Dr. K. Kaviarasn
Associate Professor (Biomedical Science)
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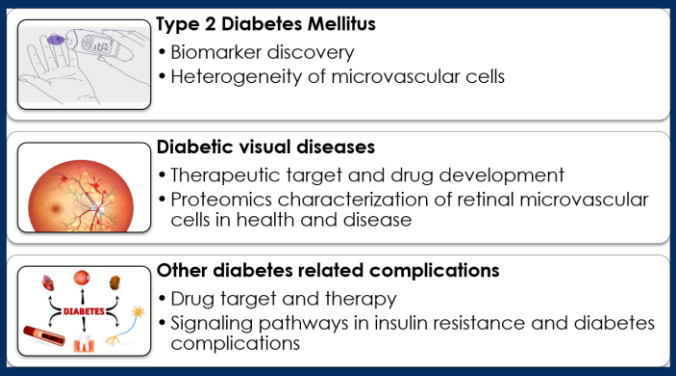
PhD/Post Doc supervision slots available: 4

Personal Profile

Dr. K. Kaviarasan is an associate professor at SRIHER, specializing in Biomedical Sciences since August 2014. His current research focuses on diabetes and its complications, immune biology, ocular proteomics, and lipidomics. He is dedicated to develop new drugs and examining their effects on the PI3K and AKT pathways, especially in relation to glucose uptake, insulin regulation, related systemic inflammation in insulin resistance and type 2 diabetes. During his Post Doctoral tenure, he investigated how lipids and their by-products contribute to the development of diabetic retinopathy. Dr. Kaviarasan has over 10 years of teaching experience in Biochemistry, Physiology, and Endocrinology. His expertise in research spans over 15 years, resulting in the publication of 17 papers in reputable journals.

Currently, he is studying the heterogeneity of retinal pericytes, endothelial and other microvascular cells in diabetes complications. In addition, He is also examining the impact of bioactive lipids, HDL function, and inflammatory cytokines on the progression from prediabetes to type 2 diabetes mellitus.

Research interest



Funding sources
[Past and Present]

ICMR INDIAN COUNCIL OF MEDICAL RESEARCH

TNSCST

NOVARTIS

Department of BioTechnology, Government of India

Current members

Ms. Sharmila Rajendran (ICMR-SRF): Research Scholar; Microvascular cells heterogeneity in diabetes and its complications

Ms. Sandhya Krishnan (ICMR-JRF): Research Scholar; Imbalance of pro and anti-inflammatory bioactive lipids, reverse cholesterol transport (HDL function) in Pre-diabetes and type 2 diabetes.

Ms. Ranjitha R: Research Scholar: Biomarker discovery for risk screening and detection of childhood anomalies in Pregnant Mother

Past Members

Y M.Mounish, Recipient of Summer research fellowship, SRIHER
Nandhini Prakash, Project Assistant, Novartis funded project
Sherine Joana, Recipient of summer research fellowship, SRIHER
Suvashini, Recipient of summer research fellowship, SRIHER
Sutannu patra, Recipient of student fellowship from TNSCST.

We are actively looking for skilled PhD students to join our team on novel biomarker discovery, drug target identification and therapy development

Selected Publications

Kaviarasan K, Jithu Mohanlal M, Mohammad Arif Mulla, Tarun Sharma, Das UN, Angayarkanni N. Low blood and vitreal BDNF, LXA4 and altered Th1/Th2 cytokine balance as potential risk factors for Diabetic Retinopathy. Metabolism 2015: 64(9); 958-66

Umashankar V, Sathya Baarathi R, Kaviarasan K, Jithu M, Undurti N Das, Angayarkanni N. Molecular docking studies infer potential binding of lipoxin A4 and eicosapentaenoic acid to brain-derived neurotrophic factor. Lipids Health Dis. 2012 Sep 4;11(1):109.

Daleena D, Nandini P, Angayarkanni K, Kaviarasan K, Thanikachalam S, Das UN, Dhanashree Ratra. Interchangeability of retinal perfusion indices in different-sized angiocubes: An optical coherence tomography angiography study in diabetic retinopathy Indian J Ophthalmol. 2020; 68(3): 484–489

Kaviarasan K, Jithu Mohanlal M, Barathi S, Mohammad Arif Mulla, Kannadasan Anand Babu, Parveen Sen, Das UN, Angayarkanni N. Elevated Serum OxLDL Is Associated with Progression of Type 2 Diabetes Mellitus to Diabetic Retinopathy. Exp Eye Res 2019;186:107668.

Dhanashree R, Rajesh N, Daleena D, Nandini P, Kaviarasan K, Thanikachalam S, Undurti Das, Angayarkanni N. Early structural and functional neurovascular changes in the retina in the prediabetic stage. Nature Eye (Lond).2020 May 28

Sharmila R, Shanmuganathan S, Arun D, Kaviarasan K. Microvascular cells: A special focus on heterogeneity of pericytes in Diabetes associated complications. International Journal of Biochemistry & Cell Biology.2021;134:105971

S Rajendran, S Seetharaman, U Vetrivel, Kaviarasan K. Integrative study of gene expression datasets in retinal samples of Diabetic Retinopathy. Exp Eye Res. 2022; 223:109194.