

DR. SUVANKAR GHORAI Ph.D - IIT Kharagpur



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PROFESSIONAL EXPERIENCE

Asst. Professor:	Raiganj University, Uttar Dinajpur. WB. 2020
Research Asst. Professor:	SRM University. Chennai 2016-2020
Research Scientist:	National Center for Cell Science, Pune- 2013-2016
Senior Post Doctorate Fellow:	University of Washington, Seattle, USA-2011-2013
Post Doctorate Fellow:	New Jersey Medical School, NJ. USA.-July 10-Dec 10
Junior /Senior Research Fellow:	IIT- Kharagpur -2004-2010

About Me:

Myself Dr. Suvankar Ghora. I have obtained my PhD from Indian Institute of Technology (IIT) Kharagpur, India. I have been trained as postdoctoral fellow at the New Jersey Medical school and University of Washington at Seattle USA on different aspects of HCV, HIV and AIDS. Coming back to India, I have been associated with National Center for Cell Science (NCCS) Pune, as Research Scientist. Before joining at the Raiganj University, I served as Research Assistant Professor at SRM University, Tamil Nadu, India, for more than three years.

Research Area and Interest:

Area of research interest includes Infection Biology, especially viral infection, antiviral and low cost point of care diagnostics. Currently Dengue virus host factors as potential therapeutic target and diagnostics research is being explored. Couple of other viruses like HPV and Corona virus is under investigation. Funding for my research has been obtained from ICMR, DBT, UGC and MHRD. With the educational qualification and over more than 10 yrs (Post Ph.D) of research exposure, I strongly believe that I can take diverse scientific challenges and come to logical conclusions.

Awards:

CROI-Young Investigator award-CROI-2012 Seattle USA.

Member of the Society

Indian Science Congress (ISCA)

Reviewer & Editor

1. Frontiers of Microbiology
2. Biosensors and Bioelectronics (Gavin Publishers)

Publications:

2020

1. Encapsulation of Ru(η -6-p-cymene) complex of the antibacterial drug trimethoprim into polydiacetylene-phospholipid assembly to enhance its In vitro anticancer and antibacterial activities. Durairaj Gopalakrishnan, Chezhiyan Sumithaa, Arumugam Madan Kumar, Nattamai S. P. Bhuvanesh, **Suvankar Ghorai**, Priyadip Das * and Mani Ganeshpandian*. New Journal of Chemistry. ISSN: 11440546, 13699261 (2020), doi.org/10.1039/D0NJ03664A. Impact Factor: 3.288.

2. Recent development of electrochemical immunosensor for the diagnosis of dengue virus NSI protein: A review. Ajitesh Dhala, Thangapandi Kalyani, **Suvankar Ghorai**, Niroj Kumar Sahu, and Saikat Kumar Jana. Sensors International. ISSN: 2666-3511: (2020), 100030, doi.org/10.1016/j.sintl.2020.100030. Impact Factor:

3. Polyaniline Based Electrochemical Sensor for the Detection of Dengue Virus Infection. Reshmi Dutta* K.Thanga Pandi, *Ciona Bastin, Raj Mahapatra, Shairee Sanyal, Sreyashi Bose, Sumantra Mondal, Saikat Jana and **Suvankar Ghorai***. Avicenna Journal of Medical Biotechnology. eISSN: 2008-4625, (2020), 12(2): 77-84. Impact factor: 1.69.

2019

4. Concentration-dependent Fabrication of Different Short Peptide Based Self-assembled Nanostructures with Different Morphologies and Controlled intracellular delivery property. Subramaniyam Sivagnanama, Amutha Arula, Soumyajit Ghosha, **Suvankar Ghorai*** Priyadip Das. Materials Chemistry Frontiers., ISSN: 2052-1537, (2019), 10(3), 2110-2119. doi.org/10.1039/C9QM00363K. Impact factor: 6.788.

5. An immunological outlook of ZIKV as DENV enhanced secondary infection. Ciyona Bastin, Sumantra Mondal, Shreyosi Bose and **Suvankar Ghorai.**" Pramana Research Journal. Volume 9 Issue 2: February 2019.

2018

6. SMAR1 attenuates Wnt/ β -catenin signalling and prevents colorectal cancer progression. Nandaraj Taye, Aftab Alam, **Suvankar Ghorai**, Deya Ghosh Chatterji, Apoorva Parulekar, Devraj Mogare, Snahlata Singh, Pallabi Sengupta, Subhrangsu Chatterjee, Manoj Kumar Bhat, Manas Kumar Santra, Prabhakar Budha Salunkhe, Susan Kling Finston and Samit Chattopadhyay. Oncotarget., ISSN: 1949-2553 (2018), 9 (30), 21322-21336. doi: 10.18632/oncotarget.25093. Impact factor: 5.168.

2017

7. Patterns and Rates of Viral Evolution Between HIV-1 Subtype B Infected Females and Males. Dapp MJ, Kober KM, Chen L, Westfall DH, Wong K, Zhao H, Hall BM, Deng W, Sibley T, **Ghorai S**, Kim K, Chen N, McHugh S, Au L, Cohen M, Anastos K, Mullins JI. PLoS One. ISSN: 19326203 (2017),12(10):e0182443. doi: 10.1371/journal.pone.0182443. Impact Factor: 3.534.

8. Cdc20 directs proteasomal degradation of tumor suppressor SMAR1 to promote malignancy. Paul D, **Ghorai S**, Dinesh US, Shetty P, Chattopadhyay S, Santra MK. Cell Death Dis. ISSN 2041-4889 (2017), 8(6): e2882.doi: 10.1038/cddis.2017.270. Impact factor: 5.378.

9. Oxidant mediated one-step complete conversion of multi-walled carbon nanotubes to graphene quantum dots and their bioactivity against mammalian and bacterial cells. Anupam Biswas, Puneet Kumar Khandelwal, Raja Das, Gayatri Salunke, Aftab Alam, **Suvankar Ghorai**, Samit Chattopadhyay and Pankaj Poddar. *J. Mater. Chem. B*, ISSN 2050 (2017), 5, 785-796. doi.org/10.1039/C6TB02446G. Impact factor: 4.872.

2016

10. SMAR1 binds to T(C/G) repeat and inhibits tumor progression by regulating miR-371-373 cluster. Jinumary Mathai, Smriti Mittal, Aftab Alam, Payal Ranade, Devraj Mogare, Sonal Patel, Smita Saxena, **Suvankar Ghorai**, Abhijeet Kulkarni, and Samit Chattopadhyay. *Scientific Report*. ISSN: 20452322, (2016), 6:33779. doi: 10.1038/srep33779 , Impact Factor: 5.078.

2015

11. p21WAF1/CIP1 RNA Expression in Highly HIV-1 Exposed, Uninfected Individuals. *Joshua T Herbeck, ***Suvankar Ghorai**, Lennie Chen, Charles Rinaldo, Joseph B Margolick, Roger Detels, Lisa Jacobson, Steven Wolinsky, James I. Mullins. *PLoS One*. ISSN: 19326203 (2015), 10(3):e0119218. doi: 10.1371/journal.pone.0119218. Impact Factor: 3.534.

*Contributed equally.

12. Doxorubicin conjugated β -NaYF₄: Gd³⁺/ Tb³⁺ phosphors: A multi- functional luminescent-magnetic probe for simultaneous pH-triggered drug delivery, optical and magnetic resonance imaging. Padhye, Preeti, Alam, Aftab, **Ghorai, Suvankar**, Chattopadhyay, Samit, Poddar, Pankaj. *Nanoscale*, ISSN: 20403364 (2015),7, 19501-19518, doi.org/10.1039/C5NR04473A. Impact Factor: 6.739.

13. Fitness-balanced escape determines resolution of dynamic founder virus escape processes in HIV-1 infection. Justine Sunshine, Brendan Larsen, Brandon Maust, Ellie Casey, Wenjie Deng, Lennie Chen, Dylan Westfall, Moon Kim, Hong Zhao, **Suvankar Ghorai**, Erinn Lanxon-Cookson, Morgane Rolland, Ann Collier, Janine Maenza, James Mullins, and Nicole Frahm. *J. Virol*. ISSN: 0022538X (2015), 89(20), 10303- 10318. doi: 10.1128/JVI.01876-15, Impact Factor: 4.648.

14. Nuclear Matrix Protein SMAR1 control regulatory T cell fate during Inflammatory Bowel Disease (IBD). Mirlekar B, **Ghorai S**, Khetmalas M, Bopanna R, Chattopadhyay S.. *Mucosal Immunology*, ISSN: 19330219 (2015), 8(6):1184-200. doi: 10.1038/mi.2015.42. Impact Factor: 7.537.

2014

15. A novel fluorescence probe for estimation of Cysteine/Histidine in human blood plasma and recognition of endogenous Cysteine in live Hct116 cells. Gandra, Upendar Reddy. Agarwalla, Hridayesh. Taye, Nandaraj. **Ghorai, Suvankar**. Chattopadhyay, Samit. And Das, Amitava. *Chem. Commun.* ISSN: 03241130 (2014), 50, 9899-9902. doi.org/10.1039/C4CC04214J Impact Factor: 6.718.

2012

16. Kinetic Analysis, Expression Pattern and Production of a Recombinant Fungal Protease Inhibitor of Tasar Silkwork *Antheraea mylitta*. Sobhan Roy, Venugopal Rao Ravipati, **Suvankar Ghorai**, Mrinmay Chakrabarti, Amit Kumar Das and Ananta Kumar Ghosh. *Appl Biochem Biotechnol*. ISSN: 02732289 (2012), 168(5):1076-85, DOI: 10.1007/s12010-012-9842-1, Impact Factor: 2.14.

2010

17. Analysis of transcripts expressed in one day old larvae and fifth instar silk glands of tasar silkworm *Antheraea mylitta*. S. Maity, S. I. Goel, S. Roy, **S. Ghorai**, S. Bhattacharyya, A. Venugopalan, A. K. Ghosh. *Comp Funct Genom*: ISSN: 1532-6268 (2010), 05/2010, 246738. doi.org/10.1155/2010/246738. Impact Factor: 2.03.

18. Molecular characterization of genome segments 1 and 3 encoding two capsid proteins of *Antheraea mylitta* cytoplasmic polyhedrosis virus. Mrinmay Chakrabarti, **Suvankar Ghorai**, Saravana K K Mani and Ananta K Ghosh. *Virology*, ISSN: 1743422X (2010), 7:181, doi: 10.1186/1743-422X-7-181, Impact Factor: 2.468.

2009

19. Cloning, overexpression, purification, crystallization and preliminary X-ray diffraction analysis of glyceraldehyde-3-phosphate dehydrogenase from *Antheraea mylitta*. S. Mukherjee, S. Maity, S. Roy, **S. Ghorai**, M. Chakrabarti, R. Agarwal, D. Dutta, A. K. Ghosh and A. K. Das. *Acta Cryst. Acta Crystallographica Section F*. ISSN: 2053230X (2009), 65(Pt 9), 937-40. doi: 10.1107/S174430910903214X, Impact Factor: 1.199.

2008

20. Genome segment 6 of *Antheraea mylitta* cyovirus encodes a structural protein with ATPase activity. Venkata R.M. Chavali., Chaithanya Madhurantakam., **Suvankar Ghorai**, Sobhan Roy., Amit K. Das and Ananta K. Ghosh. *Virology*, ISSN: 00426822 (2008), 377(1):7-18, doi: 10.1016/j.virol.2008.03.038, Impact Factor: 3.315.

21. Molecular characterization of genome segment 2 encoding RNA dependent RNA polymerase of *Antheraea mylitta* cytoplasmic polyhedrosis virus. **Suvankar Ghorai**, Mrinmay Chakrabarti, Sobhan Roy, Venkata Ramana Murthy Chavali, Abhisek Bagchi and Ananta K Ghosh. *Virology*, ISSN: 0042682 (2008), 404 (1):21-31. doi.org/10.1016/j.virol.2010.04.019, Impact Factor: 3.315.

Proceedings/Posters

1. **Ghorai S** and Ghosh AK Presented at a National Symposium of the RNA group of India. January 18-19: 2010. University of Pune India. *Antheraea mylitta* cytoplasmic polyhedrosis virus RNA dependent RNA polymerase.

2. Elevated p21/WAF1 RNA Expression Is Associated with Resistance to HIV Infection. J Herbeck, **Suvankar Ghorai***, L Chen, C Rinaldo, L Jacobson, R Detels, S Wolinsky, J Margolick, and J Mullins. Univ of Washington, Seattle, US; Univ of Pittsburgh, PA, US; Johns Hopkins Univ, Baltimore, MD, US; Univ of California, Los Angeles, US; and Northwestern Univ, Chicago, IL, US. CROI-2012. Seattle. USA. * **Young Scientist awardee**.

3. THE NATURAL HISTORY OF HIV-1 INFECTION IN WOMEN: STUDY OF THE WIHS COHORT. Lennie Chen, **Suvankar Ghorai**, Michael J Dapp, Dylan Westfall, Kim Wong, Hong Zhao, Breana M Hall, Sarah McHugh, Katie Kim, Lily Au, Natalie Chen, Daniel Holmes, Kord M. Kober, Mardge Cohen, Kathy Anastos and James I Mullins. HIVDE-2014.

4. Screening of small peptide against ischemic Fatty-Acid Binding Protein (FABP). Shairee Sanyal, Shreyashi Bose, Sumantra Mondal and Suvankar Ghorai. International Conference on emerging prespectives in Bioengineering and biomedical informatics with special relevance to ethnomedicine in human health, organized by Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu, India. **Best poster awardee**.

Current Research

1. Cancer non-invasive, point of care screening kit development
2. Altered pathway analysis during viral infection (Dengue, HPV and SARS)
3. Low cost point of care diagnostics for viral disease.
4. Natural inhibitor screening against viral targets
5. Protein Biomarker discovery

Research Grants awarded

Sl No.	Title of The Project	Amount Lakhs	Agency	Capacity	Status
1	Development of DNA Aptamer/peptide based Dengue Virus paper based diagnostic kit	19.5	ICMR	CO-PI	Ongoing (2019-2020)
2	HPV Associated Cervical cancer early screening kit development	33	DBT	PI	Awarded
3	Altered pathway analysis by RT2 profiling array upon CRISPR/Cas9 Knockout of BANP gene in BHK 21 cells followed by Dengue virus Infection.	10	UGC: Start Up Grant	PI	Awarded
4.	An integrated approach for developing a liposome based point of care paper diagnostic kit for dual detection of Dengue virus infection	44.48	MHRD/ IISC: STAR	PI	Awarded Not availed due to change of Institute

Student Guidance

PhD: 1 (On-Going)

M.Tech: 4

B.Tech: 15

Opportunity

Young and meritorious minds are always welcome for a research position. Feel free to contact for possible positions.

Address of Communication:

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