Samiran Saha, M. Sc., Ph. D.

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Education:

1. Ph.D. in July, 2007, from Jadavpur University. Research was done at Indian Institute of Chemical Biology, Kolkata, CSIR.

Thesis Title: Indian Kala-azar: Mechanism of Immune Regulation in Response to Chemotherapy and its Application in Serodiagnosis.

2. M.Sc. in Zoology in 1999, from University of Calcutta.
3. B.Sc. (Hons.) in Zoology in 1997, from University of Calcutta.

Awards:

1. UGC-Raman Post Doctoral Fellowship for research in USA, 2014.
2. CSIR Research Associateship, 2009
3. DBT Post Doctoral Fellowship, 2006
4. Joint CSIR-UGC NET-JRF, June, 2000
5. Joint CSIR-UGC NET-LS, Dec, 2000
6. GATE, 2000

Employments and Experiences:

- Assistant Professor in Biotechnology, Visva-Bharati University, Santiniketan, India, from Jan 09, 2010 till date.
- Raman Postdoctoral fellow (UGC), NIH, Maryland, USA, from Dec 2014 to Nov 2015.
- Contractual lecturer in Zoology, Netaji Subhas Open University, Kolkata, from Jan 21, 2009 to Jan 7, 2010.
- Research Associate, Saha Institute of Nuclear Physics, Kolkata, under DBT Postdoctoral Fellowship from Jan 2007 to Dec 2008.
- Guest Lecturer in Zoology, Jogesh Chandra Chowdhury College, Kolkata, from Nov 2006 to Feb 2008.
- JRF followed by SRF, Indian Institute of Chemical Biology, Kolkata, under UGC-NET fellowship from Jul 2001 to Jul 2006.
- Junior Research Fellow, Bose Institute, Kolkata, in an Indo-French Project from Jul 2000 to Jun 2001.
- Part-time lecturer in Zoology, Vijoygarh Jyotish Ray College, Kolkata from Feb 2000 to Jun 2000.

Present Research Interests:

1. Immunomodulation, chemotherapy and stress response in experimental visceral leishmaniasis.
2. Autophagy – induction, regulation and Type2 programmed cell death in cancer cell lines under treatment with different bioactive molecules.
3. Immune responses, screening and mechanisms of potential therapeutic options with different biomolecules and synthetic molecules against cancer cell lines, and in murine models of Hepatic and ascetic cancer.

Projects :

1. **Pricipal Investigator** of a Twinning Project entitled 'Study of induction and mechanisms of Autophagy in EAC cells upon treatment with Theaflavins'. Started on 26.09.19 Amount sanctioned (for Visva-Bharati): Rs. 21.25 lakh. (Total Amount: Rs. 70.9712 Lakh) Collaborator: Prof. Debasish Maiti, Dept. of Human Physiology, Tripura University, Tripura. Completed.

2. **Principal Investigator** of a DBT, Govt. of India supported project entitled 'Chemotherapeutic efficacy of Theaflavins on cancer cells through induction of autophagic cell death'. Amount: Rs. 25 lakh. Started on 29.07.2015. Completed.
3. **Co-Investigator of a** ICAR, NEH region supported project entitled 'Medicinal Plants Project'. Amount Rs. 40 lakh. Completed.
3. **Principal Investigator** of a UGC, Govt. of India supported Major research project entitled 'Therapeutic and immunomodulatory potential, and mechanism of action of *Tinospora spp.* against visceral leishmaniasis' Amount: Rs. 9 lakh. Completed.

Publications (Journals):

1. Ghosh, A.K., Verma, A., Majumder, D., Maiti, D., Choudhuri, T., Banerjee, A., **Saha S.** 2024. Theaflavins induce autophagy in Ehrlich's Ascites Carcinoma cells both *in vivo* and *in vitro*. ***Current Bioact Compd***. 20:e170124225746. doi: 10.2174/0115734072277726240102062944. ISSN: 1573-4072, eISSN: 1875-6646. CiteScore: 1.8

2. Majumder N, Banerjee A, **Saha S**. 2023. A review on new natural and synthetic anti-leishmanial chemotherapeutic agents and current perspective of treatment approaches. ***Acta Trop***. 240:106846. doi: 10.1016/j.actatropica.2023.106846. ISSN: 0001-706X. eISSN: 1873-6254. IF: 2.5

3. Iniguez E, **Saha S**, Petrellis G, Menenses C, Herbert S, Gonzalez-Rangel Y, Rowland T, Aronson NE, Rose C, Rafuse Haines L, Acosta-Serrano A, Serafim TD, Oliveira F, Srikantiah S, Bern C, Valenzuela JG, Kamhawi S. 2022. A composite recombinant salivary proteins biomarker for *Phlebotomus argentipes* provides a surveillance tool postelimination of visceral leishmaniasis in India. ***J Infect Dis***. 226:1842-1851. doi: 10.1093/infdis/jiac354. ISSN: 0022-1899, eISSN: 1537-6613. IF: 5.0

4. Ejazi SA, **Saha S**, Bhattacharyya A, Das S, Mateus NLF, da Costa Lima MS, Neitzke-Abreu HC, de Mendonca IL, Costa CHN, de Oliveira Melo OA, de Melo MA, Rossi-Bergmann B, Corso R, Manna L, Ali N. 2022. Development of immunological assays based on *Leishmania donovani* antigen for diagnosis of canine visceral leishmaniasis and their multicenter evaluation in Brazil and Italy. ***Front Cell Infect Microbiol***. 12:914477. doi: 10.3389/fcimb.2022.914477. ISSN: 2235-2988. IF: 4.6.

5. Majumder N, Ganguly S, Ghosh AK, Kundu S, Banerjee A, **Saha S**. 2020. Chlorogenic acid acts upon *Leishmania donovani* arresting cell cycle and modulating cytokines and nitric oxide *in vitro*. ***Parasite Immunol***. 42:e12719. doi: 10.1111/pim.12719. ISSN: 1365-3024. IF: 2.755.

6. Ejazi SA, Ghosh S, **Saha S**, Choudhury ST, Bhattacharyya A, Chatterjee M, Pandey K, Das VNR, Das P, Rahaman M, Goswami RP, Rai K, Khanal B, Bhattarai NR, Deepachandi B, Siriwardana YD, Karunaweera ND, Felinto deBrito ME, Gomes YM, Nakazawa M, Costa CHN, Adem E, Yeshanew A, Melkamu R, Fikre H, Hurissa Z, Diro E, Carrillo E, Moreno J, Ali N. 2019. A multicentric evaluation of dipstick test for serodiagnosis of visceral leishmaniasis in India, Nepal, Sri Lanka, Brazil, Ethiopia and Spain. ***Sci Rep***. 9:9932. doi: 10.1038/s41598-019-46283-9. ISSN: 2025-2322. IF: 4.122.

7. **Saha S**, Banerjee A, Verma A, Jha CK. 2014. Oral Treatment with Aqueous Solution of *Coffea canephora* Induce Protective Immune Response to Reduce Parasite Burden in Experimental Visceral Leishmaniasis. ***Am J Phyt Clin Ther.*** 2: 242-251. ISSN: 2321-2748. IF: 1.15

8. **Saha S**, Goswami R, Pramanik N, Guha SK, Saha B, Rahman M, Mallick S, Modak D, Silva FO, Mendonca IL, Costa DL, Costa CHN, Ali N. 2011. Easy Test for Visceral Leishmaniasis and Post–Kala-azar Dermal Leishmaniasis. ***Emerg Infect Dis***. 17:1304-1306. doi: 10.3201/eid1707.100801. ISSN: 1080-6059. IF: 6.8

9. **Saha S**, Mondal S, Ravindran R, Bhowmick S, Modak D, Mallick S, Rahman M, Kar S, Goswami R, Guha SK, Pramanik N, Saha B, Ali N. 2007. IL-10 and TGF-β mediated susceptibility in kala-azar

and post-kala-azar dermal leishmaniasis: the significance of Amphotericin B in the control of *Leishmania donovani* infection in India. ***J Immunol***. 179: 5592-5603. doi: 10.4049/jimmunol.179.8.5592. ISSN: 0022-1767, eISSN: 1550-6606. IF: 6.2

10. **Saha S**, Mondal S, Banerjee A, Ghose J, Bhowmick S, Ali N. 2006. Immune responses in kala-azar. ***Indian J Med Res***. 123:245-266. ISSN: 0971-5916. IF: 2.3

11. **Saha S**, Mazumdar T, Anam K, Ravindran R, Bairagi B, Saha B, Goswami R, Pramanik N, Guha SK, Kar S, Banerjee D, Ali N. 2005. *Leishmania* promastigote membrane antigen-based enzyme-linked immunosorbent assay and immunoblotting for differential diagnosis of Indian post-kala-azar dermal leishmaniasis. ***J Clin Microbiol***. 43:1269-1277. doi: 10.1128/JCM.43.3.1269-1277.2005. ISSN: 0095-1137. IF: 3.2

12. Mandal D, Moitra PK, **Saha S**, Basu J. 2002. Caspase 3 regulates phosphatidylserine externalization and phagocytosis of oxidatively stressed erythrocytes. ***FEBS Lett***. 513:184-188. doi: 10.1016/s0014-5793(02)02294-9. ISSN: 0014-5793 IF: 3.4

Publications (Book Chapters):

1. **Saha S**. 2022. Diversity of adaptive immune receptors in vertebrates during the course of evolution. *In* Ed. Ray S. Topics on Biodiversity, Biotechnology and Bioinformatics. pp 626-646. ISBN : 978-93-5620-397-6.

2. **Saha S**. 2022. Molecular diversity of adaptive immune receptors in mammals. *In* Ed. Ray S. Topics on Biodiversity, Biotechnology and Bioinformatics. pp. 578-625. ISBN : 978-93-5620-397-6.

Patent filed:

1. Nahid Ali and **Samiran Saha**. A non recombinant membrane antigen, a diagnostic kit thereof and process for detection of visceral leishmaniasis and PKDL. Publication No. **WO2009/130709**. Publication Date. **29 October 2009.**

Ph.D. Supervision:

1. Subhrajit Ganguly. PhD awarded on June 3, 2024.
2. Arijit Kumar Ghosh. PhD awarded on June 20, 2025.
3. Nilanjana Majumder. PhD awarded on September 01, 2025.
4. Pranay Senapati. Continuing.

Conferences:

1. Invited Talk: **Samiran Saha**. Chlorogenic acid: An emerging anti-leishmanial agent. One day National seminar on 'Understanding immunology for a better public health' (Indian Immunology Society-sponsored). Jointly organized by Department of Animal Science, Kazi Nazrul University, Asansol, West Bengal; Department of Zoology, University of Burdwan, Bardhaman, West Bengal; Department of Zoology, Visva-Bharati, Santiniketan, West Bengal and Ethophila Research Foundation, Santiniketan, West Bengal. Venuue: Hotel Green Chilli, Bolpur, West Bengal. 2 May, 2024.

2. Poster: Subhajit Bhowmick, Nilanjana Majumder and Samiran Saha. Anti-leishmanial role of a synthetic pyranocoumarin derivative GBVB2-4c on *Leishmania donovani* promastigotes. International seminar and workshop on CRISPR?Cas-based plant functional genomics & computational modeling (ISWCPC-2023). CSIR-North East Institute of Science and Technology, Jorhat – 785006, Assam. 17-21 Jan, 2023.

3. Poster: Nilanjana Majumder, Samiran Saha. Effects of environmental changes on transmission of *Leishmania* parasites. National seminar on current perspectives in Environmental Pollution: Challenges and opportunities. Dept. of Environmental Science, Tezpur University, Assam. June 7-8, 2019.

4. Poster: G. L. Merlinsheeba, Samiran Saha. Insights on polyphenol-induced autophagy and their application in cancer therapy. National Conference on Biodiversity, Biotechnology and Bioinformatics : Innovative and Emerging Trends (NCBBBIET - 2019). P.G. Department of Botany, Berhampur University, Bhanja Bihar, Berhampur, Odisha - 76000722-23 February 2019.

5. Poster: Arijit Kumar Ghosh, Antara Banerjee and Samiran Saha. Anticancer Efficacy Of Theaflavins In Cancer Cells Via Induction of Autophagy. Golden Jubilee International Conference on Trends in Zoology, Department of Zoology, The University of Burdwan. Jan 3-4, 2019.

6. Arijit Kumar Ghosh, Antara Banerjee and Samiran Saha. Role of Theaflavins to induce autophagy in cancer cells. Sate Science Congress, Sidho Kanho Birsha University, Purulia, Dec 20-21, 2018.

7. Oral presentation: **Samiran Saha**, Subhrajit Ganguly, Antara Banerjee. Therapeutic and immunomodulatory potential of new combination treatment by *Tinospora cordifolia* extracts and Amphotericin B against experimental visceral leishmaniasis. International conference on innovations for the elimination and control of visceral leishmaniasis (IEC-VL), JH-Institute of Molecular Medicine, Jamia Hamdard, New Delhi-67 Nov 28-30, 2018.

8. Poster presentation: Nilanjana Majumder**,** Arijit Kumar Ghosh, Antara Banerjee, Samiran Saha. In vitro anti-leishmanial activity of Chlorogenic acid through reduction of IL-10. International conference on innovations for the elimination and control of visceral leishmaniasis (IEC-VL), JH-Institute of Molecular Medicine, Jamia Hamdard, New Delhi-67 Nov 28-30, 2018.

9. Poster presentation: Subhrajit Ganguly, Arijit Kumar Ghosh, Antara Banerjee and Samiran Saha. Partial identification and characterization of antioxidative activity of tinospora cordifolia and its effectiveness as an immunomodulatory agent against murine visceral leishmaniasis. 3rd International conference on Perspectives of cell signaling and molecular medicine, at Bose Institute, Kolkata, from 8-10 January, 2017.

10. Oral presentation in International conference: **Samiran Saha,** Shannon Townsend, Augusto Carvalho, Shaden Kamhawi, Fabiano Oliveira, Jesus G. Valenzuela. Functional Genomics Identifies Th1-Inducing Salivary Proteins from *Phlebotomus argentipes*, the Vector of *Leishmania donovani* in the Indian Subcontinent, at the 64th Annual Meeting of the American Society of Tropical Medicine and Hygiene in Philadelphia, Pennsylvania, USA, from October 25-29, 2015.

11. Participation in International Seminar: Baltimore Vector Encounter 2015. at Johns Hopkins Bloomberg School of Public Health in Baltimore, Maryland, USA, on June 5, 2015.

12. Poster presentation: Ganguly S, Sinha S, Banerjee A and **Saha S.** Partial identification and characterization of antioxidant activity of the components in methanolic extract of *Tinospora cordifolia* through thin layer chromatography. International Seminar on The Progress and Prospect of 21st Century Research in Advance Life Sciences. Department of Botany, Vivekananda Mahavidyalaya, Haripal, Hooghly, W.B. 15-17th Feb, 2014.

13. Oral presentation: **Saha S** and Ali N. Development and evaluation of easy serodiagnosis for visceral leishmaniasis and PKDL. National seminar on ecotoxicology and human health. Department of Zoology, Berhampur University, Berhampur – 760007, Odisha. January 08-09, 2012.

14. Presentation and Exhibition at 19th West Bengal State Science & Technology Congress 2012. Organized by Saha Institute of Nuclear physics, Kolkata, and WB-DST, Govt. of West Bengal. 1-2 March, 2012.

15. Poster presentation: Saha S, Goswami R, Pramanik N, et al. Development and Evaluation of Leishmania donovani Promastigote Membrane Antigen-Based Serodiagnosis of Visceral Leishmaniasis and Post Kala-azar Dermal Leishmaniasis. 37th Annual Conference of Indian Immunology Society, Department of Immunology & Molecular Medicine, Sher-i-Kashmir Institute of Medical Sciences, Srinagar, India, February 7-9, 2011.

16. Poster presentation: Nag, A. G., Maity, A. K., Gayen M., Saha, S. and Saha, P. Identification of substrates of cyclin dependent kinases from L. donovani. 76th SBC Annual Meeting, Sri Venkateswara University, Tirupathy, India, Nov 25-27, 2007.

17. Oral presentation: Saha, S., Mazumder, T., Ravindran, R., Banerjee, A., Ghose, J., Bhowmick, S., Mondal, S., Bairagi, B., Saha, B., Goswami, R. P., Pramanik, N., Guha, S. K., Kar, S., Banerjee, D., and Ali, N. Leishmania promastigote membrane antigen based ELISA and immunoblotting for the differential diagnosis of Indian PKDL. "Emerging Areas in Biology" organized by Society of Biological Chemists (I), Calcutta Branch, Digha, India, April 9-11, 2004.

18. Poster presentation: Saha, S., Ravindran, R., Bhowmick (Pal), S., Bairagi, B., Saha, B., Goswami, R., Pramanik, N., Guha, S. K., Banerjee, D., and Ali, N. Therapy induced immune modulations in Indian kala-azar and post-kala-azar dermal leishmaniasis. 31st Annual Conference, The Indian Immunology Society, Anna University, Centre for Biotechnology, Chennai, India, December 15-18, 2004.

19. Poster presentation: Dey, T., Saha, S., Rajesh, R., Bairagi, B., Goswami, R. P., Pramanik, N., Guha, S. K., Gupta, P. N., Saha, B., Banerjee, D., and Ali, N. Immunoglobulin subclass distribution and cell mediated immune response in Indian PKDL patients. "XXIX Annual Meeting of the Indian Immunology Society & Symposium on immunoparasitology", Bhubaneswar, India, November 27-29, 2002.

Personal informations:

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Signature