

SHIEK FAREETH AHMED, PhD

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Career – Objectives

I am interested in exposing myself to future technologies and shall certainly work hard towards achieving my targets. I am enthusiastic and good team-player as well as an independent researcher. I am interested in dedicated clinical research work and I would like to utilize my Biology, Computing and Mathematical Knowledge to Solve Complex Biological problem.

Research Interests

Systems biology, Next generation sequencing (DNAseq, RNAseq, ChIPseq) microarray, metabolomics, metallomics, biostatistics, meta analysis, machine learning/artificial intelligence, molecular docking, biochemical pathways modeling and analyses.

Education

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| 2007-2011 | Doctorate of Philosophy, Department of Biotechnology
SRM University, Tamil Nadu, India.
Adviser: Winkins Santosh, PhD
Dissertation: Biomarkers identification for early diagnosis of Parkinson's disease
–Post genomic approaches (Thesis submitted on November 2010) |
| 2005-2007 | Master of Science, Bioinformatics
Sri Ramachandra University, A Harvard Medical Association Institution, India.
Adviser: P. K. Ragunath, PhD
Thesis: Identification of Common Inflammatory markers: Gene Expression data |

Work experience

2011-present **Asst. Prof & Scientist** - Chettinad Medical College and Hospital, Chennai.India

Publications

1. **Shiek SSJ Ahmed**, Winkins Santosh, Suresh Kumar: Hema T ThankaChristlet: Metabolic profiling of Parkinson's disease: evidence of biomarker from gene expression analysis and rapid neural network detection, *Journal of Biomedical Science*. 2009, 16:63. (PMID: 19594911) (**Impact Factor:2.76**)
2. **Shiek S.S.J. Ahmed**, Winkins Santosh, Suresh Kumar: Neural network algorithm for the early detection of Parkinson's disease from blood plasma by FTIR micro-spectroscopy, *Vibrational Spectroscopy*. 2010, 53:181–188. (**IF:2.08**)
3. **Shiek S.S.J. Ahmed**, Winkins Santosh, Suresh Kumar: Metallomic Profiling and oLinkage Map Analysis of Early Parkinson's Disease: A New Insight to Aluminum Marker for the Possible Diagnosis. *PloS One*. 2010, 5(6): e11252. (PMID: 20582167) (**IF:4.4**)
4. **Shiek S.S.J. Ahmed**, Winkins Santosh, Suresh Kumar: QSAR and Pharmacophore modeling of 4-arylthieno [3, 2-d] pyrimidine derivatives against A2A receptor of Parkinson's disease. *Journal of Theoretical and Computational Chemistry*. 2010, 9(6): 975-991. (**IF:0.8**)
5. G Hemamalini , PK Ragunath , D Anusha , KT Magesh , **Sheik Fareeth Ahmed**: Relevance of gene signatures in differential diagnosis of mantle cell and B-cell chronic lymphocytic lymphoma. *SRM University Journal of Dental Sciences*. 2010,1(3):220-224.
6. **Shiek S.S.J. Ahmed**, R.B.Raja, S.Raghuwanshi *et al.*, Studies On The Spectral Lines of Salivary Samples Taken From Smokers And Non-Smokers. *Journal of Health*. 2010,10:2
7. **Shiek S.S.J. Ahmed**, Winkins Santosh, Srinivasa Chakravarthy, Suresh Kumar: Systems Biological Approach of Neurological Disorders: A NovelMolecular

- Connectivity to Aging and psychosis. *BMC Systems Biology*. 2011, 5:6. (PMID: 21226925) (IF: 3.57)
8. Ragunath P, Chitra R, **Mohammad S**, Abhinand P: A systems biological study on the comorbidity of autism spectrum disorders and bipolar disorder. *Bioinformation*. 2011, 7(3):102-6. (PMID:22125377)
 9. Ragunath PK, Reddy BV, Abhinand PA, **Ahmed SS**: Relevance of systems biological approach in the differential diagnosis of invasive lobular carcinoma & invasive ductal carcinoma. *Bioinformation*. 2012, 8(8):359-64. (PMID:22570516)
 10. **Shiek S.S.J. Ahmed***, Ramakrishnan: Systems biological approach of molecular descriptors connectivity: optimal descriptors for oral bioavailability prediction. *PloS One*. 2012, 7(7): e40654 (IF:4.4)
 11. Shiek S.S.J. Ahmed 2013. Systems biology in unruptured intracranial aneurysm: a metabolomics study in serum for the detection of biomarkers. *Metabolomics*.2013, 1-11 (IF:3.855)
 12. Kamath MS, **Ahmed SS**, Dhanasekaran M, Winkins Santosh S. Polycaprolactone scaffold engineered for sustained release of resveratrol: therapeutic enhancement in bone tissue engineering 2013, 2014:183-195 (IF:4.383)
 13. R Muthukumar, V Alexander, Thangam B, Ahmed SSSJ. A Systems Biological Approach Reveals Multiple Crosstalk Mechanism between Gram-Positive and Negative Bacterial Infections: An Insight into Core Mechanism and Unique Molecular Signatures. PLoS ONE 2014, 9(2): e89993. (IF:3.73)
 14. S Kumar, S Ahmed, W Santosh Novel markers in the early detection of Parkinson's disease: Would serum elemental analysis work? MOVEMENT DISORDERS 2015, 29, S68-S69. (IF:5.68)
 15. V Alexandar, PG Nayar, R Murugesan, B Mary, P Darshana, SSSJ Ahmed. CardioGenBase: A Literature Based Multi-Omics Database for Major Cardiovascular Diseases. PloS ONE 2015, 10 (12). (IF:3.23)
 16. Alexandar V., Pradeep G. Nayar, R. Murugesan, Shajahan S., Jayalakshmi Krishnan and Shiek S. S. J. Ahmed. A systems biology and proteomics-based

approach identifies SRC and VEGFA as biomarkers in risk factor mediated coronary heart disease. *Mol. BioSyst.*, 2016, Advance Article DOI: 10.1039/C6MB00264A). (IF: 2.829).

17. Shiek S.S.J. Ahmed, R.S. Akram Husain, Suresh Kumar, V. Ramakrishnan Association between MDR1 gene polymorphisms and Parkinson's disease in Asian and Caucasian populations: a meta-analysis. *J.Neurological Sciences* 2016, 368:255–262.
18. Ramakrishnan, V., Alphonsa, T.A., Husain, R.A., Ahmed, S.S., Subramaniyan, K. and Kumar, S., 2016. Association of rs1801582 and rs1801334 PARK2 polymorphisms with risk of Parkinson's disease: a case-control study in South India and meta-analysis. *Meta Gene*, 10, 32-38.
19. J Sanya*1, SSSJ Ahmed*, HKT Ng, T Naiya, E Ghosh, TK Banerjee Metallomic Biomarkers in Cerebrospinal fluid and Serum in patients with Parkinson's disease in Indian population *Scientific reports* 2016; 6 (*equally contributed).
20. V Ramakrishnan, RSA Husain, SSSJ Ahmed. Genetic predisposition of IL-10 promoter polymorphisms with risk of multiple sclerosis: A metaanalysis. *Journal of Neuroimmunology* 2017; 306, 11-18.
21. V Ramakrishnan, RSA Husain, SSSJ Ahmed. PSEN1 gene polymorphisms in Caucasian Alzheimer's disease: A meta-analysis *ClinicaChimica Acta* 2017; 473, 65-70.
22. SSSJ Ahmed, RSA Husain, S Kumar, V Ramakrishnan Association Between NOS1 Gene Polymorphisms and Schizophrenia in Asian and Caucasian Populations: A Meta-Analysis. *NeuroMolecular Medicine* 2017; 19 (2-3),452-461.
23. Husain, R.A., Rajakeerthana, R., Sreevalsan, A., Jayaprasad, P.P., Ahmed, S.S. and Ramakrishnan, V., 2018. Prevalence of human papilloma virus with risk of cervical cancer among south Indian women: A genotypic study with meta-analysis and molecular dynamics of HPV E6 oncoprotein. *Infection, Genetics and Evolution*, 62, 130-140.
24. C Lite, SSSJ Ahmed, W Santosh, B Seetharaman. Prenatal exposure to bisphenol-A altered miRNA-224 and protein expression of aromatase in ovarian granulosa cells concomitant with elevated serum estradiol levels in F1 adult offspring. *Journal of biochemical and molecular toxicology*, 2019. (In press)

25. Gnanakkummar, Murugasan, SSSJ Ahmed, Gene Regulatory Networks in Peripheral Mononuclear Cells Reveals Critical Regulatory Modules and Regulators of Multiple Sclerosis. Scientific Reports 2019.(In press)

Patents & Copyrights

1. **SSSJ Ahmed** "System and Process For Nitric oxide estimation in fluids ", Indian Patent ApplicationNo. 5414/CHE/2015 .
2. **SSSJ Ahmed**, Murugesan.R, Gnanakkumaar, AthiraAnirudhan, Muumina M, Monisha Ganesh K M. Method and process for the detection of metal induced toxicity based on Fourier Transform infrared spectroscopy. Indian Patent published #: 201941026204.
3. **SSSJ Ahmed**, Murugesan.R, Gnanakkumaar, AthiraAnirudhan, Muumina M, Monisha Ganesh K M. Method and non-invasive process for screening of coronary artery disease using Fourier Transform Infrared Spectroscopy. Indian Patent published #: 201941026208.
4. **SSSJ Ahmed**. Indian Copyright Reg. of : Computer Software : "CardioGenBase, a multi-omic databaseand information retrieval system for cardiovascular diseases" Diary Number:11174/2015-CO/SW.

Books Published

1. Ramakrishnan V, **Shiek S. S. J. Ahmed** (2013) Genetic Associations with Coronary Artery Disease. LAP Lambert Academic Publishing (ISBN 978-3-659-34060-4).
2. V Alexandar, Saravanan R, **Shiek S. S. J. Ahmed** (2015) Marine Bioinformatics for Marine Omics: Principles and Applications. Taylor & Francis Publishers (*InPress*)

Sequence Published

1. Whole genome Sequencing of Mycobacterium avium subsp. paratuberculosis , Using illumina NGS Platform.www.ncbi.nlm.nih.gov/nuccore/CP015495

Bioinformatics & Computational Expertise

Next generation sequencing analysis (DNaseq, RNAseq, ChIPseq); Gene expression analysis; Microarray (coding and non coding RNA); Phylogenetic analysis; Gene prediction; Comparative genome analysis; Primer designing; eArray; Protein-protein interaction; Molecular modelling; Molecular docking; NMR analysis of metabolites; FTIR analysis; Biological pathway stimulations, Systems biology; Neural network; Neuron simulation.

Next generation sequencing tools:

Software: CLC Main Workbench; R-studio; Galaxy

Tools: FASTQ splitter, FASTQ joiner, FASTQ Groomer, FASTQ Masker, FASTQ interlacer ,FastQC, Trimmomatic. BWA, Bowtie2, TopHat, Sailfish, Cuffdiff ,Cuffcompare, Cufflinks, Wig/BedGraph-to-bigWig, rmdup; MACS, flagstat.

Biostatistics

SPSS; Gene Spring, Genowiz, MatLab, Microsoft Excel,

Specialized Skills

High Performance Liquid Chromatography (**HPLC**), Nuclear Magnetic Resonance Spectroscopy (**NMR**), Fourier Infrared spectroscopy (**FTIR**), Inductive Coupled Plasma Mass Spectroscopy (**ICP-MS**), Inductive Coupled plasma Absorption Emission Spectroscopy (**ICP-AES**), Gas Chromatography-Mass spectroscopy (**GC- MS**), Liquid Chromatography-Mass spectroscopy(**LC-MS**).

Fellowship/Grand's/Awards

Senior research fellowship, Centre for Scientific and Industrial Research, India
Research Associate, Centre for Scientific and Industrial Research, India

Professional Activities

2011-present	International Society for Computational Biology (ISCB)member
2010-present	Indian Bioinformatics Society (INBIOS)member