SHABARINATH SRIKUMAR, Ph.D.
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Twitter: @sshabarinath

Top 10% most cited author PLOS PATHOGENS

RESEARCH INTERESTS

Microbial Pathogenesis
Host Microbial Interaction
Foodborne Bacterial Ecology

TEACHING INTERESTS

General Microbiology
Microbial Physiology
Microbial Ecology

1. EDUCATION

Degree awarded	Year of Graduation	Thesis title	School/College
B.F.Sc (Bachelor of Fisheries Science)	2001	Not applicable	College of Fisheries, Kerala Agricultural University, India
M.F.Sc (Master of Fishery Science)	2003	*Salmonella* in Seafood: Molecular techniques for rapid detection	College of Fisheries, University of Agricultural Sciences, India
Ph.D.	2007	Molecular techniques for the characterization of *Salmonella* from Seafood	College of Fisheries, Karnataka, Veterinary, Animal Sciences and Fisheries University, India

2. APPOINTMENTS

Position	Institution	Period
Assistant Professor	Department of Poultry Science, College of Agriculture, Auburn University	2023 - present
Assistant Professor	Department of Food Science, College of Agriculture and Veterinary Medicine, UAE University	2019 - 2023
Senior Research Fellow	University College Dublin, Ireland	2015 - 2019
Postdoctoral Fellow	Trinity College Dublin, Ireland & University of Liverpool, UK	2011 - 2014
Postdoctoral Fellow	VRISD, San Diego, CA, USA	2011 - 2011
Postdoctoral Fellow	ZIEL, Abteilung Mikrobiologie, TUM, Germany	2009 - 2010
Research Fellow	College of Fisheries, Mangalore, India	2003 - 2006
Research Associate		2006 - 2007
Research Associate		2007 - 2008
Research Associate		2008 - 2009

3. PROFESSIONAL SERVICE

- **Member of Committees at the Department of Poultry Sciences, Auburn University**
  - Search Committee for Assistant Research Professor – Pre Harvest
  - Search Committee for Assistant Research Professor – Post Harvest
  - Elanco Graduate Student Awards Committee
  - Teaching Committee
  - Processing Plant Committee

4. HONORS AND AWARDS

- Member of the American Society of Microbiology **(ASM) Future Leaders Mentorship Cohort**.
- **Research and Scholarship Connections Travel Grant** to be part of the Auburn University trip to Thailand & Indonesia in 2024.
- **Research Honour** from UAE University for publication in SCOPUS top 5% journal in 2021.
- Srikumar et al., 2015 selected as one of the **top 10% cited PLoS Pathogens papers** published in 2015.
- **University Gold Medal -** best outgoing master's Student (Fishery Microbiology), University of Agricultural Sciences, Bangalore - 2003-2004.
- **Dr. Tauro Gold Medal** - best outgoing master's student (Fishery microbiology), University of Agricultural Sciences, Bangalore - 2003-2004.
- **University Gold Medal** - best outgoing Ph.D student (Fishery Microbiology), Karnataka Veterinary Animal and Fishery Sciences - 2005-2006.

5. EDITORIAL RESPONSIBILITIES

- **Editor Board Member**
  a. *Foodborne Pathogens and Disease* – Mary Ann Liebert
- **Review Editor -** *Frontiers in Microbiology*
- **Handling editor** - *MDPI Pathogens*
- ***Ad Hoc* Reviewer** for
  a. Frontiers in Microbiology,
  b. PLoS One,
  c. Microbiology,
  d. FEMS Microbiology Letters,
  e. International Journal of Food Microbiology,
  f. Food Microbiology,
  g. Microbial Spectrum,
  h. Folia Micobiologica,
  i. Foodborne Pathogens and Disease,
  j. International Journal of Microbiology,
  k. Food Research International,
  l. BMC Genomics, *etc*

- **Grant Reviewer** for
  i. Singapore Food Story A* STAR Theme 3 Competitive Grant Calls.
  ii. Sandook Al Watan, UAE Young Scientific Researchers Fellowships
  iii. Auburn University Pilot4 Intramural Research Grant Programs

6. RESEARCH GRANTS

Title of Application	Funding Agency	Amount	Status and Publications
Projects from Auburn University, Alabama			
Pathogen and Poultry: Demystifying the role of Transcriptional Factors (TFs) in this unholy nexus	Auburn University	$49,904	Principal Investigator Awarded and Ongoing
The effects of cohabitation by songbirds and chickens on the microbiome of chickens	Auburn University	$50,000	Co-Principal Investigator Awarded and Ongoing
Procuring Cold Plasma Technology for Food and Agriculture Research	USDA-NIFA	$126,100	Co-Principal Investigator Awarded and Ongoing
Production and Processing Intervention Strategies for Poultry Associated Foodborne Pathogens	USDA-Agriculture Research Service	$1,074,530.00	Principal Investigator Awarded and Ongoing
Reduction of Foodborne Pathogens and Antimicrobial Resistance in Poultry Production Environments	USDA-Agriculture Research Service	$1,074,530.00	Co-Principal Investigator Awarded and Ongoing
Projects from United Arab Emirates University			
A genomic investigation into the desiccation survival of non-Typhoidal/non-Typhimurium *Salmonella* serovars	UAEU Summer Undergraduate Research Experience (UAEU-SURE)	AED 50,000	Principal Investigator; Awarded and Completed **Bharathan et al., In Writing**
Introducing Date AntiSal-Com – deep characterization of date polyphenols and how they can help us win 'the war against antimicrobial resistance'	UAEU Program for Advanced Research (UPAR)	AED 900,000	Principal Investigator; Awarded and Ongoing **Phasaludheen et al., In Writing**
An 'omics' based comprehensive and futuristic evaluation of the antimicrobial properties of date by products	Abu Dhabi Reward for Research Excellence (AARE-2020)	AED 999,984	Principal Investigator; Awarded and Ongoing
Camel milk oligosaccharides: An in-depth study into quantification, characterization, and bioactive properties	UAEU Program for Advanced Research (UPAR)	AED 345,000	Co-Principal Investigator Awarded and Completed
Developing the *Salmonella* Milk Compendium (SalCom-Milk) – A comprehensive genotypic-phenotypic and microbiome-based characterization of the survival of *Salmonella* in bovine and camel milk	UAEU Program for Advanced Research (UPAR)	AED 800,000	Principal Investigator; Awarded and Completed **Bharathan et al., 2023 - Food Microbiology Bharathan et al., In Writing (n=2)**
Antimicrobial resistance in zoonotic *Salmonella* isolated in UAE	UAEU Research Start-Up Proposal	AED 399,800	Principal Investigator; Awarded and Completed **Deekshit and Srikumar, 2022 – J. Appl. Microbiology**
Project from Technical University of Munich, Germany			
Propanediol and Ethanolamine metabolism of *Salmonella*	Bayerische Forschungsstiftung, Technische Universitat Munchen, Germany	Euro 128,120	Awarded and Completed **Srikumar and Fuchs., 2011 - AEM Kroger et al., 2011 – J. Bacteriology**

7. PEER REVIEWED PUBLICATIONS

Google Scholar page -
https://scholar.google.com/citations?view_op=list_works&hl=en&user=mEkKj_kAAAAJ&gmla=AJsN-F6YktrxtNg8gZKTDKXd1Q45xwU23KcKupEJTHn9K3YNnQLDtyeChJOgiC8wx2-ZGRB_JFDnDitRJAgDDOyc7ZrSh1owOF_0y9ttgWV5ieu6-4rDMg4

Orcid ID - 0000-0003-3775-2831 (https://orcid.org/0000-0003-3775-2831)

2025

1. Ahmad Rabbani, Anuj Niroula, Muhammad Kashif Iqbal Khan, **Shabarinath Srikumar**, Akmal Nazir. Stability and shelf life modeling of lemongrass essential oil-in-water nanoemulsions. **(In Press - European Journal of Lipid Science and Technology MS ID ejlt.202400096).**
2. Bismi Phasaludeen, Dania Mustafa Darwich, Greeshma Bharathan, Jennifer Osamede Airouyuwa, Sajid Maqsood, Akmal Nazir, and **Shabarinath Srikumar**. Citric acid plays a dual 'synergistic/antagonistic' role with antibiotics while promoting the formation of a persister population of *Salmonella* in sesame paste. **Food Bioscience 64; 105843**.
3. Bismi Phasaludeen, Dania Mustafa Darwich, Greeshma Bharatha, Hina Khan, Priti Mudgil, Akmal Nazir, and Shabarinath Srikumar. Some polyphenols exhibit 'broad spectrum' synergy with multiple antibiotics to inhibit multidrug-resistant *Salmonella* Typhimurium DT104. (**In Review with International Journal Of Food Microbiology MS ID FOOD-D-24-01800**).
4. Greeshma Bharathan, Balamurugan Sadaiappan, Bismi Phasaludheen, Dema Alneyadi, Sunil Mundra, and **Shabarinath Srikumar**. Temperature abuse and *Salmonella* Typhimurium colonization disrupt the indigenous bacterial communities of pasteurized bovine milk over time. (**Submitted to Nature Scientific Reports Submission ID 6c5d96f5-660d-412b-bb07-e55943b8fa8f).**

2023

5. *Greeshma Bharathan, Sunil Mundra, Dania Mustafa Darwich, Maitha Mohammad Saeed, Ahad Saeed Ali Al Hafri, Maitha Mohammed Saeed Musabbeh Alsalmi, Sajid Maqsood, Priti Mudgil, Séamus Fanning, and **Shabarinath Srikumar**. 2023. Regulation of iron metabolism is critical for the survival of *Salmonella* Typhimurium in pasteurized milk. ***Food Microbiology.*** **115C: 104326.**

2022

6. Hyein Jang, Athmanya Eshwar, Angelika Lehner, Jayanthi Gangiredla, Isha R. Patel, Junia Jean-Gilles Beaubrun, Hannah R. Chase, Flavia Negrete, Samantha Finkelstein, Leah M. Weinstein, Katie Ko, Nicole Ad-dy, Laura Ewing, JungHa Woo, YouYoung Lee, Kunho Seo, Ziad Jaradat, **Shabarinath Srikumar**, Séamus Fanning, Roger Stephan, Ben D. Tall and Gopal R. Gopinath. 2022. Characterization of *Cronobacter sakazakii* Strains Originating from Plant Origin Foods using Comparative Genomic Analyses and Zebrafish Infectivity Studies. ***MDPI Microrganisms*****.** 10 (7), 1396.
7. Dechamma Mundanda Muthappa, Sakshi Lamba, Sathesh K. Sivasankaran, Ankita Naithani, Noel Rogers, **Shabarinath Srikumar**, Amalia Scannell, and Séamus Fanning. 16S rRNA based profiling of bacterial communities colonizing bakery-production environments. ***Foodborne Pathogens and Disease.*** 19(7), 485-494.
8. *Vijaya Kumar Deekshit and **Shabarinath Srikumar**. '*To be, or not to be*' – the dilemma of 'silent' antimicrobial resistance genes in bacteria. (Accepted in ***Journal of Applied Microbiology***).
9. Vikram Pareek, Rinki Gupta, Stéphanie Devineau, Sathesh K. Sivasankaran, Arpit Bhargava, Mohd. Azeem Khan, **Shabrinath Srikumar**, Séamus Fanning, and Jitendra Panwar. Does silver in different forms affect bacterial susceptibility and resistance? A mechanistic perspective. ***ACS Applied Biomaterials.*** 5(2): 801-817.
10. *Yu Cao, Ankita Naithani, Ben D Tall, Jayanthi Gangiredla, **Shabarinath Srikumar** and Séamus Fanning. A 16S rRNA sequencing study describing the environmental microbiome of two powdered infant formula manufacturing facilities. ***Foodborne Pathogens and Disease.*** 19(7), 473-484.
11. Priti Mudgil, May AlMazroui, Ali Ali Redha, Bhanu Priya Kilari, **Shabarinath Srikumar**, and Sajid Maqsood. 2021. Cow and camel milk derived whey and casein protein hydrolysates demonstrated effective antifungal properties against selected Candida species. ***Journal of Dairy Science***. 105 (3), 1878-1888.

2021

12. *Yu Cao, Katherine Dever, Sathesh Kumar Sivasankaran, Guerrino Macori, Ankita Naithani, Gopal Gopinathrao, Ben Tall, Angelika Lehner, Roger Stephan, **Shabarinath Srikumar**, and Séamus Fanning. Alterations in the transcriptional landscape allows differential desiccation tolerance in different strains of *Cronobacter sakazakii*. ***Applied and Environmental Microbiology*** 87:e00830-21.

13. *João Anes, Katherine Dever, Athmanya Eshwar, Scott Nguyen, Yu Cao, Sathesh K Sivasankaran, Sandra Sakalauskaitė, Angelika Lehner, Stéphanie Devineau, Rimantas Daugelavičius, Séamus Fanning and **Shabarinath Srikumar.** Analysis of the oxidative stress regulon identifies *soxS* as a genetic target for resistance reversal in multi-drug resistant *Klebsiella pneumoniae.* ***mBIO*** 12:e00867-21.

14. Vikram Pareek, Stéphanie Devineau, Sathesh K. Sivasankaran, Arpit Bhargava, Jitendra Panwar, **Shabarinath Srikumar**, and Séamus Fanning. 2021. Silver nanoparticles induce a 'triclosan like' antibacterial action mechanism in multi-drug resistant *Klebsiella pneumoniae.* ***Frontiers in Microbiology*** 12:638640.

2020

15. Jazeela K, Chakraborty A, Rai P, Kumar BK, **Srikumar S**, van Nguyen S, Hurley D, Fanning S, Karunasagar I, Deekshit VK. 2020. Draft genome sequences of *Salmonella* Oslo isolated from seafood and its laboratory generated auxotrophic mutant. ***J Genomics*** 8:7-10.

16. Jang H, Gopinath GR, Eshwar A, **Srikumar S**, Nguyen S, Gangiredla J, Patel IR, Finkelstein SB, Negrete F, Woo J, Lee Y, Fanning S, Stephan R, Tall BD, Lehner A. 2020. The Secretion of Toxins and Other Exoproteins of Cronobacter: Role in Virulence, Adaption, and Persistence. ***Microorganisms 8.***

2019

17. Vk, D., **Srikumar, S**., Shetty, S., van Nguyen, S., Karunasagar, I., Fanning, S., 2019. Silent antibiotic resistance genes: A threat to antimicrobial therapy. **International Journal of Infectious Diseases** 79: 20.

18. *João Anes, Sathesh K Sivasankaran, Dechamma M Muthappa, Séamus Fanning and **Shabarinath Srikumar**. Characterization of the Secondary Effects of Sub-Inhibitory Concentrations of 1-(1-Naphthylmethyl)-Piperazine in multi-drug resistant *Klebsiella pneumoniae*. ***Frontiers in Microbiology*** 10: 92.

19. ***Shabarinath Srikumar**, Yu Cao, Qiongqiong Yan, Shane Cooney, Gopal R. Gopinath, Ben D. Tall, Sathesh Kumar Sivasankaran, Karsten Hokamp, Angelika Lehner, Roger Stephan, and Séamus Fanning. RNA sequencing based Transcriptional overview of xerotolerance in *Cronobacter sakazakii.* ***Applied and Environmental Microbiology*** 85 (3): e01993-18. ***First Co-Corresponding Author Original Research publication.***

2018

20. Flavia Negrete, Hyein Jang, Jayanthi Gangiredla, JungHa Woo, YouYoung Lee, Isha Patel, Hannah Chase, Samantha Finkelstein, Caroline Wang, **Shabarinath Srikumar**, Scott Nguyen, Athmanya Eshwar, Roger Stephan, Angelika Lehner, Seamus Fanning, Ben Tall and Gopal Gopinath. Genome-wide Survey of Efflux Pump-coding Genes Associated with *Cronobacter* Survival, Osmotic Adaptation, and Persistence. ***Current Opinion in Food Science*** (Manuscript ID: **COFS_2018_23_R1)**.

21. Hyein Jang, Jungha Woo, Youyoung Lee, Flavia Negrete, Samantha Finkelstein, Hannah Chase, Nicole Addy, Laura Ewing-Peeples, Junia Jean Gilles Beaubrun, Isha Patel, Jayanthi Gangiredla, Athmanya Eshwar, Ziad W. Jaradat, Kunho Seo, **Srikumar Shabarinath**, Séamus Fanning, Roger Stephan, Angelika Lehner, Ben D Tall, and Gopal R Gopinath. Draft genomes of *Cronobacter sakazakii* strains isolated from dried spices bring unique insights into the diversity of plant-associated strains. ***Standards in Genomic Sciences*** (Manuscript ID: **SIGS-D-18-00057**).

22. Caitriona Maria Hickey, Bettina Schaible, Scott Van Nguyen, Daniel Hurley, **Shabarinath Srikumar**, Séamus Fanning, Eric Brown, Bianca Crifo, David matallanas, Siobhán McClean, Cormac Taylor, Kirsten Schaffer. Increased virulence of bloodstream over peripheral isolates of *Pseudomonas. aeruginosa* identified through post-transcriptional regulation of virulence factors. ***Frontiers in Cellular and Infection Microbiology*** 8: 357**.**

23. **Shabarinath Srikumar**, and Séamus Fanning. The protective and therapeutic role of gut microbiota. In. Nar Singh Chauhan (Ed.), Role of Microbes in Human Heath and Disease. ImTechOpen. ***First Book Chapter publication.***

24. Angelika Lehner, Ben Davis Tall, Séamus Fanning, and **Shabarinath Srikumar**. *Cronobacter* spp.- opportunistic foodborne pathogens: an update on evolution, osmotic adaptation and pathogenesis**.** ***Current Clinical Microbiology Reports*** **5(2):97-105.**

2017

25. *Yu Cao, Séamus Fanning, Sinead Proos, Kieran Jordan and **Shabarinath Srikumar**. A Review on the Applications of Next Generation Sequencing Technologies as applied to Food-related Microbiome Studies**.** ***Frontiers in Microbiology*** 8: 1829. ***First Corresponding Author Review Publication. Among the top 5% downloaded/viewed Frontiers in Microbiology papers.***

2016

26. Amir H P Anvarian, Yu Cao, **Shabarinath Srikumar**, Séamus Fanning, and Kieran Jordan. Flow Cytometric and 16S Sequencing Methodologies for Monitoring the Physiological Status of the Microbiome in Powdered Infant Formula Production. ***Frontiers in Microbiology*** 22(7); 968.

27. Evan Brennan, Marta Martins, Matthew P. McCusker, Juan Wang, Bruno Martins Alves, Daniel Hurley, Farid El Garch, Frédérique Woehrlé, Christine Miossec, Leisha McGrath, **Shabarinath Srikumar**, Patrick Wall and Séamus Fanning. Characterisation of multidrug-resistant *Escherichia coli* cultured from bovine 5 animals in Europe: identification of the *mcr-1* gene in a bacterium of animal origin co-resistant to β-lactams, florfenicol and fluoroquinolones. ***Emerging Infectious Diseases*** 22(9); 1650-1652.

2015

28. **Shabarinath Srikumar**, Carsten Kröger, Magali Hébrard, Aoife Colgan, Siân V. Owen, Sathesh K Sivasankaran, Andrew D. S. Cameron, Karsten Hokamp, and Jay C. D. Hinton. RNA-seq Brings New Insights to the Intra-Macrophage Transcriptome of *Salmonella* Typhimurium. ***PLoS Pathogens*** 11(11); e1005262**.** ***Among the top 10% cited PloS Pathogens papers published in 2015.***

29. Carla Solórzano, **Shabarinath Srikumar**, Rocio Canals, Antonio Juarez, Sonia Paytubi, Cristina Madrid. Hha has a defined regulatory role that is not dependent upon H-NS or StpA. ***Frontiers in Microbiology***. 6: 773.

2014

30. Steffen Porwollik, Michael McClelland, Pui Cheng, Fred Long, Prerak Desai, Jennifer Fredlund, **Shabarinath Srikumar**, Cecilia A. Silva, Xin Chen, Rocío Canals, M. Megan Reynolds, Lydia Bogomolnaya, Christine Shields, Ping Cui, Jinbai Guo, Yi Zheng, Tiana Endicott-Yazdani, Hee-Jeong Yang, Aimee Maple, Yury Ragoza, Carlos J. Blondel, Camila Valenzuela, Carlos A. Santiviago and Helene Andrews-Polymenis. Defined single-gene and multi-gene deletion mutant collections in *Salmonella enterica* sv Typhimurium. ***PLoS One.*** 9(7): e99820.

2013

31. Carsten Kröger, Aoife Colgan, **Shabarinath Srikumar**, Kristian Händler, Sathesh K. Sivasankaran, Disa L. Hammarlöf, Rocio Canals, Joe E. Grissom, Tyrrell Conway, Karsten Hokamp, Jay C. D. Hinton. An infection-relevant transcriptomic compendium for *Salmonella enterica* serovar Typhimurium. ***Cell Host Microbe***, 14(6): 683-695.

2012

32. Magali Hébrard, Carsten Kröger, **Shabarinath Srikumar**, Aoife Colgan, Kristian Händler and Jay C.D. Hinton. sRNAs and the virulence of *Salmonella enterica* serovar Typhimurium. ***RNA Biology***, 9(4): 437-445.

33. Vijay Kumar Deekshit, Ballamoole Krishna Kumar, Praveen Rai, **Srikumar Shabarinath**, Iddya Karunasagar and Indrani Karunasagar. Detection of Class I integrons in *Salmonella* Weltevreden and silent antibiotic resistance genes in some seafood associated non typhoidal isolates of *Salmonella* in Southwest coast of India. ***Journal of Applied Microbiology***. 112(6): 1113-22.

34. Patit Paban Bhowmick, **Srikumar Shabarinath**, Devegowda Devananda, Shekar Malathi, Darshanee Ruwandeepika HA and Indrani Karunasagar. Serotyping and Molecular characterization for the study of genetic diversity among seafood associated nontyphoidal *Salmonella* serovars. ***Indian Journal of Medical Research***. 135: 371-81.

2011

35. Patit Paban Bhowmick, Devanada Devegowda, H. A. Darshanee Ruwandeepika, Thilo M. Fuchs, **Shabarinath Srikumar**, Iddya Karunasagar and Indrani Karunasagar. *gcpA* (*stm1987*) is critical for

cellulose production and biofilm formation by *Salmonella enterica* serovar Weltevreden in both high and low nutrient medium. ***Microbial Pathogenesis***. 50: 114-122.

36. Carsten Kröger., ***Shabarinath Srikumar** and Thilo M. Fuchs. Bicarbonate-dependent bistability in myo-inositol utilization by *Salmonella enterica* serovar Typhimurium. ***Journal of Bacteriology**. 193 (6): 1427-1435. **** Equal contribution as the first author.***

37. **Shabarinath Srikumar** and Thilo M Fuchs. Ethanolamine utilization Contributes to Proliferation of *Salmonella enterica* serovar Typhimurium in Food and in Nematodes. ***Applied and Environmental Microbiology***, 77(1): 281-290.

2007

38. **Shabarinath, S.,** Sanath Kumar, H., Rekha, K., Indrani Karunasagar and Iddya Karunasagar**.** Detection and characterization of tropical seafood associated *Salmonella***.** ***International Journal of Food Microbiology***. 114(2): 227-233.

8. TEACHING

Module Taught	Lecture topic	Student Level	Year	Institution
FDSC 840	Advanced Food Microbiology II	Ph.D.	2021-2023	UAEU
FDSC 640	Advanced Food Microbiology I	Masters	2021 - 2023	UAEU
FDSC 330	Fundamentals in Food Science	Bachelor	2019 - 2023	UAEU
FDSC 454I	Food Laws	Bachelor	2019 - 2023	UAEU
FDSC 351	Food Plant Sanitation	Bachelor	2019 - 2023	UAEU
FDSC 470I	Current Issues in Food Science	Bachelor	2019 - 2023	UAEU
FDSC 350	Food Safety	Bachelor	2019 - 2023	UAEU
PHPS40610 Food Safety	*Salmonella*	Masters & Bachelor	2018	UCD
PHPS40610 Food Safety	Introduction to Food Safety - 1	Masters & Bachelor	2018	UCD
PHPS40610 Food Safety	Introduction to Food Safety - 2	Masters & Bachelor	2018	UCD
PHPS40610 Food Safety	Low moisture survival of bacteria	Masters & Bachelor	2017	UCD
PHPS 40810 Advanced Clinical Nutrition & Dietetics	*Salmonella*	Masters	2017	UCD
PHPS 40810 Advanced Clinical Nutrition & Dietetics	Microbiome and Health	Masters	2017	UCD
PHPS40610 Food Safety	*Salmonella*	Masters	2016 & 2017	UCD
PHPS40610 Food Safety	Food Borne Zoonosis	Masters	2016 & 2017	UCD
PHPS40600 Antimicrobial Resistant Zoonosis	Antimicrobial Resistance	Masters	2016 & 2017	UCD
PHPS40600 Antimicrobial Resistant Zoonosis	Multi Drug Resistance	Masters	2015-2017	UCD
PHPS 30020 Public Health Medicine, Epidemiology and International Health	Food Poisoning Outbreak	Final Year Medicine	2015-2017	UCD
F. Micro. 101	Fundamental Microbiology	Bachelors	2004-2008	COF Mangalore
F. Micro. 201	Aquatic Microbiology	Bachelors	2004-2008	COF Mangalore
F. Micro. 601	Microbiological Techniques	Masters	2004-2008	COF Mangalore
F. Micro. 604	Environmental Microbiology	Masters	2004-2008	COF Mangalore

9. ADVICING AND MENTORING

NAME OF THE STUDENT	YEAR	DEGREE	SUPERVISORY STATUS	CO-AUTHORED PUBLICATIONS (Underlined publications are with co-corresponding authorships)
PATIT BHOWMICK	2006 - 2009	Ph.D.	Co-Supervisor	Bhowmick *et al*., 2011: *Microbial Pathogenesis*; Bhowmick *et al*., 2012: *Ind J Med Res*
DEEKSHIT KUMAR	2007 – 2008	MASTERS	Co-Supervisor	Deekshit *et al*., 2012: *Int J Appl Microbiol*
DEVANANDADEVA GOWDA	2006 – 2009	Ph.D.	Co-Supervisor	Un-Published
LAURA LUQUE SHASTRE	2012	BACHELORS	Co-Supervisor	Un-Published
MICHAEL CHRISBECKETT	2013	BACHELORS	Co-Supervisor	Un-Published
YU CAO	2015 - 2018	Ph.D.	Co-Supervisor	Anvarian *et al*., 2016: *Frontiers in Microbiology*; Cao *et al*., 2017: *Frontiers in Microbiology*; Srikumar *et al.,* 2019: *AEM*; Cao et al., 2021: *AEM* Cao et al., 2022: *Foodborne Pathogens and Disease*
JOAO ANES	2015 - 2018	Ph.D.	Co-Supervisor	Anes et al., 2019: *Frontiers in Microbiology;* Anes et al., 2021: mBIO
VISHNU MOHAN	2016	MASTERS	Co-Supervisor	Un-Published
LAURA McGrath	2016	MASTERS	Co-Supervisor	Brennan *et al*., 2016: *Emerging Infectious Diseases*
BRIGID HOOBAN	2017	BACHELORS	Co-Supervisor	In Progress
KATHERINE DEVER	2018	BACHELORS	Co-Supervisor	Anes et al., 2021: mBIO Cao et al., 2021: *AEM*
MAITHA MOHAMMAD SAEED	2019	BACHELORS	Main Supervisor	Completed
REYAM MUSABBEH RASHED ALSAEDI	2020	BACHELORS	Main Supervisor	Completed
LATIFA MUFTAH OBAID ALKHATERI	2020	BACHELORS	Main Supervisor	Completed
MARYAM NASER SULTAN ALDAHMANI	2020	BACHELORS	Main Supervisor	Completed
ALREEM HAMAD ALAMRY	2020	BACHELORS	Main Supervisor	Completed
MAHA HAMDAN ALKAABI	2020	BACHELORS	Main Supervisor	Completed
AHAD KHALID SAEED	2021	BACHELORS	Main Supervisor	Completed
MAITHA SAEED MUSABBEH ALSALMI	2021	BACHELORS	Main Supervisor	Completed
SHAMMA RASHED OBAID ALGHAITHI	2021	BACHELORS	Main Supervisor	Completed
HIND SALEM ALYAHYAEE	2022	BACHELORS	Main Supervisor	Completed
NORA AL ANTALI	2022	BACHELORS	Main Supervisor	Completed
MARIAM ALSHEHI	2022	BACHELORS	Main Supervisor	Completed
OHOOD AL SHAMSI	2022	BACHELORS	Completed	In Progress

HASAN AHMED ALMARZOOQI	2019-2021	MASTERS	Completed	In Progress
GREESHMA BHARATHAN	2021-2024	Ph.D.	Main Supervisor	In Progress Bharathan *et al*., In Writing
BISMI PHASALUDHEEN	2022-2026	Ph.D.	Main Supervisor	In Progress Darwich *et al*., In Writing

10. ORAL PRESENTATIONS

1) **Speaker** at the American Society Of Microbiology South Eastern branch Conference at Auburn University, Alabama, USA on 05/11/2023.
2) **Speaker** at the Webinar *Food Safety Matters* (*Campylobacter* and *Salmonella*) at the ADAFSA/UAE meet on 20/12/2022.
3) **Speaker** at the 21st World Conference of Food Science and Technology (IUFoST) in Singapore, 31st October-3rd November 2022.
4) **Invited Speaker** at the 42nd Annual Conference of Indian Association of Biomedical Scientists (IABMS), Mangalore, India, 25 to 27th November 2021.
5) **Speaker** at the Dubai International Food Safety Conference (DIFSC 21), Dubai, 18-23 November, 2021
6) **Panelist** at the Dubai International Food Safety Conference (DIFSC 20), Dubai
7) **Invited** as a Plenary Speaker at the Applied Microbiology and Beneficial Microbes 2018 Osaka (June 06 to 07, 2018) to deliver a lecture on the application of DNA deep-sequencing in pathogenomics and food safety.
8) **Speaker** at the *International Association of Food Protection* (IAFP) 2017 Florida, Tampa (July 09 to 12, 2017) and delivered a talk on 'Mechanisms associated with desiccation survival of *Salmonella* Typhimurium and *Cronobacter sakazakii*.
9) **Speaker** at the 25th International ICFMH Conference Food Micro 2016, Dublin (June 19-22 2016) on the emergence of *Klebsiella pneumoniae* as a food borne pathogen.
10) **Speaker** at Dublin Association of Pathogenicity and Infection (DAPI), Dublin (15th January 2016) on RNA-seq Brings New Insights to the Intra-Macrophage Transcriptome of *Salmonella* Typhimurium.
11) **Speaker** at RNA SUMMIT, Berlin, Germany (27-28 June 2015) on The Intra-Macrophage Transcriptome of *Salmonella* Typhimurium.
12) **Speaker** at North West Conference, Manchester, UK (26th June 2014) on Unveiling the RNA-seq based Intra-Macrophage Transcriptome of *Salmonella* Typhimurium.
13) **Invited lecture** at the Department of Microbiology, the University of Cork on the 'Propanediol and Ethanolamine metabolism in *Salmonella* and their role in virulence' delivered on 2nd February 2012.
14) **Speaker** at RNA SUMMIT, Schefau, Germany (23-26 February 2012) on the virulence of *Salmonella* Typhimurium is regulated by small RNA.
15) **Speaker** at Conference on the microbiology of tropical seas, National Institute of Oceanography, Goa (13-15 December 2004) on the Molecular characterization of *Salmonella* isolated from seafood in tropical waters.

11. PUBLICATION AS ABSTRACT

1. Greeshma Bharathan, Balamurugan Sadaiappan, Sunil Mundra, and **Shabarinath Srikumar**. Salmonella reduces the bacterial diversity in milk and requires fur mediated Iron

Metabolism for Milk Colonization. 2025 International Poultry Science Forum, January 28 to 30, Atlanta, Georgia, USA.

2. Hunter Sheffield, Karoll Elizabeth Rodriguez Chinchilla, Greeshma Bharathan, Michelle Hayden, Aisha Madi, Jeff Buhr, and Shabarinath Srikumar. Synergistic Effects of Polyphenols and Antibiotics Against Multi-Drug Resistant *Salmonella* Typhimurium DT104. 2025 International Poultry Science Forum, January 28 to 30, Atlanta, Georgia, USA.
3. Abigail McConnell, Sabin Poudel, Greeshma Bharathan, **Shabarinath Srikumar**, Ian Rawson, Jeff Buhr, Dianna Bourassa. Comparative transcriptomic analysis of *Salmonella* Infantis following an application of a photonic decontamination treatment. 2024 PSA Latin American Scientific Conference, October 8 to 10, Iguazu Falls, Parana, Brazil.
4. Aisha Madi, Greeshma Bharathan, Hunter Sheffield, Jeff Buhr, and **Shabarinath Srikumar**. Acidic environment promotes chloramphenicol sensitivity and gentamycin resistance in Multi Drug Resistant DT104 *Salmonella* Typhimurium. 2024 South Eastern Branch American Society of Microbiology, September 6th to 8th, Tampa, Florida USA.
5. Greeshma Bharathan, Karoll Elizabeth Rodriguez Chinchilla, Hunter Schefield, Michele Hayden, Aisha Madi, R. Jeff Buhr, and **Shabarinath Srikumar**. Ferric Uptake Regulator (Fur) plays a significant role in the survival of *Salmonella* Typhimurium on meat. 2024 South Eastern Branch American Society of Microbiology, September 6th to 8th, Tampa, Florida USA.
6. Hunter Sheffield, Karoll Elizabeth Rodriguez Chinchilla, Greeshma Bharathan, Michelle Hayden, Aisha Madi, R. Jeff Buhr, and **Shabarinath Srikumar**. Synergistic Effects of Polyphenols and Antibiotics Against Multi-Drug Resistant *Salmonella* Typhimurium DT104. 2024 South Eastern Branch American Society of Microbiology, September 6th to 8th, Tampa, Florida USA.
7. Bismi Phasaludeen, Greeshma Bharathan, Akmal Nazir, and Shabarinath Srikumar. Some date seed polyphenols exhibit 'broad spectrum' antibiotic adjuvant activity with multiple antibiotics to inhibit multidrug-resistant *Salmonella* Typhimurium DT104. 2024 28th International ICFMH Conference Food Micro 2024 July, 8 to 11, Burgeos, Spain.
8. Greeshma Bharathan, Emma Holden, Mark Webber, and **Shabarinath Srikumar**. Identification of the genetic factors that are critically required for the survival of *Salmonella* Typhimurium in milk. 2023 South Eastern Branch American Society of Microbiology, November 3rd to 6th, Auburn University Alabama, USA.
9. Dania Darwich, Greeshma Bharathan, Priti Mudgil, Sajid Maqsood, and **Shabarinath Srikumar**. Elucidating the Role of Transcriptional factors in the Multiplication of *Salmonella* Typhimurium in Chicken Egg yolk. 21st World Conference of Food Science and Technology (IUFoST) in Singapore, 31st October-3rd November 2022.
10. Greeshma Bharathan, Priti Mudgil, Sunil Mundra and **Shabarinath Srikumar**. Growth Kinetics of *Sallmonella* Typhimuirum regulatory mutants identifies unique environmentals faced by the pathogen during survival in milk. Dubai International Food Safety Conference (DIFSC 21), Dubai, 18-23 November, 2021
11. **Shabarinath Srikumar**. 2018. **On the application of DNA deep-sequencing in pathogenomics and food safety** AT Applied Microbiology and Beneficial Microbes 2018 Osaka (06-07 June 2018) – Abstract is presented and accepted for publication.
12. **Joao Anes**, Daniel Hurley, Séamus Fanning and **Shabarinath Srikumar**. 2017. **Reverting multidrug-resistant phenotypes of *Escherichia coli* isolated from cattle using 1-(1-naphthylmethyl)-piperazine** AT International Association of Food Protection European Symposium 2017 Brussels (29-31 March 2017).
13. **Shabarinath Srikumar,** Carsten Kröger, Magali Hébrard, Aoife Colgan, Siân V. Owen, Sathesh K Sivasankaran, Andrew D. S. Cameron, Karsten Hokamp, and Jay C. D. Hinton. **RNA-seq Brings New Insights to the Intra-Macrophage Transcriptome of *Salmonella***

Typhimurium AT 25th International ICFMH Conference Food Micro 2016, Dublin (19-22 July 2016).

14. **Shabarinath Srikumar**, Carsten Kröger, Magali Hébrard, Karsten Hokamp, Katie Breen, Sathesh K. Sivasankaran and Jay C. D. Hinton**. sRNA profiling during macrophage infection by *Salmonella* Typhimurium.** In. **Abstracts.** 3rd Conference on Regulating with RNA in Bacteria, Würzburg, Germany. (4-8 June 2013).
15. **Shabarinath Srikumar**, Magali Hébrard, Samantha Paré, Carsten Kröger, Sathesh K. Sivasankaran, Kristian Händler, Karsten Hokamp, Alex Sittka, Yanjie Chao, Kai Papenfort, Cynthia Sharma, Jörg Vogel & Jay C. D. Hinton**. The virulence of *Salmonella* Typhimurium is regulated by sRNA.** In. **Abstracts.** SGM Spring conference 2012 – Convention centre Dublin. (26-29 March 2012).
16. **Shabarinath Srikumar**, Magali Hébrard, Samantha Paré, Carsten Kröger, Sathesh K. Sivasankaran, Kristian Händler, Karsten Hokamp, Alex Sittka, Yanjie Chao, Kai Papenfort, Cynthia Sharma, Jörg Vogel & Jay C. D. Hinton**. The virulence of *Salmonella* Typhimurium is regulated by sRNA.** In**. Abstracts**. Current trends in Biomedicine workshop: The biology of intracellular bacterial pathogens, Baeza, Spain (24-26 October 2011).
17. **Shabarinath Srikumar** and Thilo M Fuchs**. Propanediol and ethanolamine metabolism of *Salmonella enterica* serovar Typhimurium.** Abstract ID: MAMIO-96. In. **Abstracts**. 1st Metabolomics and more symposium. The Munich Functional Metabolomics Initiative. Helmholtz Zentrum München, Freising-Weihenstephan, München, Germany. (10-12 March 2010).
18. **Shabarinath Srikumar** and Thilo M Fuchs**. Propanediol and ethanolamine metabolism of *Salmonella enterica* serovar Typhimurium.** Abstract ID: ID B0330. In. **Abstracts**. 3rd Joint Conference of the German society for hygiene and Microbiology (DGHM) and Association for General and Applied Microbiology (VAAM), Hannover, Germany, (28-31 March 2010).
19. **Shabarinath, S.,** Pandit, L., Indrani Karunasagar and Iddya Karunasagar. **Direct detection of *Campylobacter jejuni* from stool samples using polymerase chain reaction.** In **Abstracts.** 48th annual conference of Association of Microbiologists of India (18-21 December 2007).
20. **Shabarinath, S.,** Smitha Kuriakose., Indrani Karunasagar and Iddya Karunasagar. **Molecular characterization of *Salmonella* isolated from seafood in tropical waters.** In **Abstracts.** 46th annual conference of Association of Microbiologists of India (8-10 December 2005).
21. **Shabarinath, S.,** Smitha Kuriakose., Indrani Karunasagar and Iddya Karunasagar. **Molecular characterization of *Salmonella* isolated from seafood in tropical waters.** In **Abstracts.** Conference on the microbiology of tropical seas, (13-15 December 2004) by National Institute of Oceanography, Goa.
22. **Shabarinath, S.,** Sanath kumar, H., Parvathy, A., Indrani Karunasagar and Iddya Karunasagar. 2003. **Evaluation of different PCR primers for the rapid detection of *Salmonella* in seafood by polymerase chain reaction.** In **Abstracts**. MICROBES AND HUMAN SUSTENANCE, a 44th annual conference of Association of Microbiologists of India.

12. POSTER PUBLICATIONS

1) Greshma IAFP
2) Greeshma Bharathan, Priti Mudgil, Sunil Mundra and **Shabarinath Srikumar**. Growth Kinetics of *Sallmonella* Typhimuirum regulatory mutants identifies unique environmentals faced by the pathogen during survival in milk. Dubai International Food Safety Conference (DIFSC 21), Dubai, 18-23 November, 2021

3) **Shabarinath Srikumar**, Carsten Kröger, Magali Hébrard, Aoife Colgan, Siân V. Owen, Sathesh K Sivasankaran, Andrew D. S. Cameron, Karsten Hokamp, and Jay C. D. Hinton. **RNA-seq Brings New Insights to the Intra-Macrophage Transcriptome of *Salmonella* Typhimurium** AT 25th International ICFMH Conference Food Micro 2016, Dublin (19-22 July 2016). ***(Finalist for the best poster award)*.**

4) **Shabarinath Srikumar**, Carsten Kröger, Magali Hébrard, Karsten Hokamp, Katie Breen, Sathesh K. Sivasankaran and Jay C. D. Hinton**. sRNA profiling during macrophage infection by *Salmonella* Typhimurium.** In. **Abstracts.** 3rd Conference on Regulating with RNA in Bacteria, Würzburg, Germany. (4-8 June 2013).

5) **Shabarinath Srikumar**, Magali Hébrard, Samantha Paré, Carsten Kröger, Sathesh K. Sivasankaran, Kristian Händler, Karsten Hokamp, Alex Sittka, Yanjie Chao, Kai Papenfort, Cynthia Sharma, Jörg Vogel & Jay C. D. Hinton**. The virulence of *Salmonella* Typhimurium is regulated by sRNA.** In. **Abstracts.** SGM Spring conference 2012 – Convention centre Dublin. (26-29 March 2012).

6) **Shabarinath Srikumar**, Magali Hébrard, Samantha Paré, Carsten Kröger, Sathesh K. Sivasankaran, Kristian Händler, Karsten Hokamp, Alex Sittka, Yanjie Chao, Kai Papenfort, Cynthia Sharma, Jörg Vogel & Jay C. D. Hinton**. The virulence of *Salmonella* Typhimurium is regulated by sRNA.** In**. Abstracts**. Current trends in Biomedicine workshop: The biology of intracellular bacterial pathogens, Baeza, Spain (24-26 October 2011).

7) **Shabarinath Srikumar** and Thilo M Fuchs, T. M**. Propanediol and ethanolamine metabolism of *Salmonella enterica* serovar Typhimurium.** Abstract ID: ID B0330. 1st Metabolomics and more symposium. The Munich Functional Metabolomics Initiative. Helmholtz Zentrum München, Freising-Weihenstephan, München, Germany, (10-12 March 2010).

8) Shabarinath Srikumar and Fuchs, T. M**. Propanediol and ethanolamine metabolism of *Salmonella enterica* serovar Typhimurium.** Abstract ID: ID B0330. 3rd Joint Conference of the German society for hygiene and Microbiology (DGHM) and Association for General and Applied Microbiology (VAAM), Hannover, Germany, (28-31 March 2010).

9) Shabarinath Srikumar, Pandit, L., Indrani Karunasagar and Karunasagar, I**. Direct detection of *Campylobacter* from stool samples using polymerase chain reaction.** Association of Microbiologists of India, Chennai Chapter. 2009.

13. PUBLICATIONS *in progress*

1. Acidic environment promotes chloramphenicol sensitivity and gentamycin resistance in Multi Drug Resistant *Salmonella* Typhimurium DT104. Dania Mustafa Darwich, Greeshma Bharathan, Priti Mudgil, Sajid Maqsood, and **Shabarinath Srikumar**. *In writing* (Target journal - Food Microbiology).
2. Yu Cao, Ankita Naithani, Nikunj Maheshwari, **Shabarinath Srikumar** and Séamus Fanning. A functional evaluation of the microbiome of a powdered infant formula plant using both meta-genomic and meta-transcriptomic approaches**.** *Target journal undecided.*
3. Brigid Hooban, Scott Nguyen, João Anes, Ben D Tall, Gopal Rao Gopinath, Daniel Hurley, Kirsten Schaffer, Kelly Wyres, Katherine Holt, Séamus Fanning and **Shabarinath Srikumar**. Whole genome sequencing of food and clinical isolates of *Klebsiella* reveals unique insights into bacterial pathoadaptaion**.** *Target journal undecided.*

14. Referees

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