



## UNIVERSITY OF CALCUTTA

### **FACULTY ACADEMIC PROFILE/ CV**

1. **Full name of the faculty member:** Dr. Prasanta Kumar Bag
2. **Designation:** Professor
3. **Specialization:** Microbiology, Immunology, Recombinant DNA Technology, Animal Tissue Culture, Microbial Ecology and pathogenesis
4. **Passport size photograph :**



5. **Contact information :**

Department of Biochemistry, University of Calcutta, 35, Ballygunge Circular Road, Kolkata-700 019, India, E. mail: [pkbbioc@caluniv.ac.in](mailto:pkbbioc@caluniv.ac.in); [prasantabag@gmail.com](mailto:prasantabag@gmail.com)

6. **Academic qualifications:**

| College/ university from which the degree was obtained               | Abbreviation of the degree |
|--|----------------------------|
| Ramakrishna Mission Vidyamandira, Belur Math, University of Calcutta | B. Sc. [Chemistry (H)]     |
| University of Calcutta   | M. Sc. [Biochemistry]      |
| University of Calcutta   | Ph. D. [Biochemistry]      |

7. **Positions held/ holding:**

| Designation         | Name of Employer       | From        | To         |
|---------------------|------------------------|-------------|------------|
| Professor           | University of Calcutta | 02.11.2013  | Till date  |
| Associate Professor | University of Calcutta | 02.11.2010  | 01.11.2013 |
| Reader              | University of Calcutta | 02.11. 2007 | 01.11.2010 |
| Sr. Lecturer        | University of Calcutta | 02.11. 2002 | 01.11.2007 |
| Lecturer            | University of Calcutta | 25.01. 2001 | 01.11.2002 |

|  |  |            |            |
|--|--|------------|------------|
| Lecturer   | Tezpur University<br>(Central University)<br>Tezpur, Assam         | 02.11.1998 | 22.01.2001 |
| Research Associate<br>(CSIR)   | National Institute of<br>Cholera and Enteric<br>Diseases, Calcutta | 1997       | 1998       |
| Research Associate<br>(DBT)  | Bose Institute, Calcutta   | 1996       | 1997       |
| Research Associate<br>(DBT)  | Indian Institute of<br>Chemical Biology,<br>Calcutta               | 1995       | 1995       |
| Monbusho Post-<br>doctoral Fellow<br>(Ministry of<br>Education,<br>Government of<br>Japan) | Department of<br>Microbiology,<br>Kyoto University,<br>Japan       | 1994       | 1995       |

#### 8. Research interests:

- ***Pathogenesis of enteric bacteria.*** Our laboratory is involved on isolation and characterization of enteropathogens from environmental samples, to elucidate the ecology and public health significance of these enteropathogens in the aquatic environment. Monitoring existing environmental strains and undertaking detailed studies of how pathogenic strains evolved from them is essential to our understanding of human disease. Our present focus is on the mechanism of pathogenesis of some enteric bacteria.
- ***Antimicrobial and anticancer activity.*** Emergence of resistance to multiple drugs is a serious clinical problem in the treatment and containment of the disease. Natural product drug discovery remains a significant hope to solve that problem. Our research interest is on isolation, purification and characterization of antimicrobial and anticancer activity from medicinal plants and synthesized nanoparticles.
- ***Molecular principles of species interaction in the rhizosphere of a leguminous plant: Biochemical and Metagenomic approaches.***  
Our laboratory is involved on determination of the microbial community composition (culturable/unculturable) within and outside the rhizosphere of an oil seed legume (*Arachis hypogaea*) on the basis of variations in lipase/esterase specific genomic loci with a view to understand effect of plant-microbe interaction in the respective soil ecosystem. Also the application potential of the identified industrial enzymes would be evaluated.

#### 9. Research guidance:

Number of researchers awarded Ph.D degrees : 07  
Number of researchers pursuing M.Phil/ Ph.D : 05

#### Present Pre-Doctoral Students:

C. Hariharan (Biotechnology), GATE (Joint- Supervisor)  
Enakshi Mondal (Biochemistry), NET(UGC) SRF

Richa Arora (Microbiology), NET-CSIR (Part time)  
Tultul Saha (Biochemistry) (Joint-Supervisor)  
Papiya Saha (Biotechnology) (GATE)

**Former Ph.D. students:**

Dr. Debasmita Ghosh (Chemistry), 2015; NET-CSIR; Presently DSK fellow, JU  
Dr. Dhritiman Dey (Biochemistry) 2019. (Associate Supervisor)  
Dr. Prativa Naskar (Biochemistry), 2018; NET(UGC)  
Dr. Prodipta Sarkar, M.Sc. (Microbiology); 2014; [NET (LS), GATE], Central Drugs Laboratory (CDL) Kolkata  
Dr. Saurabh Acharyya (Chemistry), 2011; NET (LS); Assistant Professor, Department of Chemistry, Calcutta Institute of Technology, Howrah  
Dr. Poulami Bhowmik (Zoology); 2009; (NET-UGC); Assistant Professor, Department of Zoology, Gurudas College, Kolkata  
Dr. Tapas K. Hajra (Biochemistry), (2007), Founder of Immprogen (New Era of Science & Technology) & Acharya (Academic Excellence & All round Development), Howrah, West Bengal, India

**Post-doctoral Students:**

Dr. Anirban Banerjee, Dr. D. S. Kothari Post-doctoral Fellow, UGC (2015-2018). Presently, Assistant Professor, Department of Zoology, Chakdaha College, Nadia, West Bengal.  
Dr. Goutam Banerjee, Dr. D. S. Kothari Post-doctoral Fellow, UGC (2017-2020)

**C. V. Raman Post doctoral Fellow** (June-November, 2013), DST, Government of India:

Dr. Jean De Dieu TAMOKOU, PhD  
Assistant Professor, Department of Biochemistry  
University of Dschang, Cameroon.

**Former Project Trainee:**

**Research Project:**

Nabakumar Bardoloi, Abhijit Das (Tezpur University)  
Souryadeep Mukherjee, Prarthana Thakurta (Calcutta University)

**Summer Trainee:**

Sajjad Karim, Gitanjali Nath, Lepakshi Barbora, Mohidur Rahman (Tezpur University)  
Mary Chatterjee, Bipasa Das (Calcutta University)  
Priyanka Gangopadhyay, Shibabrata Basak, & Soumyadeep Dakshy (Bangalore University)  
Sukanya Basu (Extol Faculty of Medical & life sciences, Bhopal),  
Shubhro Chatterjee (Aurangabad College, Maharashtra), Subhasis Mukherjee (HIT, WB)  
Samiran Mandal (Vidyasagar University)

Varsha Vaswati Patnaik, Manimala Sen, Pradeep Chatterjee, Akshay K. Dasadhikari (Ravenshaw University)

#### **GRE Trainees:**

Sandipan Dan, Kinkini Roy, Mrinmoyee Majumder, Pradipta Chakroborty, Bhaswati Bhattacharya, Sudeshna Goswami (Calcutta University)

#### **IASc-INSA-NASI Summer Trainee:**

Mr. Praveen Kumar (LFS2809), Banaras Hindu University, 2013

Ms. Sushmitha Srinivasan (LFS2712), Vijaya College, Bangalore University, 2015

Ms. Karthika T. (LFS687), Amrita School of Biotechnology, 2016

#### **10. Projects:**

##### ***Completed projects:***

1. ICMR, New Delhi sponsored Research project on "Isolation, Purification and Characterization of Antimicrobial Activity against *Vibrio cholerae* from Medicinal Plants", Rs. 20,82,600.00 (2003-07).

2. UNIVERSITY GRANTS COMMISSION, (MAJOR RESEARCH PROJECT) sponsored project on "Isolation, Distribution and Molecular Characterization of Plasmid from Clinical and Environmental Strains of *Vibrio cholerae*". Rs.5,54,920.00, (2002-05).

3. "Studies on the Environmental Strains of *Vibrio cholerae* in the Cholera Endemic Area in Kolkata and Surrounding Area, and Monitoring their Epidemic Potential" funded by Science and Technology Department, Government of West Bengal. Rs.1,42,000.00 (2002-04).

4. UGC (Minor research project) sponsored Project on "Isolation, Distribution and Characterization of the Enteropathogens Present in Water Samples in Kolkata and Surrounding Area". Rs.25,000.00 (2001-02).

5. Molecular Principles of species interaction in the rhizosphere of a leguminous plant : Biochemical and Metagenomic approaches . PI: M. DasGupta, M. Bhattacharya, A. Siddhanta, P.K.Bag, S. Ghosh, S. SenGupta (Dept. of Biochemistry); S. Jha, Dept of Botany, CU; S.Roychoudhuri, Sct., IICB. UPE/UGC(PROGRAM PROJECT). Rs.81,00,000.00 (2007 – 2012).

6. Studies of Antioxidative and Immunomodulatory Effect of Conjugated Linolenic Acid from Bitter Gourd Oil. PI: Pubali Dhar, Co-investigators: Shanti Nath. Ghosh, P. K.Bag. ICMR, 2011-2014; Rs. 15,96,600.00

7. Structure and function of root-associated microbiota in leguminous (*Arachis hypogaea*) and non leguminous (*Oryza sativa*) crop plants (Modern Biology: Bacterial Colonization Group), UGC/UPE Phase-II, UGC/149/UPE/ST-1 Dated 20/03/2017; 2017-2019. PIs: P. K. Bag, M. Bhattacharyya, S. Sengupta (Coordinator), Dept. of Biochemistry, University of Calcutta and S. Mandal, Department of Microbiology, University of Calcutta

#### **11. Select list of publications:**

##### **a) Journals:**

**Scopus h-index:** 14

**Google Scholar h-index:** 18    **i10 index:** 26

1. **P. K. Bag**, Nivedita Roy, Saurabh Acharyya, Dhira R. Saha, Hemanta Koley, Prodipta Sarkar, and Poulami Bhowmik. **2019**. *In vivo* fluid accumulation-inhibitory, anticolonization and anti-inflammatory and *in vitro* biofilm-inhibitory activities of methyl gallate isolated from *Terminalia chebula* against fluoroquinolones resistant *Vibrio cholerae*. **Microbial**

**Pathogenesis** (Elsevier), 128(2019) 41-46. <https://doi.org/10.1016/j.micpath.2018.12.037> (IF: 2.332)

2. Debjyoti Paul, A.Sengupta, K. Manna, S. Mukherjee, S. Dey, **P. K. Bag** & P. Dhar. **2019**. A novel nanoformulation of  $\alpha$ -eleostearic acid restores molecular pathogenesis of Hypersensitivity. **Nanomedicine**, 14(5): 529-552. DOI: 10.2217/nmm-2018-0450 (IF: 5.005)
3. Tebou PLF, Tamokou JDD, Ngnokama D, Voutquenne-Nazabadioko L, Kuate JR, **Bag PK**. **2017**. Flavonoids from *Maytenus buchananii* as potential cholera chemotherapeutic agents. **South African Journal of Botany** (Elsevier). 2017 March; 109:58–65. (IF: 1.504, 5-year IF: 1.594)
4. Simplicie Joel Ndendoung Tatsimo, Jean-de-Dieu Tamokou, Virginie Tankeu Tsague, Marc Lamshoft, Prodipta Sarkar, **Prasanta Kumar Bag**, Michael Spiteller. **2017**. Antibacterial-guided isolation of constituents from *Senna alata* leaves with a particular reference against Multi-Drug-Resistant *Vibrio cholerae* and *Shigella flexneri*. **International Journal of Biological and Chemical Sciences**, 11(1): 46-53 [ISSN 1997-342X (Online), ISSN 1991-8631 (Print)]
5. Patra SK, Bag PK, Ghosh S. **2017**. Nitrosative Stress Response in *Vibrio cholerae*: Role of S-Nitrosoglutathione Reductase. **Appl Biochem Biotechnol** (Springer), 182 (3), 871-884.
6. Jean-Bosco Jouda, Jean-de-Dieu Tamokou, Céline Djama Mbazona, Clovis Douala-Meli, Prodipta Sarkar, **Prasanta K. Bag** and Jean Wandji. **2016**. Antibacterial and cytotoxic cytochalasins from the endophytic fungus *Phomopsis* sp. harbored in *Garcinia kola* (Heckel) nut. **BMC Complementary and Alternative Medicine** 16:462 (ISSN: 1472-6882) DOI 10.1186/s12906-016-1454-9. Impact Factor: 2.109.
7. Prodipta Sarkar\*, Saurabh Acharyya\*, Anirban Banerjee\*, Amarendra Patra, Karthika Thankamani, Hemanta Koley, **Prasanta K. Bag**. **2016**. Intracellular, biofilm-inhibitory and membrane-damaging activities of nimbolide isolated from *Azadirachta indica* A. Juss (Meliaceae) against methicillin-resistant *Staphylococcus aureus*. **Journal of Medical Microbiology** (Society for General Microbiology, UK), 65 (10): 1205-1214 doi: [10.1099/jmm.0.000343](https://doi.org/10.1099/jmm.0.000343) (Impact Factor: 2.502)(\*1st author)
8. Jean-Bosco Jouda, Jean-de-Dieu Tamokou, Céline Djama Mbazona, Prodipta Sarkar, **Prasanta Kumar Bag**, Jean Wandji. **2016**. Anticancer and antibacterial secondary metabolites from the endophytic fungus *Penicillium* sp. CAM64 against multi-drug resistant Gram-negative bacteria. **African Health Sciences** 16 (3): 734-743. DOI: <http://dx.doi.org/10.4314/ahs.v16i3.13>. Impact factor: 0.842.
9. Florence Déclaire Mabou, Jean-de-Dieu Tamokou,, David Ngnokam, Laurence Voutquenne-Nazabadioko, Jules-Roger Kuate, **Prasanta K. Bag**. **2016**. Complex secondary metabolites from *Ludwigia leptocarpa* with potent antibacterial and antioxidant activities. **Drug Discoveries & Therapeutics**.10(3):141-149. ISSN: 1881-7831 Online ISSN: 1881-784X.
10. Jean-de-Dieu Tamokou, Joseph Tsemeugne, Emmanuel Sopbué Fondjo, Prodipta Sarkar, Jules-Roger Kuate, Arnaud Ngongang Djintchui, Beibam Luc Sondengam, **Prasanta K. Bag**. **2016**. Antibacterial and Cytotoxic Activities and SAR of Some Azo Compounds Containing

Thiophene Backbone. **Pharmacologia**, 7: 182-192. ISSN 2044-4648. DOI: 10.5567/pharmacologia.2016.182.192

11. D. Ghosh, C. N. Roy, S. Mondal, S. Kundu, S. Maiti, **P. K. Bag**, A. Saha. **2015**. Modulation of Catalytic Functionality of Alkaline Phosphatase Induced by Semiconductor Quantum Dots: An Evidence of Substrate Mediated Protection. **RSC Advances** 6(6) · December 2015 Impact Factor: 3.84 · DOI: 10.1039/C5RA22591D.
12. S. Acharyya\*, P. Sarkar\*, D.R. Saha, A. Patra, T. Ramamurthy and **P. K. Bag**. **2015**. Intracellular and membrane damaging activities of methyl gallate isolated from *Terminalia chebula* against multi-drug resistant *Shigella* species. **Journal of Medical Microbiology** (Society for General Microbiology, UK), doi: 10.1099/jmm.0.000107 (Impact Factor: 2.502)(\*1st author)
13. Simplicie Joel Ndendoung Tatsimo, Jean-De-Dieu Tamokou, Marc Lamsho'ft, Ferdinand Talontsi Mouafo, Alain Meli Lannang, Prodipta Sarkar, Prasanta Kumar Bag, Michael Spitteller. **2015**. LC-MS guided isolation of antibacterial and cytotoxic constituents from *Clausena anisata*. **Medicinal Chemistry Research** (Springer), 24:1468–1479. (DOI 10.1007/s00044-014-1233-4) [ISSN: 1054-2523 (Print) 1554-8120 (Online)](Impact factor: 1.720)
14. Sarkar, P., S. Yamasaki, S. Basak, A. Bera, **P. K. Bag**. 2012. Purification and characterization of a new alkali-thermostable lipase from *Staphylococcus aureus* isolated from *Arachis hypogaea* rhizosphere. **Process Biochemistry** (Elsevier), 47 (5): 858-866, doi:10.1016/j.procbio.2012.02.023. [Impact Factor: 2.883; 5-year Impact Factor: 3.393]
15. M. Sen, T. K. Hajra, P. Bhowmik, P. Naskar and P. K. Bag. 2013. Evaluation of nicotinamide adenine dinucleotide (NAD) glycohydrolase activity among the strains of *Vibrio cholerae* non-O1, non-O139. *Current Research in Microbiology and Biotechnology* (ISSN:2320-2246), 1 (2): 46-49
16. A. Patra, S. Ghosh, S. K. Bandyopadhyay, **P. K. Bag**, P. Bhowmik and E. Sukumar. 2012. Triterpene constituents and antibacterial activity of the stems of *Reissantia grahamii*. **Journal of the Indian Chemical Society**, 89 (June): 805-810 (impact factor: 0.382)
17. Acharyya, Saurabh, Amarendra Patra and Prasanta K. Bag. 2012. A comparative study on antioxidant potential of nine Indian medicinal plants. *CIBTech Journal of Pharmaceutical Sciences* (ISSN: 2319–3891), Vol. 1 (3), pp.16-23.
18. Ghosh, S., D. Ghosh, **P. K. Bag**, S. C. Bhattacharya and A. Saha. 2011. Aqueous Synthesis of ZnTe/Dendrimer Nanocomposites and its Antimicrobial Activity: Implications in Therapeutics. **Nanoscale** (Royal Society of Chemistry, UK), 3, 1139-1148. (Impact factor: 7.76)
19. Bhowmik, P., **P. K. Bag**, T. K. Hajra, R. De, P. Sarkar and T. Ramamurthy. 2009. Pathogenic potential of *Aeromonas hydrophila* isolated from surface waters in Kolkata, India. **Journal of Medical Microbiology** (Society for General Microbiology, UK), 58: 1549-1558. (Impact Factor: 2.502)

20. Mukherjee, S., N. K. Bardolui, S. Karim, V. V. Patnaik, R. K. Nandy and **P. K. Bag**. 2010. Isolation and characterization of a monoaromatic hydrocarbondegrading bacterium, *Pseudomonas aeruginosa* from crude oil. **J. Environmental Sc. and Health, Part A: Toxic/Hazardous Substances and Environmental Engineering** (Taylor & Francis, USA), 45 (9): 1048 –1053. [Impact Factor: 1.363]
21. **Bag, P. K.**, P. Bhowmik, T. K. Hajra, T. Ramamurthy, P. Sarkar, M. Majumder, G. Chowdhury, and S. C. Das. 2008. Putative Virulence Traits and Pathogenicity of *Vibrio cholerae* non-O1, non-O139 Isolated from Surface Waters in Kolkata, India. **Applied and Environmental Microbiology** (American Society for Microbiology, USA) 74 (18): 5635-5644. (Impact Factor: 3.829; 5-YEAR IMPACT FACTOR: 4.453 )
22. S. Acharyya, A. Patra and **P. K. Bag**. 2009. Evaluation of the antimicrobial activity of some medicinal plants against enteric bacteria with particular reference to multi-drug resistant *Vibrio cholerae*. **Tropical Journal of Pharmaceutical Research** [ISSN: 1596-5996 (print); 1596-9827 (electronic)], 8 (3): 231-237. (Impact factor: 0.82)
23. Hajra, T. K., **P. K. Bag**, S. C. Das, S. Mukherjee, A. Khan, and T. Ramamurthy. 2007. Development of a Simple Latex Agglutination Assay for Detection of Shiga Toxin-Producing *Escherichia coli* (STEC) by Using Polyclonal Antibody against STEC. **Clinical and Vaccine Immunology** (American Society for Microbiology, USA), 14 (5): 600-604. (Impact Factor: 3.233)
24. Thakurta, P., P. Bhowmik, S. Mukherjee, T. K. Hajra, A. Patra and **P. K. Bag**. 2007. Antibacterial, antisecretory and antihemorrhagic activity of *Azadirachta indica* used to treat cholera and diarrhea in India. **Journal of Ethnopharmacology** (Elsevier) 111 (3): 607-612. (Impact Factor: 3.414; 5-year impact factor: 3.671) [Commentaries in Natural Product Radiance, Vol. 6 (6): 540-541, CSIR, 2007 (nopr.niscair.res.in)]
25. Faruque, S. M., M. N. Saha, Asadul Ghani, **P. K. Bag**, R. K. Bhadra, S. K. Bhattacharya, R. B. Sack, Y. Takeda and G. B. Nair. 2000. Genomic diversity among *Vibrio cholerae* O139 strains isolated in Bangladesh and India between 1992 and 1998. **FEMS Microbiology Letters** (Federation of European Microbiological Society), 184: 279-284. (Impact Factor: 2.27)
26. **Bag, P. K.**, S. Nandi, R. K. Bhadra, T. Ramamurthy, S. K. Bhattacharya, M. Nisibuchi, S. Yamazaki, Y. Takeda and G. B. Nair. 1999. Clonal diversity among recently emerged strains of *Vibrio parahaemolyticus* O3:K6 associated with pandemic spread. **Journal of Clinical Microbiology** (American Society for Microbiology, USA), 37 (7):2354-2357. (Impact Factor: 4.959)
27. **Bag, P. K.**, S. Maity, A. Ghosh, A. K. Mukhopadhyaya; R. Mitra, Y. Takeda and G. B. Nair. 1998. Rapid spread of the new clone of *Vibrio cholerae* O1 biotype Eltor in cholera endemic areas in India. **Epidemiology and Infection** (Cambridge University Press), 121:245-251. (Impact Factor: 2.365)
28. Mukhopadhyaya, A. K., A. Basu, P. Garg, **P. K. Bag**, A. Ghosh, S. K. Bhattacharya, Y. Takeda and G. B. Nair. 1998. Molecular epidemiology of reemerged *Vibrio cholerae* O139 Bengal in India. **Journal of Clinical Microbiology** (American Society for Microbiology, USA), 36: 2149-2152. (Impact Factor: 4.959)

29. **Bag, P. K.**, A. Dutta, B. Guhathkurta, D. Sasmal and G. B. Nair. 1996. Monoclonal antibodies to outer membrane proteins of non-O1 *Vibrio cholerae*: Assessment of their utilities as diagnostic reagents. *Biotechnology for Development (A compendium of Essays)*, The eighth Kerala Science Congress, Kerala, India State Committee on Science, Technology and Environment, Kerala, India, pp 123-133.
30. Kurazono, H., A. Pal, **P. K. Bag**, G. B. Nair, T. Karasawa, T. Mihara, and Y. Takeda. 1995. Distribution of genes encoding cholera toxin, zonula occludens toxin, accessory toxin and EITor haemolysin in *Vibrio cholerae* of diverse origin. **Microbial Pathogenesis** (Elsevier) 18:231-235. (Impact Factor: 2.581; 5-year Impact Factor: 2.459)
31. Nair, G. B., **P. K. Bag**, T. Shimada, T. Ramamurthy, T. Takeda, S. Yamamoto, H. Kurazono and Y. Takeda. 1995. Evaluation of DNA probes for the specific detection of *Vibrio cholerae* O139 Bengal. **Journal of Clinical Microbiology** (American Society for Microbiology, USA), 31: 2186-2187. (Impact Factor: 4.959)
32. **Bag, P. K.**, T. Ramamurthy, Y. Takeda, S. C. Pal and G. B. Nair. 1992. Identification of subunits of cholera toxin in stool specimens of patients with Campylobacteriosis using western immunoblotting. **Biomedical Letters** (ISSN: 0961-088X), 47:375-382.
33. Yoshino, K, M. Miyachi, T. Takao, **P. K. Bag**, H. Xiaozhe, G. B. Nair, T. Takeda and Y. Shimonishi. 1993. Purification and sequence determination of heat stable enterotoxins elaborated by a cholera toxin producing strain of *Vibrio cholerae* O1. **FEBS Letters** (Elsevier) 326: 83-86. (Impact Factor: 3.601)
34. Nair, G. B., T. Ramamurthy, **P. K. Bag**, S. K. Bhattacharya, S, C, Pal, H. Kurazono, S. Yamazaki, T. Takeda and Y. Takeda. 1992. Detection of cholera toxin and cholera toxin gene directly from stool samples by bead enzyme linked immunosorbent assay and by polymerase Chain Reaction. Twentyeighth Joint Conference on Cholera and related Diarrheal Diseases, Tokyo, Japan, pp-97-100.
35. Bhadra, R. K., **P. K. Bag**, S. C. Pal and G. B. Nair. 1991. Comparison and selective medium supplement with blood and a charcoal based blood free medium for primary isolation of Campylobacters from human faeces. **Indian Journal of Medical Research**. [A] 93:22. (Impact Factor: 1.516)
36. Bhattacharya, S. K., M. K. Bhattacharya, T. Ramamurthy, A. Pal, **P. K. Bag**, T. Takeda, S. Chakraborti, P. Dutta, A. Debnath, S. C. Pal and G. B. Nair. 1992. Acute secretory diarrhoea caused by *Vibrio cholerae* Non-O1 which does not produce cholera like and heat stable enterotoxins. **Journal of Diarrhoeal Diseases Research** (ICDDR, ISSN: 0253-8768), 10 (3):161-163.
37. Ramamurthy, T., A. Pal, **P. K. Bag**, S. K. Bhattacharya, G. B. Nair, H. Kurazono, S. Yamazaki, T. Takeda and Y. Takeda. 1993. Detection of cholera toxin (CT) gene by the polymerase chain reaction in stool specimens: comparison with the CT bead enzyme linked immunosorbent assay and with culture methods for laboratory diagnosis of cholera. **Journal of Clinical Microbiology** (American Society for Microbiology, USA), 31: 3068-3070. (Impact Factor: 4.22)



38. **Bag, P. K.**, T. Ramamurthy; Y. Takeda, S. C. Pal and G. B. Nair. 1991. Detection of cholera toxin subunits in stools samples of cases solely infected by *Campylobacter* using the western blot technique. **Microbial Ecology in Health and Disease**, the VI th International workshop on *Campylobacter*, *Helicobacter* and related organisms, Sydney, Australia; Volume 4 Special Issue, pp. S16, John Wiley & Sons Ltd. Publication, UK.
39. Ramamurthy, T., **P. K. Bag**, A. Pal, S. K. Bhattacharya, M. K. Bhattacharya, D. Sen, T. Shimada, T. Takeda, Y. Takeda and G. B. Nair. 1993. Virulence patterns of *Vibrio cholerae* Non-O1 isolated from hospitalized patients with acute diarrhoea in Calcutta, India. **Journal of Medical Microbiology** (Society for General Microbiology, UK), 39(4): 310-317.(Impact Factor: 2.38)
40. **Bag, P. K.**, T. Ramamurthy and G. B. Nair. 1993. Evidence for the presence of receptor for the cytotoxic distending toxin (CLDT) of *Campylobacter jejuni* on CHO and HeLa cell membranes and development of a receptor based enzyme linked immunosorbent assay for detection of CLDT. **FEMS Microbiology Letters** (Federation of European Microbiological Society) 114 (3): 285-292. (Impact Factor: 2.27)

**Books/ book chapters:**

1. **Bag, P. K.** 2013. Current perspectives on pathogenesis of *Aeromonas*. In: **Infections of Gastrointestinal System**, Ed. Chetana Vaishnavi, Jaypee Brothers Medical Publishers (P) Ltd. Page:307-320. **ISBN: 978-93-5090352-0**.
2. **Bag, P. K.** 2013. Global Climate Variability and Change: Potential Impacts on Infectious Diseases. In: **Climate security perceptions, challenges and beyond**. Eds. A. Mukhopadhyay and S. Ghosh. UGC Academic Staff College, University of Calcutta, Kolkata, India, pp: 246-259.
3. **Bag, P. K.** 2011. Current Perspectives on the Pathogenesis of *Vibrio cholerae* Non-O1, Non-O139. In: **Cholera: Symptoms, Diagnosis and Treatment**. Ed. Evelyn L. Melbourne. **Nova Science Publishers, Inc.**, NY, USA pp.1-31. [Hard copy, **ISBN: 978-1-61761-789-8**. ebook, **ISBN: 978-1-61122-151-0**].
4. **Bag, P. K.** 2006. Enteric bacteria with particular reference to *Vibrio cholerae*: epidemiology and infection. In: **Environment: Issues and Approach**. Eds. A. Mukhopadhyay and S. Ghosh. UGC Academic Staff College, University of Calcutta, Kolkata, India, pp: 199-206.

c) **Conference/ seminar volumes:**

**Abstract in conference/Symposium etc (selected).**

1. Prasanta K. Bag, Nivedita Roy, Saurabh Acharyya, Dhira R. Saha, Hemanta Koley, Prodipta Sarkar, and Poulami Bhowmik. *In vivo* fluid accumulation-inhibitory, anticolonization and anti-inflammatory and *in vitro* biofilm-inhibitory activities of methyl gallate isolated from *Terminalia chebula* against fluoroquinolones resistant *Vibrio cholerae*. 54th United States -Japan Cooperative Medical Sciences Program (CMSP) Joint Panel Conference on Cholera and Other Bacterial Enteric Infections held **Osaka, Japan** on Dec 10-13, 2019.

**Awarded Travel grant by the Bill & Melinda Gates Foundation and International Vaccine Institute** to present research paper in the 54th United States-Japan Cooperative Medical Sciences Program (CMSP) Joint Panel Conference on Cholera and Other Bacterial Enteric Infections held **Osaka, Japan** on Dec 10-13, 2019.

2. **P. K. Bag**, S. Acharyya, P. Sarkar, D. R. Saha, A. Patra, T. Ramamurthy. Antimicrobial activities of methyl gallate *against multi-drug resistant Shigella species*. United States – Japan Cooperative Medical Sciences Program 21<sup>st</sup> International Conference on Emerging Infectious Diseases in the Pacific Rim, held at **Hanoi, Vietnam**, 26 February – 1 March **2019**.
3. Ghosh D., **P. K. Bag**, and A. Saha. Cytotoxicity of Water Soluble Organically Capped Group II-VI Quantum Dots in Mammalian Cells. Clusters, Nanocrystals & Nanostructures: From Fundamental Chemical and Physical Processes to applications; **Gordon Research Conferences**, held at Mount Holyoke College, South Hadley, MA, August 4-9, 2013.
4. Sarkar P. and **P. K. Bag**. Isolation and characterization of a new lipase from metagenomic library of *Arachis hypogea* rhizosphere soil. “International Conference on Biotechnology Advances: Omics Approaches and Way Forward” held at Bhubaneswar, India; December 20-22, 2012.
5. **Bag P. K.**, M. Sen, T. K. Hajra, and P. Bhowmik. Evaluation of NAD glycohydrolase Activity among the Strains of *Vibrio cholerae* non-O1, non-O139. **14th International Conference on Emerging Infectious Diseases (EID) in the Pacific Rim: Next Generation Diagnostics for Infectious Diseases**, held at **Penang, Malaysia**: October 4-6, 2010.
6. **Bag, P. K.**, P. Bhowmik, T. K. Hajra, R. De, and T. Ramamurthy. Pathogenic Potential of *Aeromonas hydrophila* Isolated from Surface Waters in Kolkata, India. **13<sup>th</sup> International Conference on Emerging Infectious Diseases in the Pacific Rim** held at Kolkata, India; April 6-9, 2009.
7. **Bag, P. K.**, P. Thakurta, P. Bhowmik, S. Mukherjee, T. K. Hajra, and A. Patra. Antibacterial, Antisecretory and Antihemorrhagic Activity of *Azadirachta indica*. EHRlich II-2<sup>nd</sup> World Conference on Magic Bullets held at **Nürnberg, Germany**; October 3 - 5, 2008.
8. Sarkar, P., S. Yamasaki, S. Basak, A. Bera, **P. K. Bag**. Purification and characterization of a new alkali-thermostable lipase from *Staphylococcus aureus* isolated from *Arachis hypogaea* rhizosphere. One day symposium of the SBC(I), Kolkata Chapter held at the Department of Biochemistry, University of Calcutta, November 12, 2011
9. Bhowmik, P., T. K. Hajra, T. Ramamurthy, and **P. K. Bag**. Comparative Studies on the Biochemical Characteristics and Putative Virulence Traits among the Strains of *Vibrio cholerae* O1, O139 and Non - O1, Non -O139. 77th Annual meeting of the Society of Biological Chemists (India), held at Indian Institute of Technology Madras, Chennai, India, December 18-20, 2008. Abstract, pp.28-29.
10. Mukherjee, S., N. K. Bardolui and **P. K. Bag**. Degradation of benzene aerobically and anaerobically in pure culture by a strain of *Pseudomonas aeruginosa*. 10th Congress of the Federation of Asian and Oceanic Biochemists and Molecular Biologists held at Bangalore, India, December 7-11, 2003. Abstract pp. 66.
11. Hajra, T. K., S. Mukherjee, T. Ramamurthy and **P. K. Bag**. Development of a simple latex agglutination method to detect the verotoxin producing *Escherichia coli*. 10th Congress of the Federation of Asian and Oceanic Biochemists and Molecular Biologists held at Bangalore, India, December 7-11, 2003. Abstract, pp.86.
12. **Bag, P. K.**, A. Dutta, B. Guhathkurta, D. Sasmal and G. B. Nair. Monoclonal antibodies to outer membrane proteins of non-O1 *Vibrio cholerae*: Assessment of their utilities as diagnostic reagents. Biotechnology for Development (A compendium of Essays), The eighth Kerala Science Congress, 1996. pp 123-133
13. Nair, G. B., T. Ramamurthy, **P. K. Bag**, S. K. Bhattacharya, S. C. Pal, H. Kurazono, S. Yamasaki, T. Takeda and Y. Takeda. Detection of cholera toxin and cholera toxin gene directly from stool samples by

bead enzyme linked immunosorbent assay and by polymerase Chain Reaction. Twenty-eighth Joint Conference on Cholera and related Diarrheal Diseases, Tokyo, Japan, 1992 pp-97-100.

14. **Bag, P. K.**, Y. Takeda, and G. B. Nair. Detection of *Campylobacter* from stool specimens using Bead-Enzyme Linked Immunosorbent Assay: A preliminary effort. **33rd Annual Conference of the Association of Microbiologists of India** held at Goa University, India between November 5th and 7th, 1992, pp-202.
15. **Bag, P. K.**, T. Ramamurthy, Y. Takeda, S. C. Pal, and G. B. Nair. Detection of cholera toxin subunits in stools samples of cases solely infected by *Campylobacters* using the western blot technique. **Vith International workshop on *Campylobacter*, *Helicobacter* and related organisms**, held at **Sydney, Australia** between 7th and 10th October, 1991

d) **Other publications :**

Contribution in **Bigyan Kosh**: An encyclopedia of Science and Technology, 2010, Published by: Sishu Kishore Academy, I & B Dept., WB Govt.

12. **Membership of Learned Societies:**

Society of Biological Chemists, India (Life Member)

13. **Patents: NA**

**14. Invited lectures delivered/paper presented:**

1. Invited paper presentation in "United States – Japan Cooperative Medical Sciences Priogram 21<sup>st</sup> International Conference on Emerging Infectious Diseases in the Pacific Rim" organized by Ministry of Health of Viet Nam and the CMSP, held at **Hanoi, Vietnam**, 26 February – 1 March **2019**
2. Invited speaker in Global Foodborne Infections Network (GFN) Level I Enteric Diseases Training' held at NICODE, Kolkata, March 14-18, **2011** organized by **World Health Organization; CDC, USA and NICODE, Kolkata, India**
3. Invited paper presentation in "14th International Conference on Emerging Infectious Diseases (EID) in the Pacific Rim:Next Generation Diagnostics for Infectious Diseases" organized by **NIAID** of National Institute of Health (**NIH**), USA held at Penang, Malaysia: October 4-6, 2010.
4. Invited speaker in "**EHRLICH II-2<sup>nd</sup> World Conference on Magic Bullets**" organized by German Association of Pharmaceutical Scientists held at **Nürnberg, Germany; October 3 - 5, 2008**.
5. Invited papert presentation in "13<sup>th</sup> International Conference on Emerging Infectious Diseases in the Pacific Rim" jointly organized by **National Institutes of Health (NIH), USA** in collaboration with (**NIAID, USA** and **NICODE, India**, held at Kolkata, India; April 6-9, 2009.
6. Invited speaker in UGC sponsored seminar on "Changing Facets of Microbiology in 21<sup>st</sup> Century" conducted by the Department of Microbiology, Lady Brabourne College, Kolkata, November 27-28, 2008.
7. Delivered lectures in Refresher course on Environmental Science: UGC sponsored Refresher courses conducted by Academic Staff College, University of Calcutta, 2008-2011.
8. Invited paper presentation in **Vith International workshop on *Campylobacter*, *Helicobacter* and related organisms**, held at **Sydney, Australia** between 7th and 10th October, 1991.

15. **Awards/recognition:**

- Associate Editor: *BMC Complementary and Alternative Medicine*

**“Certificate of outstanding contribution in reviewing”** awarded May **2018** by Journal of Ethnopharmacology (Elsevier)

- **“Certificate of outstanding contribution in reviewing”** awarded March **2017** by Diagnostic Microbiology & Infectious Disease (Elsevier)
- Elsevier Top Reviewer (Pharmacology) 2011
- Chosen as Host Scientist for the C. V. Raman Post doctoral Fellow, Department of Science and Technology, Government of India, 2013
- Travel grant was awarded by NIAID of National Institute of Health, USA, 2010 to attend “13<sup>th</sup> International Conference on Emerging Infectious Diseases in the Pacific Rim” at Penang, Malaysia: October 4-6, 2010
- Travel Grant was awarded by the Department of Science and Technology, India, 2008 to attend EHRLICH II-2<sup>nd</sup> World Conference on Magic Bullets at Nürnberg, Germany.
- Monbusho (Ministry of Education, Government of Japan) Fellowship (1994) for Post- doctoral research in Kyoto University, Japan.
- Qualified in the National Eligibility Test (NET) for Junior Research Fellowship conducted jointly by CSIR (New Delhi) and UGC (New Delhi), 1989.
- Research Associateship, CSIR (New Delhi), 1997.
- Travel Grant awarded by Kyoto University, Japan, 1994

## **16. Other notable activities:**

### **Editorial Board:**

- **Associate Editor, BMC Complementary and Alternative Medicine, Springer Nature**
- Universal Journal of Microbiology Research, Horizon Research Publishing, USA
- Toxicology and Forensic Medicine - Open Journal, USA
- ISRN Bacteriology, Hindawi Publishing Corporation

### **Invited Reviewing Board Member of Science Journals:**

- Journal of Infectious Diseases (Oxford University Press)
- Journal of Ethnopharmacology (Elsevier)
- Diagnostic Microbiology and Infectious Disease (Elsevier)
- Process Biochemistry (Elsevier)
- Environmental Science and Pollution Research (Springer)
- Journal of Medical Microbiology (Society for General Microbiology, UK)
- Journal of Applied Microbiology (Wiley)
- Letters in Applied Microbiology (Wiley)
- BMC Microbiology
- BMC Complementary and Alternative Medicine
- BMC Research Notes
- Applied Biochemistry and Biotechnology (Springer)
- Journal of Basic Microbiology (Wiley)
- Biotechnology and Applied Biochemistry (Portland Press, IUBMB)
- Pharmaceutical Biology (Taylor & Francis, USA)
- African Journal of Microbiology Research (Academic journals)
- Indian Journal of Experimental Biology
- African Journal of Pharmacy and Pharmacology (Academic journals)
- Journal of Toxicology and Environmental Health Sciences (Academic Journals)

- Arabian J Chemistry (Elsevier)
- Natural Product research (Taylor & Francis, USA)

#### **Visiting Teacher (P.G.):**

- School of Applied and Interdisciplinary Sciences, Integrated Master's-PhD Program, **Indian Association for the Cultivation of Science**, Jadavpur
- Department of Life sciences, **Tripura University**, Agartala, Tripura
- Department of Microbiology, **Vidyasagar University**, Midnapore, WB
- Department of Biotechnology, **Ravenshaw University**, Cuttack, Orissa

#### **Invited Reviewer for research project:**

- Major research project, Department of Science and Technology, Government of India.
- Senior Research Fellowship research project, ICMR, New Delhi, India.
- Acted as an Expert member of the project review committee for reviewing of the research project proposal in the field of Radiation Chemistry (under the collaborative Research Scheme utilizing radiation facilities at VECC/CSR at UGC-DAE Consortium for Scientific Research, Kolkata Centre.

#### **Ph.D. Thesis examiner:**

Examined the Ph. D. thesis for Bose Institute, Kolkata; IICB, Kolkata; NICED, Kolkata; Tezpur University, Assam; Jadavpur University, Kolkata; Periyar University, Salem; Amity University, Haryana, Gurugram, West Bengal State University, Barasat, etc.

#### **Member of Board of studies:**

Board of studies in Biochemistry attached to the council for Under Graduate studies in Science, CU (2008-).  
 Board of studies in Microbiology attached to the council for Under Graduate studies in Science, CU (2006-2009).  
 P.G. Board of studies in Biochemistry, CU

#### **Judging the projects/models of Innovation hub etc, and Eastern India Science Fair and Science & Engineering Fair (2008 -):**

Birla Industrial and Technological Museum (National Council of Science Museums, Ministry of Culture, Govt. Of India), Kolkata-700019

- ▶ **Coordinator**, CAS program of the Department of Biochemistry, CU (2016-).
- ▶ **Coordinator**, DST-FIST program of the Department of Biochemistry, CU (2018-2019).
- ▶ **Member** of the Ph. D. committee, Department of Biochemistry, CU (2016-).
- ▶ **DBT (Government of India) nominee** for the animal ethics committee, Dept. of Biotechnology National Institute of Technology, Durgapur, WB (2013- )

#### **Research Collaboration:**

##### **International:**

**Dr. Tamokou Jean De Dieu**, Assistant Professor, Department of Biochemistry, Faculty of Science, University of Dschang, **Cameroon**

**Dr. Shinji Yamasaki**, Laboratory of International Prevention of Epidemics, Department of Veterinary Science, Graduate School of Life and Environmental Sciences, Osaka Prefecture University, **Osaka, Japan**

**National:**

**Dr. T. Ramamurthy**, Dept. of Microbiology, National Institute of Cholera and Enteric Diseases, P-33 C. I. T. Road, Scheme-XM, Beliaghata, Kolkata 700 010, India

**Prof. Amarendra Patra**, Department of Chemistry, University of Calcutta

**Dr. Abhijit Saha**, UGC-DAE Consortium for Scientific Research, Kolkata Centre, III/LB-8 Bhidhannagar, Kolkata-700098, India

**Dr. Soumen Basak**, Chemical Sciences Division, Saha Institute of Nuclear Physics, Kolkata-700064, India

**Dr. Pubali Dhar**, Department of Home Science, University of Calcutta

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*Prasanta K. Bag*

*Signature of the faculty member*