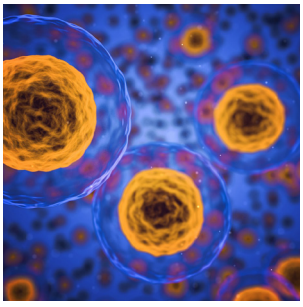
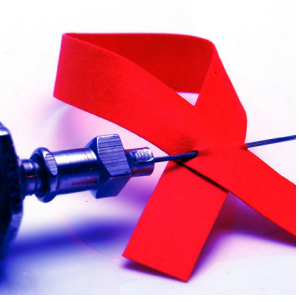
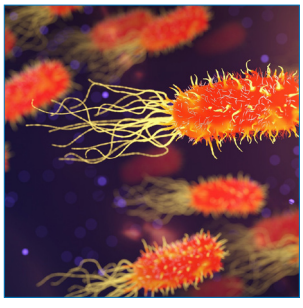
Scientific Tracks & Sessions
November 21, 2019

STD AIDS 2019

IMMUNOLOGY CONGRESS 2019







Joint Event on

Global Experts Meeting on

STD-AIDS and Infectious Diseases

&

12th International Conference on

Allergy, Immunology and Rheumatology

November 21-22, 2019 | Singapore

Role of gut microbiota dysbiosis and metabolic endotoxemia in pathogenic mechanisms of Rheumatoid Arthritis (RA)

Alex Shnyra and **Alex Malloy**
Kansas City University of Medicine and Biosciences, USA

RA is an autoimmune disease manifested by chronic inflammation of synovial joints that leads to bone and cartilage damage, systemic complications, and disability. RA affects approximately 0.5% to 1% of the population worldwide. Epidemiological studies show that RA has a complex genetic background. The heritability of RA is estimated to be about 60%. A strong association between certain human leukocyte antigens (HLAs) and predisposition to RA was shown in multiple studies. However, genetic factors are not alone in determining the risk and outcomes of RA development. It was demonstrated that environmental and lifestyle-related factors such as microbial burden and diet may also contribute to RA susceptibility in genetically predisposed individuals. Emerging evidence suggests the existence of a relationship between changes in gut microbiota and development of RA, although the precise role of microbial dysbiosis in the pathogenic mechanisms of RA is still to be fully defined. The autoimmune nature of RA is confirmed by the presence of anti-citrullinated protein antibodies (ACPA) and autoantigen-specific CD4+ T cells in RA patients. Mounting experimental and clinical evidence also suggest a key role of synovial macrophages (Mϕ in joint health and disease. In healthy joints, synovial M exhibit relatively quiescent M2 phenotype characterized by anti-inflammatory properties. In RA, inflammatory M are reprogrammed into M1 phenotype and serve as the major source of pro-inflammatory cytokines and other mediators implemented into synovial tissue inflammation, bone erosion, and ultimate destruction of joints. In our search for environmental triggers involved in early development of autoimmune diseases, we identified gut-derived endotoxin as a putative causative factor in the onset of RA. Here, we will review the emerging clinical and experimental evidence suggesting an important role of gut microbiota and metabolic endotoxemia in modulation of M1/M2 phenotypic responses of synovial M relevant to the pathogenic mechanisms of RA.

Speaker Biography

Alex Shnyra (born January 05, 1956) received his Doctor of Medicine in 1979 and Doctor of Philosophy in 1985 at Moscow, Russia. Dr. Shnyra was a senior scientist at All-Union Cardiology Research Center at Moscow, a visiting scientist at Dept. of Clinical Bacteriology, Karolinska Institute, Stockholm, Sweden, and he hold Faculty Positions at several medical schools in the U.A.E. and U.S.A. Since 2007, he is an Associate Professor of immunology at Kansas City University of Medicine and Biosciences. Dr. Shnyra is an expert immunologist with extensive experience in cell biology, immunology, molecular biology and biochemistry. He has developed several funded research projects in Russia, Sweden, and UAE and at NIH, USA. Dr. Shnyra is a receiver of International and Nationals awards and honors. His research is cited in more than 800 scientific publications. His current research is focused on the link between autoimmune diseases and the gastrointestinal microbiome..

e: ashnyra@kcumb.edu

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Nutritional Immunology: The New Health Concept on Disease Prevention

Manaog Jerlita
Association of Operating Room Nurses of the Philippines, Philippines

Nutritional Immunology is a science that continuously exploring how proper nutrition affect the functions of the immune system. It researches on specific plant food nutrients with great quantities of phytochemicals, antioxidants and polysaccharides that will benefit the immune system.

The immune system is a well-coordinated network of different immune organs that works as the body's best defense against foreign substances, infectious diseases and even cancer. When the immune system is weak, the human body is susceptible to acquire many illnesses. If the immune is confused or it cannot identify who is self and who is the enemy; the body may develop different allergies, such as skin allergies, or autoimmune diseases, such as rheumatoid arthritis. No amount of drug can replace a healthy immune system. The immune system must be well-fed, nourished on a daily basis and it can be nourished through proper nutrition; nutrition that come s from plant sources with great amount of phytochemicals, anti-oxidants and polysaccharides so the immune system can seek and destroy the invading enemies, cleanse the body from harmful chemicals and can repair damaged sites. Each part of the plant yield different nutrition. Every vegetable and fruit has its own unique nutritional properties, qualities, and each contains different amount of phytochemicals, antioxidants, and polysaccharides. To get the maximum nutritional benefits, the science of Nutritional Immunology will researched on the best type of plant food, species , harvest time, the best part of the plant, plant food combination and must use the best processing methods that retain its nutrients intact without the use chemical isolation, extraction and chemical preservation. Nutritional Immunology promotes the importance of educating the public on avoiding the path that lead to disease. It gives hope on how to improve lifestyle and quality of life by making wiser decisions in choosing the best plant food for the immune system. We are in charge of our health to live a healthy life and to create a healthier world for the next generations. Nutritional Immunology is the new health concept on disease prevention.

Speaker Biography

Manaog Jerlita completed her BS in Nursing at the age of 22 at the Makati Medical Center College of Nursing. She had units and a candidate of Masteral in Clinical Nutrition at the Philippine Women's University. Manaog J worked as the Assistant Unit Manager at the Operating Room Department, Clinical Instructor and a Private Duty Nurse at the Makati Medical Center for 9 years. She leads the research team for the Management Study by Dr. Renato Jose Priela of the Hospital of the Holy Cross entitled: "Promotion of Preventive Healthcare as a Tool in Hospital Patients Satisfaction" presented at the University of the Philippines Masteral of Hospital Administration and Public Health – Manila in 2011. She is one of the 12th selected Filipino trained by Dr. Jau Fei Chen (A World Renowned Scientist and Immunologist and the founder of Nutritional Immunology Science) at the Cebu International Convention Center in1998 organized by E.Excel International (Philippines) pioneers Nutritional Immunology (N.I.) Research. Currently, Manaog J is a favorite lecturer and conducts numerous speaking engagements in schools, colleges, hospitals, Municipal Health Offices and organizations in Philippines in spreading the Science of N.I. currently; she is the CEO and Sole Proprietress for the Center for Preventive Healthcare Management and N.I. Awareness for 15 years and a N.I. Advocate for 21 yrs. She is currently the Community Service Director for Mother and Child Care of the Rotary Club of Downtown Calapan District 3820.

e: jerlitamanaog@gmail.com

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Lab Allergy Testing: Assessing Frequency of Food and Environmental Allergens in Pakistani Population

Ghani F
Aga Khan University Hospital, Pakistan

Food and environmental allergies are common in childhood and adults. It has been suggested that the magnitude of an allergen specific IgE result can improve diagnostic usefulness, but this has been addressed in only a few tertiary challenge-based studies. This study aims to assess the frequency of food and environmental allergens in our population. The study population consisted of 88 individuals (male: 47 and female: 41). The study was conducted in the clinical laboratory, department of pathology and microbiology, Aga Khan University Hospital from May 2009, till May 2010. Sera of patients positive for total IgE were tested for allergen specific IgE levels by immulite 2000, 3gAllergyTM.

There were a total of 27 allergens tested on 88 individuals having positive total IgE. We have analyzed the data on two cutoffs of allergen specific IgE i.e. moderate (0.7-3.49 kU/L) and high (3.5-17.49 kU/L). The results suggest that in moderate reactivity the most common allergen from environmental panel was dog epithelium (46.6%), mites (33%), cockroach (17%) and from food panel was egg white (23.9%), milk (22.7%)and soybean (13.6%) but in high reactivity the commonest allergen was mites (6.8%),cockroach (4.5%),cat dander epithelium (3.4%),D.farinae (3.4%), molds (3.4%) and weeds (3.4%) from environmental panel and egg white (2.3%), peanuts (2.3%) and shrimps (2.3%) from food panel. At very high reactivity (>52.50 kU/L) most common environmental allergens seen were mites (2.3%), cat dander epithelium (1.1%) and common food allergens were shrimps (1.1%) and peanuts (1.1%). Results generated from our study showed that there is high frequency of environmental and food allergies in our patients and total IgE levels are correlating with specific IgE levels.

Speaker Biography

Farooq Ghani did his MBBS from Karachi followed by training in Pathology at Boston University Medical Center USA. He did his fellowship in Pathology and Laboratory Medicine in Boston plus a PhD in Pathology from Boston University. He is a Diplomate American Board of Clinical Chemistry and Fellow of National Academy of Clinical Biochemistry USA. Dr Ghani has spent most of his professional career in United States. He has held faculty and consultant positions at Boston University Medical Center, Hartford Hospital Connecticut, New York Medical College at Westchester Medical Center New York and was Director at Bayer Healthcare in Tarrytown New York. Upon his return to Pakistan he joined Aga Khan University in 2007. He is currently the Service Chief, Department of Pathology & Laboratory Medicine at The Aga Khan University Hospital. He has published extensively in reputable peer reviewed journals and has many book chapters to his credit.

e: farooq.ghani@aku.edu

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A trivalent vaccine candidate against brucellosis

Sonal Gupta and **Rakesh Bhatnagar**
Jawaharlal Nehru University, India

The current vaccines against brucellosis namely B. abortus Strain 19 and RB51, are able to prevent Brucellosis infection in animals but are still far from ideal in offering complete protection against the disease. Moreover they are infectious to the human hosts as well as pose potential risks to recipient animals e.g. attenuation reversal and virulence in susceptible hosts on administration. Therefore, recombinant subunit vaccines prove to be better alternatives for combating brucellosis. BP26, Omp25 and L7/L12 are proposed to be promising protective antigens by inducing heightened antibody titres in conjugation with strong cell-mediated immune responses against Brucellosis infection. The main goal of the present study is to determine the prophylactic potential of a Combined Subunit vaccine (CSV) against brucellosis consisting of BP26, Omp25 and L7/L12 ribosomal protein of Brucella abortus. On co-immunization of BP26, Omp25 and L7/L12, It was observed that total IgG antibody levels in combined subunit vaccine were comparable to the mice immunized with BP26, Omp25 and L7/L12 individually. Robust humoral and cellular immune response was suggested by higher IgG1 and IgG2a levels in mice immunized with Combined Subunit vaccine candidate (CSV). The effect of formulations on T-helper (Th) cell development was assessed by quantifying the Th1-dependant (IFN-γ, IL-2 and TNF-α) and Th2-dependant (IL-5, IL-10) cytokines. Evidently, the simultaneous immunization with three antigens complimented immune responses against its components. Altogether, this study shows immune responses analysis on co-immunization of BP26, Omp25 and L7/L12 proteins as a vaccine candidate against Brucella species infection.

Speaker Biography

Sonal Gupta is a research scholar working on formulation of recombinant vaccines against infectious diseases such as Brucellosis, anthrax. She completed her MSc in Biotechnology from School of Biotechnology, JNU. Currently she is pursuing PhD in Biotechnology from Jawaharlal Nehru University, New Delhi. Her research interests include studying immunological responses of host in response of bacterial diseases, recombinant vaccines formulation against bacterial infectious diseases.

e: sonalmole@gmail.com

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HIV communication programme among long-distance truck workers in West Bengal - An analysis of selected national highway in Bengal

Rajesh Das
University of Burdwan, India

West Bengal, the most important State in eastern India, is a gateway of business and commerce for entire eastern India along with Bangladesh, Nepal and Bhutan. The State comprises of 3664 KM National Highway along with 4300 Km long State Highway. Millions of trucks are running everyday with their drivers, helpers and cleaners from one District to another State. The truck workers spend their life with a shabby, unhealthy environment within or outside of truck, less physical proximity from their wife and family or community, face several types of risks on road, and willingly or unwillingly come across some conflicts and contradictions with public other transports drivers or even police. In these circumstances Female sex workers (FSWs) and long distance truck drivers (LDTDs) are considered key population at high risk for HIV transmission due to high prevalence. The intersection of these mobile populations, cover a multi clustered 'risk –audiences group', like truck workers- themselves , their family members and wives, female sex works even some other women in another states who are accidentally becomes his friend or close associate. At the same time the National Highways spread across the remote hinter lands of villages. The adjacent rural community, more specifically the women are one of the vulnerable HIV risk community in this said transport ecology. Two major issues will be analysed through this work-i) it will reveal a perspective of a changing notion of communication paradigm of HIV /AIDS awareness from its existing scientific extension system to the transfer of socio-psychological information on need based orientation for specific community and ii) issues, ideas and scopes of applications of cultural proximity and dialogic action in AIDS communication for truck workers community onwards National Highway. Research problems may be defined as - i) how to define the problem of HIV/ AIDS communication awareness campaign among a mobile community- truck workers?

ii) To explore the nature of sex trade along a particular transport route. In this study it will be explained the notions of direct level biological (physical) contacts and the vulnerabilities that exist between these two groups, i.e. truck drivers and professional and casual sex workers with regards to HIV/AIDS. This proposition will help to design to formulate an agenda-setting; through an involvement of said stakeholders (participation of vulnerable group/s) .Proposed study may consider Health Belief Model and Theory of Planned Behavior as Possible Theoretical Frameworks, along with McGuire's Hierarchy of Effects to gauge various stages of outcome. A Mixed method design classification on AIDS awareness and communication design will follow for the proposed study. It means qualitative methods to develop quantitative measures and qualitative methods to explain quantitative findings. Focused group discussion, In-depth interview, Content and coverage of AIDS campaign and coverage by leading media and stratified clustered survey analysis would be the research methodology for this work.

Speaker Biography

Rajesh Das has 15 years of teaching experience in PG level, specialization in health communication, rural communication and international communication; he has successfully presented around 60 no of research papers in an international and national conference/ seminar. He also published three edited volume along with 20 articles in journal or as a chapter in an edited volume. He act as a research supervisor in two consecutives projects by Indian Institute of Mass Communication, funded by ICSSR, New Delhi and NCRI, Hyderabad, under Ministry of Human Recourse Development, Govt of India. He also awarded as a principal investigator in ICSSR -IMPRESS Major Research Project, funded byMinistry of Human Recourse Development, Govt of India and also awarded as a producer in International Documentary Film Festival by the Department of Information and Culture, Govt of West Bengal.

e: rajesh.das.cal@gmail.com

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