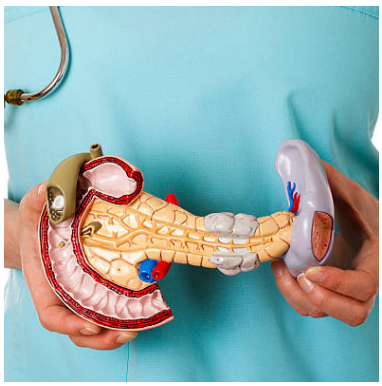
Keynote Forum
March 07-08, 2019

Diabetes 2019



Joint Event

International Conference on

Diabetes, Endocrinology and Metabolic Syndrome

&

Annual Summit on

Diabetes, Obesity & Heart

March 07-08, 2019 | London, UK

Vinod Chandra Tawar

King George Medical Clinic, Canada

Diabetic eye disorders and a novel approach via "OPTICORR"

Diabetic eye disorders have been of common occurrence resulting from a progressive uncontrolled disease leading to cataracts and retinopathy. A review of past literature from 2006 to date has demonstrated a common message i.e. utilizations of vitamins for the resolutions of retinal disorders. The researchers in 2006 had shown the effects of retinol as an agent in the treatment of age-related maculopathy. Subsequent studies were focused on Vitamin A supplementation in children for Retinal dysfunction. Our current research from 2015 had one primary objective of creating a topical preparation as an alternative to the oral treatment to escape from systemic side effects. The OPTICORR our innovative formulation was studied in the pilot project and had shown a dramatic improvement restoring to normal vision. The patients were instructed to apply OPTICORR on the eyelids externally for a duration of 12 weeks. A large scale study has been conducted with a target population of 30 patients. The project will be continued for an in determined period due to the encouraging benefits for a duration to normal restoration. In addition, the medication has shown resolution of challenging dermatological diseases. The study was free of any adverse symptoms except for presence of l erythema at the region of the application on the skin would likely indicate intolerance to vitamin ingredients therefore a discontinuation would be warranted.

Speaker Biography

Vinod Chandra Tawar has earned BSc Hons. and BSc Tech. Pharmaceuticals from University of Bombay. He was offered a teaching assistantship at the School of Pharmacy, University of Manitoba, Canada, where he achieved a Post-graduate (MSc) degree in Pharmacology followed by working as a Toxicologist at a University Hospital in Winnipeg for a duration of 10 years. In due course, he developed a Toxicology laboratory for patient management and Forensic purposes. This later became a reference laboratory for the Province of Manitoba. In 1981, he decided to study Medicine and graduated Medicine in 1985. Subsequently, he joined Douglas Hospital Research Centre at McGill University as a Psychiatry Research Consultant with participation in projects on depression, Alzheimer's disease, alcoholism and schizophrenia. Currently he is working in King George Medical Clinic, Canada.

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Mirza Saima Mahmud

Dubai Hospital, UAE

Impact of fasting on cardiovascular diseases and various metabolic parameters

Muslims observe fast from sunrise to sunset, during the month of Ramadhan. This long period of fasting, has a significant impact on patients with acute coronary syndrome and decompensated heart failure. Over the last 12 years, Mirza Saima Mahmud worked in 3 of the top hospitals in Dubai and was part of few studies in related topics. In this presentation, she will articulate how in diabetic patients - fasting impacts different metabolic parameters and comparison of these changes - before and after the month of fasting.

Speaker Biography

Mirza Saima Mahmud has completed her MBBS from Sir Salimullah Medical college, Dhaka followed by MRCP UK. Over last 12 years she has worked with Rashid Hospital, Al Baraha Hospital and Dubai Hospital – all leading government run healthcare facilities. She takes special interest in serving underprivileged community and is keen to generate awareness in prevention on cardiovascular diseases. She has organized multiple free medical camps screening 100's of patients. She is also a coordinator for SAVE A HEART charity that supports underprivileged people for Cardiac Intervention. She participates in research studies along with her work in Dubai Hospital and has won awards from Dubai Health Authority and Bangladesh Consulate, UAE for her charity initiatives.

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Sarita Bajaj

MLN Medical College, India

Non-alcoholic fatty liver disease: Associations and impact on cardiovascular events

Non-alcoholic fatty liver disease (NAFLD) is a distinct hepatic condition characterized by abnormal fat accumulation in liver cells. The term NAFLD is used to describe a wide array of fatty liver changes from simple steatosis to steatohepatitis, cirrhosis and hepatocellular carcinoma, in the absence of excessive alcohol intake. It is one of the most common forms of chronic liver disease in developed countries. With increasing urbanization and behavioral changes such as decreased physical activity, high-dense energy fat diet and increased occurrence of type 2 diabetes mellitus (T2DM), its prevalence has increased in the Asian region. The overall prevalence of NAFLD in western countries varies from 15-40% and in Asian countries from 9-40%. In India too, NAFLD is emerging as an important cause of liver disease. Epidemiological studies suggest the prevalence of NAFLD to be around 9-32% in general Indian population, with a higher incidence amongst overweight/obese and diabetic/prediabetic patients. NAFLD and its more severe form with steatohepatitis (NASH), are common in patients with T2DM. Compared to non-obese patients without NAFLD, patients with NAFLD have severe systemic (liver/muscle), and particularly, adipose tissue (fasting/postprandial) insulin resistance. NAFLD is a well-known contributor for the development of cardiovascular disease (CVD). CIMT is a known marker for early atherosclerosis and its progression. In recent years, case-control studies have shown a relationship between NAFLD and the presence of early manifestations of atherosclerosis as indicated by CIMT measurement. The first clinical manifestation of CVD often arises in a stage of well-advanced atherosclerosis. The putative underlying mechanisms that link NAFLD to cardiovascular, cardiac and arrhythmogenic complications might originate from the expanded and inflamed visceral adipose tissue. NAFLD frequently coexists with obesity, diabetes, and dyslipidemia an improved knowledge of the pathophysiological links of NAFLD with cardiovascular, cardiac and arrhythmogenic complications might also provide a potential target for the pharmacological treatment of these diseases.

Speaker Biography

Sarita Bajaj is currently Director-Professor and Head of Medicine, MLN Medical College, India. She has been awarded the Lifetime Achievement Award of the UP-Diabetes Association (UPDA). Her major contribution is towards studies on diabetes, obesity and growth. She has almost 200 publications in peer reviewed journals, monograms and books. She has been awarded numerous Orations and Fellowships. In her capacity as scientific chair, she has successfully organized well attended scientific programs on diabetes, endocrine and metabolic disorders, diabetes exhibitions, camps and has been involved in several National Diabetes Projects. She is holding and has held many prestigious posts of National Societies across India. She is Editor in Chief, ESI Manual of Endocrinology 1st and 2nd edition and on the Editorial Committee of several peer reviewed journals. She has been invited as faculty at both national & international forum. Honors have bestowed upon her in the scientific and public field for her enormous contribution to the medical fraternity and society in endocrine education and awareness.

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Anil K Saxena

Central Drug Research Institute, India

Computational drug design in the search of protein tyrosine phosphatase 1B inhibitors as potential antidiabetic agents

Computational approaches, including both indirect and direct designs have been used in the search of novel small molecules as potential biologically active agents. The protein tyrosine phosphatase 1B (PTP1B) is been considered is potential targets for designing for antidiabetic agents as PTP1B inhibition results both in increased insulin sensitivity and resistance to obesity, with no abnormalities in growth or fertility or other pathogenetic effects. Thus in search of small molecule as potential PTP1B inhibitors, the indirect drug design approaches like CoMFA, CoMSIA and pharmacophore modeling resulted in the design and synthesis of a series of 2-[(4-methoxyphenyl) ethyl] acetamide derivatives including a promising PTP1B inhibitor (IC_{50} = 69µM) and another series of substituted phenoxy-3-piperazin-1-yl-propan-2-ols where one compound showed 40.3% normalization of plasma glucose levels at 100mg/kg in sugar-loaded model (SLM) and 32% activity in streptozocin model (STZ). In continuation of this work using computer assisted pharmacophore modeling and direct drug design approaches like docking led to the identification and synthesis of substituted sulfonamides and carboxamides where the best compound of the sulfonamides and carboxamides series showed very high activity with IC_{50} values 7.54 and 5.8µm respectively. Both the compounds improved in vivo activity in STZ model and restored the insulin level and the serum lipid profile by significantly improving the insulin signaling and insulin resistance. Altogether, both compounds present excellent profile for development as candidate for future PTP1B targeted drug discovery.

Speaker Biography

Anil K Saxena is actively involved in the domain of medicinal chemistry, including CADD, drug discovery and development research. He has more than 49 years of research experience with 206 research publications, 24 reviews/articles in books and/monographs, 72 patents and has delivered more than 180 invited lectures and chaired more than 48 sessions. He is a Fellow of Royal Society of Chemistry, UK, Editorial Board Member of different prominent journals like Medicinal Chemistry Research, SAR and QSAR in Environmental Research, online International journal ARKIVOC and Patent Evaluator: Current Drugs, UK. He is also series editor for book series "Topics in Medicinal Chemistry" published by Springer Verlag.

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Mridula Saxena

Amity University, India

Substituted Oxopropanylindole Hydrazones as potential lipid lowering, anti-oxidant and anti-hyperglycemic agents

The oxidative stress and hyperlypidimia are important factors in the pathogenesis and development of atherosclerosis and type 2 diabetes. The hydroxyl free radicals are involved in the peroxidative damage to lipoproteins in the blood leading to the development of atherosclerosis. Further, in hyperglycemic patients, the occurrence of several non-enzymatic glycosylations accompanied by glucose oxidation leading to the formation of $OH^{\bullet}$ and O^{2-} radicals through catalysis by Cu^{2+} and Fe^{2+} ions is the major risk factor of cardiac disorder in these patients. Moreover, the decrease in the bioavailability of vascular nitric oxide due to hronic hyperglycemia, insulin resistance and abnormal lipoprotein profiles lead to the risk of atherosclerosis. Thus, an agent lowering the cholesterol along with anti-oxidant activity and anti-diabetic activity should be able to protect endothelial and myocardial function and thus may be a good anti-atherosclerotic agent. Tryptophan derivatives are known to stabilize cell membranes that help to resist free radical damage due to their function as a free radical scavenger and anti-oxidants. The hydrazones as well as carboxamides have been versatile building blocks in the clinically used pharmaceuticals in the treatment of diabetes, obesity, metabolic syndrome (dyslipidemia) and CVD's. In view of above substituted oxopropanylindole hydrazones were synthesized and evaluated for anti-oxidant, anti-dyslipidemic, anti-adipogenic and anti-hyperglycemic activity where the most promising compound showed 44% reduction in lipid accumulation and 20.5% and 24.3% reduction in blood glucose at 5h and 24h respectively, as compared to standard drug metformin.

Speaker Biography

Mridula Saxena is currently working as Head of the Department of Chemistry, Amity University, India. She is actively involved in teaching and drug discovery research. She received her PhD degree at Central Drug Research Institute, Lucknow and has been associated both with teaching and research from the last 40 years. She has more than 32 papers and review/book articles in national and international journals, and 4 patents to her credit. She has visited many countries like, Germany, Hong Kong, China, Turkey, Slovenia, South Korea, Montenegro, Greece, Russia and Dubai for presenting her work.

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Vinod Chandra Tawar

King George Medical Clinic, Canada

Diabetic foot disease an innovation in treatment

A literature search from 2011 to date was conducted. An impact of diabetes on the peripheral circulation has been of a late stage occurrence. However, it is recognized as a significant complication due to further progression of the disease leading to an irreversible consequence e.g. amputation of the lower limb. As a treatment in earlier research Hyperbaric oxygen therapy was considered following a failure of antimicrobial treatment of foot ulcers. Later, a compromised circulation was identified as being responsible for the resistance in healing ulcers and subsequent antibacterial resistance. Finally, in literature, inconsistency in the diagnostic methods for peripheral arterial disease has been recognized. In our research, observations of clinical presentation e.g. the feeling of cold feet as a persistent occurrence, numbness, discoloration (pale green, blue) have been a common finding. Our research utilizing "Perivasc/ Diab" (our own creation), since 2015, has been based on early identification of vascular compromise among poorly controlled diabetics. A topical application twice a day for 30 to 90 days, in a population of 30 patients has yielded reversal of vascular compromise and restoration to normally functioning limbs. In Perivasc, active ingredients were responsible for a vasodilator effect. A continued application twice a day and by eliminating predisposing factors e.g. smoking and glycaemic control were essential to see optimum resolution. The active ingredients in the pilot study were also recognized as effective treatment measures in urological and cardio-vascular diseases. The study will be continued for a further review of these supplemental benefits. Through the course of the entire study no side effects have been observed.

Speaker Biography

Vinod Chandra Tawar has earned BSc Hons. and BSc Tech. Pharmaceuticals from University of Bombay. He was offered a teaching assistantship at the School of Pharmacy, University of Manitoba, Canada, where he achieved a Post-graduate (MSc) degree in Pharmacology followed by working as a Toxicologist at a University Hospital in Winnipeg for a duration of 10 years. In due course, he developed a Toxicology laboratory for patient management and Forensic purposes. This later became a reference laboratory for the Province of Manitoba. In 1981, he decided to study Medicine and graduated Medicine in 1985. Subsequently, he joined Douglas Hospital Research Centre at McGill University as a Psychiatry Research Consultant with participation in projects on depression, Alzheimer's disease, alcoholism and schizophrenia. Currently he is working in King George Medical Clinic, Canada.

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Mohit Vijay Rojekar

Rajiv Gandhi Medical College, India

Paraoxonase activity in metabolic syndrome in Children and Adolescents

Metabolic syndrome (MetS) is a collection of various interrelated risk factors that appear to have an impact as development of atherosclerotic cardiovascular disease (CVDs). Epidemic of childhood and adolescent's obesity has increased interest in the metabolic syndrome (MS) due to the potential projection into adulthood. The prevalence of MS in adolescents has been estimated to be 6.7% in young adults and 4.2% in adolescents. We aimed to study the MetS in children and adolescents with respect to metabolic changes. The international Diabetes Federation criteria were used for the selection of cases. Serum paraoxonase 1 (PON1) activities were measured using spectrophotometer. Statistical analysis was done using MyStat statistical software. Serum PON1 arylesterase (ARE) and lactonase (LACT) activities were found to be reduced significantly in patients with MetS than in controls. Regression analysis showed a significant correlation between PON1 activities and body mass index. Area under curve (AUC) found to increase from HDL to PON1 ARE to PON1 LACT. From the present study, it is clear that in children and adolescents, reduction in PON1 activities in MetS is mainly due either to abnormalities with synthesis or secretion of HDL cholesterol or oxidative stress as a consequence of excess production of the free radicals. This study also iterates that it is the quality and not the quantity of HDL cholesterol which is important while studying the pathophysiology of MetS.

Speaker Biography

Mohit Vijay Rojekar has completed his MD from SRTR Govt Medical College, Ambajogai, India. Now he is Associate Professor in the Dept of Biochemistry at Rajiv Gandhi Medical College and director of the Central Clinical Biochemistry Lab at Chhatrapati Shivaji Maharaj Hospital. He has to his credit more than 20 publications in various national and international journals. He is on editorial and advisory board of many reputed international journals. He also serves on reviewer boards of many well-known reputed international journals.

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