

Lucky Sarkar

Senior Research Fellow
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A. Academic qualification

University/ Institution	Degree	Year	Field of Study	Percentage Marks
Indian Institute of Science Education and Research Kolkata, Mohanpur, India	MS- Integrated PhD	2014- ongoing	Biological Sciences	77.9
Presidency University, Kolkata, India	B.Sc	2011- 2014	Botany (Honours)	77.5

B. Research experience

Ph.D. thesis title: "Azadirachta indica A. Juss ameliorates murine coronavirus (m-CoV) Mouse Hepatitis virus-induced cell-to-cell fusion and concomitant neuropathogenesis."

Guide's Name: Prof. Jayasri Das Sarma

Institute: IISER-K

Year of Ph.D. enrolment: 2016

Tentative year of award: 2021

C. Work experience (chronological order)

SL No.	Positions held	Name of Institute	From	To
1.	Summer Trainee	Bose Institute, Kolkata	June 2014	July 2014
2.	MS Project Fellow	IISER-K	May 2015	July 2016
3.	Junior Research Fellow	IISER-K	September 2016	July 2018
4.	Senior Research Fellow	IISER-K	August 2018	Current time
5.	Teaching assistant (Marine Biology Theory, course- LS4208)	IISER-K	January 2019	April 2019
6.	Teaching assistant (Molecular Biology & Genetics Laboratory IV, course- LS2203)	IISER-K	January 2020	April 2020

D. Fields of interest

Neurovirology, Neuroinflammation, Neurodegeneration, Neuroimmunology, Cell Biology, Virology, Autoimmune Disease Biology and Herbal Drug Discovery

E. Technical skills

Cell Culture, Viral Infection *in vitro* and *in vivo*, Viral Titer Assay, RNA Isolation, Plasmid and Genomic DNA isolation, Gene Cloning from Bacteria, Semi-Quantitative PCR, Protein Isolation, Western Blot, Immunofluorescence, Handling of Fluorescent Microscopy, Mouse Handling and Dissection, Tissue Sectioning, Histopathology, Immunohistochemistry

F. Practical skills

- ❖ Proof-Reading of Thesis (Endoplasmic Reticulum Chaperone ERp29 Regulates Murine β -Coronavirus Induced Gap Junction Intercellular Communication, by Abhishek Bose, I. PhD, IISR Kolkata)
- ❖ Participated in organizing Conferences (Indo-US Symposium 2016, 2019, & 2020 Virtual INDO-US Bilateral symposium)

G. Software skills

Audacity, Banshee, Endnote, GraphPad Prism, ImageJ, Origin8, Photoshop CC

H. Professional recognition/award/certificate/fellowship

June 13-18, 2020	Received International' American Society for Virology (ASV) travel award at 39 th Annual Meeting of the 'American Society for Virology ASV2020', Colorado State University, Fort Collins, CO, USA (canceled due to COVID-19 pandemic)
June 18, 2020	Ph.D. work ' Azadirachta indica A. Juss ameliorates Mouse Hepatitis virus-induced neuroinflammatory demyelination ' was highlighted and selected to present for a 5' flash talk plus a poster in the Pathogenesis session at 39 th Annual Meeting of the 'American Society for Virology ASV, 2020', Colorado State University, Fort Collins, CO, USA (canceled due to COVID-19 pandemic)
November 19-21, 2019	Got selected for ' Dr. DM Kar Prize ' category and presented her paper at 'XXXVII Annual Meet of Indian Academy of Neurosciences (IAN 2019)- Neuron to Behavior', AIIMS New Delhi, India
September 14-16, 2018	Received ' Third best Oral presentation award ' in the ' Young Scientist category ' at "International Conference on Nutraceuticals and Chronic Diseases (INCD 2018)", Dehradun, India
2016	Qualified the first preliminary level of ' WBSSC Upper Primary TET ', West Bengal Central School

	Service Commission, Government of West Bengal, India
August 2014-present	IISER Kolkata' Integrated Ph.D. Fellowship' , Ministry of Human Resource and Development, Government of India
July 2014	Got a job opportunity in the position of 'Software Trainee' in ' COGNIZANT' , a Multinational Corporation, Kolkata, India
2011-2014	' INSPIRE-SHE' Scholarship , Department of Science & Technology, Ministry of Science & Technology, Government of India
2011	' WBCHSE' Scholarship , West Bengal Council of Higher Secondary Education, State Government, Kolkata, India

I. Peer-reviewed publication

Sarkar, L., Putchala, R.K., Safiriyu, A.A., Das Sarma, J.*, "Azadirachta indica A. Juss ameliorates Mouse Hepatitis virus-induced neuroinflammatory demyelination by modulating cell-to-cell fusion in an experimental animal model of Multiple Sclerosis," *Frontiers in Cellular Neuroscience* 14:116 (1-22), April 2020, **DOI: 10.3389/fncel.2020.00116**

J. Oral and Poster presentations

Talks delivered

June 18, 2020	Delivered a 5' flash talk on 'Azadirachta indica A. Juss ameliorates Mouse Hepatitis virus-induced neuroinflammatory demyelination' in the Pathogenesis session, 39 th Annual Meeting of the 'American Society for Virology ASV, 2020', Colorado State University, Fort Collins, CO, USA
November 21, 2019	Delivered an ' Oral Presentation ' on " Neem bark extract (NBE) modulates enveloped virus-induced cell-to-cell fusion and consecutive neuropathogenesis. " under ' Dr. DM Kar Prize category ' in the ' XXXVII Annual Meet of Indian Academy of Neurosciences (IAN 2019) '- " Neuron to Behavior "; organized by Departments of Physiology & Anatomy, AIIMS, New Delhi, India
September 15, 2018	delivered an ' Oral Presentation ' on " Neem bark extract impairs Mouse Hepatitis virus infectivity and protects C57BL/6 mice from neuroinflammatory damage. " in the 3 rd International Conference on " Nutraceuticals and Chronic Diseases " (INCD-2018); jointly organized by Swami Rama Himalayan University (Dehradun, India), International Society of Nutraceuticals & Chronic Diseases and the University of Tennessee Health Science Center (USA), Dehradun, India
2014	First oral presentation experienced at undergraduate level on

"Molecular Basis of Host-Pathogen Interaction,"
Presidency University, Kolkata, India

Posters presented

- October 4-7, 2020 **"Azadirachta indica A. Juss may be a potential antiviral against Coronaviruses"**, IAN International E-Conference, XXXVIII Annual Meeting of Indian Academy of Neurosciences Basic and Clinical Neurosciences: Bridging the Gaps; organized by Hyderabad, Telangana, India
- December 3-8, 2019 **"Neem bark extract modulates enveloped virus-induced Cell-to-Cell Fusion and Consecutive Pathogenesis"**, at **"New Insights into the Inflammation, Immunity, and Pathobiology of Diseases, INDO-US Symposium 2019"**; organized by the Department of Biological Sciences, IISER Kolkata at Andaman, India
- September 21, 2019 **"Neem bark extract modulates virus-induced cell-to-cell fusion and consecutive pathogenesis"**, at One-day Mini-Symposium of **"Bridging Chemistry and Biology for Human Health and Disease"**, jointly organized by Society of Biological Chemists (I), Kolkata and CSIR-Indian Institute of Chemical Biology on at IICB Kolkata
- January 19-21, 2018 **"Potential therapeutic role of traditional medicinal plants in Mouse Hepatitis virus-induced cytopathy & Neuroinflammation both *in vitro* and *in vivo*, at "Frontiers in Modern Biology (FIMB) 2018"**; organized by Department of Biological Sciences, IISER-Kolkata
- November 14-17, 2016 **"Mouse Hepatitis virus-induced DJ-1 regulates viral-Induced oxidative stress in microglial cells"**, at **"Bilateral Indo-US Symposium on Central Nervous System Virus Infection and its Therapy"**; organized by IISER-Kolkata, University of Iowa, USA and BHU, Varanasi

K. Seminars and Workshops attended

- TNQ-Janelia India COVID-19 Seminar series on **"Coronaviruses: Old & New"**, October 9, October 16, and October 23, 2020
- Webinar on **"Post Centenary 150th year Celebrations of Mahatma Gandhi"**, organized by Sri Ramachandra Institute of Higher Education and Research, Chennai, India, September 10-11, 2020
- Webinar on **"Bilateral INDO-US Webinar on COVID Biology"**, organized by IISER Kolkata, India, in collaboration with IISc India, University of Colorado and University of Pennsylvania, USA, August 16-19, 2020
- **"Virtual Panel on Navigating the Post-COVID Research Landscape"**, organized by the 'NICOYA' team, July 9 & August 13, 2020
- **"Workshop on Advanced Bioanalytical methods and applications on coordination with international outreach activities in advanced microbiology education & teaching 2018"** (organized by IISER-K); Gangtok, Sikkim, India

- **“ZEISS Workshop on High-End Widefield, Confocal and SR Imaging”** (organized by Carl Zeiss India Bangalore Pvt. Ltd.) 2017; IICB-True Campus, Kolkata and also achieved **2nd position** in written test and evaluation
- 10th year Celebration of Excellence in Science in **“Advances in Life Sciences Symposium”** 2017, IISER Kolkata
- **“Bilateral Indo-US Symposium on Central Nervous System Virus Infection and its Therapy”** 2016, (organized by IUSSTF-IISER-K/University of Iowa/BHU); Jalpaiguri, West Bengal, India

L. Summer projects undertaken

- **“Neuroprotective Role of DJ-1 in Viral- Induced Oxidative Stress”**, under Prof Jayasri Das Sarma, Neuroimmunology and Neurovirology Laboratory, 2015-2016, IISER Kolkata, India
- **“Inhibition of Fungal and Bacterial Pathogens by Synthetic Antimicrobial Peptides: Application in Treating Plant Diseases”**, under Dr. Anirban Bhunia, Biophysical Chemistry Laboratory 2014, Bose Institute, Kolkata, India

M. Projects supervised

- **6-months Dissertation project-**
 - a) Ms. Amrita Mondal, M. Sc Biotechnology, Central University of South Bihar (October 2020- ongoing)
- **MS Summer project (other Institutes)-**
 - a) Mr. Arghyadip Bose, B. Tech 3rd Year, Heritage Institute of Technology, Kolkata, India (June-July, 2020)
 - b) Ms. Payal Patra, B. Sc(H) Zoology 3rd Year, Hindu College, University of Delhi (March-July, 2020)
- **MS Summer project (Parent Institute)-**
 - a) Mr. Ravi Kiran Putchala, BS-MS 4th year, IISER Kolkata (May, 2018- January, 2019)
- **Lab Rotation project-**
 - a) Ms. Debanjana Das, Integrated Ph. D, IISER Kolkata (January-February 2019)
 - b) Mr. Chirag Singhal, Integrated Ph. D, IISER Kolkata (February-April, 2018)

N. Press Release (News coverage)

‘Can Neem bark extract reduce the severity of SARS-CoV-2 replication, spread and pathogenesis as it does for murine group 2 beta coronavirus?’

By Lucky Sarkar, Ravi Kiran Putchala, Abass Alao Safiriyu, **Jayasri Das Sarma**

(Covered by **‘News 18 Bangla’** Channel and other Electronic Media)

News Full link:

https://bengali.news18.com/news/coronavirus-latest-news/does-bark-of-neem-tree-has-element-to-fight-coronavirus-researchers-get-positive-results-on-rats-pbd-439667.html?fbclid=IwAR2OATg_YmlbM_VvVvZ4gutinKmseybfmpb5VgxKP3SteCdemA-QWwcyPIY

O. Extracurricular Activity

- Performed in international conferences- “**India-Bangladesh Structural Chemistry Conference 2015**”, “**Bilateral Indo-US Symposium on Central Nervous System Virus Infection and its therapy, 2016**”, “**New Insights into the Inflammation, Immunity, and Pathobiology of Diseases, INDO-US Symposium 2019**”, and “**Bilateral INDO-US Webinar on COVID Biology**”, 2020
- Organized the cultural programme in “**New Insights into the Inflammation, Immunity, and Pathobiology of Diseases, INDO-US Symposium 2019**”, Andaman, India
- Participated in cultural programmes of different institute events such as ‘**All India Science fest-Inquivesta**’ (2014-2019), ‘**Ishan Vikas Outreach programme**’ 2015, at IISER Kolkata
- **1st winner** of Institute Interbatch Dance Competition 2014-2016, **back-to-back twice** in “**Solo**” dance performance
- I have also learned and developed my artistic skills up to 8th Standard, 2007
- Participated in the District Level “**Vacation Camp for Creative Learning 2006**” organized by the Association and catalysed by The Ministry of Human Resource Development, Govt. of India
- **Semiclassical dancer** and passed 3rd year final specially on “Rabindrya Nritya” from Gandharva Mahavidyalaya, Kaliyaganj, Uttar Dinajpur, West Bengal
- **Kathak dancer** and passed 2nd year final from Gandharva Mahavidyalaya, Kaliyaganj, Uttar Dinajpur, West Bengal

P. Languages Known

English, Hindi, Bengali

Q. Strengths

Hardworking with positive attitude, Flexibility and Adaptability, Friendly, Honesty and integrity, Punctuality, Dedicated, Responsible, Patience and Tolerance, Listening, Self-motivated, can create a positive work environment; can take any challenge with bravery

R. Other link: https://www.researchgate.net/profile/Lucky_Sarkar

S. Personal statement

My career objective is to work with tenacity in a challenging environment that provides me generous opportunities for learning and growth.