiO<sub>2</sub> Nanoparticles with 5'-triphosphates of Nucleoside Analogues that Display a Reduced Cytotoxicity and Enhanced Drug Activity”. Dr. Anil K Suresh (Department of Biotechnology, SRM University, Chennai, India) also shared his knowledge entitled “Engineered Nanoparticles for Cancer Therapeutics” followed by talk of Dr. Puja Khare (Agronomy & Soil Science Division, Central Institute of Medicinal and Aromatic Plants, Lucknow, India) entitled “Effect of pH on In Vitro Release of Oxytetracyclin by Nano Biopolymer” and Dr. D. Pramur (Developmental Toxicology Division, Indian Institute of Toxicology Research, Lucknow) on “Cytochrome P450s: Biomarkers for Predicting Tobacco Induced Oral Cancer”. An informative talk by Dr. Saba Hasan (Amity Institute of Biotechnology, AMITY University, Lucknow, U.P., INDIA) presented her views on “Biological Synthesis of Gold and Silver Nanoparticles from Entomopathogenic Fungi” to end the session and lead to the Lunch. At the end of the conference, a Valedictory Session was conducted in order to pay vote of thanks.

In this conference, total 250 scholars were participated as delegates from national and international institutes. A total 31 invited talks were delivered by scientists of repute from India and abroad. In the Young Scientists category 12 scholars were participated while in Poster Presentation category 69 scholars participated. In conclusion, it was a great conference pointing out the role of oxidative stress, being recognised as an important factor in the development of metabolic syndrome and age-related diseases. The unbridled production and accumulation of free radicals induces oxidative stress inside the cells damaging important

cellular macromolecules and is the major cause of development of chronic and degenerative illness such as cancer, autoimmune disorders, rheumatoid arthritis, cardiovascular and neurodegenerative diseases. This meeting was an important step in the right direction as the presentations were likely to increase the awareness about this overlooked but critical aspect of several diseases. This conference provided an excellent platform for interactions among the experts and researchers from different fields and regions, which promoted academic exchange and collaborative research on various frontiers of free radical biology and medicine. This in turn may be helpful in developing more effective therapeutic strategies for the treatment of metabolic syndrome and associated diseases.









