

# Keynote Forum November 01, 2018

## **Clinical Microbiology & Eye 2018**



7<sup>th</sup> European Clinical Microbiology Congress & 4<sup>th</sup> International Conference on Ophthalmology and Eye Disorder November 01-02, 2018 | London, UK



Joint Event

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# Radka Argirova

Tokuda Hospital, Bulgaria

Co-infection HIV/flu: From experimental model to individual health

Recently, *in vitro* model has been developed to study HIV-1 and influenza virus (Flu) co-infection based on HIV-1 sialoglycoprotein (Sgp) synthesis and virus replication in acute (MT2) and chronically (H9/HTLVIIIB) double-infected cells. HIV-1 replication and gp120 concentration were quantified by specific tests (RT detection and gp120 Antigen Capture Assay, resp.) The co-infection provoked desialylation of HIV Sgps, followed by increased HIV replication. A hypothesis was outlined that exogenous neuraminidase (NA) (Flu) changes the configuration of HIV-1 gp120 through desialylation resulting in exposure of a novel antigen. Monoclonal antibody to the principal neutralizing determinant V3 but not the broadly reactive one against gp120 recognize and neutralize in concentration-dependent way the epitope newly exposed on HIV-1 virion after flu infection. The proposed model could contribute to better understanding of pathogenesis of flu co-infection in people living with HIV. In vivo, flu co-infection most probably leads to desialylation of both HIV and the cell surface, thus facilitating the escape of HIV from immune control. This fact coincides well with the increase of viral

load observed in HIV-infected persons with flu co-infection or after flu vaccination. The findings described here reflect the interaction between components of two viruses – NA of flu and Sgps on HIV-1 without considering the cell surface. The hypothesis is now extended to other exogenous agents containing NA in HIV-infected people. Moreover, without HIV infection, it has been reported that some sialylated glycoproteins can be desialylated *in vivo* by interaction with endogenous cellular NAs, thus changing their function.

### Speaker Biography

Radka Argirova has many years of scientific and practical experience as a virologist, especially in the field of HIV, retroviruses and oncogenic viruses. She graduated from the Higher Medical Institute in Sofia in 1969. In 1973, she graduated from the Institute of Virology "Ivanovski " in Moscow, where she obtained a degree in medical sciences (Candidate of Medical Sciences). In 1987, she became an assoc. prof. in virology at the Institute of General and Comparative Pathology of the Bulgarian Academy of Sciences. Since 1994, he has been a doctor of medical sciences and since 1997, a professor of virology. She is currently working in Tokuda Hospital.

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## Shlomo Dotan

Hadassah University, Israel

The 12 neuro-ophthalmological diagnoses you would hate to miss

he presentation will elaborate on twelve neuroophthalmologic disorders, part of a longer list, which can potentially cause death or blindness if not diagnosed and treated correctly: Aneurysmal third nerve palsy; aneurysm is not the most common compressive lesion causing third nerve palsy, but it has the highest mortality if untreated. Giant cell arteritis is an idiopathic inflammatory vasculitis affecting smallto-medium size arteries, which can cause blindness, but also cerebral infarction and cardiac ischemia. Myasthenia gravis is an autoimmune disease of the neuromuscular junction, which has both an ocular and generalized form. Myasthenic crisis is a neurologic emergency, which causes paralysis of the muscles of breathing. Pituitary apoplexy results from hemorrhagic infarction of the pituitary gland and causes acute endocrine and neurologic symptoms. Pseudotumor cerebri or idiopathic intracranial hypertension is a condition of unknown cause that produces elevated intracranial pressure and papilledema primarily in young obese females. In 24% of cases can cause visual dysfunction. Primary optic nerve sheath meningioma is the most common tumor of the optic nerve sheath, and it typically presents with a slowly progressive optic neuropathy characterized by a variable loss of visual acuity. Pituitary adenomas are the most common cause of chiasmal lesions in adults. The most common symptom of a chiasmal compressive lesion is gradual, painless, progressive and bilateral vision loss. Fungal optic neuropathy may complicate meningitis resulting from a variety of molds and yeasts. The prevalence

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of these disorders increases in immunocompromised or immunosuppressed patients with diabetes, lymphoreticular disorders or AIDS. Neuromyelitis optica or Devic's disease is characterized by acute or subacute loss of vision in one or both eyes caused by acute optic neuropathy preceded or followed within days or weeks by a transverse or ascending myelopathy. Horner syndrome is manifested with acute neck pain and a miotic pupil. It may be caused by a lesion along the sympathetic pathway that supplies the head, eye and neck. Toxic/nutritional optic neuropathies usually develop over months with a painless, bilateral, symmetric and progressive loss of central vision, but some cases may present with acute and severe vision loss such as poisoning with methanol or ethylene glycol. Amaurosis fugax lasting minutes in an altitudinal fashion should be considered to be ischemic, due to cardioembolic source or giant cell arteritis, until proven otherwise.

### **Speaker Biography**

Shlomo Dotan attended medical school at the Hebrew University–Hadassah Hospital in Jerusalem, between the years 1968 and 1974. He completed his internship and residency in ophthalmology and received his license as a specialist in ophthalmology from the Israeli Ministry of Health in 1986. In 1989, he started a clinical fellowship in neuro-ophthalmology at the Kellogg Eye Center in Ann Arbor, MI, USA, under the supervision of Dr. Jonathan Trobe, a world leading neuro-ophthalmologist. For the last 27 years, he was the chief of the neuro-ophthalmology service at the Hadassah-Hebrew University Medical Center in Ein Kerem, Jerusalem. He speaks fluently five languages, is the author of almost forty scientific articles and the organizer and speaker in many ophthalmological and neuro-ophthalmological conferences.

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# Anil Chandra Phukan

North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, India Emerging viral diseases in India with particular reference to the north eastern region

merging infectious diseases is a major health threat to the Cmankind. The globe has been observing detection of one new infectious agent in average in every year during last 30 years. Several outbreaks due to 8 new aetiological agents in recent past are reported in India. Majority of them (62.5%) are viral agents like H1N1, Chikungunya, Chandipura, CCHFD virus and Nipah virus on top of JEV, Dengue viruses, HBV, HCV, HEV including HIV.

Northeast India is the north eastern region of the country comprising of eight states with 4500km of international boundary with China, Myanmar, Bangladesh and Bhutan with more than 40 million population and 220 diverse ethnic groups. The region has unique climatic condition with hilly terrains flanking huge valleys with inhabitants mosaic socio-economic and cultural backgrounds. of

Northeast India is bearing a considerable burden of viral infections occurring as emerging or re-emerging diseases. The region has the worse experience of devastating epidemics of JE since 1978, with huge morbidity and mortality till today spreading to new geographical areas. Recent activities of Dengue and Chikungunya viruses in the region is emerging as a great concern to the public health authority. HIV with increasing HBV and HCV infections, containment of H1N1 and H5N1 diseases and epidemic prediction including preparedness for CCHFD and current Nipah virus infections are becoming a great challenge to the heath administrators of the region. In consideration of successful implementation of prevention and control strategies for such infections a diagnostic laboratory and surveillance based study was conducted to investigate the prevalence of different emerging viral infections in the Northeast India in North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong during the period 2015-2018. The relevant Arbo viruses, Hepatitis viruses, Rota viruses and



Influenza viruses including CCHFD virus were included in the study. Data was analyzed using R-statistical package v3.4.4 and MedCalc v18.

A total of 1795 patients were investigated for various viral infections in the study. The male:female ratio of the total patients investigated was 1.34, with male preponderance. The mean age of the patients was 31.01 (±17.23). Among the patients investigated, 82.34% were from the state of Meghalaya and rest 17.66% were from the neighbouring States of the region. The prevalence of various viral agents associated with the patients was found to be as: Dengue (15.25%, n= 669), Japanese encephalitis (22.1%, n= 353), Chikungunya (14.83%, n = 573), Hepatitis viruses (25.11%, n=238), Crimean Congo Hemorrhagic Fever virus (0%, n = 35), Rota viruses (60.61%, n = 33), Influenza viruses (0.56%, n = 1080). The seasonal variation of different viral infections was also analyzed. The demographic profile of individual viral infection was analyzed.

Conclusion: The study highlights the burden of different emerging viral infections in this region of the country. Strengthening of surveillance and timely reporting systems, epidemic prediction and preparedness, rapid response and a revamped health infrastructure are the best weapons to fight against such threat to human being.

### **Speaker Biography**

Anil Chandra Phukan completed MD (Medical Microbiology) from Dibrugarh University, Assam and DMV from Pune University, India and obtained DSA from COTTISA, Bangkok, Thailand under WHO Fellowship. He worked as senior scientist in Indian Council of Medical Research for a long time. Presently, he has been working as dean of academics and prof. & head of Microbiology Department, NEIGRIHMS, Shillong, India with active involvement in implementation of national health programmes. He has several national and international publications in reputed journals. Understanding of molecular epidemiology of infectious diseases is his priority area of research activity.

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