Name:	**URMI CHATTERJI**
Designation:	**Professor, Department of Zoology, University of Calcutta**
Address:	**Cancer Research Lab, Room-222, Department of Zoology, 35 Ballygunge Circular Road, Kolkata – 700 019.**
Telephone:	**093393 76535**
Email:	**urmichatterji@gmail.com**
Nationality:	**Indian**
Date of Birth:	**28 September, 1967**
Category:	**General**

Academic Qualifications:

- **1998** — **Ph.D.** (Science) from CSIR-Indian Institute of Chemical Biology (Registered under Jadavpur University, Kolkata).
  Title of thesis for doctoral degree: "Autocrine-Paracrine Functions of Uterine Agglutinins"
- **1991** — **M.Sc.** from Department of Zoology, University of Calcutta (Ballygunge campus) in Zoology (Special paper: Endocrinology) with a **first class**.
- **1989** — **B.Sc.** from Presidency College (affiliated to University of Calcutta) with Zoology (Honours), Physiology, Botany, English and obtained a **first class**.
- **1986** — **Higher Secondary** from Loreto House, Kolkata, under the West Bengal Board of Higher Secondary Education with Science with a **first division**.
- **1984** — **I.C.S.E.** from Loreto House, Kolkata, with a **first division.**

Honors and Awards:

- Gold-medalist; Ranked 1st in Masters Examination in Zoology of the University of Calcutta in 1991.
- Qualified Graduate Aptitude Test in Engineering (GATE; 91.8 percentile) in 1992.
- Awarded DN Ganguly Memorial Medal for best dissertation on "Earth Summit" by the Zoological Society, Kolkata, in 1992.
- Awarded Junior Research Fellowship from the Indian Council of Medical Research, New Delhi, from 1994-1996.
- Awarded Senior Research Fellowship from the Indian Council of Medical Research, New Delhi, from 1996-1999.
- Awarded BOYSCAST Fellowship from the Department of Science and Technology, New Delhi, for research on Stem Cell and Cancer Biology at Cornell University, Ithaca, New York, USA, from April to September, 2008.

Research experience:

- **2009** **Visiting Scientist**, Department of Biological Sciences, Cornell University, Ithaca, New York, USA
- **2008** **BOYSCAST Fellow**, Department of Biological Sciences, Cornell University, Ithaca, New York, USA
- **1999-2003** **Postdoctoral Researcher**, Department of Molecular and Cell Biology, University of California at Berkeley, Berkeley, California, USA
- **1998-1999** **Postdoctoral Fellow**, Department of OB/GYN, University of California at San Francisco, San Francisco, USA
- **1994-1998** **Doctoral candidate**, CSIR-Indian Institute of Chemical Biology, Kolkata, under Jadavpur University, India

Teaching experience:

- **December 5, 2014 – present** Professor, Department of Zoology, University of Calcutta
- **December 5, 2011 – December 4, 2014** Associate Professor, Department of Zoology, University of Calcutta
- **December 5, 2008 – December 4, 2011** Reader, Department of Zoology, University of Calcutta
- **16 April 2008 – December 4, 2008** Sr. Lecturer, Department of Zoology, University of Calcutta
- **April 16, 2004 – 15 April 2008** Lecturer, Department of Zoology, University of Calcutta

#	Topics / Subjects taught	Institution	Years taught (yyyy to yyyy)	Level (UG/PG)
1.	ZOOLOGY DEPT. Cell Biology, Developmental Biology, Cancer Biology, Neurobiology, Cell Signaling, Endocrinology	UNIVERSITY OF CALCUTTA	2004 – present	PG
2.	BIOTECHNOLOGY DEPT. Developmental Biology, Animal Biotechnology	UNIVERSITY OF CALCUTTA	2005 – present	PG
3.	NEUROSCIENCE DEPT. Developmental Biology, Animal Biotechnology	UNIVERSITY OF CALCUTTA	2005 – present	PG
4.	GENETICS DEPT. Developmental Biology, Animal Biotechnology	UNIVERSITY OF CALCUTTA	2005 – present	PG
5.	MICROBIOLOGY DEPT. Developmental Biology, Animal Biotechnology, Animal/Human Cell Culture Techniques	UNIVERSITY OF CALCUTTA	2005 – present	PG
6.	BOTANY DEPT. Cell and Cancer Biology	UNIVERSITY OF CALCUTTA	2006-2011	PG
7.	BIOCHEMISTRY DEPT. Developmental Biology, Cell Signaling	UNIVERSITY OF CALCUTTA	2006-2011 2015-2019	PG
8.	ZOOLOGY DEPT. Biochemistry	GAUHATI UNIVERSITY	2006	PG
9.	ZOOLOGY DEPT. Cell Biology, Cell Signaling, Cancer Biology	VIDYASAGAR UNIVERSITY, MIDNAPORE	2005-2010	PG
10.	PhD Course Work Regular classes in departments of Zoology Biochemistry Botany	UNIVERSITY OF CALCUTTA	2015-present	Ph.D.
11.	M. Phil. Fisheries Technology, including dissertation	UNIVERSITY OF CALCUTTA	2005-2008	M.Phil.
12.	Orientation Programmes and Refresher Courses for Teachers Department of Zoology Department of Botany Department of Physiology Department of Biotechnology	UNIVERSITY OF CALCUTTA JADAVPUR UNIVERSITY	2006 - present	UG and PG Teachers

Publications:

Citations: 753
h-index: 17
i10 index: 24
https://scholar.google.com/citations?hl=en&view_op=list_works&gmla=AJsN-F4x5qUGlk1xyZN7P1SCU60tcCwVJBLxd REEEBFzaEJm9N9lrVRcVL8_3CggKaHWjbzKa6dtkeUzIAAgTTueA2zX1GFUsw&user=uoQWNFoAAAAJ

ORCID ID: **0000-0002-9317-5672**

1. Das, J., Jamal, Z. and **Chatterji, U.** (2021) *All*-trans retinoic acid alleviates arsenic-induced stress in Swiss albino mice. (MS under preparation)

2. Basak, D., Jamal, Z., Ghosh, A., Mondal, P.K., Dey Talukdar, P., Ghosh, S., Ghosh Roy, B., Ghosh, R., Halder, A., Chowdhury, A., Dhali, G.K., Chattopadhyay, B.K., Lal Saha, M.L., Basu, A., Roy, S., Biswas, N.K., **Chatterji, U.**, Datta, S. (2021) Reciprocal Interplay between Asporin and Decorin: Implications in Gastric Cancer Prognosis. *J. Cancer Res. Clin. Oncol*. (Communicated)

3. Pan, A., Mitra, I., Mukherjee, S., Ghosh, S., **Chatterji, U.**, Moi, S.C. (2020) Development of anticancer activity of Pt(II) complex with N-heterocyclic amine: their in vitro pharmacokinetics with thiol and thio-ethers, DNA, BSA binding, and cell cycle arrest. *ACS Applied Bio Materials.* (Communicated)

4. Bhaduri, R., Mukherjee, S., Mitra, I., Ghosh, S., **Chatterji, U.**, Moi, S.C. (2020) Pharmacokinetics of Pt(II)-sulfur adduct formation and their in vitro biotransformation to Pt(II)-DNA adduct: BSA binding, anticancer activity and cell death mechanism. *Eur. J. Med. Chem.* (Communicated)

5. Ghosh, S., Dey Talukdar, P., Bhattacharjee, A., Giri, S., Bhattacharyya, N. P. and **Chatterji, U.** (2020) JunD accentuates arecoline-induced disruption of tight junctions and promotes epithelial-to-mesenchymal transition in association with NEAT1 lncRNA. *Carcinogenesis* (Communicated)

6. Jamal, Z., Das, J., Gupta, P., Chattopadhyay, S. and **Chatterji, U.** (2020) Self Nano Emulsified Curcumin (SNEC 30) attenuates arsenic-induced cell death in mice. *Environ. Toxicol.* (Communicated)

7. Mukherjee, P., Bagchi, A., Banerjee, A., Roy, H., Bhattacharya, A., Biswas, A. and **Chatterji, U.** (2020) Rolipram driven non-canonical activation of mTOR compels breast cancer stem cells towards apoptosis. *Oncol. Rep.* (Accepted Impact Factor – 3.417)

8. Halder, A., Jethwa, M., Mukherjee, P., Ghosh, S., Das, S., Helal Uddin, A. B. M., Mukherjee, A., **Chatterji, U.** and Roy, P. (2020) Lactoferrin tethered betulinic acid nanoparticles promote rapid delivery and cell death in triple negative breast and laryngeal cancer cells. *Artificial Cells, Nanomed. Biotech.* 48(1): 1362-1371. (Impact Factor – 3.93)

9. Bhattacharya, R., Chatterjee, T., Mandal, A.K.A., Mukhopadhyay, A., Basu, S., Giri, A.K., **Chatterji, U.** and Bhattacharjee, P. (2020) Theaflavin-containing black tea extract: A potential DNA methyltransferase-inhibitor in human colon cancer cells and Ehrlich ascites carcinoma-induced solid tumors in mice. *Nutrition and Cancer: An International Journal* (Impact Factor – 2.1)

10. Saha, I., Chakraborty, S.B., Chatterjee, A., Pradhan, D., **Chatterji, U.** and Maiti, B. R. (2020) Arecoline inhibits pineal-testis function in experimentally induced hypothyroid rats. *Arch. Physiol. Biochem*. 126(1):7-16. (Impact Factor – 2.110)

11. Jamal, Z., Das, J., Ghosh, S., Gupta, A., Chattopadhyay, S. and **Chatterji, U.** (2020) Arsenic-induced immunomodulatory effects disorient the survival-death interface by stabilizing the Hsp90/Beclin1 interaction. *Chemosphere* 238:124647. (Impact factor – 5.34)

12. Das, A., Narayanam, M.K., Paul, S., Mukherjee, P., Ghosh, S., Ghosh Dastidar, D., Chakrabarty, S., Ganguli, A., Basu, B., Pal, M., **Chatterji, U**., Banerjee, S.K., Karmakar, P., Kumar, D., and Chakrabarti, G. (2019) A novel triazole NMK-T-057 induces autophagic cell death in breast cancer cells by inhibiting γ-secretase-mediated activation of Notch-signaling. *J. Biol. Chem*. 294(17):6733-6750. (Impact factor – 4.010)

13. Das, S., Mukherjee, P., Chatterjee, R., Jamal, Z. and **Chatterji, U.** (2019) Nanoformulation of Wedelolactone promotes acquisition of chemosensitivity of breast cancer stem cells through coordinated regulation of pluripotency markers and NF-κB inhibition. *Mol Cancer Ther* 18(3): 680-692. (Impact Factor – 5.365)

14. Mukherjee, P., Gupta, A. and **Chatterji, U.** (2018) A *TWIST* in the tale. *Significances Bioeng Bio*sci 2(2): SBB.000532. (Review)

15. Saha, I., Pradhan, D., **Chatterji, U.** and Maiti, B. R. (2018) Arecoline cannot alter pineal-testicular responses to metabolic stress in Wistar rats. *Acta Endocrinologica* 14:175-183. (Impact Factor – 1.2)

16. Mitra, T., Prasad, P., Mukherjee, P., Ray Chaudhuri, S., **Chatterji, U.** and Roy, S.S. (2018) Stemness and chemoresistance are imparted to the OC cells through TGFβ1 driven EMT. *J. Cell. Biochem*. 119 (7): 5775-5787 (Impact Factor – 4.237)

17. Halder, A., Mukherjee, P., Ghosh, S., Mandal, S., **Chatterji, U.**, Mukherjee, A. (2018) Smart PLGA nanoparticles loaded with Quercetin: Cellular uptake and in-vitro anticancer study. *Mater. Today: Proc*. 5(3):9698-9705. (Impact Factor – 0.97)

18. Saha, I., Chatterjee, A., **Chatterji, U.** and Maiti, B. R. (2018) Arecoline cannot alter testicular dysfunction and pineal activation caused by noise in Wistar rat. *Arch. Physiol. Biochem*. 124(1):18-26. (Impact Factor – 2.110)

19. Mitra, I., Mukherjee, S., Venkata, P. Reddy, B., Chatterjee, S.K., Mukherjee, S., Ghosh, S., **Chatterji, U.** and Moi, S. (2017) DNA/protein interactions, cell cycle arrest and apoptosis study of potent cytotoxic Pt(II) complexes with reduced side effects. *J. Mol. Liquids.* 248: 515-526 (Impact Factor – 3.648)

20. Mukherjee, S., Mitra, I., Venkata, P. Reddy, B., Fouzder, C., Mukherjee, S., Ghosh, S., **Chatterji, U.** and Moi, S. (2017) Cytotoxic Pt(II) complexes with low toxicity and better efficacy: a comparable study with recognized anticancer drugs. *J. Mol. Liquids* 247: 126-140 (Impact Factor – 3.648)

21. Bhowal, A., Majumder, S., Ghosh, S., Basu, S., Sen, D., Roychowdhury, S., Sengupta, S. and **Chatterji, U.** (2017) Pathway-based expression profiling of benign prostatic hyperplasia and prostate cancer delineates an immunophilin molecule associated with cancer progression. *Sci. Rep.* 7(1): 9763. (Impact Factor – 4.259)

22. Mukherjee, P., Gupta, A., Chattopadhyay, D.J. and **Chatterji, U.** (2017) Modulation of SOX2 expression delineates an end-point for paclitaxel-effectiveness in breast cancer stem cells. *Sci. Rep.* 7(1): 9170. (Impact Factor – 4.259)

23. Maji, P., Chatterjee, R., Choudhury, B.P., **Chatterji, U.** and Ganguly, J. (2017) Enhanced p53-dependent growth inhibition of human glioblastoma cells by combinatorial treatment of temozolomide and novel purified natural carbohydrate of *Pleurotus florida*. *Int. J. Pharma. Pharma. Sci*. 9(6): 189-193. (Impact Factor – 2.11)

24. Chatterjee, A. and **Chatterji, U.** (2017) *All*-trans retinoic acid ameliorates arsenic-induced oxidative stress and apoptosis in the rat uterus by modulating MAPK signaling proteins. *J. Cell. Biochem*. 118(11): 3796-3809. (Impact Factor – 3.448)

25. Choudhury, S., Gupta, P., Ghosh, S., Mukherjee, S., Chakraborty, P., **Chatterji, U.** and Chattopadhyay, S. (2016) Arsenic-induced dose-dependent modulation of the NFkB/IL-6 axis in thymocytes triggers differential immune responses. *Toxicol*. 357-358: 85-96. (Impact Factor – 3.621)

26. Majumder, S., Bhowal, A., Basu, S., Mukherjee, P., **Chatterji, U.** and Sengupta, S. (2016) Deregulated E2F5/p38/SMAD3 circuitry reinforces the pro-tumorigenic switch of TGFβ signaling in prostate cancer. *J Cell Physiol*. 231(11): 2482-92. (Impact Factor – 3.839)

27. Sinha, S., Jothiramajayam, M., Ghosh, M., Jana, A., **Chatterji, U.** and Mukherjee, A. (2015) Vetiver oil (java) attenuates cisplatin-induced oxidative stress, nephrotoxicity and myelosuppression in Swiss albino mice. *Food Chem Toxicol.* 81: 120-128. (Impact Factor –3.210)

28. Mondal, A. and **Chatterji, U.** (2015) Artemisinin represses telomerase subunits and induces apoptosis in HPV-39 infected human cervical cancer cells. *J. Cell. Biochem*. 116(9): 1968-81. (Impact Factor – 4.448)

29. Saha, I., Das, J., Maiti, B. R. and **Chatterji, U.** (2015) A Protective Role of Arecoline Hydrobromide in Experimentally Induced Male Diabetic Rats. *BioMed Res Int*. 2015: 1-12 (Impact Factor – 2.71)

30. Kumar, S., Acharya, R., **Chatterji, U.** and De, P. (2014) Controlled synthesis of β-sheet polymers based on side-chain amyloidogenic short peptide segments via RAFT polymerization. *Polymer Chem* 5: 6039-6050 (Impact Factor – 5.3)

31. Kumar, S., Acharya, R., **Chatterji, U.** and De, P. (2013) Side-Chain Amino Acid Based pH Responsive Self-Assembled Block Copolymers for Drug Delivery and Gene Transfer. *Langmuir* 29(49): 15375-15385 (Impact Factor – 4.19)

32. Ghosh, S., Acharya, R., **Chatterji, U.** and De, P. (2013) RAFT polymerization of methacrylates containing a tryptophan moiety: controlled synthesis of biocompatible fluorescent cationic chiral polymers with smart pH-responsiveness. *Polym. Chem.* 4: 1141-1152. (Impact Factor – 5.3)

33. Kumar, S., Acharya, R., **Chatterji, U.** and De, P. (2013) Controlled Synthesis of pH Responsive Cationic Polymers Containing Side-Chain Peptide Moieties via RAFT Polymerization and Their Self Assembly. *J. Mater. Chem. B*. 1(7): 946-957. (Impact Factor – 6.0)

34. Roy, P., Das, S., Mondal, A., **Chatterji, U.** and Mukherjee, A. (2012) Enhanced antitumor effects of andrographolide nanoparticles in MCF-7 human breast cancer cells and Ehrlich's ascites carcinoma in mice. *Curr Pharma Biotech.* 13(15):2669-81. (Impact Factor – 3.455)

35. Chatterjee, A. and **Chatterji, U.** (2011) All-trans retinoic acid protects against arsenic-induced uterine toxicity in female Sprague-Dawley rats. *Toxicol. Appl. Pharmacol.* 257: 250-263. (Impact Factor - 3.993; 5-year impact factor – 4.258)

36. Saha, I., Chatterjee, A., Mondal, A., Maiti, B. R. and **Chatterji, U.** (2011) Arecoline augments cellular proliferation in the prostate gland of male Wistar rats. *Toxicol. Appl. Pharmacol.* 255 (2): 160-168. (Impact Factor - 3.993; 5-year impact factor – 4.258)

37. Chakraborty, S. B., Mazumdar, D., **Chatterji, U.** and Banerjee S. (2011) Growth of Mixed-Sex and Monosex Nile tilapia in Different Culture Systems. *Turkish J Fisheries Aquatic Sciences*. 11: 133-140.

38. Sarkar, K., Srivastava, R., **Chatterji, U.** and Kundu, P.P. (2011) Evaluation of Chitosan and their self-assembled nanoparticles with pDNA for the application in gene therapy. *J. Appl. Polymer Sc.* 121: 2239-2249. (Impact Factor - 1.203)

39. Chatterjee, A. and **Chatterji, U.** (2010) Inorganic arsenic abrogates the estrogen signaling pathway in the rat uterus. *Reprod. Biol. Endocrinol*. 8: 80-90. (Impact Factor - 2.68)

40. Chowdhury, M., Chatterjee, A., Mandal, A. and **Chatterji, U.** (2010) Ovaprim abrogates expression of GnRH receptor- II in the Indian catfish. *Int. J. Biol*. **2**: 189-198.

41. Dasgupta, R., **Chatterji, U.**, Nag, T.C., Chaudhuri-Sengupta, S., Nag, D. and Maiti, B. R. (2010) Ultrastructural and hormonal modulations of the thyroid gland following arecoline treatment in albino mice. *Mol. Cell. Endo*. 319: 1-7. (Impact Factor - 3.5)

42. Saha, I., **Chatterji, U.**, Chaudhuri-Sengupta, S. and Maiti, B. R. (2007) Suppression of circadian rhythm of pineal and testicular hormones following lithium treatment in normal and reversed light-dark cycles, constant light and constant dark in rats. *Biol. Rhy. Res*. 38 (1): 19-32. (Impact Factor - 0.731)

43. Saha, I., **Chatterji, U.**, Chaudhuri-Sengupta, S., Nag, T. C., Nag, D., Banerjee, S. and Maiti, B. R. (2007) Ultrastructural and hormonal changes in the pineal-testicular axis following arecoline administration in rats. *J Exp Zool Part A Ecol Genet Physiol*. 307 (4): 187-98. (Impact Factor - 3.364)

44. Riby, J. E., Xue, L., **Chatterji, U.**, Bjeldanes, E.L., Firestone, G. L. and Bjeldanes, L. F. (2006) Activation and Potentiation of Interferon-{gamma} Signaling by 3,3'-Diindolylmethane in MCF-7 Breast Cancer Cells. *Mol. Pharmacol.* 69 (2): 430-9. (Impact Factor - 4.711)

45. **Chatterji, U.** and Siddiqi, M. (2004) Telomeres and Cancer. *Science and Culture.* 70 (3-4): 100-104. (Review)

46. **Chatterji, U.**, Riby, J. E., Taniguchi, T., Bjeldanes, E. L., Bjeldanes, L. F. and Firestone, G. L. (2004) Indole-3-carbinol stimulates transcription of the interferon gamma receptor 1 gene and augments interferon responsiveness in human breast cancer cells. *Carcinogenesis* 25 (7): 1119-1128. (Impact Factor – 5.4)

47. **Chatterji, U.**, Sen, A. K., Schauer, R. and Chowdhury, M. (2000) Paracrine effects of a uterine agglutinin are mediated via the sialic acids present in the rat uterine endometrium. *Mol. Cell. Biochem*. 215 (1-2): 47-55. (Impact Factor - 2.1)

Contribution to book chapters/conference proceedings:

1. **Chatterji, U.** (2019) Lung Cancer: Old Story, New Modalities. *In*: Oxidative Stress in Lung Diseases. Vol 2, pp 385-409; Springer ISBN 978-981-329-366-3

2. **Chatterji, U.** (2011) Environmental Modulations and Reproduction: the Favourable and Unfavourable Paradigms. *In*: Perspectives in Animal Ecology & Reproduction. Vol.7, pp 378-410. M/s. Daya Publishing House, New Delhi, India. ISBN 978-935-124-136-2

3. **Chatterji, U.** (2011) Efficacy of induced breeding strategies. *In*: Advances in Fish Research Vol 5; Chapter 4. Narendra Publishing House ISBN 978-938-042-858-1

4. **Chatterji, U.**, and Chowdhury, M. (2004) Sugar-specificity of P-SAS on rat endometrial stromal cells. *Golden Jubilee Commemorative Collection of Research Articles, Dept. of Zoology, Presidency College*. 2: 26-28.

5. **Chatterji, U.**, and Chowdhury, M. (2003) Mitogenic effects of P-SAS on rat endometrial stromal cells. *Golden Jubilee Commemorative Collection of Research Articles, Dept. of Zoology, Presidency College*. 1: 20-22.

Invited Webinars:

1. Impact of Covid-19 on Research Progress in Life Sciences: Mitigation of losses and way forward organized by Mansarovar Global University and National Academy of Sciences India (Bhopal Chapter) on Jul 5, 2020 at 11:00 AM.

Grants/Research Projects Received/Completed:

Sl. No.	Title	Date of start & Date of completion	Cost	Agency & Ref. No.	Role
1	"Identifying the Breast Cancer Target for Indole-3-Carbinol"	July 2000– June 2002	$80,000	California Breast Cancer Research Program, USA; Grant #: 6FB-0025	PI
2	"Identifying a Target for Indole- 3-Carbinol in MCF-7 Breast Cancer Cells"	July 2001- September 2003	$1,50,000	Department of Defense US Army Breast Cancer Res Prog ; Grant # DAMD17-01-1-0174	PI
3	"Telomerase inhibition as potential anti-cancer therapeutic strategy"	27.7.2005 – 26.7.08	Rs. 10.00 lakhs	DST, New Delhi (Fast Track Fellowship) SR/FTP/LSA- 080/2002 dated 16.12.2003	PI
4	"Reversing Arsenic-Induced Endocrine Disruption With Retinoic Acid: A Therapeutic Strategy"	1.5.2006 – 30.4.2009	Rs. 11.68 lakhs	UGC, New Delhi (Major Project Scheme) 31-227/2005 (SR) dated 31.3.2006	PI
5	"Investigating the Molecular Dynamics of Progression of Prostate Cancer"	1.7.2007 – 30.6.2012	Rs. 16.2 lakhs	UPE Project under UGC, New Delhi UGC/193/UPE/07	Joint PI
6	"Effect of arecoline on the gene expression of androgen receptor in the prostate of male rats"	1.4.2008 – 31.3.2010	Rs. 90,000	UGC, New Delhi (Minor Project Scheme) F.PSW-031/07-08 dated 21.02.2008	Co-PI
7	"Delivery of antisense oligonucleotides (ASO) to the androgen receptor of prostate cancer cells by nanoparticles: a prospective antitumoral strategy".	1 year	Rs. 2 lakhs + 1 student	CRNN, University of Calcutta No. CONV/ 006 / NANORAC (2009) dated 25-Feb-2009	PI
8	"Biotechnical manipulation and stocking of tilapia for sustainable culture of Indian major carps".	2 years	Rs. 12,09,560	WB State Council of Science and Technology, 1112/WBSCST/F/ 0216/08 dtd 28.09.2010	PI
9	"Betulinic Acid and Andrographolide Nanoparticles in Cancer Chemotherapy: *in vitro*, *in vivo* and toxicity studies"	1 year	Rs. 2 lakhs + 1 student	Nanoscience and Nanotechnology Center, University of Calcutta	Co-PI
10	"Effect of arsenic on the thyroid and adrenal physiology of Swiss albino mice"	1.4.2011 – 31.3.2013	Rs. 1,96,000	University Grants Commission, New Delhi (Minor Project Scheme) F.PSW-031/07-08 dated 21.02.2008	Co-PI
11	"Effect of arsenic treatment on endocrine physiology and immune status of Swiss albino mice"	1.7.2012 – 30.6.2015	Rs. 11.23 lakhs	University Grants Commission, New Delhi , (Major Project Scheme) 31-227/2005 (SR) dated 31.3.2006	PI

12	"Evaluating the gene expression profile of breast cancer stem cells which are resistant to conventional chemotherapeutic drugs"	4.10.12 – 3.10.2016	Rs. 76.25 lakhs	Department of Biotechnology, New Delhi BT/PR5731/MED/31/165/2012 dated 4.10.12	PI
13	"Effect of arsenic treatment on endocrine physiology and immune status of Swiss albino mice"	1.5.2013 – 30.4.2016	Rs. 11.23 lakhs	UGC, New Delhi (Major Project Scheme) 31-227/2005 (SR) dated 31.3.2006	Co-PI
14	"Characterization of tight junction proteins and use of phytochemicals towards restoration of tight junctional complex disruption as a possible treatment against cancer"	26.3.13-25.9.16	Rs. 39.20 lakhs	Biotech Consortium India Limited, DBT, New Delhi "Twinning Programme" BCIL/NER-BPMC/2013 dated 26.03.2013	PI
15	"Targeting breast cancer stem cells with phosphodiesterases inhibitors"	1.4.2017-31.3.2020	Rs. 19.56 Lakhs	DBT, GoWB; Memo No. 248 (Sanc) / BT(Estt) / RD-27/2016	Joint-PI
16	"Delineating the role of hippo signaling pathway components in maintenance of pluripotency, chemoresistance and metastatic properties of breast cancer stem cells: clinical and therapeutic implications"	16.11.2018 – 15.11.2021	Rs. 34.62	Department of Biotechnology, GoWB; Memo No. 140 (Sanc)/ BT/P/ Budget/RD-75/2017	PI

M. Phil. thesis submitted under my supervision:

"Expression and distribution of GnRH-receptor II in different tissues in *Clarias batrachus* under the influence of Ovaprim injection" by Ms Munmun Chowdhury in 2007.

M. D. thesis submitted under my co-supervision:

"Histopathological, immunohistochemical and gene expression profiling of cancer stem cells in triple negative breast cancers" Dr. Shubhayan Banik in 2019

Ph.D. candidates under my supervision:

#	Name of candidate	Title of thesis	Year of award
1.	Indraneel Saha	Effect of arecoline on pineal-gonadal axis in male rats	2011
2.	Debjani Ghosh*	Evaluation of the anti-inflammatory properties of Allylpyrocatechol, a simple catechol isolated from *Piper betle*	2011
3.	Aniruddha Chatterjee	Effects of inorganic arsenic on the rat female reproductive axis and development of therapeutic strategies using antioxidants	2012

4.	Alok Manna**	Investigation of plant derived compounds with immunomodulatory activity as proposed anti-cancer agents	2015
5.	Anushree Mondal	Molecular alterations induced by artemisinin in HPV-39 infected human cervical cancer cells	2016
6.	Ankur Bhowal	Differential gene expression analysis and genetic association studies in benign and malignant prostate tissues	2016
7.	Subhadipa Mazumdar**	Understanding the molecular pathomechanisms of benign hyperplasia and adenocarcinomas of human prostate gland	2017
8.	Pritha Mukherjee	Identification and modulation of genes responsible chemoresistance in human breast cancer stem cells	Submitted
9.	Suchismita Daw**	Enzymatic scenario regarding kinases and phosphatases and the alteration of physiology in the bone marrow of myelodysplastic syndrome: an experimental approach in animal model	Submitted
10.	Zarqua Jamal	Effect of arsenic on immune status and cell death pathways in Swiss albino mice	Awaiting submission
11.	Subarna Ghosh	Elucidating the molecular mechanism of arecoline-mediated tight junction disruption in human head and neck cancers	Awaiting submission

* As Associate Supervisor **As Joint Supervisor

Memberships/Positions Held in Scientific Organizations:

1. Associate Member, American Association of Cancer Research (AACR), USA
2. Life Member, Indian Association for Cancer Research (IACR)
3. Life Member and Assistant Secretary (2009-13),The Zoological Society, Kolkata
4. Member, Senate, University of Calcutta (2007-2012)
5. Member, Animal Facility Committee, University of Calcutta
6. Paper setter for CSIR-NET examination, New Delhi (Since 2010)
7. Executive Committee member, The Cytometry Society, India (2015-2017)
8. Secretary, The Cytometry Society, India (2017-2019)
9. Vice-President (Basic Research), The Cytometry Society, India (2019-2021)
10. Convener, Academic Excellence Committee, University of Calcutta (2015-2016)
11. Member, Ph.D. Committee, Dept. of Zoology, CU (2017-2021)
12. External Expert, Ethical Committee on Stem Cell Research, Bose Institute (2018)
13. External Expert, Ethical Committee on Stem Cell Research, IIT, Kharagpur (2020)

Academic, Administrative and Social Responsibilities undertaken:

#	INDICATORS	YEAR	ROLE
	AS AN ADMINISTRATOR • *She was the first to procure an infrastructure grant (DST-FIST) in department of Zoology after almost 22 years. She has set up -* • *a state-of-the-art instrument room, with light, stereozoom and inverted microscopes with documentation units, cold centrifuge, ELISA reader, -80ºC freezer, micro-balances, UV-Vis Spectrophotometer, frozen ultramicrotome, flow cytometer and cell sorter* • *tissue culture room, with A3 Biosafety cabinet and CO_2 incubator* • *animal house, with surgery and breeding rooms* • *microbiology room, with hood and incubators* • *computer facilities with 10 computers, printers and scanners* • *cold room* • *PG students provided 'hands on' training* • *Led to introduction of a 'Tools and Techniques' section in the PG syllabus.*		
1.	Drafting, defending and executing DST-FIST Phase I	2005-2010	Convener
2.	Drafting and executing DST-FIST Phase II	2011-2016	Member
3.	Drafting, defending and executing DST-FIST Phase III	2018-2023	Co-ordinator
4.	Drafting and executing UGC-SAP Phase I	2006-2011	Member
5.	Drafting and executing UGC-UPE Phases I and II	2007-2012 2014-2019	Co-ordinator
6.	Drafting DST-PURSE project on behalf of the University	2016	Co-ordinator
7.	Conferences/Seminars organized, both at the National And International levels, for the benefit of students and scholars		
	• 34th All India Cell Biology Conference	2010	Member, Org Com
	• 3rd Int'nal Cancer Research Symposium	2012	Secretary
	• 100th Women's Science Congress	2013	Member, Org Com
	• 100th Year of Zoology Department	2018	President
	• 37th Annual IACR Convention	2018	Member, Org Com

6.	As the <u>Head of the Department</u> • Procured and implemented DST-FIST Phase III for the department • Organized an International Conference and Reunion to mark 100 Years of the Department of Zoology, CU • Regularized meeting proceedings, semester examinations and financial record keeping • Pioneered Choice-Based Credit System in the University and department • Introduced 1 year lab-specific dissertation for PG students • Instrumental for procuring extra Rs 16 Lakhs in the departmental budget from the University, so that teachers could impart new techniques to students • Upgraded classrooms and laboratory • Constructed a smart classroom • Organized the involvement of 9-UG colleges who taught PG courses through proficient united PGBoS and workshops for the first time	2017-2019 (and briefly for 6 months in 2015-2016)	HoD

AS A RESEARCHER

Prof. Chatterji has been instrumental in –

- *getting financial support for research for the benefit of her PhD scholars*
- *regularly motivating PG students to design short-term research problems*
- *organizing several workshops and conferences for students*
- *encouraging students to participate in different seminars and conferences where they have won awards for oral and poster presentations*
- *trained summer students from different institutions in Kolkata, other states of India, USA and Canada through active collaborations*
- *motivated exchange programs, so that her students could train themselves in India (from NIT Durgapur, Indian Statistical Institute, CSIR-IICB, and from different Institutes and Universities in West Bengal and different departments in the University) and in UQTR, Quebec, Canada*

• *Led to favorable positions for her PhD students in colleges and universities*			
1.	Funding for research (Annexure 3) BCRP and US Army - 2 DST, GoI – 1 DBT, GoI – 2 UGC, GoI – 3 DST, GoWB – 1 DBT, GoWB – 1 Others (Nanotech related) – 1	 2000-2003 2005-2008 2012-2016 2006/2007/2011 2010 2018 2009	PI
2.	Funding for research (Annexure 3) UGC, GoI – 3 DBT, GoWB – 1 Others (Nanotech related) – 1	 2008/2012/2013 2017 2011	Co-PI
3.	Established '**Cancer Research Laboratory**' in the University - provided opportunities for students of her department and from other institutions in India and abroad (US and Canada) to learn different aspects and techniques related to cancer biology	2004-present	PI
4.	Pioneered work on - 'Cancer Stem Cells' 'Animal Models of Tumors'	 2012 2016	PI
5.	Conferences attended: • INCOFIBS, NIT, Rourkela • EUROGIN, Lisbon, Spain • CARCINOGENESIS, Delhi University • 3rd ICRS, Univ of Kansas Medical School and University of Calcutta • International Molecular Biology Congress, Suchou, China • INCOFIBS, NIT, Rourkela • IACR Annual Conferences • NanoBioCon, MACAUT • 15th SFRR Meeting, BARC, Mumbai • TCS Meetings	 2010 2011 2012 2012 2013 2015 2016/2018/2019 2016 2017 2013/2015/2016/ 2017/2019	 Chair/Speaker Invited speaker Invited speaker Invited speaker Chair/Speaker Chair/Speaker Invited speaker Invited speaker Invited speaker Invited speaker

	• CME lectures at – Medical College, Kolkata Saroj Gupta Cancer Centre & Research Institute • World Cancer Congress, Science City	 2012 2017 2017	 Invited speaker Invited speaker Invited speaker
6.	Research Collaborations: <u>National</u> • Indian Institute of Chemical Biology, Kolkata • Indian Institute of Science Education and Research, Kolkata • Indian Institute of Engineering Science and Technology, Shibpur • National Institute of Technology, Durgapur • Dept. of Biochemistry, University of Calcutta • Dept. of Physiology, University of Calcutta • Dept. of Biotechnology, University of Calcutta • Dept. of Botany, University of Calcutta • Dept. of Environmental Science, University of Calcutta • Dept. of Polymer Science and Technology, University of Calcutta • University of Assam, Silchar • Dept. of Zoology, Kalyani University • Saroj Gupta Cancer Centre &Research Institute, Thakurpukur • Dept. of Surgery, Calcutta Medical College • Dept. of Urology, Ramakrishna Mission Seva Pratisthan, Kolkata <u>International</u> Université du Québec à Trois-Rivierès, Canada (Queen Elizabeth Scholarship)	 Since 2016 2018 2017 Since 2016 Since 2007 Since 2010 Since 2012 2016 Since 2018 Since 2010 Since 2012 Since 2018 Since 2012 Since 2015 Since 2008 Since 2016	Collaborator

AS A TEACHER

Backed by her strong research background and hands-on experience, she

- *strongly advocated modernization of classical subjects*
- *promoted interactive sessions with PG students, in terms of allowing them to teach on board and present papers*
- *regularized home assignments in every class*
- *introduced new subjects included under Modern Biology*
- *This has helped her students perform extremely well at various national level exams, especially CSIR/UGC-NET and a rise from 3% to 18% was seen in the last 15 years.*
- *instrumental in introducing the semester system in PG courses*
- *invited as an expert for evaluating PG and PhD students of different Universities*
- *strongly motivated students to pursue a career in teaching and research*
- *encouraged students to attend seminars and workshops organized by different institutions in and around Kolkata*

	Courses introduced/modernized in the PG syllabus of the department	Year	Role
1.	<u>Theory</u> • Cell signaling • Neurobiology • Stem Cell Biology • Cancer Biology • Developmental Biology • Animal Biotechnology • Tools and Techniques in Cell Biology	2005-present	Mentor
2.	<u>Practical</u> • Investigating stage-wise developmental stages of *Clarias* (Magur) • Isolation and mounting of mice hippocampus • Histology and Immunohistochemistry • Cell culture techniques • Cell cycle and apoptosis of cancer cells by flow cytometry • Isolation of stem cells by cell sorting • Protein isolation and western blot analysis • RNA isolation and RT-PCR • Development of tumors in mice	2005-present	Mentor

3.	Workshops organized • 1st National Workshop on Applications of Flow Cytometry for College Teachers • 2nd National Workshop on Applications of Flow Cytometry for College Teachers • INDO-US Conference and Workshop on Applications of Flow Cytometry • International Workshop on Flow Cytometry and Imaging for College and University Teachers and Research Scholars • Workshop on Multicolor Flow Cytometry • Master Class on Flow Cytometry • Several departmental seminars and colloquiums	 2011 2012 2013 2014 2014 2018 2006-present	 Secretary Secretary Secretary Secretary Member Organizer/Speaker Member-Secretary
4.	Preparation of resource material, fresh reading materials, laboratory manuals	2010-present	Faculty
5.	Imparting of knowledge/ instruction *vis-à-vis* the prescribed material and methodology of the curriculum	2010-present	Faculty
AS AN ADVISOR AND SUBJECT EXPERT • *Prof. Urmi Chatterji has been actively updating herself in her subject* • *Has strived to sensitize students of different institutions to the mutual benefits of teaching and research* • *Attempts to create an intellectual and physical environment in the classroom and beyond* • *Accordingly, she has been selected to act in different committees of the University and represent in the media, so as to ensure sound academic environment and promote good teaching and research ethics*			
	INDICATORS	**Period**	**Role**
1.	Institutional Governance responsibilities: • Senate Member, University of Calcutta • Academic Excellence Committee, CU • Research Advisory Committee, Centre for Research in Nanoscience & Nanotechnology • Committee for DST-PURSE • Departmental PhD Committee • Animal House Implementation Committee	 2007-2012 2015-2017 2010-present 2017 2017-present 2008-2012	 Member Coordinator Member Member Member Coordinator

2.	Participation in short-term training courses in curriculum and professional development, like Orientation Progs and Refresher	Since 2008	Mentor
3.	Participation in CSIR Examination Committee for NET Examination	Since 2010	Expert
4.	Publication of articles in – popular college magazines, radio talks (AIR) and television talks (DD Bangla, Zee Bangla, Etv, News Time)	Occasionally since 2005-present	Invited expert
5.	Subject Expert in • UG BoS, RKM Vidyamandir, Belur • PG Board of Studies, Genetics Dept, CU	 Since 2018 Since 2010	Vice-Chancellor's nominee
6.	Promotion of college and university teachers in • different colleges in and around Kolkata • Visva-Bharati University • North-Bengal University • Assam University, Silchar	 2015-2019 2019 2018-2019 2018	Expert
7.	Syllabus updating and increase in enrollment of students in PG courses in different colleges under University of Calcutta	2015-2019	University representative

Other Academic Activities including delivering popular lectures on science, and outreach activities:

#	Year	INSTITUTION	EVENT
1.	2005-till date	Television channels (Doordarshan, Etv, DD Bangla) and Radio (AIR)	Different aspects of biological sciences & social implications
2.	2006-2010	Cancer Foundation of India	Awareness talks and lectures on cancer biology
3.	Since 2008	Medical Institutions and Cancer Centers in Kolkata	Visits with PG students and research scholars to get direct exposure to patients
4.	Since 2010	Centre for Research in Nanoscience and Nanotechnology, CU	Have regularly popularized application of flow cytometry through several workshops for college teachers and research scholars
5.	2013	Dept. of Biotechnology, Govt. of India	Mentorship Program for Principle Investigators
6.	2013	St Augustine School, Kolkata	The Art and Science of Leadership

7.	2014/2017	College magazines of St Xavier's College, Presidency University and University of Calcutta	Popular articles on Life as a Teacher, Neurological disorders and Portrayal of Animals in Media
8.	2015/2016	Birla Industrial and Technological Museum, Kolkata	Importance of 'Biology' for school students from different districts in West Bengal,
9.	2018	Delhi Public School, Classes 9-12, Barasat, West Bengal	Applications and Importance of Biological Sciences
10.	2018	Kalyani University, Workshop on Animal Handling and Experimentation	Art and Science of Research with Animals
11.	2018-2019	Centre for Research in Nanoscience and Nanotechnology, CU	Uses of nano-materials in biological science research
12.	2019	Birla Bharati School, Classes 9-11, Khidderpore, Kolkata	National Cancer Awareness Day lecture - 'Nuances of a crabby affair'
13.	2019	National Statistical Office, Govt. of India	Disorders in Human Behavior – GAD vs OCD
14.	2019-2020	Rotary Club of Calcutta Avyanna (As President, 2019-2020)	Awareness lectures at different schools in remote areas around Kolkata
15.	2020	Jadavpur University, Kolkata	Refresher Course in Biotechnology