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| **NAME** | Dr. Madhumita P. Ghosh |  |
| **DESIGNATION** | Associate Professor | |
| **EMAIL ID** | mpghosh@amity.edu | |
| **CONTACT NUMBER** | +91-9868223141 | |
| **RESEARCH INTERESTS** | Ocular Pharmacology and Therapeutics | |

**EDUCATIONAL QUALIFICATIONS:**

| Name of College / University | Degree | Year |
|---|---|---|
| Ravishankar Shukla Univ, Raipur, MP | M.Sc. (Life Sciences) | 1994 |
| Ravishankar Shukla Univ, Raipur, MP | B.Sc. ( Zoology, Botany, Chemistry) | 1992 |
| Class XII, CBSE Board, Bhilai, MP | Senior Secondary School, Sec X , Bhilai, MP | 1989 |
| Class X, CBSE Board , Bhilai, MP | Senior Secondary School,Sec-X, Bhilai, MP | 1987 |

**Title of Ph.D. thesis: Variations in immunologic reactions of human spermatozoa is a coorelative phenomenon in clinical infertility**

**EXPERIENCE (in chronological order): Total 20 Years Research & Teaching**

| Designation | Type of post held (teaching/ research) | Name of the Institute | Year (From – To) |
|---|---|---|---|
| Associate Professor | Teaching as well as Research | Amity Institute of Biotechnology, Amity Univ, Noida | Feb 2019 – Till date |
| Assistant Professor | Teaching as well as Research | Amity Institute of Biotechnology, Amity Univ, Noida | 2011 - 2019 |
| Senior Lecturer | Teaching as well as Research | Amity Institute of Biotechnology, Amity Univ, Noida | 2009 - 2011 |
| Lecturer | Teaching as well as Research | Amity Institute of Biotechnology, Amity Univ, Noida | 2008 - 2009 |
| Post Doctoral Fellow , | | National Brain Research Center, Manesar, Gurgaon | 2004 - 2008 |
| Post Doctoral Fellow | | National Eye Institute, NIH, USA | 2002 - 2004 |
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| **No. of Ph.D. students supervised** | 01 Completed (Full Time)<br>01 Ongoing ( Full Time), 02 Ongoing ( Part Time) |
| **No. of Post-Doc** | Nil |
| **No. of M.Tech. Students supervised:** | 10 |
| **No. of B.Tech. Students supervised:** | 30 |
| **PUBLICATIONS**<br>***(mention total no. here)*** | **14**<br><br>[a]Shikha Upreti, [b]Prachi Sharma, [c] Seema Sen, [b]Subhrajit Biswas and [a]**Madhumita P. Ghosh**. Auxillary effect of trolox and coenzyme Q10 on angiogenesis and proliferation of retinoblastoma cells via ERK/Akt pathway. ( Revised version submitted to Scientific Reports, |

Awaiting acceptance).

D Siuli Shaw, Mukesh Chourasia, Ranu Nayak, Tushar Kumeria, **Madhumita P Ghosh**, Seneha Santoshi, Sudeep Bose .Molecular interaction of quercetin and its derivatives against nucleolin in breast cancer: in-silico and in-vitro study. Journal of Biomolecular Structure and Dynamics, pg 1-12. *https://doi.org/10.1080/07391102.2024.2326668*

Shikha Upreti, Tapas Nag and **Madhumita P. Ghosh**. Trolox aids Coenzyme Q10 in neuroprotection against NMDA induced damage via upregulation of VEGF in rat model ofglutamate excitoxicity. Shikha Upreti [1], Tapas Chandra Nag [2], Madhumita P Ghosh [3]. PMID: 3805655. DOI: 10.1016/j.exer.2023.109740

Amritpal Kaur, Yash Sharma, Anoop Kumar, **Madhumita P. Ghosh** & Kumud Bala. In-vitro antiproliferative efficacy of *Abrus precatorius* seed extracts on cervical carcinoma. . ScientificReports volume 12**,** Article number: 10226 (2022).

S Upreti, S Sen, TC Nag, **MP Ghosh** .Insulin like growth factor-1 works synergistically with dopamine to attenuate diabetic retinopathy by downregulating vascular endothelial growth factor. Biomedicine & Pharmacotherapy. 2022 May 1;149:112868.

Upreti S**. and Madhumita P. Ghosh**. Chapter 9 - Trolox assisted inhibition of glutamate excitotoxicity-mediated degeneration in retina. Contemporary Medical Biotechnology Researchfor Human Health. Advances in Biotechnology and Bioengineering. 2022, Pages 79-90 ( Elsevier Publications)

Lithium rescues retinal ganglion cells in rat model of glutamate excitotoxicity. Shikha Upreti,Gaurav Yadav, Mehak Tiwari and **Madhumita P. Ghosh**. Int J. Pharmaceutical Science and Research.2020.Vol. 11(11): 5823-5830

Rapid Electrochemical Quantification for In Vitro Release Trait of Ophthalmic Drug Loaded within Mucoadhesive Metal Organic Framework (MOF). Chansi, Shikha Upreti , Punya , JaySingh , **Madhumita P Ghosh** , Tinku Basu. Chemistryselect: 2021: 6 (12): 3006 – 3012.

Mutation associated with autosomal dominant retinitis pigmentosa alter MAPK-dependent phosphorylation of neural retina leucine zipper. Prabodh Swain, Sandeep Kumar, Dharmesh Patel, Sushmita Richong, Pranav Oberoi, **Madhumita P Ghosh** and Anand Swaroop. Molecular Vision.2007 July; 13 :1114-20

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| | Lack of fiber cell induction stops normal growth of rat lenses in organ culture. **Madhumita P.Ghosh and** J. Samuel Zigler Jr. Molecular.Vision. 2005 Nov 1; 11: 901-8<br><br>A spontaneous mutation affects programmed cell death during development of the rat eye. Debasish Sinha, Stacey Hose, Chen Zhang , **Madhumita P. Ghosh,** Terrence P. O'Brien, Olof Sundin, Morton F. Goldberg, W. Gerald Robison, Jr., Paul Russell, Woo-Kuen Lo and J. Samuel Zigler, Jr. Exp Eye Res. 2005 Mar; 80(3): 323-35<br><br>Studies on Rat Lenses Following Long Term Organ Culture **.** **Madhumita P. Ghosh, JS Zigler** Jr Abstract, IOVS: 44 (13), 3492-3492.<br><br>Apoptosis and necrosis in developing brain cells due to arsenic toxicity and protection with antioxidants. Sukumar Chattopadhyay, Sraboni Bhaumik**, Madhumita Purkayastha,** SrabantiBasu, Aditi Nag Chaudhuri and Shyamal Das Gupta.Toxicol Lett. 2002 Nov 15, 136(1): 65-76 |
| **PATENTS** ***(total no.)*** | **3 (Published)**<br><br>1. A formulation for the treatment of ophthalmic diseases. Madhumita P. Ghosh and Shikha Upreti.202011010373. INDIA ( Complete, Published since 2.5 years)<br><br>2. Dopamine in combination with insulin growth factor(IGF-1) for prevention of proliferative diabetoc retinopathy. Madhumita P. Ghosh and Shikha Upreti. 202011001007. INDIA.( Complete, Published since 2.5 years)<br><br>3. Development of a slow release MOF encapsulated novel neuro protective drug complex relied on Li+and antioxidant and vitamin e for the treatment of glaucoma. Tinku Basu, Chansi, Shikha Upreti and Madhumita P. Ghosh. 2011018206CRN-CRN3999 ( Complete, Published since 2 years) |

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| **RESEARCH PROJECTS**<br>Completed: ***(total no.)***<br>Ongoing: ***(total no.)*** | ***Completed :3***<br>***1.*** Assessment of lithium in the form of of lithium chloride in combination with coenzyme Q and vitamin E against retinal ganglion cell degeneration DBT funded 3 year project. (BT/PR3433/MED/30/647/2011) with an amount of<br>**27,66000(INR)**<br>.<br>**2.**Studies on dopamine/ dopamine agonist treatment with IGF1 to regulate angiogenetis and normalize blood vessels in diabetic retinopathy under DST-SERB scheme of 3 years from 2017-2020,( EMR/2016/004054)with a sanction of budget around **47,25000.00 (INR)**<br>**3**.Elucidating the role of VEGF using Trolox and CoQ10 in combination against NMDA induced toxicity in retina"for 3 yrs from 2021-2024. ICMR-SRF grant of Shikha Upreti( 2020-8486) . PI of this grant, completed and submitted her Ph.D thesis this yr **16,80000. (INR)**<br>**Ongoing 1.**<br>Development of a targeted intraocular neuroprotective sustained release novel drug assembly for attenuation of retinal ganglion cells." Under DST-SERB scheme from 2023-2026. **52,00000 (INR)** |
| **AWARDS & HONOURS/ DISTINCTIONS** | ***Details: Invited speaker*** *at the international Conference of Cancer, Cell Science and Microbiology at* ***Cell Science 2024 ( 10-11 June Rome'Itally)***<br>***Women Researcher Award*** *at the International Conference of Neurology and Neurological Disorders****, ( 20-22 Aug'2024 Berlin' Germany)***<br>***Honoured as Symposium speaker at the 24th Annual meeting of Indian Academy of Neuroscience , 2 – 5th Oct'2023, Jiwaji University, Gwalior.***<br>***Awarded Junior research fellowship and Senior research fellowship of*** *University Grants Commission from* ***1995-2000, department of Biotechnology, Jadavpur University, Kolkata*** |

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| **MEMBERSHIP** with Professional/ Academic bodies | ***Details: Life memberof Indian Academy of Neuroscience***<br>***Life member of India Eye Research Group***<br>***Life Member of Vitreo Retina Society of India*** |