Does proteogenomics study give answer to the diagnosis of infectious and non-infectious diseases of nervous system

Proteogenomics study for the diagnosis of infectious and non-infectious disease is gaining importance in the recent developments. Infectious diseases like tuberculosis, cryptococcosis, toxoplasmosis and many more bacterial infections of the brain and non-infectious diseases like autoimmune diseases, mental disorders, Alzheimer’s disease and many more disorders related to central nervous system are increasing in recent years. There are indirect assays available to detect the causative agents or showing evidence of parameters which suggests the possibilities of occurrence of disorders. No single direct assay is available in the present situation to give the definite proof of disease. There are several direct tools available in proteomics and genomics study if done methodically with the identification of novel proteins and they are specific. The proteomic study has been designed in our centre for infections of brain and genomic study has been proposed by using body fluids like cerebrospinal fluid (CSF) and blood. Sequencing represents one of the most powerful techniques currently available to identify signatures of organisms in any potentially diagnostic specimen including CSF. Sequencing CSF samples to look for evidence of infection has been reported to be successful in identifying cases where other diagnostic tests had failed. However, the requirement of high technical skill and cost is deterring factor for its routine use. Sequencing blood samples obtained from non-infectious disorders and healthy volunteers have been tested negative for potential transfusion transmitted infections will help us to identify any other potential infection which needs to be tested in future. The study proposes to identify possible infection in diagnostic test negative CSF and to look for the presence of any in the blood.

Biography

Raju Ravikumar has completed his Doctor of Medicine from Bangalore University and further completed certificate course in Immunology from University of London. He is the Professor of Neuromicrobiology, National Institute of Mental Health and Neurosciences Bangalore, India. He has received WHO Fellowship to attend XII International Congress for Tropical Medicine and Malaria in Amsterdam. He was the recipient of WHO Fellowship on Food Safety at Bangkok, Thailand. He has presented scientific papers in International AIDS conferences in 2004, 2006 and 2008 held in Bangkok, Toronto and Mexico respectively. He has published more than 40 scientific papers in national and international journals. He is the Member of International AIDS Society, European Society of Clinical Microbiology and Infectious Diseases ESCMID, American Society for Microbiology, Quality Council of India, Indian Association of Medical Microbiologists, Indian Association of Pathologists and Microbiologists and Indian Immunology Society.

Notes: