

Dr. Aparajita Pal

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Academic Appointments:

2019 May-Till date- Assistant Professor in Department of Zoology, DHWU, West Bengal, India

2016-2019- Post-Doctoral Fellow, Bose Institute, Kolkata, WB

2013-2015- Post-Doctoral Fellow, Bose Institute, Kolkata, WB

Education:

- **Ph.D.** 2010, from Indian Association for the Cultivation of Science (under Jadavpur University), Kolkata, India. Thesis entitled “**Molecular mechanisms involved in immunomodulation by methylglyoxal**”.
- **Master of Science** in Zoology from Calcutta University (in Presidency College), Kolkata, 2004 with First class [Special paper- Hematology and Clinical Immunology]
- **Bachelor of Science** in Zoology from University of Calcutta, Kolkata, 2002 with First class.

Achievements / Awards:

- Institutional Fellowship from Indian Association for the Cultivation of Science.
- National Eligibility Test (NET) under CSIR-UGC, Government of India.
- Graduate Aptitude Test in Engineering (GATE) under the Department of Education, Ministry of Department of Education, Ministry of Human Resource and development, Government of India in Life Science.
- “Prof. Sivatosh Mukherjee Award” for standing First class first in M Sc.in Presidency College.
- First Class in Bachelor of Science (University of Calcutta, India)

Research Interest:

- Immunomodulation of anticancer drugs
- Development of anticancer therapeutics from natural agents
- Targeting Cancer Stem Cells
- Development of Nano- therapeutics against cancer

List of Publications:

- 1) **Aparajita Pal**, Anirban Roy, Manju Ray. (2016) Creatine supplementation with Methylglyoxal: A Potent Therapy for Cancer in Experimental Models. *Amino Acids*. (2016) 48:2003–2013. ([IF-3.9](#))
- 2) **Aparajita Pal**, Dipa Talukdar, Anirban Roy, Subhankar Ray, Asish Mallick, Chitra Mandal and Manju Ray, (2015) Nanofabrication of Methylglyoxal with chitosan biopolymer: A potential tool

for enhancement of its anticancer effect. *International Journal of Nanomedicine*. (2015) 10:3499-518, 2015. (IF-4.3)

- 3) **Aparajita Pal**, Iman Bhattacharya, Kaushik Bhattacharya, Chitra Mandal, Manju Ray, (2009) Methylglyoxal induced activation of murine peritoneal macrophages and surface markers of T lymphocytes in sarcoma-180 bearing mice: involvement of kinase, NF-kappa beta signal transduction pathway. *Molecular Immunology* (2009) 46(10), 2039-2044, 2009. (IF-3.37)
- 4) Adrita Chakrabarti, Dipa Talukdar, **Aparajita Pal**, Manju Ray, (2014). Immunomodulation of macrophages by methylglyoxal conjugated with chitosan nanoparticles against Sarcoma-180 tumor in mice. *Cellular Immunology*. (2014) 287(1), 27-35, 2014. (IF-2.5)
- 5) Nivedita Bhattacharyya, **Aparajita Pal**, Subrata Patra, Arun kumar Haldar, Syamal Roy, Manju Ray,(2008.) Activation of macrophages and lymphocytes by methylglyoxal against tumor cells in the host. *International Immunopharmacology*, (2008) 8, 1503-1512, 2008. (IF-2.4)
- 6) Sonali Ghosh, **Aparajita Pal**, Manju Ray (2017). 5FU Synergistically Inhibits MCF-7 in Combination with Methylglyoxal. *Clinics in Oncology*. (2017) 2, Article 1353.
- 7) Anirban Roy, Sushmita Sarker, Priyanka Upadhyay, **Aparajita Pal**, Arghya Adhikary, Kuladip Jana, Manju Ray.(2018) Methylglyoxal at metronomic doses sensitizes breast cancer cells to doxorubicin and cisplatin causing synergistic induction of programmed cell death and inhibition of stemness. *Biochemical Pharmacology*, (2018) 156:322-339. (IF-5.00)
- 8) Sonali Ghosh[#], **Aparajita Pal**[#], Manju Ray. Methylglyoxal elicits improved chemosensitivity of 5-Fluorouracil in breast cancer through apoptosis and cell cycle inhibition. *Biomedicine and pharmacotherapy*, (2019)114:108855. (IF-3.5) # **Equal contribution**

Presentation/attendance of symposium or seminars:

- 1) **Aparajita Pal** & Manju Ray. Methylglyoxal conjugated with chitosan nanoparticles: its anticancer and immunomodulatory effect. National Meeting Jugaad Innovation” 2017, Leeds, **United Kingdom**, 2017.
- 2) **Aparajita Pal**, Dipa Talukdar and Manju Ray. Methylglyoxal conjugated with chitosan nanoparticles: A potential drug candidate for cancer therapy. **Oral presentation** in UGC sponsored National seminar “RECENT ADVANCES IN BIOLOGICAL SCIENCES”, Gurudas College, Kolkata, India, 2017.
- 3) **Aparajita Pal**, Nivedita Bhattacharyya, Manju Ray. Immunomodulatory effect of Methylglyoxal in tumor bearing mice. Poster Presentation in Society of Biological Chemists (India) at Sri Venkateswara University, Tirupati in 2008.

Teaching and Training Experiences

- Six years teaching experience in Gurudas College for B.Sc. Honors and M.Sc. students.
- Mentoring 6 project trainees for their post-graduate summer projects.