REPORT ON

IMMUNOMEET 2024

COMJNMH, West Bengal University of Health Sciences (WBUHS), Kolkata

Department of Biochemistry, College of Medicine & Jawaharlal Nehru Memorial Hospital (COMJNMH), West Bengal University of Health Sciences (WBUHS), Kolkata, organized an outreach Conference "Immunomeet" covering immunesystem and immunodiagnostics at Baranti Village Resort, Baranti, Purulia, West Bengal on March 27-29, 2024. Dr Vijay K Kutala, Additional Professor, Department of Biochemistry, Nizam's Institute of Medical Sciences (NIMS), Hyderabad released the Abstract book and Souvenir.

Dr Dablu Lal Gupta, Assistant Professor from AIIMS, Raipur discussed about the mutations in the RBD domain at the residues K417, E484, and N501 that reduced the immuno-reactivity with antisera obtained from vaccinated people and SARS-COV-2 recovered patients. Prof. Dibyajyoti Banerjee from PGIMER, Chandigarh explained the binding of Vitamin D and some of the related molecules (analogs and other steroids) with the ACE2 receptor. He said if this binding affinity is more than the SARS-CoV-2 proteins, then inhalation supplementation of such molecules will not allow the pathogen to bind with the ACE2 receptor, thus imparting a host-based prevention mode.

Dr Amit Pal from AIIMS, Kalyani discussed about the role of selenium levels in colorectal cancer. Dr. Sanchayan Sinha from College of Medicine and Sagore Dutta Hospital, Kolkata reported three cases of dengue in pediatric and adolescent age groups, with myositis presenting as muscle weakness. Dr Lalthanzami Sailo from COMJNMH, Kalyani, discussed the role of serum TGF-β1 and hydroxyproline in female uterine prolapse. Sharmila Wahengbam and Romabai Chanu from NIT, Manipur described the combined chemotherapeutic effect by bimetallic cobalt (III) and platinum (II) complexes. Gobinda Bag from NIT, Manipur developed red-light activable oxovanadium (IV) complexes that enhanced therapeutic activity on photo-activation through the singlet oxygen generation making the prodrug system remarkably cytotoxic against cancer cells.

Small molecules like antibiotics are widely used as therapeutic agents against diseases and also detectable marker for diseases. Dr. Rajasri Bhattacharyya from PGIMER, Chandigarh, identified peptide as diagnostic and therapeutic marker against diseases. Dr Sruti from TRIHMS, Arunachal Pradesh talked the role of insulin resistance and serum TNF-α level in overweight, obese with and without metabolic syndrome and their risk for cancer. Dr. Tapan Mondal, COMJNMH, Kalyani, identified the role of serum Mg^{2+}, erythrocytic $Na^{+}K^{+}$ATPase and insulin resistance with any possible association in between them in case of type 2 diabetes mellitus.

Complement is a pro-inflammatory system comprising of soluble and membrane bound proteins. Their importance in several disorders is increasingly being realized. In this context, a detailed presentation by the 2nd year MBBS students on Complement system was enjoyed and applauded by everyone. Prof. Nibhriti Das (former Prof. from AIIMS, New Delhi) discussed on the complement regulatory proteins as biomarkers. She explored the disease association and potential of leucocyte DAF (Decay Accelerating Factor) and Membrane Cofactor Protein **(**MCP) as biomarkers for rheumatoid arthritis and for that, investigated the disease related modulation of these two vital transmembrane complement regulators.

Chikungunya is a viral disease caused by positive sense single stranded RNA virus. This virus transmitted to human by Aedes misquotes. High fever, myaligia, Joint swelling, body rashes are characteristic features of Chikungunya. Prof. DN Rao (former Prof. from AIIMS, New Delhi) constructed Multiple Antigenic Peptide (MAP) based on in house established immunodominant B and T cell epitopes of E2 protein and established an alternative approach for vaccine design for Chikungunya. With the aim to identify immunodominant epitopes within the envelope protein his team investigated the detailed analysis of fine specificity of antibody response in different individuals with Chikungunya Virus infection.

Autoimmunity is an aberrant immune response against the self-tolerance mechanism. Because of its intricate pathogenesis, therapeutics is still evolving. The incidence of autoimmune colitis has been progressively increasing globally. Human lymphatic filariae have evolved numerous immune evasion strategies to secure their

long-term survival in a host. Prof Kalyan Goswami from AIIMS, Kalyani showed that exploiting filarial immunomodulators can be a potential therapeutic strategy against autoimmune pathology. Dr. Vijay Kumar Kutala from Nizam's Institute of Medical Sciences (NIMS), Hyderabad, shared his findings on the association of human leukocyte antigenclass II alleles with the susceptibility and phenotypic heterogeneity of systemic lupus erythematosus (SLE) in south Indian subjects.

Dr. Sukhes Mukherjee from AIIMS, Bhopal revealed that *M olifera* phytocompounds have potent anti-breastcancer properties in cell lines, suggesting that Tregs and peripheral immune cell counts could be used as biomarkers for breast cancer diagnosis and prognosis. Injamam Ul Hossain from JIPMER, Puducherry, compared the serum levels of oncovascular risk factors, stress levels and vascular endothelial function before and after Neoadjuvant Chemotherapy (NACT) among primary Breast Cancer (BC) patients.

This memorable program at Baranti Village Resort ended with Vote of thanks by the Organizing Secretary, Dr Mrityunjoy Halder, Assistant Professor, COMJNMH, WBUHS, Kolkata.

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