Ivy Bhattacharya

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EDUCATION

- Master of Technology (M. Tech.) Biomedical Engineering — July, 2017 – July, 2019
  Department of Biosciences and Bioengineering, IIT Bombay — GPA: 8.89/10.00
  Master's Thesis: Bhattacharya, I. (2019) *Probing Cytoskeletal Changes in Neuronal Stem Cells due to Glucose Dysregulation.* (Master of Technology). Indian Institute of Technology Bombay, Powai. Mumbai. India. (archived) (presentation) (manuscript in preparation)
  - Mammalian cell culture, differentiation, gel preparation, cell morphology studies
  - Trypsin deadhesion and live cell imaging, Atomic Force Microscopy (AFM) and confocal microscopy
  - Quantification of activated myosin with pMLC staining to find underlying molecular mechanisms behind observed cellular dynamics

  Advisor: Prof Shamik Sen

- Bachelor of Technology (B. Tech.) Biotechnology — June, 2013 – May, 2017
  School of Bio Sciences and Technology, VIT University, Vellore — GPA: 7.49/10.00
  Bachelor's Thesis: Quantification of Trace Elements in Prostasomes, and its Correlation with Sperm Motility and Viability in Fertile and Infertile Human Male Smokers
  Thesis research conducted at International Institute for Training and Research in Reproductive Health (IIRRH), Bangalore — Jan, 2017 – May, 2017
  - Cell fractionation, D-aspartic acid estimation using HPLC, zinc and magnesium estimation using Atomic Absorption Spectroscopy (AAS), protein estimation
  - Statistical analysis of biochemical parameters: amount of total protein, triglyceride, calcium, potassium, zinc, magnesium and sodium
  - Correlation studies of the quantities of trace elements present, with sperm count, motility, and viability

  Advisors: Prof T B Sridharan, Prof Ramesh Pathy M.

ADDITIONAL RESEARCH EXPERIENCE

- Graduate Research Assistant, Psychophysiology Laboratory — August, 2019 – present
  Department of Mathematics, IIT Bombay
  Project: Changing Reading Direction for a Single Word – The Case of Reading Numerals in Urdu
  - Participant recruitment and analysis of fixation durations during bi-directional reading of native Urdu speakers
  - Electroencephalogram (EEG) recording of subjects over the period of inflated fixation durations while reading numerals in Urdu

  Advisor: Prof Azizuddin Khan

- Undergraduate Intern — Dec, 2015 – Jan, 2016
  Intas Biopharmaceuticals, Ahmedabad
  - R & D: Production of protein: cloning heavy and light chain genes of monoclonal antibody (p29), transfection to CHO –S cells and screening by the DHFR selection system, followed by limiting dilution cloning
  - Quality Control: 360-degree performance appraisal of the quality control unit, with inputs to enhance efficiency

PEER-REVIEWED PUBLICATION

- Singh, D., Bharti, D., **Bhattacharya, I.**, & Devi, S. C. (2018). *Epidemiological Survey of Subjects in the age group of 18 to 24 Years for Failed Secondary Response to Varicella Zoster Virus (VZV).* Research Journal of Pharmacy and Technology, 11(7), 2817-2820.

AWARDS & HONORS

- Junior Research Fellowship, Department of Science and Technology (DST), Government of India, 2019 – 2020
- Ministry of Human Resource Development (MHRD) GATE Scholarship, 2017 – 2019
- Graduate Teaching Assistantship, IIT Bombay, for the course: BB101 – Biology for Engineers, 2017 – 2019
- St. Gallen Wings of Excellence – Leader of Tomorrow Award and invited essayist, Beyond the End of Work – 48th St. Gallen Symposium, University of St. Gallen, Switzerland, 2 – 5 May, 2018
- Indian Institute of Science Center for Biosystems Science and Engineering BioEngineering Summer Training Fellowship, 2018
- Biotech Innovation Ignition Scholar**,** Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI), funded by National Innovation Foundation (NIF), Department of Science and Technology (DST), Govt. of India, Dec, 9 – 29, 2017
- Undergraduate Oral Presentation Award for: Bhattacharya I., Goswami C., Sen D. *Role of Delta Opioids in the Treatment of Parkinson's Disorder*, presented at XIII International Conference of Science, Engineering and Technology, VIT Vellore, May 2 – 3, 2016

RESEARCH SKILLS

- Experimental skills: EEG, EMG, Eye-tracking, mammalian cell culture, microscopy (fluorescence, confocal, SEM, TEM, AFM), spectroscopy (UV-Vis, fluorescence, AAS), genetic engineering tools (DNA isolation, cloning and expression, electrophoresis, PCR, transformation, SDS PAGE), basic biochemical and biophysical assays, HPLC, fabrication of microfluidic devices using PDMS
- Computer languages and software: C, MATLAB, LabView, ImageJ, SolidWorks, GraphPad Prism, OriginLab

EXTRA-CURRICULAR AWARDS & EXPERIENCE

- Editorial Board Member, Insight, the official student media body of IIT Bombay, 2018 – 2019 (flagship edition)
- Student Chair, Gender Sensitization Series, Gender Cell, IIT Bombay, Mar, 2018 – Mar, 2019
- Invited author, Echoes 2.0, the annual literary magazine, IITB Litzkreig, Mar, 2019
- Invited essayist, TeamWork Arts Pvt. Ltd., ZEE Jaipur Literature Festival (JLF), January, 2018
- Co-founder, Spartans Association of Youth, a non-profit organization targeted at increasing the literacy rate in southern India, 2017
- Finalist, National Youth Poetry Slam (NYPS) 2016, Airplane Poetry Movement, Bangalore, in association with University of Illinois Chicago, September, 2016
- Creative director and contributor, The Anonymous Writer (archived), New Delhi, 2014 – 2016
- Author, *26 Jumpstraps: Twenty-Six Thumb rules of Entrepreneurial Bootstrapping* published by FixNix Incorporation, 2014

OTHER SKILLS

- Graduate certificate in the Indian classical dance form of Kathak – certified by Anart Foundation, Ahmedabad, India, 2011

- Languages
  - Native/Bilingual: Hindi, Bengali
  - Fluent: English
  - Conversant: Gujarati, Marathi
  - Basic: Sanskrit, French, German