

**SOMADITYA DEY**

Name and full current address: **Somaditya Dey (Ph.D.), Assistant Professor, West Bengal Education Service, Post Graduate Department of Zoology, Barasat Government College, 24 Parganas (N), 10, K.N.C. Road, Pin - 700 124, West Bengal, India.** Telephone: Tel: (033) 25523365 (O), 08013247086 (M), FAX: (033) 25625053, E-mail : [somaditya.dey@gmail.com](mailto:somaditya.dey@gmail.com)

Date of Birth: **20.02.1987**

**PhD: Cellular Immunology & Experimental Therapeutics Laboratory, Department of Zoology, West Bengal State University. PI: Prof. Chiranjib Pal. M: 9831306386. E-mail: [cpcu.immunology@gmail.com](mailto:cpcu.immunology@gmail.com).**

**[Thesis title:** “Host protection against drug -sensitive & -resistant *Leishmania donovani* infection by therapeutic combination of *Mycobacterium indicus pranii* (M.w.) & heat induced promastigotes promotes the up regulation of Flt3+ preDC leading to IL-6 producing CD11c+ cDC” (2019)]

- **Travel grants to early-career researchers from American Association of Immunologists** for attendance and paper presentation (poster) at the **17<sup>th</sup> International Congress of Immunology, 2019**, Beijing, China, organized by IUIS and CSI, on 19-23rd October, 2019. [Abstract published in *European Journal of Immunology*; doi.org/10.1002/eji.201970400].
- **Joint Winner of the BRIC idea exposition stipend of Rs. 25000/- (Theme: Pharmaceuticals and Nutraceuticals)**, organized by the Biotechnology Industry Research Assistance Council (BIRAC), IKP Knowledge Park (IKP), and IICB (TRUE), Salt lake, Kolkata on 20-21<sup>st</sup> September, 2019
- **ECI- AAI Travel Grant award, from American Association of Immunologists** for participating and poster presentation of the thesis work at the **European congress of Immunology, September, 2018**, organized by, EFIS and DSI, NVVI at Amsterdam, Netherland.
- **Poster presentation at ‘Gordon Research Conference on Biology of Host- Parasite Interactions,’ June, 2018**, at Newport, RI, USA. [Travel Grant Recommended by University Grants Commission, India for full support]
- **'Young Scientist Travel Support Award from ICMR and CSIR India, sponsored by Govt. of India**, for participating and paper presentation (poster) at **ASM/ESCMID Conference on Drug Development to Meet the Challenge of Antimicrobial Resistance, September, 2017**, organized by the ASM & ESCMID, at Boston, USA.
- **'100 students initiative scheme' Travel Support Award from KAMRC, India, sponsored by WHO & DNDi, Geneva** for participating and paper presentation (ORAL) at **6th World Congress on Leishmaniasis, May, 2017**, organized by WHO Collaborating Centre for Leishmaniasis, Madrid and the Drugs for Neglected Diseases initiative, Geneva , at Toledo, Spain.

- **International Travel Support Grant as young scientist (DST Science & Engineering Research Board)** for attendance & paper presentation (ORAL) at **International Congress of Immunology, August, 2016**, Melbourne Australia, organized by International Union of Immunological Societies and the Australasian Society for Immunology. [Abstract published in *European Journal of Immunology*; 46(1): 2016].

### Academic Qualification

EXAMINATION	BOARD/ UNIVERSITY	(%)	CLASS/ DIVISION	YEAR OF PASSING
<b>Joint CSIR-UGC NET (Life Sciences)</b>	CSIR-UGC, India	N.A.	CSIR-UGC NET (LS) Rank-0030/0848 (2012)	2012, 2013, 2014
<b>M.Sc. Zoology (Specialization in Parasitology &amp; Immunology)</b>	Bidhannagar College, W.B.S.U., West Bengal, India	82.5%	1 <sup>st</sup>	2010
<b>B.Sc. Zoology (Hons.)</b>	Bidhannagar College, C.U., West Bengal, India	61%	1 <sup>st</sup>	2008
<b>Higher Secondary</b>	WBCHSE	78%	1 <sup>st</sup>	2005
<b>Madhyamik Pariksha</b>	WBBSE	86%	1 <sup>st</sup>	2003

### Research and Academic Experiences

Name of Institution	Full Time/	Particulars in Full	From	To
Dept. of Zoology, West Bengal State University	Full Time	<b>Project Fellow; PI: Dr. Chiranjib Pal</b>	03.05.2011	02.02.2012
Dept. of Zoology, West Bengal State University	Full Time	<b>JRF, DBT Project; PI: Dr. Chiranjib Pal</b>	03.02.2012	31.05.2012

Dept. of Zoology, West Bengal State University	Full Time	<b>Laboratory Assistant (Technician B), ICMR Project; PI: Dr. Chiranjib Pal</b>	01.06.2012	19.02.2015
Post Graduate Dept. of Zoology, Barasat Govt. College	Full Time Permanent	<b>Assistant Professor in Zoology, W.B.E.S., Department of Higher Education, GoWB</b>	20.02.15	Continuing

### **Patent and publications**

#### **Patent:**

1. Chiranjib Pal, Susanta Adhikari Debarati Mukherjee, Md Yousuf, **Somaditya Dey**; Saurav Chatterjee. "Synthesis and anti-leishmanial profile of novel water soluble ferrocenylquinoline derivatives" **Indian Patent Application No. 201831027970 of 25.07.2018.** [The Patent Office Journal No. 42/2018 Dated 19/10/2018; International Classification: A61K31/00; Responses to FER submitted; Application Awaiting Examination]

#### **Publications:**

1. **Somaditya Dey<sup>#</sup>**, Debarati Mukherjee<sup>#</sup>, Pradyumna Patra, Chiranjib Pal\*. The increased inflammatory monocytes are the hallmark of human visceral leishmaniasis caused by *Leishmania donovani*: The activation of signature chemokines for the regulation of the disease. (**MS ready for communication; #: Joint 1<sup>st</sup> author**).
2. Joydip Ghosh<sup>a¶</sup>, Sondipon Chakraborty<sup>a¶</sup>, **Somaditya Dey<sup>a,¶</sup>**, Debarati Mukherjee<sup>a</sup>, Biswajyoti Sarkar<sup>a</sup>, Suvadip Mallick<sup>a</sup>, Aritri Dutta<sup>a</sup>, , Tanmoy Dutta<sup>c</sup>, Soumen Bhattacharjee<sup>c</sup>, Narayan Ghorai<sup>b</sup>, Chiranjib Pal<sup>a\*</sup>. Potential anti-leishmanial activity of a semi-purified fraction isolated from the leaves of *Parthenium hysterophorus*. *Acta Parasitologica*; (**MS ID: ACTP-D-20-00277; Under Review**); **Impact factor: 1.1.** (#: Joint 1<sup>st</sup> author).
3. Aabid Hussain<sup>#</sup>, Sanhita Ghosh<sup>#</sup>, Kamalika Roy<sup>#</sup>, Supriya Nath, Biswajyoti Sarkar, Aritri Dutta, Priyanka Maji, Shibani Basu, Sharmistha Paul, **Somaditya Dey**, Kakuli Chakraborty, Bikramjit Raychaudhury, Krishnendu Acharya, Jhuma Ganguly, Chiranjib Pal (2020). A mushroom derived 'carbohydrate-fraction' reinstates host immunity and protects from *Leishmani donovani* infection. *Parasite Immunology*; 2020;00:e12806. **Impact Factor: 2.054** (#: Joint 1<sup>st</sup> author). **ISSN: 1365-3024; Wos and Scopus; SJR: 1.059**
4. Debarati Mukherjee<sup>1, #</sup>, Md Yousuf<sup>2, #</sup>, **Somaditya Dey<sup>1</sup>**, Sondipon Chakraborty<sup>1</sup>, Vinay Kumar<sup>3</sup>, Ankur Chaudhuri<sup>4</sup>, Biswajyoti Sarkar<sup>1</sup>, Supriya Nath<sup>1</sup>, Aabid Hussain<sup>1</sup>, Aritri Dutta<sup>1</sup>, Saurav Chatterjee<sup>2</sup>, Sibani Chakraborty<sup>4</sup>, Sushma Singh<sup>3</sup>, Susanta Adhikari<sup>2\*</sup>, Chiranjib Pal<sup>1\*</sup> (2020). Targeting the trypanothione reductase of tissue-residing *Leishmania* in hosts' reticuloendothelial

- system: Flexible water-soluble ferrocenylquinoline-based preclinical drug candidate. *Journal of Medicinal Chemistry*; 63, 24, 15621–15638. **Impact Factor: 6.205** (#: Joint 1<sup>st</sup> author). **ISSN: 0022-2623; Wos and Scopus; SJR: 2.29**
5. **Somaditya Dey**, Debarati Mukherjee, Sirin Salma Sultana, Suvadip Mallick, Supratim Mandal, Aritri Dutta, Joydip Ghosh, Aabid Hussain, Pradyumna Patra, Bhaskar Saha and Chiranjib Pal. Combination of *Mycobacterium indicus pranii* and heat induced promastigotes cures drug-resistant *Leishmania* infection: Critical role of Interleukin-6 producing classical dendritic cells. *Infection and Immunity*; e00222-19; 88(6):1-20. **Impact Factor: 3.2. ISSN: 00199567; Wos & Scopus; SJR: 1.59, UGC: 21033.**
  6. Sultana Sirin Salma<sup>#</sup>, Joydip Ghosh<sup>#</sup>, Sondipon Chakraborty<sup>#</sup>, Debarati Mukherjee, **Somaditya Dey**, Suvadip Mallick, Aritri Dutta, Soumitra Paloi, Somanjana Khatua, Tanmay Dutta, Soumen Bhattacharya, Krishnendu Acharya, Narayan Ghorai, Chiranjib Pal (2018) Selective *in vitro* inhibition of *Leishmania donovani* by a semi-purified fraction of wild mushroom *Grifola frondosa*. *Experimental Parasitology*; 192:73-84. **Impact Factor: 1.76** [#: Joint 1<sup>st</sup> author]. **ISSN: 00144894; WoS & Scopus; UGC: 29106**
  7. Md Yousuf<sup>#</sup>; Debarati Mukherjee<sup>#</sup>; **Somaditya Dey**; Sourav Chatterjee, Abhishek Pal; Biswajyoti Sarkar; Chiranjib Pal and Susanta Adhikari. (2018) Synthesis and biological evaluation of polyhydroxylated oxindole derivatives as potential antileishmanial agent. *Bioorganic and Medicinal Chemistry Letters*, 28: 1056–1062. **Impact Factor: 2.46.** [#: Joint 1<sup>st</sup> author]. **ISSN: 0960894X; UNIV, Wos & Scopus; UGC: 47160.**
  8. Md Yousuf<sup>#</sup>, Debarati Mukherjee<sup>#</sup>, **Somaditya Dey**, Chiranjib Pal, Susanta Adhikari\* (2016). Antileishmanial ferrocenylquinoline derivatives: Synthesis and biological evaluation against *Leishmania donovani*. *European Journal of Medicinal Chemistry*, 124:468-479. **Impact Factor: 4.52.** [#: Joint 1<sup>st</sup> author] **ISSN: 02235234; Wos & Scopus; UGC: 28767.**
  9. Suvadip Mallick<sup>¶</sup>, Aritri Dutta<sup>¶</sup>, Ankur Chaudhuri, Debasri Mukherjee, **Somaditya Dey**, Subhadra Halder, Joydip Ghosh, Debarati Mukherjee, Sirin Salma Sultana, Gunjan Biswas, Tapan Kumar Lai, Pradyumna Patra, Indranil Sarkar, Sibani Chakraborty, Bhaskar Saha, Krishnendu Acharya and Chiranjib Pal\* (2016). Successful therapy of murine visceral leishmaniasis with astrakurkurone, a triterpene isolated from mushroom *Astraeus hygrometricus*, involves the induction of protective cell mediated immunity and TLR9. *Antimicrobial Agents and Chemotherapy*, 60(5): 2696-2708. **Impact Factor: 4.476. ISSN: 00664804; Wos & Scopus; UGC: 15824.**

10. Pranab Ghosh, Ashim Ghosh, Amitava Mandal, Sirin Salma Sultana, **Somaditya Dey**, Chiranjib Pal (2016). Oxysterols: Synthesis and anti-leishmanial activities. *Steroids*, 107: 65-73. **Impact Factor: 2.64. ISSN: 0039128X; Wos & Scopus; UGC: 33759**
11. Debarati Mukherjee<sup>#</sup>, Chingakhm Brajakishor Singh<sup>#</sup>, **Somaditya Dey**, Supratim Mandal, Joydip Ghosh, Suvadip Mallick, Aabid Hussain, Ningombam Swapana, Samir A Ross<sup>d</sup> and Chiranjib Pal\* (2016). Induction of apoptosis by Zerumbone isolated from *Zingiber zerumbet* (L.) Smith in protozoan parasite *Leishmania donovani* due to oxidative stress. *Brazilian Journal of Infectious Diseases*, 20(1): 48-55. **Impact Factor: 1.52. [#: Joint 1<sup>st</sup> author]. ISSN: 14138670; Wos & Scopus; UGC: 9171**
12. Suvadip Mallick<sup>#</sup>, **Somaditya Dey**<sup>#</sup>, Supratim Mandal, Aritri Dutta, Debarati Mukherjee, Gunjan Biswas, Soumya Chatterjee, Sanjaya Mallick, Tapan Kumar Lai, Krishnendu Acharya and Chiranjib Pal\* (2015). A novel triterpene from *Astraeus hygrometricus* induces reactive oxygen species leading to death in *Leishmania donovani*. *Future Microbiology*, 10 (5): 763-789. **Impact Factor: 4.275. [#: Joint 1<sup>st</sup> author] ISSN: 17460913; Wos & Scopus; UGC: 17877.**
13. Md Yousuf<sup>#</sup>, Debarati Mukherjee<sup>#</sup>, Abhishek Pal, **Somaditya Dey**, Supratim Mandal, Chiranjib Pal\*, and Susanta Adhikari\* (2015). Synthesis and Biological Evaluation of Small Molecule Ferrocenylquinoline as a Potential Antileishmanial Agent. *ChemMedChem*, 10 (3): 546-554. **Impact Factor: 2.97. [#: Joint 1<sup>st</sup> author; \*Joint Correspondence Author.] ISSN: 18607179; WoS & Scopus; UGC: 5535.**
14. **Somaditya Dey**, Debarati Mukherjee, Sondipon Chakraborty, Suvadip Mallick, Aritri Dutta, Ningombam Swapana, Swatilekha Maiti, Narayan Ghorai, Chingakhm Brajakishor Singh and Chiranjib Pal\* (2015). Protective effect of *Croton caudatus* Geisel leaf extract against experimental visceral leishmaniasis induces proinflammatory cytokines *in vitro* and *in vivo*. *Experimental Parasitology*; 151–152: 84–95. **Impact Factor: 1.76. ISSN: 00144894; WoS & Scopus; UGC: 29106.**
15. Pranab Ghosh, Amitava Mandal, **Somaditya Dey**, Chiranjib Pal (2015). Synthesis and in vitro screening of 29, 30-dibromo-28-oxoallobetulin against parasitic protozoans, *Leishmania donovani* and *Leishmania major*. *Indian Journal of Pharmaceutical Sciences* 77 (2), 202. **Impact Factor: 0.76. ISSN: 0250474X; WoS & Scopus & ICI; UGC: 20843**
16. Suvadip Mallick<sup>#</sup>, Aritri Dutta<sup>#</sup>, **Somaditya Dey**<sup>#</sup>, Joydip Ghosh, Debarati Mukherjee, Sirin S Sultana, Supratim Mandal, Soumitra Paloi, Somanjana Khatua, Krishnendu Acharya, Chiranjib Pal\* (2014). Selective inhibition of *Leishmania donovani* by active extracts of wild mushrooms used by the tribal population of India: An *in vitro* exploration for new leads against

parasitic protozoans. *Experimental Parasitology*; 138: 9–17. **Impact Factor: 1.76. [#: Joint 1<sup>st</sup> author]** ISSN: 00144894; WoS & Scopus; UGC: 29106

17. Suvadip Mallick, Subhadra Halder, Aritri Dutta, **Somaditya Dey**, Sourav Maiti, Chandrakanta Bandyopadhyay, Bhaskar Saha and Chiranjib Pal\* (2013). Chromone linked nitro derivative induces the expression of iNOS2 and Th1 cytokines but reduces the Th2 response in experimental visceral leishmaniasis. *International Immunopharmacology*; 15(4):772–779. **Impact Factor: 3.07. ISSN: 15675769; WoS & Scopus; UGC: 2445**

### **Ad-hoc Reviewer**

1. Frontiers in chemistry

### **Awards & Achievements**

- **Oral presentation** at 1st regional science and technology congress, being organized by the DST, Govt. of West Bengal on November 13 and 14, 2016
- **Poster presentation** on, ‘Astrakurkurone, a novel triterpene isolated from Indian mushroom *Astraeus hygrometricus*, induces mitochondrial dysfunction and ROS dependent death in *Leishmania donovani*’ at National Seminar on “Ethnopharmacology: perspectives for Development of Ayurveda” on 19<sup>th</sup> March, 2016, jointly organized by NRIADD, CCRAS, GoI & SFE-India and awarded **best poster** for the same.
- **Poster presentation** on, ‘*Mycobacterium indicus pranii* (Mw) in combination with heat induced promastigotes persuade host protection against *Leishmania donovani* infection: Activation of IL-6 producing CD11c+ cDC and induction of CXCL10’ at Symposium on Frontiers in Modern Biology, 2015, organized by Dept. of Biological Sciences, IISER-Kolkata; December 5<sup>th</sup> -6<sup>th</sup> 2015 and awarded **best poster** for the same.
- **Oral presentation** at “Elimination of Leishmaniasis in South Asia by 2015: Myth or reality?” IPGMER, Kolkata on 22<sup>nd</sup> January, 2015.
- **Oral presentation and the best Poster presentation** on, ‘Astrakurkurone, a novel triterpene isolated from Indian mushroom *Astraeus hygrometricus*, induces mitochondrial dysfunction and ROS dependent death in *Leishmania donovani*’ at International Conference on "Molecular Biology and its Applications", on February 14<sup>th</sup> and 15<sup>th</sup>, 2014, by Department of Life Science and Biotechnology, Jadavpur University, Kolkata.

### **Training Programs and Workshops**

- Attended **107<sup>th</sup> Indian Science Congress** at University of Agricultural Sciences, GKVK, Bengaluru during 5-6<sup>th</sup> January, 2020; funded by the Biotechnology Industry Research Assistance Council (BIRAC), IKP Knowledge Park (IKP).
- **Training Course on Clinical Flow Cytometry**, organized by CRNN, University of Calcutta in association with BD Biosciences (India); June 11<sup>th</sup> – 13<sup>th</sup> 2013.
- **International Workshop on Application of Flow Cytometry and Imaging in Cell Biology and Nano-Biotechnology**, organized by CRNN, University of Calcutta; August 11<sup>th</sup>-18<sup>th</sup> 2012.
- **National Workshop on Scanning Electron Microscopy**, organized by University Science Instrumentation Centre, The University of Burdwan; July 26<sup>th</sup>-29<sup>th</sup> 2011.

### **Administrative and Professional Experiences**

Sl.	University/ Institute/	Post Held	Nature of Work	Duration
1	BARASAT GOVT. COLLEGE, WEST BENGAL, INDIA	Jt. Coordinator, System Management Committee ( <u>Administrative Committee</u> )	Overall maintenance of college website, online processes, Implementation of IFMS/ HRMS system and other administrative works	2016-17, 2017-18, 2018-19, 2019-20
2		Jt. Convener, Admission Committee	B.A./B.Sc. & M.A./M.Sc. admission processes	2017-18, 2018-19, 2019-20
3		Teacher member, Project Monitoring unit, RUSA, ( <u>Administrative Committee</u> )	Procurements under RUSA	2016-17, 2017-18, 2018-19, 2019-20
4		Teacher member, UGC and AISHEE committee	Coordination with UGC	2016-17, 2017-18, 2018-19, 2019-20
5		Teacher member, Students' welfare and support cell	Processing of fellowships viz., Kanyasree, UGC SGC, SVMCMS, minority	2017-18, 2018-19, 2019-20
6		Teacher member, NSS committee	NSS works	2015-16, 2016-17
7		Teacher member, Routine Committee and Sports Committee	Routine preparation, College sports and games	2015-16, 2016-17

### **M.Sc. Students' Review/ Dissertation works**

1. Ms. Gunjan Roy Chowdhury, M.Sc. Semester III, 2015-16; Topic: “**Antigenic variations in Trypanosoma**”

2. Ms. Gunjan Roy Chowdhury, M.Sc. Semester IV, 2015-16; Topic: **“Maternal Acceptance to Foetus”**
3. Ms. Arpita Hazra, M.Sc. Semester III, 2015-16; Topic: **“Pathogenic infections of female genital tract”**
4. Ms. Arpita Hazra, M.Sc. Semester IV, 2015-16; Topic: **“Congenital and neonatal pathogenic infections”**
5. Ms. Ipshita Paul, M. Sc. Semester III, 2016-17; Topic: **“Role of Dendritic Cells in Tissue Specific Autoimmunity”**
6. Ms. Ipshita Paul, M. Sc. Semester IV, 2016-17; Topic: **“Transplantation Immunology”**
7. Ms. Ishita Kulavi, M. Sc. Semester III, 2017-18; Topic: **“Macrophage and bone inflammation”**
8. Ms. Ishita Kulavi, M. Sc. Semester IV, 2017-18; Topic: **“T cells in metabolism associated autoimmune diseases”**
9. Mr. Rakhipallab Kundu, M. Sc. Semester IV, 2017-18; Topic: **“Inflammasome: Complex of innate immune system”**
10. Ms. Nandita Mondal, M.Sc. Semester IV, 2017-18; Topic: **“Host parasite interaction under environmental stress”**
11. Ms. Pushmita Sarkar, M. Sc. Semester III, 2017-18; Topic: **“Host-parasite interaction in malaria: Implications of protein molecules”**
12. Ms. Pushmita Sarkar, M. Sc. Semester IV, 2017-18; Topic: **“Vaccination strategies to control malaria by targeting the parasitic proteins”**
13. Ms. Mayuri Dutta, M.Sc. Semester III, 2018-19, Topic: **“Cerebral Malaria: A fatal infection caused by *Plasmodium falciparum*”**
14. Mr. Sandipan Das, M.Sc. Semester III, 2018-19; Topic: **“Overview of leishmaniasis and immune regulation”**
15. Ms. Puja Bhowmick, M.Sc. Semester III, 2018-19; Topic: **“An overview of Dengue”**
16. Ms. Mayuri Dutta, M.Sc. Semester IV, 2018-19, Topic: **“Chronic Granulomatous Disease and its complexities”**
17. Mr. Sandipan Das, M.Sc. Semester IV, 2018-19; Topic: **“Host- Parasite Interaction in Trypanosomiasis and Antigenic Variation”**
18. Ms. Puja Bhowmick, M.Sc. Semester IV, 2018-19; Topic: **“Rheumatoid Arthritis”**
19. Ms. Puja Das, M.Sc. Semester III, 2019-20; Topic: **“Environmental Factors Controlling Prevalence of Leishmaniasis”**



20. Ms. Trishita Dutta; M.Sc. Semester III, 2019-20; Topic: **“Role of sand fly saliva in leishmaniasis”**
21. Mr. Soumyadip Mukherjee; M.Sc. Semester III, 2019-20; Topic: **“Revolutionary Changes in Genetic Engineering”**
22. Ms. Puja Das, M.Sc. Semester IV, 2019-20; Topic: **“Iron And Its Impact On Leishmaniasis: An Update And Overview”**
23. Ms. Trishita Dutta; M.Sc. Semester IV, 2019-20; Topic: **“Role Of Pdl-1 In Tumour Immune Suppression”**
24. Mr. Soumyadip Mukherjee; M.Sc. Semester IV, 2019-20; Topic: **“The Immune Responses To ‘Nipah Virus’ Infections”**