Short Resume

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Qualification: PhD

Designation: Additional Professor

Institute: Department of Biochemistry, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala-695011

Area of research: Genetic and molecular basis of rare neurodegenerative diseases, blood-based biomarkers, biochemical assay development

Publications: (Search: Madhusoodanan UK/Madhusoodanan Urulangodi)

1. Fasaludeen A, Jose M, Aswathi U, Prasannakumar S, Banerjee M, Sundaram S, **Madhusoodanan Urulangodi**, Radhakrishnan A, Menon RN (2025) A real-world comparison between the diagnostic yield of trio-whole exome sequencing and proband-only targeted exome sequencing in complex childhood epilepsy. **Seizure**. 2025 Apr 1;129:51-54. https://doi.org/10.1016/j.seizure.2025.03.020
2. Vasu MM, Koshy K, Ganapathi G Panniyammakal J, **Madhusoodanan Urulangodi**, Srinivas G, Harikrishnan S (2025) Diagnostic and Prognostic Relevance of Circulating MicroRNAs in Heart Failure. ***Heart Failure Journal of India*** 3(1):p 17-36, January-April 2025. ***https://doi.org/*10.4103/HFJI.HFJI_5_25**
3. Aishwarya Babu, Achanya S Jayan, Anjali Sethumadhavan, Geetha Mandagini, Cibin T Raghavan, Srinivas Gopala, Syam Krishnan*, **Madhusoodanan Urulangodi*** (2024) An improved Glucocerebrosidase assay for accurate prediction of lysosomal dysfunction: exemplified by its relevance in Parkinson's Disease**.** ***Indian Journal of Clinical Biochemistry*** https://doi.org/10.1007/s12291-024-01234-8
4. Deepthy Chandran, Syam Krishnan, **Madhusoodanan Urulangodi***, Srinivas Gopala* (2024) Exosomal microRNAs in Parkinson's disease: insights into biomarker potential and disease pathology. ***Neurological Sciences*** 45(8):3625-3639. https://doi.org/10.1007/s10072-024-07439-2
5. Harikrishnan S, Koshy L, Ganapathi S, Jeemon P, Ramya Das NK, **Madhusoodanan Urulangodi**, Madhuma M, Vysakh Y, Subran A, Lakshmikanth LR (2024) Clinical exome sequencing unravels the diverse spectrum of genetic heterogeneity and genotype-phenotype correlations in hypertrophic cardiomyopathy. ***Int J Cardiol.*** 411 (2024):132273. https://doi.org/10.1016/j.ijcard.2024.132273
6. Vasu MM, Koshy L, Ganapathi S, Jeemon P, **Madhusoodanan Urulangodi**, Gopala S, Greeva P, Anitha A, Reethu S, Divya P, Shamla S, Sumitha K, Madhavan M, Vineeth CP, Kochumoni R, Harikrishnan S (2024) Identification of novel endogenous control miRNAs in heart failure for normalization of qPCR data. ***Int J Biol Macromol.*** 261(Pt 2):129714. https://doi.org/10.1016/j.ijbiomac.2024.129714
7. Anand Binu, Easwer HV, Prakash Nair, Antony Stanley, Biren Khimji Patel, **Madhusoodanan Urulangodi**, Geetha Mandagini, Tania Jose (2024) Role of Copeptin in predicting Post operative

Hyponatremia and Hypernatremia in patients undergoing endoscopic pituitary adenoma surgery. ***Neurosurgery.*** 95(3):641-650. https://doi.org/10.1227/neu.0000000000002927

8. Asha Kishore, Marc Sturm, Kanchana Soman Pillai, Christopher Hakkaart, Divya Kalikavil Puthanveedu, **Madhusoodanan Urulangodi**, Syam Krishnan, Ashwin Ashok Kumar-Sreelatha, Roopa Rajan, Pramod Kumar Pal, Ravi Yadav, Gangadhara Sarma, Nicolas Casadei, Thomas Gasser, Peter Bauer, Olaf Riess, Manu Sharma (2024) Resequencing the complete *SNCA* locus in Indian patients with Parkinson's disease. ***NPJ Parkinson's Disease***, 10(1):85 https://doi.org/10.1038/s41531-024-00676-4
9. Fasaludeen A, McTague A, Jose M, Banerjee M, Sundaram S, **Madhusoodanan UK**, Radhakrishnan A, Menon RN (2024) Genetic variant interpretation for the neurologist - A pragmatic approach in the next-generation sequencing era in childhood epilepsy. ***Epilepsy Res.*** 201:107341. https://doi.org/10.1016/j.eplepsyres.2024.107341
10. Rudrabhatla PK, Divya KP, Fasaludeen A, Menon RN, Cherian A, **Madhusoodanan Urulangodi**, Sundaram S (2024) Generalized Stiffness in Hereditary Hyperekplexia Responsive to Trihexyphenidyl: A Novel Finding. ***Clin Pediatr (Phila).*** 63(7):885-888. ***https://doi.org/10.1177/00099228231203300***
11. Pravi Vidyadharan, Santhi CKV, Anjali Sethumadhavan, Srinivas Gopala, Cibin T Raghavan, **Madhusoodanan Urulangodi*** (2023) Functional assessment of DNA extraction methods from frozen human blood samples for Sanger sequencing analysis. ***Cellular and Molecular Biology***, **69(8):25-33.** https://doi.org/10.14715/cmb/2023.69.8.4.
12. Aishwarya Babu, **Madhusoodanan Urulangodi*** (2023) Chemotherapy-induced neuronal DNA damage: an intriguing toolbox to elucidate DNA repair mechanisms in the brain. ***Genome Instability & Disease,*** **4(6): 315–332**. https://doi.org/10.1007/s42764-023-00110-8
13. Rudrabhatla PK, Divya KP, Alfiya F, Ramshekhar N. Menon, Ajith Cherian, **Madhusoodanan Urulangodi**, Soumya Sundaram (2023) Generalised stiffness in hereditary hyperekplexia responsive to trihexyphenidyl: a novel finding. ***Clinical Pediatrics.*** https://doi.org/10.1177/000992282312033.
14. Asish Vijayaraghavan, **Madhusoodanan Urulangodi**, Karthika Ajit, Soumya Sundaram, Syam Krishnan (2023) Movement disorders in GRIA2-related disorder - expanding the genetic spectrum of developmental dyskinetic encephalopathy. ***Movement Disorders Clinical Practice.*** 23 May 2023**.** https://doi.org/10.1002/mdc3.13797
15. Soumya Krishnamoorthy, Gurpreet Singh, Sapna Erat Sreedharan, Deepa Damayanthi, Srinivas Gopala, **Madhusoodanan UK**, Sylaja PN (2023) Soluble ST2 Predicts Poor Functional Outcome in Acute Ischemic Stroke Patients. ***Cerebrovasc Dis Extra***. Feb 8;13(1):33-40. https://doi.org/10.1159/000529512
16. Karthika Ajit, Srutji S Nair, Sethu Madhavan Anjali, Pravi Vidyadharan, **Madhusoodanan Urulangodi**, Ramshekhar N Menon, Soumya Sundaram (2023) A genotype-phenotype description in two Indian patients: broadening the spectrum in *VRK1*-related complex motor disorders. ***Neurology and Clinical Neuroscience***. 11: 93-96 https://doi.org/10.1111/ncn3.12694
17. Krishnamoorthy S, Sylaja PN, Sreedharan SE, Singh G, Damayanthi D, Gopala S**, Madhusoodanan UK**, Ramachandran H.J (2023) Biomarkers predict hemorrhagic transformation and stroke severity after acute ischemic stroke**.** ***J Stroke Cerebrovasc Dis***; 32(1):106875. https://doi.org/10.1016/j.jstrokecerebrovasdis.2022.106875
18. Bhavya B, Anand CR, **Madhusoodanan Urulangodi**, Sreelakshmi K, Deepti AN, Girish RM, Krishnakumar K, Easwer HV, Srinivas G (2022) The mutant isocitrate dehydrogenase 1 product, 2-hydroxyglutarate, activates MutT homolog 1 in glioma cells via the augmentation of reactive oxygen species levels. ***World Academy of Sciences Journal.*** 4: 39. https://doi.org/10.3892/wasj.2022.174

19. Alfiya F, Jose M, Chandrasekharan SV, Sundaram S, **Madhusoodanan Urulangodi**, Thomas B, Radhakrishnan A, Banerjee M, Ramshekhar N Menon (2022) C12orf57 pathogenic variants: a unique cause of developmental encephalopathy in a south Indian child. ***Journal of genetics***. 101:30. https://doi.org/10.1007/s12041-022-01371-0
20. Koshy L, Panniyammakal J, Ganapathi G, Madhuma M, **Madhusoodanan U K**, Sharma M, Sivadasanpillai H (2021) Association of South Asian-specific MYBPC3Δ25bp deletion polymorphism and cardiomyopathy: A systematic review and meta-analysis. ***Meta Gene.*** 28: 100883 https://doi.org/10.1016/j.mgene.2021.100883
21. Bhavya B, Easwer HV, Vilanilam GC, Anand CR, Sreelakshmi K, **Madhusoodanan Urulangodi**, Rajalakshmi P, Neena I, Padmakrishnan CJ, Menon GR, Krishnakumar K, Deepti AN, Gopala S (2021) MutT Homolog1 has multifaceted role in glioma and is under the apparent orchestration by Hypoxia Inducible factor1 alpha. ***Life Sciences***. 264:118673. https://doi.org/10.1016/j.lfs.2020.118673

Short title of project (Max. 10 words)	**Role PI/Co-PI**	**Funding agency**
Identification & characterization of … exosomal proteins in Parkinson's Disease	PI	ICMR
Absolute Measurement of Glucocerebrosidase … Lysosomal Dysfunction in Parkinson's Disease	PI	ICMR
Genetic Architecture of Parkinson's disease	Co-PI	The Michael J. Fox Foundation
Prognostic value of circulating microRNAs in Heart Failure	Co-PI	ICMR
ICMR-Center for Advanced Research and Excellence (CARE) in heart failure	Co-PI	ICMR
Contemporary outcomes in cardiac channelopathies	Co-PI	ICMR
A whole exome sequencing study … in Moyamoya disease in the Indian population	Co-PI	ICMR