

Curriculum Vitae

Name : **Dipshikha Chakravortty, Ph D (Female)**

Citizen : Indian

Present Position : Professor
Dipshikha Chakravortty.
ORCID ID.0000-0002-7838-5145
Website-<https://mcbl.iisc.ac.in/dclab/>
Adjunct Faculty- IISER Thiruvananthapuram

Permanent Address : Dr. Dipshikha Chakravortty,
Professor
Department of Microbiology and Cell Biology
Lab:SA10
Indian Institute of Science
Bangalore 560 012, India
Email:- dipa@mcbl.iisc.ernet.in
Tel:- 0091 80 2293 2842
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(Home Address) : Dipshikha Chakravortty
C/o S.K. Chakravortty Ganesh Villa,Plot
No. 132. Gajanan Society,
P.O. Wadi.
Nagpur 440023, INDIA.
Tel : 91-07104-220312

EDUCATIONAL QUALIFICATIONS

| | | | | |
|------|--|---------------------------------------|---------------------|--|
| B Sc | L.A.D college Nagpur Univer. Nagpur. | Chemistry, Zoology Microbiology | 1989 | 1 st Division |
| MSc | L.I.T., Nagpur | Microbiology | 1991 | 1 st Division Uni. (2 nd merit) |
| Ph D | Pune University, Pune, India | Biotechnology | 1993-1999 (2000) | National Centre for Cell Science,Pune |

Academic Distinction

M.Sc First Division and 2nd in the Merit

Research positions held

1993- 1995 Junior Research Fellow at National Centre for Cell Science, Pune

1995- 1998 *Senior Research Fellow* at National Centre for Cell Science, Pune

1999-2001(August) *Visiting Scientist* at Department of Microbiology and Immunology, Aichi Medical University, Japan

2001-November-Jan 2003- Fellow at Institute for Clinical Microbiology Immunology and Hygiene Friedrich-Alexander University in lab of Prof. Dr. Micheal Hensel, Wasserturm Str. 3/5 Erlangen 91054. Germany

Feb 2003-Jan 2004:- HUMBOLDT FELLOW at Institute for Clinical Microbiology Immunology and Hygiene Friedrich-Alexander University, Wasserturm Str. 3/5 Erlangen 91054. Germany

Feb 9th 2004 Dec 16th 2009 :- Joined as Assistant Professor in Department of Microbiology and Cell Biology, Indian Institute of Science, Bangalore 560 012.

Dec 23th 2009 – Dec 23th 2015- Associate Professor, Department of Microbiology and Cell Biology, Indian Institute of Science, Bangalore 560 012

Dec 28th 2015 onwards- Professor, Department of Microbiology and Cell Biology, Indian Institute of Science, Bangalore 560 012

Jan 2022 Onwards- Adjunct faculty in IISER, Thiruvananthapuram

Awards and Honours

Awarded fellow of TWAS, 2025

Awarded Sir Rustum Choksi Award for Excellence in Science, 2024

Awarded Prof P. A. Kurup Endowment Award by SBC (I), 2023

Awarded Yogmaya Devi Award for Research in Biomedical Science, for Outstanding work, by Maharashtra Cultivation for the Association of Sciences (MACS), 2022

Awarded TATA Innovation fellowship, 2021

Awarded ‘Prof. S.K. Chatterjee Award’ for the year 2020., for Outstanding Women Researcher

Fellow of Indian Academy of Science, Bangalore , Jan 2021

Fellow of Indian National Science Academy, India

Fellow of National Academy of Sciences, India Awarded

ASTRA Chair Professorship, 2018

NASI-Reliance Platinum Jubilee Award, 2015

Awarded the DAE SRC Outstanding Investigator Award, 2015

Awarded the “National Bioscience Award” by Department of Biotechnology, 2010

Awarded the ASM Indo-USA Professorship, 2005

Awarded Humboldt fellowship award in Germany to carry out research plan-2003-2004 Winner of

Daiko Foundation fellowship for continuing Research in Japan, Japan 1999-2000

Gold Medal for the best research work and research work presentation by the Indian Association of Basic medical Scientist (IABMS) 1994

Best Research Paper presentation from the IIIRD Maharashtra Chapter of IAMM 1997, B.J. Medical College, Pune

Gold Medal for the excellent research work from the Honorable President, Aichi Medical University, Japan 1999

Conferences/Workshop/ Invited talks/meetings

- Invited Talk- International Conference on AMR, SRM University, Amravati, Oct 29-31st, 2023, AMR and Beyond
- Invited Talk – Sister Nivedita University, 4th May, 2023, Why bacterial chooses different lifestyles
- Academy Lectures, NGM College, Pollachi, 25-26th April, 2023, - Plant Pathogen interaction
- CESin Conference, IICB- 16th-18th March, 2023, - Invited talk, OmpA and antibiotic resistance
- BITS Pilani- Jan 25th -28th 2023 Invited talk – Life in a vacuole
- STEM for GIRLS- organized by IISC and IBM- Invited talk , 6th June, 2022- Why bacterial make us
~~~~~sick
- IISER TVM- 29<sup>th</sup> April to 1<sup>st</sup> May- Invited talk and teaching a part of the course, 2022
- GRC Conference, Bhimtal, 22-25<sup>th</sup> April 2022
- Teacher’s refresher course , Srimad Padmavat Arts and Science college, Tiruchillapalli, TN, 14-16<sup>th</sup>  
~~~~~ and 21<sup>st</sup> Dec 2021
- Academy lecture in Hindustan College, Coimbatore, 10th December, 2021
- Invited talk in Indian Academy of Science, Annual meeting of Indian Academy of Sciences, 13th November, 2021
- Nominated by CSIR DG for ‘International Conference on Emerging Fourth Industrial Revolution (4IR) Technologies for Sustainable Development’ jointly with the Ministry of Science and Technology of the People’s Republic of China on 22 July 2021. Represented India as a panelist
- Invited Speaker- India Special Session organized as a part of IEEE 2021 Conference on Norbert Wiener in the 21st century being held during 23-26 July 2021, Anna University, Chennai, India. , 23rd July- Caged Salmonella

- Invited Speaker- Amity University Kolkatta, 21st July 2021- Bacterial Lifestyles and their niches
- Invited speaker- Science Day, IEEE, IISc- 25th Feb 2021- *An unusual collaboration between a Medical Microbiologist & a Aerospace Scientist!*
- CDRI-2021, Revolving around Vacuole- Why Salmonella loves to live in Vacuole, 15th Jan
- Vivekananda Institute of Higher learning, Hyderabad- Science and National Building, 1th Jan 2021
- St Joseph college 2021 convenor of Academy Lecture workshop, 12th-13th Jan,
- University of Davengere- From Coffee table to Winning Nobel, 17th Dec 2020
- VIT-2020-
- Manoj Prakash Memorial Lecture, Shock wave Society, IISc, 5th Dec, 2020- Biological application of shock waves
- Uttar Banga Krishi Viswavidyalaya, Contemplating Soil Research and Education: A way forward, Rhizosphere to endophytic life of Salmonella: An unexplored area of Soil Microbiology, 4th Dec 2020
- NIT Rourkela- National conference on “Host-pathogen interaction: present and future perspective, 24th September, 2020- Bridging the gap between metabolism and pathogenesis
- NIT Suratkal-
- Hislop College - International Science Day organized by Hislop School of Biotechnology in association with Department of Chemistry, Hislop College, Nagpur. Nov 10, 2020- Life in A vacuole
- Mount Carmel college, Bangalore , “Covid-19: Life is Different Today”, 21st May 2020
- St. Joseph College, Bangalore - Inaugural talk on 5th July- Life in vacuole, 2019
- ILS Bhuwaneswar March 18-19th 2019, National Symposium- Life of Salmonella
- IIT Mumbai Diamond jubilee – Feb 15-16th 2019, Invited talk- How Salmonella can dodge the host deacetylases
- Academy lecture series – Jain University- How Pathogen create pathogenesis , 16th Jan 2019
- Academy lecture series convener and speaker - Christ University- Biological applications of Shock waves, March 7-8th 2018.
- Plenary Talk in Mount Carmel College, August 11th and August 16th, 2018
- Chemical Ecology workshop organized by SERB, DST- Talk on Quorum sensing in bacteria- 21st July 2018
- Talk in St. John’s Medical College on Bacterial pathogenesis- 20th July 2018
- Talk on “Scientific Ethics” organized by Indian Academy of Science, National Academy of Sciences and Indian National Science Academy, 15th June 2018
- Sahyadri Conclave- International meeting organized by Sahyadri college of Science, technology and management – 6-10th Jan 2018, Invited talk on 10th Jan and member of panel discussion.
- Invited talk by Association of Physiologists and Pharmacologists, NIMHANS, 2nd April, 2016 “ Shock wave and its application in medicine”
- CESIN- Invited talk- Unraveling the mechanism of BPI- 21-24th Dec 2016
- NII- Nov 23 2016 –talk delivered
- Academy Workshop for Teachers training- Quorum sensing, 27th Feb 2017
- Co-ordinator Academy Symposium , Christ University, 22-23rd Feb, 2017- Talk on Unravelling the mechanism of BPI
- Academy Symposium- Invited talk- Bangalore Institute of Technology , 24-25th May 2017-

- Biological application of Shock waves
- Invited talk- **Sir MVIT.**, Bangalore , 30th May 2017, **Designing experiments in biology/biosciences**
 - Academy talk- Maharaja College, Mysore, 27th April, 2017
 - Invited talk:- TWAS Regional Office for Central & South Asia (TWAS ROCASA) ,JawaharlalNehru Centre for Advanced Scientific Research,Conference of Young Scientists on the topic, “Infectious Diseases: Biology to Intervention Strategies”, 7-9 September 2017
 - Academy talk- Vijaya college Bangalore, 15th Sept 2017
 - Academy Lecture- Kumaraguru College of Engineering,. Coimbatore5-6th Oct, Invited talk- Biological Applications of Shock waves
 - Academy Teachers training lectures-Manipal School of life Sciences, 1st Dec,2017
 - Chetana Program - Invited Talk, Microbial Intelligence- 15th Dec, 2017
 - Humboldt Annual Meeting- Co-Chair of session, 23-25th Dec 2017
 - Convenor and Speaker of Academy lecture series conducted by Oxford College , Bangalore, 3-4th march 2016.
 - Chaired the session and Organizing committee member in 17th Indo-UA Cytometry Workshop on Application of laser flow cytometry in Biomedical research, 14-18th March2016
 - Chief Guest- DRDO, Radar Center, Bangalore30th March 2016.
 - Academy lecture series convener and speaker - Christ University- Biological applications of Shock waves, March 7-8th 2018.
 - Convenor and Speaker of Academy lecture series conducted by Christ University Bangalore, 22-23rdJan 2015.
 - Convenor and Speaker of Academy lecture series conducted by Kolar , Bangalore, 11-12th Feb 2015.
 - Invited talk , IIT Mumbai
 - Convenor and Speaker of Academy lecture series conducted by Oxford College , Bangalore, 3-4th march 2016.
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 - Sahyadri Conclave- International meeting organized by Sahyadri college of Science, technology and management – 6-10th Jan 2018, Invited talk on 10th Jan and member of panel discussion.
 - Academy lecture series convener and speaker - Christ University- Biological applications of Shock waves, March 7-8th 2018.
 - Convenor- MCB75 platinum jubilee celebrations- 11-14th Dec 2015

- Convenor and Speaker of Academy lecture series conducted by Kolar , Bangalore, 11-12th Feb 2015.
- Invited talk , IIT Mumbai, Feb 16th 2015
- Inspire Program- Invited talk On Doing Science, Christ University, Oct 30th 2015
- Invited talk- Indo-German Workshop on Chemical Biology of Infectious Diseases, National Institute of Immunology-Max Planck Institute, Germany, Delhi, Jan 20-21, 2014.
- Invited Speaker of Academy lecture series conducted by CRM Institute , Women in Science: A Career in Science Workshop, CMR Institute of Management Studies, To commemorate Prof. Anna Mani's 96th Birthday, Bangalore, Jan 22-23, 2014.
- Doing Science: How, Why and When, Mount Carmel College, Bangalore, 26th Feb 2014.
- Plenary talk- Dr. T. M.A. Pai Endowment Chair – Enteric Pathogens Lab, Melaka Manipal Medical College Manipal, National Hands-On Training Workshop on, Bacterial Enteric Infections, - Bacteria secretion machineries, 7th March, 2014
- Lecture Series- REAP program by Jawaharlal Nehru Planetarium, April-May 2014.
- Convenor and Speaker; Lecture Workshop on "Life Sciences – Enkindle intelligentsia" at CMR Institute of Management Studies, Bangalore from Jan 22-23, 2014
- Invited talk, IIT-Chennai- Quorum in Infection biology, 16th Dec, 2014
- Invited to Amrita Institute of Medical Sciences, Kochi, for assessing the suitability of the candidates for pursuing Ph.D and for JRF to SRF promotion of the existing candidates, 2015., convener and speaker, Academy Workshop "Lecture Workshop on Life Science Research - Present & Future, Christ University, Bangalore, Feb 25-26, 2015.
- Convenor and Speaker, Academy workshop on "Skopion Scientia" at Government Women's First Grade college, Kolar, Feb 11-12, 2015
- Board of Studies , Microbiology (B.Sc), Mount Carmel College, from 2014 onwards.
- Research Advisory committee member, Oxford College, Bangalore, 2015 onwards
- Advisor for Michigan Valley education, Delhi, an initiative program to instill the interest about science in young minds
- Invited talk, IIT-Mumbai- Changing facets of Infection Biology, 24th July 2015
- Grant reviewer for ICMR, DST, DBT and BRNS (India)
- Invited lecture series- sponsored by UGC at MSU Baroda, Jan 16-18th 2013.
- Invited talk- Science and Academy workshop on " progress and challenges in medical biotechnology, Christ University, Bangalore, Feb 15-16th, 2013.
- International Seminar- Invited talk in "Global health Institute" EPFL, Lausanne, August 23-25th 2012
- Humboldt Networking meeting – As an Ambassador from AvH foundation, Hotel Oberoi, Gurgaon march 29-31st. Facilitator for a Workshop titled Networking- How and Why?
- Invited Judge for the Session "Good Health and Better Society, Organized by Samanway- 2012, Student Council, IISc. 2-3rd March 2012.
- Invited talk- Institute of Life Science , Hyderabad And Merck- Anti-Infectives, March 19-21st, 2012
- Invited talk-Workshop on Advances in Biological Sciences organized by NASI, NAS, NSA, Poornaprajna Institute of Scientific Research, January 20-22nd 2011,
- Invited talk-"Lecture Workshop on Contemporary Biology" organized by NASI, NAS, NSA, Jain College, Bangalore, March 15-16th, 2011
- Invited talk- Anti-Immunology-UGC Seminar – Organized by Hislop College, Nagpur-10-11th Oct 2011
- Invited talk- Biotechnology Symposium Organized by St. Mary's College- Thrissur, 27-28th Oct 2011
- Invited talk- International meeting on "New horizons in Biotechnology" organized by Biotech Research Society, 21-25 Nov 2011
- Attended GRC meeting in Khimsar Fort, Jodhpur, 1-5th Dec 2011

- Addressed teachers as UGC teachers Refresher course in GGNU, Amritsar, 3rd Jan 2012
- Invited talk - Zoology Catholicate College, Pathamantthitta, Kerala, “Recent Trends in Biotechnology”, 2-3rd Feb 2012
- Invited Talk- National Shock wave Symposium 2” Biological Application of Shock Waves”, Periyar Maniamma University, 27-28th Feb 2012.
- Invited Judge for the Session “Good Health and Better Society, Organized by Samanway-2012, Student Council, IISc. 2-3rd March 2012.
- Invited talk: Guha Research Conference : Bacterial evasion strategies, Aurangabad, 16th-21st Dec 2010.
- Invited talk: Society for Biological chemists (SBC)- 79th SBCI , 13th-15th Dec 2010, Bangalore, Role of arginine in Salmonella pathogenesis.
- Talk on Innate immune sensors. Center for Artificial intelligence, Bangalore. Jun 22nd 2010
- Microbes in Health and Disease, organized by NASI, NAS, NSA, Mount Carmel College, August 18th 2010
- Invited talk- Stealthy Strategies of Salmonella survival. Indo-Taiwan meeting Nov 24-25th 2009, IISc
- REAP-2 lectures series for the Graduate students of Biology organized by Nehru Planetarium , 11th Oct , 2009
- Addressing the teachers on, 20th August 2009, Thursday, Sri Bhagawan Mahaveer Jain college, Telling the bell_role of TLR in infectious diseases
- Invited talk in “ XVI Sir Dorab Tata meeting on Mechanism of microbial pathogenesis, March 10-12th 2009
- INSA lecture series, Maharani ammani college, Jan 2009
- TRendys-Biochemical Symposium organized by Department of Biochemistry, Indian Institute of Science, 14-15th Nov 2008
- International Conference on emerging trends in Biological Sciences organized by KIIT university, Bhubaneswar, 23-25th Nov 2008
- National seminar on Microbiological Developments and Biochemical research, organized by Women’s education society, Lady Amritabai Daga College, Nagpur , 29th Nov- 30th Nov.2007
- 76th SBC meeting in SV university , Tirupati (25th Nov-27th Nov 2007)-Host and Microbes-Whose world it is anyway!
- Invited Talk:University of Manchester- The Faculty of Life Sciences research workshop at the University of Manchester (2-5th July 2007)
- Invited Talk in Association of Microbiology of India, Dec 9-12th 2007, Delhi.
- Max-Planck India meeting at NCBS, Bangalore , March 6-9, 2005:- Life inside vacuole- Strategies employed by salmonella to evade host defense functions
- Attended the 25th All India Cell biology Conference held at National center for Human genomic research, Chandigarh , Dec 10-13th, 2004.
- Attended the Meeting with Nobel Laureates in Lindau and participated actively in discussion with eminent Nobel-laureates in field of Biological sciences , July 23-28th 2003
- Life inside vacuole-2003’, presented a research paper, Marburg, March 27- 29 2003, Germany
- Attended and organised 1st conference of **Type three secretion system**, held in Klosterbans, Sept-12-15th 2002
- Attended the workshop organised by EMBO on electron microscopy- Heidelberg –May 22- June 2, 2002
- Attended Sixth International conference of Endotoxin and presented a paper *International society for Endotoxin Research, Paris, Sept 12-15, 2000*
- Attended Fifth International conference of Endotoxin and presented a paper *International society*

for Endotoxin Research, Santa fe, Sept 12-15, 1998

- Microplate detection of bacterial contamination in tissue culture media. *Society for Biological chemists (India), Central Drug Research Institute, Lucknow, oct-1994*
- Action of lipopolysaccharide of *Salmonella* and *E. coli* in human small intestinal lamina propria fibroblasts. National congress of *India Association of Medical Microbiologists. Armed Force Medical College, Pune, Oct 1994.*
- Biotechnological detection of Enteric diseases. Organised by All India Institute of Medical Sciences, New Delhi and University of Bergen, Norway. Dec. 1994.

Research Interest- Infectious diseases and Host-pathogen interaction

The deep understanding from our research opens up new avenue infectious disease research. The various evasion strategy *Salmonella* is using to become a successful pathogen can be targeted for successful therapeutic intervention. Further, the vaccine strains which are generated in the lab are in the process of getting commercialized. Understanding the various ways by which *Salmonella* combat the host is a very challenging issue. New drug generation and small molecules which can inhibit the secretion of virulence proteins will be addressed. New, early and precise diagnostic of typhoid fever will be worked upon. Efforts will be put to market the diagnostic kit. One diagnostic method based on PCR is already applied for patent and efforts are being made to market this. The secret behind inhibition of antigen presentation by *Salmonella* will be worked upon. The mechanism if revealed can lead to fruitful discovery of potent vaccine with long term memory. Use of microshock wave technology for wound healing and needleless vaccine delivery is on clinical trial and we hope to make a mark on the diabetic wound healing.

Teaching

I am actively involved in teaching two courses to the Graduate students and 2 courses for Int PhD, PhD, and graduate and 1 course for the MSc Life Science students across the departments

Course-1

Microbiology & Immunology (MC 203/DB 203 (AUG) 3:0)

Fascinating world of microbes; Principles of microscopy; Microbial diversity, evolution and genomics; Mechanisms of horizontal gene transfer, Microbes as model systems of development, Microbes as bioreactors and sensors; bioremediation; bacterial cell structure and function; Bacterial physiology and nutrition; Bacteriophages- virulent and temperate; phage life cycles; Plasmids, Transposons; Understanding and combating bacterial pathogenesis; Antibiotics- mechanisms of drug resistance and mode of action; Quorum sensing and biofilms; Pathogens and beneficial microorganisms; Adaptive and Innate immune system, Major histocompatibility molecules and T cell receptors, Antigen Processing and presentation, Cytokines and

chemokines, Molecular basis of cell-mediated cytotoxicity, Immunity to pathogens, Cancer Immunology, Recent trends in Immunology, Vaccines.

Course-2

Host-Pathogen interactions and immune evasion mechanisms(MC 205 (AUG) 2:0)

This course will utilize multiple host-pathogen pairs as models to demonstrate the innumerable mechanisms utilized by pathogens of viral, bacterial and parasitic origin to subvert the host and enhance their own survival. Secretion systems of bacteria: Type I, II, III, IV V, overview of ABC exporters and importers, plant pathogen interactions, virulence gene expression, intracellular pathogenesis; signaling by the bacterial components; innate and adaptive immunity to bacterial pathogens; quorum sensing, biofilm formation and its role in pathogenesis. Viral immune evasion mechanisms such as functional mimicry of host complement proteins, secretion of chemokine and cytokine-like molecules, inhibition of NF- κ B and apoptosis, inhibition of serine proteases of the host antigen presenting cells to suppress antigen presentation, inhibition of MHC class I presentation of viral antigens, inhibition of host secretory pathway, prevention of phagosome acidification, antigenic variation and suppression of TH1 responses by protozoan pathogens, role of host TRIM5 family proteins in controlling HIV by mutation of viral RNA, ds-RNA and non-capped 5' end mediated recognition of pathogens by the host, will be some of the topics that will be covered.

Course 3: UB102T/UB102L-Introductory Biology II (Microbiology, Cell Biology and Genetics), UG, 2nd Semester

Course 4: UB301- Practical in Microbiology, 5th Semester

Course 4- LS201- MSc Life Science

Course taught elsewhere – JNCSAR, NIBGM Kalyani, IISER Thiruvananthapuram- All these are independent courses floated by me and taught in these Institute followed by exam and marks uploading.

Editor/Editorial board member of Journals

Editorial Board, Innate Immunity, SAGE publications, 2013 onwards

Editorial Board, Resonance, 2013-2018

Editorial Board Virulence, Landes Bioscience: 2011 onwards.

Academic Editor, PLoS One, November 2010 onwards

Editorial Board member, Scientific Reports, Nature Publishing Group, 2017 onwards

Grant reviewer for International Grants

NC3Rs Research Grant scheme, UK. Proposal Details:

Title: Species-specific high-throughput dendritic cell screening: an animal friendly

and cost-effective approach to vaccine development.
Grant Reference: NC/L000792/1

The Wellcome Trust

Ref: Grant 092728/Z/10/Z

Swiss National Science Foundation

Ref: document 310030 156818

National Science Foundation(Poland)

Funding scheme HARMONIA, Liquid core polyelectrolyte nanocapsules as anticancer drugcarriers, prof. dr hab. inż. Piotr Warszyński, Jerzy Haber Institute of Catalysis and Surface Chemistry of the Polish Academy of Sciences, No. 301550, Panel ST5

Israel Science Foundation

Request for evaluation application number 2365/17-82.0. Israel Science Foundation (ISF), to request your assistance in reviewing a research proposal titled: Novel strategies to target *Pseudomonas aeruginosa* biofilms in Cystic Fibrosis

European Science Foundation

Ph.D thesis Evaluation

IIT Mumbai , IIT Chennai , IIT-Delhi, IIT-Roorkee, IIT-Kanpur, National Institute of Immunology ,Delhi CDRI , Lucknow, University of Mumbai, Central University Rajasthan, CDRI Lucknow, CDFD, JNU-Delhi, Sambalpur University, Orissa, University of Kerala, University of Calcutta, IICB, Kolkatta

Professional Memberships

Guha Research Conference (GRC)
Molecular Immunology Forum
International society for Endotoxin research
American society for Microbiology
Indian Association of Cell Biologists
Society of Biological Chemists , India
Indian Association of Medical Microbiologists

Committees/ Scientific bodies in IISc

Chair ICASH- 2017-2021
Chair Hostel Wardens- 2019 to 2021
Chair WeCARE- 2017 to 2021
Integrated PhD Co-ordinator- 2018 onwards
Convenor Biological Sciences Division- 2021 onwards
UG admission committee- 2021 onwards
IBSC, Member Secretary- 24th May 2022 onwards

Committee Member- Entities Committee, 2024 onwards
 Committee member- BS Admissions- 2024 onwards
 Committee member- Medal's committee and Young Alumni Medal committee- 2024 onwards

Committees/ Scientific bodies/International Committee outside IISc

RAC/SAC Committee member, NIBGM Kalyani, May 2023 onwards
 RAC/SAC committee member, IGIB, Delhi, 2021 onwards
 RAC/SAC committee member in NCCS Pune, From 2016 -2018
 RAC/SAC committee member, CDFD, Hyderabad, August 2022
 ,Invited Guest
 Board of Studies- Christ University, Mount Carmel College, St. Xaviers College, Mumbai
DBT nominee IBSC- Thermo Fischer, IBAB, Richcore Life sciences. Azim Premji University
DST PAC committees, SUPRA, WOS-A, SERB-PAC , S E R B - P O W E R
CSIR- Monitoring Meeting of Screening & Expert cum External Monitoring Committee for Facility Creation Projects (SEEMC-FCP)
Area Review Panel (ARP) for "Drugs & Drug Delivery, Biopharmaceuticals, Regenerative Medicine, Stem cells, Vaccines, & Clinical trials" for BIPP, SBIRI & PACE schemes,2023 onwards
UGC expert committee for granting permission to start the Universities, 2023 onwards
National Committee for International Union of Microbiological Societies (IUMS), January 1, 2024 – December 31, 2026
INSA Council Member – 2024 onwards

Patent

1. Received US patent on developing vaccine against Salmonella: United States Patent, Chakravorty et al., US008444999B2 US 8,444,999B2 May 21, 2013
2. Patent filed on Novel PCR diagnosis of *Salmonella* Typhi, 2010
3. Patent filed on novel mechanism of drug delivery to Intracellular pathogens, 2012
4. A Portable Electronic Platform Integrated with Microfluidic Biosensors for High-throughput and Rapid Antibiotic Susceptibility Testing at the Point-of- Care and the Methods Thereof. Inventors: Anil Vishnu G. K., Bhagaban Behera, Alekya B., Arun Baby, Saeed Rila, Arjun B. S., Midhun C. Kachappilly, Prathik B.H., Nagasuma Chandra, **Dipshikha Chakravorty**, and Hardik J. Pandya. **TEMP/E-1/26941/2020-CHE** with reference number: **202041024394**
5. A METHOD AND SYSTEM FOR DIAGNOSING INFECTED BLOOD USING PRE-TRAINED MACHINE LEARNING MODEL, Omkar Hedge, Ritika Chatterjee, Dipshikha Chakravorty, Saptarshi Basu, TEMP/E1/16229/2021- CHE 8000 11729, 202141014327
6. PCT Application No.: PCT/IN2023/050431, Date of filing: 05-May-2023, Priority Application No. : 202241027182, Priority Date: 11-May-2022, Title: portable system and a replaceable cartridge for wound healing, and more particularly, to a portable system and a replaceable cartridge for accelerated wound healing using shockwaves. Jagadeesh Gopalan, Dipshikha Chakravorty, Chintoo, KPJ Reddy, Akshay Datey, Obaid

List books and other educational materials developed

Contributed a Chapter titled “**Toll like Receptors in Vaccine**”, **Dipshikha Chakravortty, Amit Lahiri and Priyanka Das**, Title of the Book: **Vaccinology –Principals and Practice**, **Wiley-Blackwell Publications**.

Contributed a Chapter titled “**Role of Methylglyoxal in disease**”, **Dipshikha Chakravortty, Mayuri Gogoi and Kasturi Chandra**, Title of the Book: **Dietary AGEs and Their Role in Health and Disease** , **CRC Press, Taylor and Francis**,

Contributed a Chapter titled “ **Risk of Transmission of Antimicrobial Resistant Escherichia coli From Commercial Broiler and Free-Range Retail Chicken in India**” **Arif Hussain, Sabiha Shaik, Amit Ranjan, Nishant Nandanwar,, Sumeet K. Tiwari, Mohammad Majid, Ramani Baddam, Insaf A. Qureshi,,Torsten Semmler, Lothar H. Wieler, Mohammad A. Islam, Dipshikha Chakravortty and Niyaz Ahmed**, Title of the book- **Food borne pathogens- hygiene and safety**, **Frontiers in Microbiology**, ebook.Oct 2019

Adhoc Reviewer

Microbiology and Molecular Biology review (MMBR), Nature Communications, Innate Immunity, Cellular Microbiology Microbiology, Vaccine, Expert opinion in therapeutic patent Virulence, Indian Journal of Medical Research, Journal of Bioscience, Current Science Gut Pathogen, Infection and Immunity Biosensors and Bioelectronics , PLoS, One PLoS Pathogen,eBiomedicine FEMS Microbiology Letters

Guidance of students for research

Conferment Ph.D- 25 students

8 students pursuing their Ph.D MS

4 students awarded the MS degree

Summer students trained- 120. The summer students have been trained from various parts of India.

Details of Grant for past 5 years

| Research Grants (last 5 years) | Name of the funding agency | Name(s) of recipient(s) | Title of the project | Awarded Budget with currencies (INR) | Start date of project | End date of project | Your role in the project |
|--------------------------------|---|-------------------------|---|--------------------------------------|-----------------------|---------------------|--------------------------|
| 1 | LSRB-DRDO | DC & GJ | Development of biomedical applications of shockwaves | 4,97,00,000 | August 2021 * | August 2024 | Principal Investigator |
| 2 | DST-IMPRINT II | DC & GJ | Development of shockwave therapy for diabetic wound healing | 1,20,00,000 | March 2019 | March 2022 | Principal Investigator |
| 3 | Department of Atomic Energy – SRC Award | DC | Understanding quorum sensing in intracellular pathogen | 1,10,00,000 | April 2016 | December 2021 | Principal Investigator |
| 4 | DST | DC & SAM | Modelling outcome of Salmonella infection & pathogenesis | 65,00,000 | April 2017 | April 2020 | Co-investigator |

In News

- [IISc Bangalore researchers design protein to kill bacterium ...www.newindianexpress.com › states› karnataka › jul › iisc-bangalore-rese](https://www.newindianexpress.com/states/karnataka/jul/iisc-bangalore-researchers-unravel-how-salmonella-bacteria-infect...)
[IISc researchers unravel how Salmonella bacteria infect ... https://www.thehindu.com › Sci-Tech › Science](https://www.thehindu.com/Sci-Tech/Science)
- <http://www.natureasia.com/en/nindia/article/10.1038/nindia.2010.94>
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9.5. Popular articles (attached)

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Citation indices (taken from Google

Scholar<http://scholar.google.co.in/citations?user=b978y2oAAAAJ&hl=en>)

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|-----------|------|
| - | All |
| Citations | 8540 |
| h-index | 52 |
| i10-index | 128 |

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