



Divecha Centre for Climate Change

Indian Institute of Science

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DCCC Seminar

Title: “Environmental Issues in the Alzheimers Disease Recognition and Prevention”

Speakers: Dr. Thomas Gregor Issac,

Associate Professor, Centre for Brain Research (CBR)

Indian Institute of Science, Bangalore.

Date: 24th November 2022(Thursday)

Time: 4:00 PM – 5.30 PM

Venue: DCCC Auditorium, 2nd Floor.

Speaker Bio :

Dr. Thomas Gregor Issac completed his M.B B.S training from M.O.S.C Medical College (Mahatma Gandhi University), Kerala from 2003-2009 and subsequently got selected for Ph.D. in Clinical Neurosciences Programme under the ICMR MD-PhD Talent Search programme which he pursued from August 2011 till July 2016. His PhD dissertation focused on the role of “Renin-Angiotensin-Aldosterone System in Cognitive deterioration in patients with cerebral small vessel disease” wherein he examined the genetic, cognitive, and neuroimaging profiles of a cohort of more than 200 patients across the spectrum of vascular cognitive impairment. Subsequently, he was selected for the MD Psychiatry course at the prestigious National Institute of Mental Health and Neurosciences (NIMHANS) and trained as a Junior Resident in the Department of Psychiatry from July 2016 to June 2019. His MD dissertation involved studying the “Role of APO E4 allele in vascular cognitive impairment”. He has also cleared DNB in Psychiatry. Dr. Thomas Gregor Issac, MBBS, M.D, D.M, Ph.D.(NIMHANS), Associate Professor at the Centre for Brain Research (CBR), Indian Institute of Science. Worked as a Clinical Neurosciences Fellowship for ICMR from 1916-2022. He has > 50 published indexed publications.

Abstract:

Our environment has a significant contribution in ensuring cognitive well-being. The Lancet commission (2020) reported that environmental pollution (especially air pollution) is one of the important modifiable risk factors of developing dementia and if controlled would contribute to reducing 2% of prevalence of worldwide dementia cases. This talk would be focused on the environmental risk factors playing a role in the development of neurocognitive decline. The major brunt of this is borne by the Low and Middle-income countries (LAMIC) where the population affected is more but contributes less to carbon emission and environmental pollution. Another recent ICMR study identified exposure to PM_{2.5}(exposure to particulate matter with an aerodynamic diameter less than 2.5 µm) as a risk factor for all-cause dementia, Alzheimer's Dementia, and Vascular Dementia and exposure to Ozone (O₃) as a possible risk factor for AD. The implications are tremendous. This could range from occupational hazards, ingestion of chemicals, presence of microplastics, the role of Aluminum in the precipitation of Alzheimer's dementia, manganese in Parkinson's disease, and so on. Harmonious co-existence with other species and ensuring well being of the ecosystem around us would be the only workable solution. Climate change was a myth 2 decades ago and now it is a reality. Healthy ageing is an effortful process and eliminating these environment-related modifiable risk factors would ensure better cognitive health and a lesser prevalence of dementia. I would also try to delve into the possible solutions in this context. I invite one and all for this talk and valuable discussion with respect to the same.

All are Welcome