

Kasturi Ganguly

Ph.D. Research Scholar at ICMR-NIRRH

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Date of Birth: 28/12/1993



Career Objectives

Presently, I am working towards completion of my Ph.D. thesis in the domain of cancer immunology. My research area includes innate immunity, oncotherapy, cancer immunology, anti-prostate cancer therapy. I am interested in taking up a challenging role in the field of scientific analysis, modern techniques and excel them by applying my zeal, energy, and knowledge to gain a comprehensive understanding at a reputed organization. I look forward to working in a talented, multidisciplinary team to get responsibility and contribute significantly to achieve good progress in my career through all my best expertise and skills and knowledge.

Ph.D. Thesis

Title: ***“Deciphering the Mechanisms of Innate Immune Surveillance in Prostate cancer for Immunotherapy”***

Department of Innate Immunity, ICMR-National Institute for Research in Reproductive and Child Health (NIRRH), Mumbai

Supervisor: Dr. Taruna Madan, Scientist “G” and Head, Developmental Research, ICMR, New Delhi, formerly, Scientist “G” and Head, Dept. of innate Immunity, ICMR-NIRRH, Mumbai

Date of Joining: 17th September 2018

The present research focuses on the involvement of innate immunity as a complementary treatment paradigm for prostate cancer. Stimulating several innate immune receptor pathways were shown to transform an poorly immunogenic “cold” tumor into highly immune-responsive and immunogenic “hot” tumor via immunomodulation leading to active immune surveillance of the tumor. Future studies aimed at investigating several innate immune pathways, yet unexplored, and may yield novel approaches for the next generation of cancer immunotherapy.

M.Sc. Dissertation Project

Title: ***“Therapeutic Potential of Nigella sativa Against Cadmium-Induced Cytotoxicity, Hematological Disturbances and Hepatorenal Damages in Mice”***

Supervisor: Dr. S Roy Karmakar, Department of Zoology, Maulana Azad College, Kolkata

Nigella sativa could significantly attenuate the harmful effects of Cadmium by exerting its therapeutic potentials as well as hepato-protective, renal-protective and anti-cancer activities in mice.

Awards and Achievements

- **ICMR-NIRRH Foundation Day Award 2023** for the **Best Research Paper** entitled ***“Immunomodulatory Role of Surfactant Protein-D in a Transgenic Adenocarcinoma of Mouse Prostate (TRAMP) Model”***

- **Best Poster Award** for “*Intra-tumoral delivery of RIG-I agonist regressed tumor in a syngeneic murine model of Prostate cancer*” at International Conference on Kaleidoscopic Insights into Reproductive and Child Health, Mumbai, 2023
- **CSIR-Junior Research Fellow (JRF) NET** with AIR 81 by Joint CSIR-UGC Junior Research fellowship & Eligibility for Lecturership (NET) Exam, December 2018
- **CSIR-Senior Research Fellow, SRF (NET)**, October 2020

Roles and Responsibilities

- Co-operator of Institute’s Confocal-Microscopy Central Facility (October2022-present)
- Mentor of two M.Sc. dissertation projects (2022-2023)
- Co-ordinator for “Immunoquiz” for Indian Immunology Day celebration supported by Indian Immunology Society, Mumbai Immunology Group (2020-2022)
- Member of organizing committee of Immunocon-2019, Mumbai (2019)

Teaching Experiences

- Topic Lecturer, “Cancer Immunology” Module, Ph.D. Coursework, ICMR-NIRRH (2021-2023)
- Visiting Faculty for “Immunology and Immunoinformatics” Module for M.Sc. Part II (Sem III) (2021) of M.Sc. Bioinformatics Department, Guru Nanak Khalsa College of Arts, Science and Commerce, Mumbai.
- Part-Time Biology Faculty, Foundation Department, Pathfinder Educational Centre, Kolkata (01st April 2018 to 26th August 2018)

Technical Skills

- Expertise in several molecular techniques including Flow cytometry, qRT-PCR, Immunoblotting, Immunofluorescence, Immunohistochemistry, SDS PAGE, PCR.
- Expertise in handling software such as FlowJo Mendeley etc.
- Expertise in mice handling, dissection and tissue processing.
- Expertise in cell-line maintenance and *in-vitro* studies.

Academic Qualification

Degree	Institute	Subject	Division	Duration
M.Sc.	Maulana Azad College, University of Calcutta	Zoology	First Class First (82%)	2015-2017
B. Sc.	Lady Brabourne College, University of Calcutta	Zoology (Hons.)	First Class (75.38%)	2012-2015
Higher Secondary	Kanchrapara Indian Girls’ High School, WBCHSE Board		First Class (80.6%)	2010-2012

Publications

1. **Kasturi Ganguly**, Uday Kishore, Taruna Madan, *Role of C type lectins in the tumor microenvironment*. Handbook of Cancer and Immunology In: Rezaei, N. (eds) Handbook of Cancer and Immunology. Springer, Cham (2023). https://doi.org/10.1007/978-3-030-80962-1_94-1
2. **Kasturi Ganguly**, Uday Kishore, Siddhanath M Metkari, Taruna Madan. *Immunomodulatory role of Surfactant Protein-D in a Transgenic Adenocarcinoma of Mouse Prostate (TRAMP) model*. Frontiers in Immunology (2022). DOI: 10.3389/fimmu.2022.930449 (IF:7.3)

3. **Kasturi Ganguly**, Uday Kishore, Taruna Madan, Interplay between *C-type lectin receptors and microRNAs in cellular homeostasis and immune response*. The FEBS Journal, 288 (14), 4210-4229, (2020). DOI: 10.1111/febs.15603 (IF: 5.622)
4. Rambhadur Subedi, **Kasturi Ganguly**, Taruna Madan. *Multiple mechanisms underlying anti-prostate cancer activity of Surfactant protein-D*. 31 Issue ISSRF Newsletter-A Kaleidoscopic View of Advances in Reproductive Health Research as India Turns 75, Indian Society for the Study of Reproduction and Fertility (140-142) (2023), ISBN 2395-2806
5. Valarmathy Murugaiah, Hadida Yasmin, Hrisikesh Pandit, **Kasturi Ganguly**, Ram Subedi, Maha Al-Mozaini, Taruna Madan, Uday Kishore, *Innate immune response against HIV-1*. Microbial Pathogenesis: Infection and Immunity. Part of the Advances in Experimental Medicine and Biology. Springer Nature (2021) DOI: 10.1007/978-3-030-67452-6_3 (IF: 3.650)
6. **Kasturi Ganguly** and Taruna Madan. *Novel immunotherapies targeting the immune dysregulation in Prostate Cancer*. 32 Issue ISSRF Newsletter- Immunology and Reproduction - An Interlinking Paradigm. (under review)
7. **Kasturi Ganguly**, Siddhanath M. Metkari, Barnali Biswas, Rambhadur Subedi, Taruna Madan. *Intra-tumoral delivery of RIG-I agonist induces robust anti-tumor response in murine model prostate cancer*. The FEBS Journal. (in preparation)

Conference Publication

1. **Kasturi Ganguly**, Taruna Madan. *Intra-tumoral delivery of RIG-I agonist regressed tumor in a syngeneic murine model of Prostate cancer*. International Conference on Kaleidoscopic Insights into Reproductive and Child Health- Mumbai, 23-25 Jan, 2023
2. **Kasturi Ganguly**, Uday Kishore, Taruna Madan. *Surfactant Protein-D mediated Innate Immune Surveillance in Prostate*. 7th World Cancer Congress- Bangalore, 19-20 Nov, 2022
3. **Kasturi Ganguly**, Taruna Madan. *Dysregulated RLR signalling in Prostate Cancer*. The Indian Immunology Society Immunocon- Varanasi, 8-9 July, 2022 (virtual)
4. **Kasturi Ganguly**, S.M. Metkari, Taruna Madan. *Dysregulated immune response and Surfactant protein D: signatures of “cold” prostate tumor microenvironment*. ISSRF-Delhi 19-21 Feb, 2021 (virtual)

References

1. Dr. Taruna Madan
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