

Dr Sophia Inbaraj

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Specialised areas: Leptospirosis, antimicrobial resistance, bacteriophages

S.No	Project name	Role	Year of completion	Funding agency
1	Development and evaluation of molecular methods for identification of <i>Salmonella enterica</i> serovars among isolates of poultry origin	Co-PI	2022	ICAR-IVRI (Institute funded)
2	Comparative evaluation of whole cell bacterin and outer membrane vesicles as vaccine candidates against bovine leptospirosis	PI	2022	ICAR-IVRI (Institute funded)
3	All India Network Programme on Neonatal Mortality of Farm Animals (ICAR)	Co-PI	2021	ICAR funded

Projects completed

Research Publications

1. Asha Kumari Verma , Mostafa Y.Abdel-Glil , Angappan Madesh , Shailendri Gupta , Athira Cheruplackal Karunakaran , **Sophia Inbaraj**, Abhishek , Viswas Konasagara Nagaleekar, Pallab Chaudhuri, Rajesh Kumar Agarwal, Prasad Thomas. Multilocus sequence typing of *Clostridium perfringens* strains from neonatal calves, dairy workers and associated environment in India. Anaerobe, 63, 2020, 102212. (Impact factor:2.8)
2. Bhuvana Priya, G., Agrawal, R.K., Milton, A.A.P., Mishra, M., Mendiratta, S.K., Luke, A., **Inbaraj, S.**, Singh, B.R., Kumar, D., Ravi Kumar, G., Rajkhowa, S. Rapid and visual detection of *Salmonella* in meat using invasin A (*invA*) gene-based loop-

mediated isothermal amplification assay. LWT Food Science and Technology, 2020, (126) 109262. (Impact factor: 4.9)

3. **Inbaraj S**, Agrawal RK, Thomas P, Mohan C, Agarwal RK, Verma MR, Chaudhuri P. Antimicrobial resistance in Indian isolates of nontyphoidal *Salmonella* of livestock, poultry, and environmental origin from 1990 to 2017. Comp Immunol Microbiol Infect Dis 2022;80:101719.(Impact factor: 2.7)
4. Damini Khawaskar, Anbazhagan Subbaiyan, Dhayananth Balusamy, **Sophia Inbaraj**, Abhishek, Obli Rajendhran Vinodh Kumar, Viswas Konasagara Nagaleekar, Dharmendra Kumar Sinha, Pallab Chaudhuri, Bhoj Raj Singh, Vinod Kumar Chaturvedi, Prasad Thomas, A comparative genomics approach for identifying genetic factors in Escherichia coli isolates associated with bovine diseases, *Journal of Applied Microbiology*, 133(6): 3490-3501. (Impact factor:4.0)
5. Khawaskar DP, Sinha DK, Lalrinzuala MV, Athira V, Kumar M, Chhakchhuak L, Mohanapriya K, **Sophia I**, Abhishek, Kumar ORV, Chaudhuri P, Singh BR, Thomas P. Pathotyping and antimicrobial susceptibility testing of Escherichia coli isolates from neonatal calves. Vet Res Commun. 2022, 46(2):353-362. (Impact factor: 2.8)
6. Angappan, M., Ghatak, S., Milton, A.A.P. Verma, AK., **Sophia, I** et al. Detection of novel sequence types and zoonotic transmission potentiality among strains of Shiga toxigenic *Escherichia coli* (STEC) from dairy calves, animal handlers and associated environments. *Braz J Microbiol* **52**, 2541–2546 (2021). (Impact factor: 2.2).
7. **Inbaraj S**, Agrawal RK, Thomas P, Chaudhuri P, Chaturvedi VK. Isolation and characterization of vB_SenS_Ib_psk2 bacteriophage against drug-resistant *Salmonella enterica* serovar Kentucky. *Folia Microbiol (Praha)*. 2023 Apr 19. doi: 10.1007/s12223-023-01052-0. (Impact factor: 2.62).
8. **Inbaraj S**, Angappan M, Thomas P, Kumar M, Irungbam K, Verma MR, Viswas KN, Abhishek, Rawat M, Chaudhuri P. Isolation and characterization of bacteriophage Ib_pec2 against shigatoxigenic *Escherichia coli*. J Basic Microbiol. 2022 Oct 21. doi: 10.1002/jobm.202200398. (Impact factor: 2.65).

9. **Sophia, I**, V. Sejian, M. Bagath, Raghavendra Bhatta. Quantitative expression of hepatic toll-like receptors 1–10 mRNA in Osmanabadi goats during different climatic stresses. Small Ruminant Research, 141(2016): 11–16. (Impact factor: 1.4).
10. **Sophia Inbaraj**, Karam Chand, Sanchay K. Biswas, Anandamoy Kundu, Jai Sunder. Emerging Orbiviral Infections in Animals in the Climate Change Scenario: Evidence of Bluetongue Virus Antibodies and Antigens in Small Ruminants of Andaman and Nicobar Islands, India. National Academy Science Letters 42(6):451–454. (Impact factor : 0.9).

Awards / Honor Received

- 1) INSPIRE fellowship, Department of Science and Technology for pursuing Ph.D 2013
- 2) Appreciation certificate from Uttar Pradesh State Forest Department for diagnostic services of leptospirosis in wildlife, 2019
- 3) Awarded Thiru.SKM Maeilanandhan Prize for securing highest marks in Poultry Science during BVSc & A.H
- 4) Awarded Western Hatcheries Ltd. Gold medal for the best B.V.Sc & A.H student of Madras Veterinary College in the subject of Poultry Science

Membership

Life member of National Academy of Biological Sciences, India

Life member of Andaman Science Association, India

Life member of Society for Bacteriophage Research and Therapy

Life member of Indian Meat Science Association (IMSA)