Vatsala Rangachar Srinivasa

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QUALIFICATIONS SUMMARY

▪ Highly skilled in the application of epidemiological and statistical concepts in genomic epidemiology
▪ 4+ years of research experience
▪ Skilled in using programming languages: STATA, SAS, R, and command line
▪ Experience working in BSL2+ lab using concepts of Microbiology, Molecular Biology, and Immunology
▪ Skilled in using bioinformatics tools

EDUCATION

Doctor of Philosophy (PhD), Department of Epidemiology   *2021-Present*
University of Pittsburgh, School of Public Health, Pittsburgh, PA
Specialization: Epidemiology

Masters in Public Health (MPH), Infectious Diseases and Microbiology   *Apr. 2018*
University of Pittsburgh, Graduate School of Public Health, Pittsburgh, PA   GPA: 3.96/4
Specialization: Infectious Disease Management, Intervention and Community Practice
Thesis: "*Clostridium difficile* infection spread within healthcare environment" at UPMC Mercy. Advisors Dr. Mohamed Yassin and Dr. Lawrence Kingsley

Bachelor of Engineering (BE) in Biotechnology. Dept. of Biotechnology   *Jun. 2014*
Sir M Visvesvaraya Institute of Technology (SMVIT), Bangalore, India   Grade: Distinction
Thesis: "Screening and isolation of novel biosurfactant producing microorganisms" at SMVIT. Advisor: Mrs. Kalyani Rath

WORK and RELEVANT EXPERIENCE

Research Technician III – MiGEL Lab (Dept. of Medicine, University of Pittsburgh)   *Feb.2020 – Present*
▪ Investigating the genomic epidemiology of hospital-acquired microbial infections and Respiratory viruses such as SARS-CoV2, Influenza, etc.
▪ Applying concepts of microbiology and molecular biology in a BSL2+ lab setting to contribute to the genomic analyses of hospital-associated infections.
▪ Application of bioinformatics methods to characterize viral and bacterial genome sequences for publication and grant applications.
▪ Assisting in data entry, data analyses and visualization using R, STATA and SAS programming languages, and Biolinux operating system.
▪ Establishing and maintaining close, interpersonal working relationships with the clinical microbiology labs.
▪ Training and monitoring undergraduate student workers in the laboratory.

Research Technician III (University of Pittsburgh)   *July. 2018 – Jan. 2020*
▪ Worked on HIV infected blood and tissue samples.
▪ Molecular and Virological techniques for assessing the viral reservoir in latently infected cells from ART suppressed HIV-1 positive participants.
▪ Compared TZA assay developed in the lab with other techniques for quantitating latent viral reservoir in HIV-1 positive individuals suppressed under therapy.

Infection Control and prevention Short-term Project (UPMC, Pittsburgh)   *June. 2019 - Jan. 2020*
▪ Analysis of whole genome sequencing data of hospital isolates for antimicrobial resistance prediction, and single nucleotide polymorphism analysis to assist in outbreak investigation.
▪ Sampling of high-touch surfaces in the immediate patient environment to investigate the presence of hospital-associated Carbapenem-resistant Enterobacteriaceae (CRE) infection.
▪ Assisted in data entry, analyses, and visualization.

Infection Control and Prevention Practicum (UPMC Mercy, Pittsburgh)   *Jan. 2017 – Apr. 2018*

▪ Conducted retrospective surveillance of Clostridium difficile infection (CDI) using electronic medical records.
▪ Research on CDI spread within the hospital environment using epidemiology and statistical concepts.
▪ Worked in a Clinical Microbiology lab to analyze the relationship between the hospital rooms and the spread of CDI.

Lab Instructor (Sir M Visvesvaraya Institute of Technology, Dept. of Biotechnology, India)   *Aug. 2015 – Jul. 2016*

▪ Instructed undergraduate students in Microbiology, Molecular Biology, Upstream Processing, Genetic Engineering and Immunotechnology labs.
▪ Mentored two undergraduate students in completing their final year thesis work.
▪ Managed workshops and wrote proposals for research projects.

PUBLICATIONS

▪ Mustapha, M. M., **Srinivasa, V. R.**[*], Griffith, M. P., Cho, S.-T., Evans, D. R., Waggle, K., Ezeonwuka, C., Snyder, D. J., Marsh, J. W., Harrison, L. H., Cooper, V. S., & Van Tyne, D. (2021). Genomic diversity of hospital-acquired infections revealed through prospective whole genome sequencing-based surveillance. https://doi.org/10.1101/2021.10.27.466213

   [*]**First co-author**

▪ Chen, Y., Lin, H., Cole, M., Morris, A., Martinson, J., Mckay, H., Mimiaga, M., Margolick, J., Fitch, A., Methe, B., **Srinivas, V.**, Peddada, S., & Rinaldo, C. (2021). Signature changes in gut microbiome are associated with increased susceptibility to HIV-1 infection in MSM. *Microbiome*, *9*(1). https://doi.org/10.1186/s40168-021-01168-w

▪ Sundermann, A. J., Chen, J., Kumar, P., Ayres, A. M., Cho, S.-T., Ezeonwuka, C., Griffith, M. P., Miller, J. K., Mustapha, M. M., Pasculle, A. W., Saul, M. I., Shutt, K. A., **Srinivasa, V.**, Waggle, K., Snyder, D. J., Cooper, V. S., Van Tyne, D., Snyder, G. M., Marsh, J. W., … Harrison, L. H. (2021). Whole-genome sequencing surveillance and machine learning of the electronic health record for Enhanced Healthcare Outbreak Detection. *Clinical Infectious Diseases*. https://doi.org/10.1093/cid/ciab946

▪ Sundermann AJ, Chen J, Miller JK, Saul MI, Shutt KA, Griffith MP, Mustapha MM, Ezeonwuka C, Waggle K, **Srinivasa V**, Kumar P, Pasculle AW, Ayres AM, Snyder GM, Cooper VS, Van Tyne D, Marsh JW, Dubrawski AW, Harrison LH. Outbreak of Pseudomonas aeruginosa Infections from a Contaminated Gastroscope Detected by Whole Genome Sequencing Surveillance. Clin Infect Dis. 2020 Dec 25:ciaa1887. doi: 10.1093/cid/ciaa1887. Epub ahead of print. PMID: 33367518.

▪ Sanyal, A., **Rangachar, V. S**. and Gupta, P. (2019). TZA, a Sensitive Reporter Cell-based Assay to Accurately and Rapidly Quantify Inducible, Replication-competent Latent HIV-1 from Resting CD4+ T Cells. Bio-protocol 9(10): e3232. DOI: 10.21769/BioProtoc.3232.

▪ **Srinivasa, V. R**., Hariri, R., Frank, L. R., Kingsley, L., Magee, E., Pokrywka, M., & Yassin, M. H. (2019). Hospital-associated Clostridium difficile infection and reservoirs within the hospital environment. American Journal of Infection Control,47(7), 780-785. doi:10.1016/j.ajic.2018.12.013

▪ K Rath, A B Singh, S Chandan and **R S Vatsala**. (2016): "Isolation and Characterization of a Biosurfactant Producing Strain pseudomonas aeruginosa SMVIT 1 from Oil Contaminated Soil", Journal of Scientific and Industrial Research, Vol. 75, pp. 681-686.

SOFTWARES and TOOLS

▪ Electronic Medical Records**: Cerner and Theradoc**
▪ Statistical analysis and data visualization: **R, SAS and STATA**
▪ Operating System: **Linux (Biolinux) and Windows**
▪ **Microsoft office**

AWARDS and ACHIEVEMENTS

▪ First place, Master's Category at Dean's day poster competition (University of Pittsburgh, PA)
   Topic: Bed tracing for hospital associated *Clostridium difficile* Infection
▪ Proposal for a project was approved by the Pollution Control Board, Government of India and received funding to carry out bioremediation of heavy metals from polluted water sources.
▪ Conducted a 4-day workshop on Microbiology and Molecular Biology lab techniques for High school students

POSTERS and PRESENTATIONS

- ▪ "*Clostridium difficile* Infection (CDI) Spread within the Hospital Environment"   *2018*
  Presented at University of Pittsburgh, Graduate School of Public Health as part of Dean's Day competition
  Presented at Dept. of Infectious Diseases and Microbiology, University of Pittsburgh as part of research day
- ▪ "Increasing Hepatitis C Screening Among Injection Drug Users in Allegheny County"   *2018*
  Presented at Allegheny County Health Department (ACHD), Pittsburgh
- ▪ "Emergence of community-associated methicillin-resistant Staphylococcus aureus strains in the neonata
  intensive care unit: an infection prevention and patient safety challenge"   *2017*
  Presented at University of Pittsburgh
- ▪ Journal Club Presentations: *2017*
  - ➢ "Diverse Sources of C. *difficile* Infection Identified on Whole-Genome Sequencing" (NEJM), UPMC Mercy
  - ➢ "Emergence of community-associated methicillin-resistant Staphylococcus aureus strains in the neonatal intensive care unit: an infection prevention and patient safety challenge" (CMI), University of Pittsburgh
  - ➢ Reviewer: Article: "Vaccination against HPV in adolescent girls: Mother's knowledge, attitude, desire and Practice in Nigeria", University of Pittsburgh
- ▪ "Reducing opioid overdose in adults age 25-55 in Western Pennsylvania"   *2016*
  Presented at University of Pittsburgh
- ▪ "Screening and isolation of secondary metabolites from algae"   *2014*
  Presented at Sir M Visvesvaraya Institute of Technology, Bangalore, India
- ▪ "Effects of Oil Spill on Marine Ecosystem"   *2014*
  Presented at Sir M Visvesvaraya Institute of Technology, Bangalore, India

TRAININGS

- ▪ **Nursing Home Infection Preventionist Training**   *Oct. 2019*
  CDC TRAIN, Centers for Disease Control and Prevention

- ▪ **National Healthcare Safety Network (NHSN) Training: Patient Safety Component**
  Centers for Disease Control and Prevention
  - ➢ Introduction to device associated training module   *Oct. 2019*
  - ➢ Catheter associated urinary tract infection   *Oct. 2019*