

CURRICULUM VITAE

Dr. Rajen Dey

Assistant Professor

Department of Medical Laboratory Technology,

School of Allied Health Sciences

Swami Vivekananda University, Barrackpore. West Bengal, India.

E-mail: rdrajen422@gmail.com

Mobile No.: 9831926184

ORCID ID: <https://orcid.org/0009-0009-2264-8047>



Personal Details:

Father's Name : Nemaï Chand Dey.

Date of birth : 11/11/1991

Sex : Male

Category : General

Nationality : Indian

Marital status : Single

Address : 104/D, G.T Road, Serampore (west), Dist-Hooghly, Pin-712203, West Bengal.

Educational Qualifications:

Examinations	Affiliation	Institution	Year of passing	% Marks obtained
Ph.D.(Sc.) in Physiology	University of Calcutta	University Colleges of Science and Technology	2022	NA
M.Sc. in Human Physiology (Spl: Immunology & Microbiology)	University of Calcutta	University Colleges of Science and Technology	2015	79.50
B.Sc. Physiology(Hons)	University of Calcutta	Serampore College	2013	69.37
Higher Secondary	WBCHSE	Mahesh Sri Ramkrishna Ashram Vidyalaya	2010	84.40
Madhyamik	WBBSE	Mahesh Sri Ramkrishna Ashram Vidyalaya	2008	88.37

Other Academic Qualifications:

1. CSIR-UGC (NET) JRF-Exam qualified in June 2019
2. W.B. SET-Exam qualified in 2017
3. ICMR JRF Exam qualified in 2016
4. GATE (Life science) Exam qualified in 2016 & 2017
5. JGEEBILS (TIFR-GS) Exam qualified in 2015

Professional Teaching Experiences:

Name of the post	Institution	Permanent/Temporary	Date of Joining	Date of Leaving	Courses Taught
Assistant Professor	Swami Vivekananda University	Permanent	01.08.2022	Continuing	UG: BMLT & BMRIT Courses
Part-time Faculty	JIS University	Temporary	24.01.2022	31.07.2022	UG: Biotechnology (Hons), Microbiology (Hons) PG: Biotechnology, Microbiology, Biochemistry

Appointed External Moderator & Practical Examiner: In Department of Biosciences, JIS University (both UG and PG courses)

Current area of teaching:

- a. Basic Human Physiology
- b. General Anatomy and Physiology
- c. Biotechnology and Human welfare
- d. General Pathology and Microbiology
- e. Pathology
- f. Immunopathology

Title of the Ph.D. thesis [under Ph.D. regulation 2016]: *Ph.D. awarded on 20th September 2022*

“Studies On *Staphylococcus aureus* Induced Microglial Inflammatory Responses And Its Regulation: Possible Involvement Of TLR-2 And Glucocorticoid Receptors”.

Title of the M.Sc. project work:

“Effect of neutralization of cell surface Interleukin-8 Receptor (CXCR-1) on functional response of the murine splenic, peritoneal macrophages and resident fresh bone marrow cells after viable *Staphylococcus aureus* infection and heat killed *S. aureus* stimulation”.

(P.I: Prof. Biswadev Bishayi, Department of Physiology, University of Calcutta)

Summer project:

Completed summer project at School of Tropical Medicine, Kolkata, Department of Laboratory Medicine from May –August 2013 on “Establishment of *Alstonia scholaris* Pollen Induced Animal Model for Asthma”. (During B.Sc. course curriculum)

Techniques known during Ph.D. tenure:

- Isolation and culture of murine primary microglia, staining, chemotaxis assay
- *Staphylococcus aureus* culture, plating, determination of inoculums size, animal infection
- Light microscopy, Phase contrast microscopy, Confocal microscopy
- Biochemical assays for the estimation of ROS and antioxidant enzyme activities in microglia
- FACS analysis and sorting
- Western blot for the receptors and inflammatory markers
- Cytokine/chemokine ELISA
- Development of in-vivo brain abscess model, intraperitoneal, intravenous injection
- Brain Histology (H/E) and Immunohistochemistry (IHC)
- Animal behavioral studies (OFT, EPM, TFT, TST, WHT)
- Statistical analyses

Research interest:

Basic neuroimmunology, Microglial response to infection, Cellular receptor modulation, Immunomodulatory drug interaction, Infectious disease model, Free radical biology and antioxidant system, Animal behaviour.

Scientific Activities:

- Participated in 47th Annual Conference of The Indian Immunology Society organized in collaboration with CSIR- Indian Institute of Chemical Biology, Kolkata in December, 2021.
- Participated in PHYSICON-2018 organized by Department of Physiology, Serampore College in November, 2018.

- Participated in Workshop organized by Department of Physiology, University of Calcutta on “Tips to Build Your Research Career” in June, 2018.
- Participated in Indian Science Congress Association (ISCA) Kolkata Chapter Seminar in February, 2018.
- Participated in Indian Academy of Neuroscience (IAN) Kolkata Chapter Symposium in September, 2013.
- Seminar presented on ‘Brain Ageing’ in Annual Scientific Seminar 2013, Dept. of Physiology, Serampore College.
- Poster presented on ‘Spinal Stroke’ in Annual Scientific Seminar 2012, Dept. of Physiology, Serampore College.

Awards/Recognition:

- i. ‘Outstanding Paper Award’ (Physiology and Medical Sciences including Forensic Sciences) in the 7th Regional Science and Technology Congress 2024-25 organized by WB-DSTBT.
- ii. Secured 1st runners up position among Young scientist presentations in Indian Academy of Neurosciences, Kolkata chapter colloquium in August 2022.
- iii. Subarna Chatterjee Memorial Scholarship (Merit cum Means) in M.Sc. from University of Calcutta in 2013.
- iv. Late Amarendra Nath Bandopadhyay Memorial Award 2013 for securing 3rd position in departmental seminar competition from Serampore College.

Publications:

1. **Dey R**, Bishayi B. Microglial Inflammatory Responses to SARS-CoV-2 Infection: A Comprehensive Review. *Cell Mol Neurobiol.* 2024; 44(1): 2.
2. **Dey R**, Bishayi B. Ascorbic acid along with ciprofloxacin regulates *S. aureus* induced microglial inflammatory responses and oxidative stress through TLR-2 and glucocorticoid receptor modulation. *Inflammopharmacology.* 2022; 30(4): 1303-1322.
3. **Dey R**, Bishayi B. Ciprofloxacin and dexamethasone in combination attenuate *S. aureus* induced brain abscess via neuroendocrine-immune interaction of TLR-2 and glucocorticoid receptor leading to behavioral improvement. *Int Immunopharmacol.* 2021; 97: 107695.
4. **Dey R**, Bishayi B. TLR-2 neutralization potentiates microglial M1 to M2 switching by the combinatorial treatment of ciprofloxacin and dexamethasone during *S. aureus* infection. *J Neuroimmunol.* 2020; 344: 577262.

5. **Dey R**, Bishayi B. Dexamethasone along with ciprofloxacin modulates *S. aureus* induced microglial inflammation via glucocorticoid (GC)-GC receptor-mediated pathway. *Microb Pathog.* 2020; 145: 104227.
6. **Dey R**, Bishayi B. Dexamethasone exhibits its anti-inflammatory effects in *S. aureus* induced microglial inflammation via modulating TLR-2 and glucocorticoid receptor expression. *Int Immunopharmacol.* 2019; 75: 105806.
7. **Dey R**, Sultana S, Bishayi B. Combination treatment of celecoxib and ciprofloxacin attenuates live *S. aureus* induced oxidative damage and inflammation in murine microglia via regulation of cytokine balance. *J Neuroimmunol.* 2018; 316: 23-39.
8. Sultana S, **Dey R**, Bishayi B. Role of plasminogen activator inhibitor – 1(PAI-1) in regulating the pathogenesis of *S. aureus* arthritis via plasminogen pathway. *Immunol Lett.* 2019; 209: 53-66.
9. Sultana S, **Dey R**, Bishayi B. Dual neutralization of TNFR-2 and MMP-2 regulates the severity of *S. aureus* induced septic arthritis correlating alteration in the level of interferon gamma and interleukin-10 in terms of TNFR2 blocking. *Immunol Res.* 2018; 66: 97-119.
10. Dutta P, Sultana S, **Dey R**, Bishayi B. Regulation of *Staphylococcus aureus*-induced CXCR1 expression via inhibition of receptor mobilization and receptor shedding during dual receptor (TNFR1 and IL-1R) neutralization. *Immunol Res.* 2019; 67(2-3): 241-260.
11. Bishayi B, Nandi A, **Dey R**, Adhikary R. Expression of CXCR1 (IL-8 receptor A) in splenic, peritoneal macrophages and resident bone marrow cells after acute live or heat killed *Staphylococcus aureus* stimulation in mice. *Microb Pathog.* 2017; 109: 131-150.
12. Bishayi B, Adhikary R, Sultana S, **Dey R**, Nandi A. Altered expression of CXCR1 (IL-8R) in macrophages utilizing cell surface TNFR1 and IL-1 receptor during *Staphylococcus aureus* infection. *Microb Pathog.* 2017; 113: 460-471.
13. Sawoo R, **Dey R**, Ghosh R, Bishayi B. TLR4 and TNFR1 blockade dampen M1 macrophage activation and shifts them towards an M2 phenotype. *Immunol Res.* 2021; 69(4): 334-351.
14. Ghosh R, **Dey R**, Sawoo R, Bishayi B. Neutralization of IL-17 and treatment with IL-2 protects septic arthritis by regulating free radical production and antioxidant enzymes in Th17 and Tregs: An immunomodulatory TLR2 versus TNFR response. *Cell Immunol.* 2021; 370: 104441.
15. Ghosh R, **Dey R**, Sawoo R, Bishayi B. Simultaneous neutralization of TGF- β and IL-6 attenuates *S. aureus* induced arthritic inflammation through differential modulation of splenic and synovial macrophages. *Scand J Immunol.* 2023; 97: e13252.
16. Kanwar M, **Dey R**, Maiti S, Banerjee A, Bishayi B. Synovial macrophages of rheumatoid arthritic mice protectively responded by altered M1/M2 differentiation after antibody blocking of TNFR1 and IL-1R. *Int Immunopharmacol.* 2023; 115: 109654.

17. Ghosh R, **Dey R**, Sawoo R, Haque W, Bishayi B. Endogenous neutralization of TGF- β and IL-6 ameliorates septic arthritis by altering RANKL/OPG interaction in lymphocytes. *Mol Immunol*. 2022; 152: 183-206.
18. Sawoo R, **Dey R**, Ghosh R, Bishayi B. Exogenous IL-10 post-treatment along with TLR4 and TNFR1 blockade improves tissue antioxidant status by modulating sepsis-induced macrophage polarization. *J Appl Toxicol*. 2023; 43(10): 1549-1572.
19. **Dey R**, Bhattacharya K, Basak AK et al. Inflammatory perspectives of polycystic ovary syndrome: role of specific mediators and markers. *Middle East Fertil Soc J*. 2023; 28: 33.
20. Bhattacharya K, **Dey R**, Sen D et al. Polycystic ovary syndrome and its management: In view of oxidative stress. *Biomol Concepts*. 2024; 15(1):10.
21. Paul S, Patra S, Mondal A, Adhikari GS, Ghosh P, Bysack M, **Dey R**. The role of microglia in Zika virus pathogenesis: Possible diagnostic and therapeutic strategies. *The Microbe*. 2024; 5: 100180.
22. Bandyopadhyay U, Sen D, Ahuja D, Mahapatra SP, Biswas D, Maiti R, Chakraborty S, Hazra A, Parua S, Basak AK, Das A, Paul N, Purkait MP, Syamal AK, **Dey R**, Bhattacharya K, Adhikary K, Bhattacharjee A. Interplay of calcium, vitamin D, and parathormone in the milieu of infections and immunity: Reassessed in the context of COVID-19. *J Steroid Biochem Mol Biol*. 2024; 245: 106624.
23. Bishayi B, **Dey R**, Ghosh R, Kanwar M. Simultaneous blockade of TLR4 and TNFR1 attenuates TLR2 sensitivity in LPS-stimulated macrophages through TNFR2-mediated pathway. *INDIAN JOURNAL OF PHYSIOLOGY AND ALLIED SCIENCES*. 2024; 76(03): 43–56.
24. **Rajen Dey**. (2024). Covid-19 Induced Neuroinflammation. *Journal of Advanced Zoology*, 45(2), 1544–1548. <https://doi.org/10.53555/jaz.v45i2.4447>.
25. Subhrajyoti Paul, Sudipta Patra, Ayan Mondal, Gungun Sharma Adhikari, Piu Ghosh, Manojit Bysack, & **Rajen Dey**. (2024). Pathogenesis And Consequences Of Zika Virus Infection. *Journal of Advanced Zoology*, 45(2), 1549–1553. <https://doi.org/10.53555/jaz.v45i2.4448>.
26. **Rajen Dey**, & Manojit Bysack. (2024). Ascorbic Acid: Therapeutic Implications In Neurodegenerative Diseases. *Journal of Advanced Zoology*, 45(2), 1554–1558. <https://doi.org/10.53555/jaz.v45i2.4450>.
27. Manojit Bysack, & **Rajen Dey**. (2024). Abrogation Of Gram Negative Bacteria Induced Inflammation. *Journal of Advanced Zoology*, 45(2), 1564–1573. <https://doi.org/10.53555/jaz.v45i2.4453>.
28. Ayan Sengupta, Priyanshu Ganguly, Preeti Patra, Ankita Ballav, Banashree Ash, Shayani Das, **Rajen Dey**, & Manojit Bysack. (2024). A Systematic Review On Consequential

- Interventions Of *Mucuna Pruriens* In Male Infertility. *Journal of Advanced Zoology*, 45(2), 1574–1580. <https://doi.org/10.53555/jaz.v45i2.4455>.
29. Rupak Bera, Titlee Majumder Modak, & **Rajen Dey**. (2024). Effect Of Selenium In Altering Hypertension Within Indian Population: A Review. *Journal of Advanced Zoology*, 45(2), 1600–1602. <https://doi.org/10.53555/jaz.v45i2.4461>.
 30. Ballav A, **Dey R**. Staphylococcal brain abscesses: a review. *The Bioscan*. 2024(Supplement); 19(2): 19-21. <https://doi.org/10.63001/tbs.2024.v19.i02.S1.pp19-21>.
 31. Sangita Bhaumik, **Rajen Dey**. Human papillomavirus and pathogenesis of cervical cancer. *Int J Appl Res* 2024; 10(11): 302-305. DOI: [10.22271/allresearch.2024.v10.i11e.12175](https://doi.org/10.22271/allresearch.2024.v10.i11e.12175)
 32. Priyanshu Ganguly, **Rajen Dey**. Therapeutics and vaccination strategies against *Staphylococcus aureus*. *Int J Appl Res* 2024; 10(11): 310-314. DOI: [10.22271/allresearch.2024.v10.i11e.12177](https://doi.org/10.22271/allresearch.2024.v10.i11e.12177)
 33. Arka Chatterjee, **Rajen Dey**, Manojit Bysack. Role of diet in type II diabetes mellitus: A comprehensive review. *Int J Appl Res* 2024; 10(11): 282-284. DOI: [10.22271/allresearch.2024.v10.i11e.12170](https://doi.org/10.22271/allresearch.2024.v10.i11e.12170)
 34. Arka Chatterjee, **Rajen Dey**, Manojit Bysack. A thorough review of liver cirrhosis: Epidemiology, causes, etiology, pathophysiology, diagnosis, and treatment management. *Int J Appl Res* 2024; 10(11): 285-289. DOI: [10.22271/allresearch.2024.v10.i11e.12171](https://doi.org/10.22271/allresearch.2024.v10.i11e.12171)
 35. Preeti Patra and **Rajen Dey**. *Candida albicans* infection: Virulence factors and pathogenesis. *Int. J. Biol. Sci.* 2024; 6(2): 215-220. DOI: [10.33545/26649926.2024.v6.i2c.254](https://doi.org/10.33545/26649926.2024.v6.i2c.254)
 36. Ayan Sen Gupta and **Rajen Dey**. Antimicrobial agents and techniques used in modern microbiology. *Int. J. Biol. Sci.* 2024; 6(2): 173-177. DOI: [10.33545/26649926.2024.v6.i2c.251](https://doi.org/10.33545/26649926.2024.v6.i2c.251)
 37. Sibujana, **Rajen Dey** and Manojit Bysack. Evaluation of cardiovascular risks through the assessment of cholesterol level. *Int. J. Biol. Sci.* 2024; 6(2): 152-156. DOI: [10.33545/26649926.2024.v6.i2c.246](https://doi.org/10.33545/26649926.2024.v6.i2c.246)
 38. Soumaditya Das, **Rajen Dey** and Manojit Bysack. Contribution of liver enzymes in diagnosing hepatic diseases: A review. *Int. J. Biol. Sci.* 2024; 6(2): 145-148. DOI: [10.33545/26649926.2024.v6.i2b.244](https://doi.org/10.33545/26649926.2024.v6.i2b.244)

Book Chapters:

1. Ayan sengupta and **Rajen Dey**, Brain Aging: A Gradual Change in the Physical and Cognitive Health, *Archive of Human Health and Wellbeing*, AkiNik Publications, 2024; 1. 97-108. ISBN: 978-93-6135-299-7. DOI: <https://doi.org/10.22271/ed.book.2750>.

2. Preeti Patra and **Rajen Dey**, Pathogenesis and consequences of *C. neoformans* Infection: A Review, *Archive of Human Health and Wellbeing*, AkiNik Publications, 2024; 1. 109-122. ISBN: 978-93-6135-299-7. DOI: <https://doi.org/10.22271/ed.book.2750>.

Patents:

1. Bhattacharya K, Bhattacharjee A, **Dey R**, Ray Chaudhuri G et al. BED FOR PATIENTS SUFFERING FROM URINARY INCONTINENCE. Indian Patent. 2024; Design No. 400946-001, class 06-02, Date of filing: 29.11.2023, Date of publication: 11.10.2024.

Seminar/Conference attended:

International

- Sudrita Roy Choudhury, **Rajen Dey**. ROLE OF NUTRACEUTICAL IN THE MANAGEMENT OF PCOS, International Conference on GLOBAL HEALTHCON 2024, held on June at Swami Vivekananda University (Oral presentation).
- **Rajen Dey**. EFFECT OF MICROGLIAL POLARIZATION ON NEURODEGENERATIVE DISEASES, International Conference on GLOBAL HEALTHCON 2024, held on February at Swami Vivekananda University (Oral presentation).
- **Rajen Dey** and Biswadev Bishayi. Possible regulatory mechanisms of *Staphylococcus aureus* induced microglial inflammation via TLR-2 and Glucocorticoid receptor, International Conference celebrating 100 years of Zoology, University of Calcutta, INTZOOCON-2018 (Poster presentation).

National

- **Rajen Dey** and Biswadev Bishayi. Combination treatment of ciprofloxacin and dexamethasone reduces the severity of *S. aureus* induced brain abscess via neuroendocrine-immune interaction of TLR-2 and glucocorticoid receptor leading to behavioral improvement, Satellite Symposium for the Indian Academy of Neurosciences (IAN) Annual Conference, entitled “Translational Neurophysiology & Cognition”, 10th Nov 2021 (Oral presentation).

Workshop and Training programmes:

- Participated in one day workshop on “Writing Research Grant Proposals” on 02.12.2024 organized by Swami Vivekananda University.
- Participated in “COVID-19 Vaccine Development and Novel Therapeutics” online certificate course organized by Harvard Medical School in September 2020.
- Participated in E-Learning programme of “POSHAN Abhiyaan” organised by ICMR-NIN in June 2020.

- Participated in online WHO Health emergencies programme on “Novel Coronavirus (COVID-19)” infection prevention and control, operational planning guidelines, and clinical care of SARS in May 2020.
- Participated in open WHO course on “Antimicrobial Stewardship: A competency-based approach” in May 2020.
- Basics of Flow Cytometry (BD FACSVerserTM/ BD FACSAriaTMIII) organised by CRNN, University of Calcutta and BD biosciences from 19th to 21st Feb 2019.
- Hands on Training on “Lymphocyte Separation for Bio-analytical Applications” organised by ICMR-Regional Occupational Health Centre (Eastern), Kolkata held on 29th to 31st May, 2019.

Reviewer for Journals:

1. *Annals of Medicine* (Taylor & Francis)
2. *Scandinavian Journal of Immunology* (Wiley)
3. *Experimental Neurology* (Elsevier)
4. *Frontiers in Oncology* (Frontiers)
5. *Journal of Inflammation Research* (Dovepress)
6. *Immunologic Research* (Springer)

Faculty Development Program:

- Participated in the Faculty Skill Development Program organized by Swami Vivekananda University & E-YUVA Centre, Adamas University from 06.05.24 to 15.05.24.
- Participated in the Faculty Development Program organized by Swami Vivekananda University on ‘strategic negotiations & conflict management’ from 23.09.23 to 24.09.23.

Membership of Scientific Associations/ Societies: Life member of Physiological Society of India (PSI)

References:

- 1) Prof. Biswadev Bishayi
Professor, Department of Physiology
Immunology Laboratory, University of Calcutta, 92 APC Road, Calcutta-700009,
West Bengal. India.
Email id: biswadevbishayi4@gmail.com
Mob: 9432569869

2) Dr. Avik Acharya Chowdhury
Associate Professor & HOD
Department of Biosciences
JIS University, Agarpara, West Bengal.
Email id: avikacharya@jisuniversity.ac.in
Mob: 8017792095

3) Dr. Sandip Mukherjee
Associate Professor, Department of Physiology
Serampore college, Serampore, Hooghly-712201, West Bengal.
Email id: sm_kdc@yahoo.co.in
Mob: 9830632675

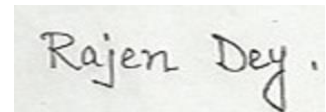
Declaration

I hereby declare that the above said information is true to best of my knowledge and belief.

Date: 18.01.25

Place: Serampore

yours sincerely



Dr. Rajen Dey