

Dr. Pradip Kumar Kar
Associate Professor and Head
Department of Zoology
Cooch Behar Panchanan Barma University

Summary

- ✦ **More than 18 years of research experience -**
Parasitology, Autoimmune diseases, Plant-derived compounds, Anthelmintics, Nanogold/Nanosilver particles as therapeutics, Neurobiology of invertebrates, Immunocytochemistry / Immunohistochemistry, Trematodes, Cestodes of fishes, Amphibian helminths, Microbiology, Hookworm - prevalence and control, Molecular biology, biochemistry, enzymology, amino acid analysis, electron microscopy, chromatography (TLC, HPLC), execution of research projects for Govt. of India and Italy
- ✦ Has keen interest in biological sciences research, enjoys developing and executing research at own initiative and as part of a scientific team, and is flexible.

Current projects

- a) Collaborative project with University of Connecticut and University of Kansas, as per the MOU signed between University of Connecticut and Jhargram Raj College – Research on tapeworms of sharks, skates and sting rays of Bay of Bengal. (2013-2018)
- b) Major Research Project funded by Council of Scientific and Industrial Research (C.S.I.R.), India – **Control of helminth parasites of veterinary and medical importance (2008-2011)** Sanction no. 37 (1330)/08/EMR-II (Completed)
- c) Joint Research Project with Institute of Parasitology, Academy of Sciences of Czech Republic – **Systematics and Phylogeny of helminthes from fresh water and marine fishes.** (2008-2013) ASCR Grant Nos. Z60220518 and LC 522, Project Nos. 524/08/0885 and 206/09/H026
- d) Italy-India Executive Programme of Scientific and Technological Co-operation For the years 2008-2010, Joint Research Project with University of Modena and Reggio Emilia, Italy – **Nanotechnology Applications in Neurotransmission in Invertebrates** Sanction no. INT / ITALY / HFB-3/35 /2008-2010
- e) Joint Research Project with University of Calcutta – Efficacy of nanogold and nanosilver as anthelmintics. (under process, submitted to DST, India)

Post Doctoral Fellow

- ✦ University of Modena and Reggio Emilia, Italy, under Prof. Dario Sonetti, 2006 - 2007.
- ✦ Visiting Fellow, N.C.B.S., T.I.F.R., Bangalore, 2003-2004

Previous appointment

- a) **Assistant Professor** in West Bengal Education Service, Deptt. of Zoology, Maulana Azad College, Govt. of West Bengal. From Nov. 2014 till Nov 2016
- b) **Assistant Professor** in West Bengal Education Service, Post Graduate Deptt. of Zoology, Jhargram Raj College, Govt. of West Bengal. From July 2007 till Nov 2014.
- c) **Lecturer** in Post Graduate Deptt. of Zoology, Darjeeling Govt. College, Govt. of West Bengal. From May 2005 till Nov 2006.

Supervising and guiding Ph.D. students

Total number of students who completed Ph.D. and got awarded – **1**
Total number of students currently working for a Ph.D. – **5**

Registered for Ph.D. – 4 (Vidyasagar University -2, Visva Bharati University – 2) and

To be registered - **1**

Member of Ph.D. board formed by University of South Bohemia. Attended the Ph.D. defence of Anirban Ash in June 2012 in Ceske Budejovice, Czech Republic.

Collaborators

Ongoing collaborations with the following labs -

- 1) **Prof. Tomas Scholz**, Director, Institute of Parasitology, ASCR, Czech Republic
- 2) **Prof. Janine Caira**, University of Connecticut, USA
- 3) **Prof. Veena Tandon**, North-Eastern Hill University, Shillong, Meghalaya
- 4) **Prof. Kirsten Jensen**, University of Kansas, USA
- 5) **Dr. Nirup Bikash Mondal**, IICB, Kolkata
- 6) **Prof. Samar Kumar Saha**, Visva Bharati
- 7) **Dr. Larisha M. Lyndem**, Visva Bharati
- 8) **Dr. Alain De Chambrier**, Scientist, Natural History Museum, Geneva, Switzerland
- 9) **Dr. Mikulas Oros**, Slovak Academy of Sciences, Slovak Republic
- 10) **Dr. Manoj Kar**, Ex-Deptt. of Biochemistry, N.R.S. Medical College, Kolkata
- 11) **Dr. Neil Koorbanally**, University of Kwa-Zulu Natal, Durban, South Africa
- 12) **Dr. Krishnendu Acharya**, Professor, University of Calcutta, Kolkata
- 13) **Dr. Taposh Kumar Das**, Additional Professor, A.I.I.M.S., New Delhi

Publications (peer reviewed journals)

- 1) **Pradip Kumar Kar**, Sanatan Murmu, Saswati Saha, Veena Tandon, Krishnendu Acharya. Anthelmintic efficacy of gold nanoparticles derived from phytopathogenic fungi *Nigrospora oryzae*. PLOS ONE (2014) 9(1): e84693
- 2) Anirban Ash, Tomáš Scholz, Alain de Chambrier, Jan Brabec, Mikuláš Oros, **Pradip Kumar Kar**, Shivaji Prabhakar Chavan, Jean Mariaux. Revision of *Gangesia* (Cestoda: Proteocephalidea) in the Indomalayan Region: morphology, molecules and surface ultrastructure. PLOS ONE (2012) 7(10): 1-28, e46421
- 3) **Pradip K Kar**, Veena Tandon, Nirmalendu Saha. Anthelmintic efficacy of *Flemingia vestita*: genistein induced effect on the activity of nitric oxide synthase in the trematode parasite, *Fasciolopsis buski*, **Parasitology International** (2002), 51(3): 249-257
- 4) Veena Tandon, **Pradip Kumar Kar**, Nirmalendu Saha. NO nerves in trematodes, too! NADPH-diaphorase activity in adult *Fasciolopsis buski*, **Parasitology International** (2001) 50(3): 157-163
- 5) **Pradip Kumar Kar**, Veena Tandon, Nirmalendu Saha. Anthelmintic efficacy of genistein, the active principle of *Flemingia vestita* (Fabaceae): alterations in the free amino acid pool and ammonia levels in the fluke, *Fasciolopsis buski*, **Parasitology International** (2004) 53(4): 287-291
- 6) Anirban Ash, Tomáš Scholz, Mikuláš Oros, **Pradip Kumar Kar**. Tapeworms (Cestoda: Caryophyllidea), parasites of *Clarias batrachus* (Pisces: Siluriformes) in the Indomalayan region. **Journal of Parasitology** (2011), 97(3): 435-459
- 7) Mikulas Oros, Anirban Ash, Jan Brabec, **Pradip Kumar Kar**, Tomas Scholz. A new monozoic tapeworm, *Lobulovarium longiovatum* n. g., n. sp. (Cestoda: Caryophyllidea), from barbs *Puntius* spp. (Teleostei: Cyprinidae) in the Indomalayan region. **Systematic Parasitology** (2012), 83: 1-13

- 8) František Moravec, Tomáš Scholz, Anirban Ash and **Pradip Kumar Kar**. New data on the morphology and taxonomy of three species of *Rhabdochona* (Nematoda: Rhabdochonidae) parasitizing fishes in India. **Folia Parasitologica** (2010), 57(4): 295-306
- 9) Anirban Ash, Alain de Chambrier, Tomáš Scholz, **Pradip Kumar Kar**. Redescription of *Vermaia pseudotropii*, a hyperapolytic freshwater tapeworm, and composition of *Vermaia* Nybelin, 1942 (Cestoda: Proteocephalidea). **Revue Suisse de Zoologie** (2010), 117(4): 665-677
- 10) Anirban Ash, Tomáš Scholz, Mikuláš Oros, Celine Levron and **Pradip Kumar Kar**. Cestodes (caryophyllidea) of the stinging catfish *Heteropneustes fossilis* (siluriformes: heteropneustidae) from Asia. **Journal of Parasitology** (2011), 97(5): 899-907
- 11) Alain de Chambrier, Tomáš Scholz, *, Anirban Ash, **Pradip Kumar Kar**. *Ritacestus* gen. n. (cestoda: proteocephalidea) and redescription of *R. ritaii* n. comb., a parasite of bagrid catfish in India. **Folia Parasitologica** (2011), 58(4): 279-288
- 12) V Tandon, **P K Kar**, B Das, B. Sharma and J. Dorjee. Preliminary survey of gastro-intestinal helminth infection in herbivorous livestock of mountainous regions of Bhutan and Arunachal Pradesh, **Zoos' Print Journal** (2005), 20(5): 1867-1868
- 13) V Tandon, R Imkongwapang, **P K Kar**. Helminth infracommunities in anuran amphibia of Nagaland, India, **Journal of Parasitic Diseases** (2001), 25(1): 8-20
- 14) **Pradip Kumar Kar**, Veena Tandon. Anthelmintic efficacy of *Flemingia vestita* (Fabaceae): genistein induced effect on the nervous components in two digenetic trematodes, **Journal of Parasitic Diseases** (2000), 24(2): 141-146
- 15) V Tandon, L M Lyndem, **P K Kar**, P Pal, B Das, H S P Rao. Anthelmintic efficacy of rhizome-pulp extract of *Stephania glabra* and aerial root extract of *Trichosanthes multiloba* in vitro: two indigenous plants in Shillong, India, **Journal of Parasitic Diseases** (2004), 28(1): 37-44
- 16) **Pradip Kumar Kar**, Veena Tandon. Anthelmintic efficacy of genistein, the active principle of *Flemingia vestita* (Fabaceae): alterations in the activity of the enzymes associated with the tegumental and gastrodermal interfaces of the trematode, *Fasciolopsis buski*. **Journal of Parasitic Diseases** (2004), 28(1): 45-56
- 17) Gautam Aditya, Sankar Bhattacharyya, Niloy Kundu, **Pradip Kumar Kar**, Goutam Kumar Saha. Predatory efficiency of the sewage drain inhabiting larvae of *Toxorhynchites splendens* Wiedemann on *Culex quinquefasciatus* Say and *Armigeres subalbatus* (Coquillett) larvae, **Southeast Asian Journal of Tropical Medicine and Public Health** (2007), 38(5): 799-807
- 18) **Pradip Kumar Kar**, Dario Sonetti. Immunohistochemical localization of neuronal structures in the central nervous system of the freshwater snail *Planorbarius corneus* containing molecules related to corticotropin-releasing factor (CRF) ligand, CRF receptor-2 and urocortin. **Brain Research** (Communicated)
- 19) Anirban Ash, Tomáš Scholz, **Pradip Kumar Kar**. Caryophyllidean tapeworms (Cestoda) from *Puntius ticto* from India. *Folia Parasitologica* (communicated)
- 20) Anirban Ash, Tomáš Scholz, **Pradip Kumar Kar**. Caryophyllidean tapeworms (Cestoda) from *Mystus vittatus* from India. *Folia Parasitologica* (communicated)
- 21) Ash A., de Chambrier A., Scholz T., **Kar P. K.** Redescription of *Gangesia* sp. (Cestoda: Proteocephalidea) from *Wallago attu* from India. *Revue Suisse de Zoologie* (communicated)
- 22) **P. K. Kar**, A. Mondal, D. Roy, V. Tandon, N. Koorbanally. Anthelmintic efficacy of *Vernonia roxburghii* and *Polygonum barbatum* effect on tegumental enzymes of flatworms of medical and veterinary importance. *Journal of Ethnopharmacology* (To be communicated)
- 23) **P. K. Kar**, A. Mondal, D. Roy, V. Tandon, N. Koorbanally. Efficacy of *Vernonia roxburghii* and *Polygonum barbatum* as anthelmintics against flatworms of medical and veterinary importance. *Journal of Ethnopharmacology* (To be communicated)
- 24) **P. K. Kar**, D. Roy, A. Mondal. Anthelmintic efficacy of *Barringtonia* sp. and *Clerodendrum* sp against flatworms of medical and veterinary importance. *Parasitology Research* (To be communicated)

- 25) **P. K. Kar**, A. Mondal, D. Roy. An *in vitro* study on the anthelmintic efficacy of *Barringtonia sp.* and *Clerodendrum sp.* - Effect on tegumental and gastrointestinal enzymes of flatworms of medical and veterinary importance. Journal of Ethnopharmacology (To be communicated)

Reviewer

- **Reviewed Major Research Project Proposal of funding agencies like Council of Scientific and Industrial Research, Govt. of India, S.E.R.B., D.S.T., Govt of India, etc.**
- **Referee for Indian and International Journals (PLOS ONE etc.)**

Database Development

Developed database on Helminth Parasite Spectrum in Northeast India
http://www.nehu.ac.in/BIC/HelMinth_Parasite_NE/default.htm

Trainings underwent

- ✦ Microscopy with respect to immunocytochemistry , histochemistry – Light, Electron, Confocal, Two-Photon, STEM,
- ✦ Basic computer course
- ✦ Isolation of active compounds from natural products
- ✦ Electron microscopy (scanning and transmission) along with special techniques like immunogold labelling, cryosectioning for sub-zero TEM viewing
- ✦ DNA, RNA extraction, PCR, cryomicrotomy using cryostat and other molecular biological techniques
- ✦ Collection, preservation and identification of zoological specimens with special emphasis on helminths

Grants/Awards

1. Post Doc award - University of Modena and Reggio Emilia, Italy under Prof. Dario Sonetti, 2006-2007
2. SCIENCE grant under European Commission's Framework 6 Programme for Integrated Infrastructures Initiatives, **Research Institute for Symbolic Computation**, Linz, Austria, 2007
3. Council of Scientific and Industrial Research, Govt. of India –
 - a) **Research Associate**, 2004
 - b) **Foreign Travel Grant** to attend and **chair a session** in The **Tenth International Congress of Parasitology** held in **Vancouver**, Canada, 2002
4. Foreign travel grant from Department of Science and Technology, Govt. of India
5. Junior Research Fellowship by Ministry of Environment and Forests, Govt. of India

Major Professional Achievements

- ✦ **Chairperson** - Chemotherapy session - **Tenth International Congress of Parasitology** held in Vancouver, British Columbia, Canada from Aug. 4th to 9th 2002.
- ✦ Acted as **Guest-of-Honour** in the inaugural programme of 100 years of Zoological Survey of India, MARC, Digha, West Bengal, 1st July 2015.
- ✦ Invited talk in UGC sponsored Seminar organized by Bajkul Milani Mahavidyalaya, Mar 2012.
- ✦ Acted as a **Convener** of the **International Seminar on Recent trends in Zoology**, held in Jhargram Raj College, India, on 8th March 2011.

Membership of Professional Bodies

Life member of Indian Society of Parasitology, Lucknow

Life member of Zoological Society, Calcutta

Life member of Indian Society of Cell Biology, BHU

Current Lab. Members

- ✦ **Dinesh Das**, NET, Vidyasagar University,
- ✦ **Sanatan Murmu**, NET, National Fellowship for Higher Edn. of ST Students, UGC
- ✦ **Naznin Kamar**, SET, Maulana Azad National Fellowship, UGC
- ✦ **Netri Datta**, Visva Bharati Fellowship
- ✦ **Rima Majumder**, GATE, VB-RET

Previous Lab. Members

- ✦ **Dr. Anirban Ash**, Assistant Professor, Department of Zoology, The University of Burdwan
- ✦ **Debsekhar Nath**
- ✦ **Amritendu Mondal**
- ✦ **Sanjana Pati**