CURRICULUM VITAE

i. Name:	Dr. Mahuya Sengupta
ii. Sex: M/F	F
iii. Date of Birth:	December 24, 1974
iv. Category: (GEN/SC/ST/OBC)	GEN
v. Nationality:	Indian
vi. Qualification:	PhD
vii. Designation:	Associate Professor
viii. Address:	
Office :	Department of Biotechnology, Assam University, Silchar-788011, Assam.
Email:	**senguptamahuya35@gmail.com**
ix. Teaching experience:	16 Years (PhD: 10 awarded, 1 submitted, 3 ongoing) (PhD: 4 co-supervised) (M. Phil: 4 awarded)
x. Research experience:	7 Years in PhD (at the University of Calcutta) and 16+ years at Assam University, India, at the Department of Biotechnology, AUS.
x. Year of award of Doctoral degree:	2007
xi. Title of thesis for doctoral degree:	Immunobiological studies in mice after exposure to arsenic and lead and its relation to immunosuppression
xii. Preferred Areas of Teaching:	(1) Immunology (2) Biochemistry (3) Cell Biology
xiii. Areas of Specialization :	1. Biochemistry and Animal Cell Sciences 2. Immunotoxicology 3. Nanobiology and Cancer Immunology 4. Phytotherapy and Immunomodulation

xiv. Current Research Interest :

1. Nanobiotechnology
2. Cancer Immunology
3. Cell Signaling, Senescence and Apoptosis
4. Inflammation and Oxidative Stress
5. Immunotoxicology

xv. Awards:

1. Prof. B.B. Sarkar Research Award; Physiological Society of India; University of Calcutta, 2003.
2. Shakuntala Dasgupta Oration Award; Annual Conference of the Physiological Society of India; University of Calcutta, 2015.

xvi. Publication:

a. Papers Published: 44

1. Chohelee Choudhury, Ritwik Mazumder, Rajib Biswas, Mahuya Sengupta. Cadmium exposure induces inflammation through the canonical NF-κB pathway in monocytes/macrophages of *Channa punctatus* Bloch. Fish & Shellfish Immunology. 2021. doi 10.1016/j.fsi.2021.01.002. IF 3.29
2. Chohelee Choudhury, Ritwik Mazumder, Rajeev Kumar, Bishal Dhar, Mahuya Sengupta. Cadmium induced oxystress alters Nrf2-Keap1 signaling and triggers apoptosis in piscine head kidney macrophages. Aquatic Toxicology, 2020. Doi: 10.1016/j.aquatox.2020.105739 IF 4.33
3. Biswajit Das, Hasimur Rahaman, Sujit Kumar Ghosh, Mahuya Sengupta. Synthesis and Characterization of Arsenic (III) Oxide Nanoparticles as Potent Inhibitors of MCF 7 Cell Proliferation through Proapoptotic Mechanism. BioNanoScience.2020. 10, 420–429.
4. Angom Ranjana Devi, Mahuya Sengupta, Dipu Mani Barman, Yashmin Choudhury. Oral Nicotine Induces Oxidative Stress and Inflammation but Does Not Subvert Tumor Suppressor and DNA Repair Responses in Mice. Indian Journal of Clinical Biochemistry. 2020. doi 10.1007/s12291-020-00903-8.
5. Jeny Laskar, Mahuya Sengupta, Yashmin Choudhury. Treatment with the anti-diabetic drug metformin ameliorates betel-nut induced carcinogenesis in a murine model. Pharmacological Reports. 2019. 71, 1115-1124 IF 2.89

6. Mahuya Sengupta, Ramkrishna Pal, Anupam Nath, Biswajit Chakraborty, Leichombam Mohindro Singh, Biswajit Das and Sujit Kumar Ghosh. Anticancer efficacy of noble metal nanoparticles relies on reprogramming tumor-associated macrophages through redox pathways and pro-inflammatory cytokine cascades. Cellular and Molecular Immunology 2018; doi: 0.1038/s41423-018-0046-7 IF 7.6
7. Hirak Chatterjee, Dewan S. Rahman, Mahuya Sengupta, and Sujit Kumar Ghosh. Gold Nanostars in Plasmonic Photothermal Therapy: The Role of Tip Heads in the Thermoplasmonic Landscape. The Journal of Physical Chemistry 2018; doi: 10.1021/acs.jpcc.8b00388 IF 4.484
8. Anupam Nath, Ramkrishna Pal, Leichombam Mohindro Singh, Himadri Saikia, Hasimur Rahaman, Sujit Kumar Ghosh, Ritwik Mazumder and Mahuya Sengupta. Gold‑manganese oxide nanocomposite suppresses hypoxia and augments pro-inflammatory cytokines in tumor associated macrophages. International Immunopharmacology 2018; 57 157-164 IF 3.1
9. Jeny Laskar, Kasturi Bhattacharjee, Mahuya Sengupta and Yashmin Choudhury. Anti-Diabetic Drugs: Cure or Risk Factors for Cancer? Pathology and Oncology Research 2018; doi: 10.1007/s12253-018-0402-z IF 1.935
10. Anupam Nath, Ramkrishna Pal, Leichombam Mohindro Singh, Himadri Saikia, Hasimur Rahaman, Sujit Kumar Ghosh, Ritwik Mazumder and Mahuya Sengupta. Dose Response Study of a Novel Gold-Manganese Oxide Nano-Composite in an In Vivo Murine Model. Journal of Applied Pharmacological Science 2017; 7:12 028-037 IF 0.8
11. Leichombam Mohindro Singh, Biswajit Chakraborty, Ramkrishna Pal, Anupam Nath, Sudip Pal, Dewan Shahidur Rahman, Sujit Kumar Ghosh and Mahuya Sengupta. A comparative study on the antioxidant and immunomodulatory properties of curcumin conjugated gold nanospheres and free curcumin. Journal of Applied Pharmacological Science 2017; 7:11 056-063 IF 0.8
12. Ramkrishna Pal, Biswajit Chakraborty, Anupam Nath, Leichombam Mohindro Singh, Mohammed Ali, Dewan Shahidur Rahman, Sujit Kumar Ghosh, Abhishek Basu, Sudin Bhattacharya, Rathindranath Baral and Mahuya Sengupta. Noble metal nanoparticle-induced oxidative stress modulates tumor associated macrophages (TAMs) from an M2

to M1 phenotype: An in vitro approach. International Immunopharmacology 2016; 38 332-341 IF 3.1

13. Pankaj Phukan, Meenakshi Bawari and Mahuya Sengupta. Promising neuroprotective plants from North-East India. International Journal of Pharmacy and Pharmaceutical Sciences 2015; 7:3
14. Moriom Begam and Mahuya Sengupta. Immunomodulation of intestinal macrophages by mercury involves oxidative damage and rise of pro-inflammatory cytokine release in the fresh water fish Channa punctatus Bloch. Fish and Shellfish Immunology 2015; 45: 3 78-3 85 IF 3.034
15. C. Datta, D. Das, P. Mondal, B. Chakraborty, M. Sengupta, C.R. Bhattacharjee, Novel water soluble neutral vanadium(IV)–antibiotic complex: Antioxidant, immunomodulatory and molecular docking studies, European Journal of Medicinal Chemistry, 2015,doi: 10.1016/j.ejmech.2015.05.005 IF 3.499
16. Biswajit Chakraborty, Ramkrishna Pal, Mohammed Ali, Sujit K. Ghosh and Mahuya Sengupta. Antitumor Potential of Gold Nanoparticles in Chemically Induced Murine Fibrosarcoma. Cellular and Molecular Immunology, 2015; doi: 10.1038/cmi.2015.05 IF 7.6
17. Shamim Ahmed Barbhuiya and Mahuya Sengupta. The toxic effects of lead on testicular macrophage immunomodulation and sperm cell parameters in mice. British Journal of Medicine and Medical Research, 2015. 9(5): 1-10
18. Chakraborty B, Nath A, Saikia H, Sengupta M. Bactericidal activity of selected medicinal plants against multidrug resistant bacterial strains from clinical isolates. Asian Pac J Trop Med. 2014; 7S1:S4 35-41. IF 0.926
19. 14. Chakraborty S, Gang S, Sengupta M. Functional status of testicular macrophages in an immunopriviledged niche in cadmium intoxicated murine testes. Am J Reprod Immunol. 2014; 72(1):14-21. IF 3.218
20. Paul N, Chakraborty S, Sengupta M. Lead toxicity on non-specific immune mechanisms of freshwater fish Channa punctatus. Aquat Toxicol. 2014; 152:105-12. IF 3.730
21. Shamim Ahmed Barbhuiya, Sumana Chakraborty and Mahuya Sengupta. An in vitro study on immune modulation of murine testicular macrophages and loss of

immunoprivilege due to lead toxicity. International Journal of Recent Scientific Research, 2014. 5(6): 1082-1086

22. Sengupta M., Deb I., Sharma G.D. and Kar K.K. A study on human sperm and other seminal constituents in male infertile patients from arsenic and cadmium rich areas of Southern Assam. Systems Biology in Reproductive Medicine, 2013. Early Online: 1–11 (DOI: 10.3109/19396368.2013.783143). IF 1.847
23. Shamim Ahmed Barbhuiya, Sumana Chakraborty and Mahuya Sengupta. Studies of lead toxicity on inflammatory damage and innate immune functions in testicular macrophages of male Swiss albino mice. Modern Research in Inflammation, 2013. 2(4): 75-81
24. Paul N. and Sengupta M. Lead induced overactivation of phagocytes and variation in enzymatic and non-enzymatic antioxidant defences in intestinal macrophages of Channa punctatus. Modern Research in Inflammation, 2013. Vol.2, No.2, 28-35
25. Deb S., Sharma B., Rout J. and Sengupta M. Algal diversity in soil crusts of Assam University, Silchar Campus (North East India). Phykos, 2013. 43 (1): 56-67
26. Chakraborty B. And Sengupta M. Boosting of nonspecific host response by aromatic spices turmeric and ginger in immunocompromised mice. Cellular Immunology, 2012. 280: 92-100 IF 1.743
27. Chakraborty B and Sengupta M. Supporting the immune system through functional modulation of carbon tetrachloride intoxicated splenic macrophages by administering *Tinospora cordifolia*. Journal of Applied Pharmaceutical Science, 2012;02(07)117-124
28. Sumana Chakraborty, Ishita Deb, Gauri Dutta Sharma and Mahuya Sengupta. Effect of cadmium exposure on testicular macrophages in adult male albino mice. Assam University Journal of Science and Technology-Biological and Environmental Sciences, 2012. 9(1): 58-61
29. Ishita Deb, Sumana Chakraborty, Gauri Dutta Sharma and Mahuya Sengupta.A study on semen quality and its correlation with mercury exposure in infertile men compared with a normal population. Assam University Journal of Science and Technology-Biological and Environmental Sciences, 2012. 9(1): 75-80
30. Begam M., Paul N. and Sengupta M. Effects of mercuric chloride on the activities of antioxidant enzymes in the fresh water fish *Channa punctatus*. Assam University Journal of Science & Technology, 2012. 10(1): 1-7

31. Sengupta M., Sharma G. D. and Chakraborty B. Effect of aqueous extract of Tinospora cordifolia on functions of peritoneal macrophages isolated from CCl4intoxicated male albino mice. BMC Complement Altern Med. 2011; 11: 102. IF 2.08
32. Mahuya Sengupta, Gauri Dutta Sharma and Biswajit Chakraborty. Hepatoprotective and immunomodulatory properties of aqueous extract of Curcuma longa in carbon tetra chloride intoxicated Swiss albino mice. Asian Pacific Journal of Tropical Biomedicine, 2011. 1:193-199. IF 0.502
33. Bhattacharjee, Chira R., Goswami, Pankaj and Sengupta, Mahuya. Synthesis, electrochemical and antimicrobial studies of mono and binuclear iron (III) and oxovanadium (IV) complexes of [ONO] donor tridentate Schiff-base ligands. Journal of Coordination Chemistry, 2010. 63:22, 3969-3980. IF 1.801
34. Deb I., Sengupta M., Sharma G.D. and Chakraborty B. Antifertility and immunomodulatory effects of Ocimum sanctum on Swiss albino mice. Journal of Immunology and Immunopathology, 2010. 12(2)
35. Gang S., Chakraborty B., Sharma G.D. and Sengupta M. Intracellular survival of *Staphylococcus aureus* and associated immunological dysfunctions in cadmium intoxicated mice. Journal of Immunology and Immunopathology, 2010. 12(2)
36. Biswajit Chakraborty, Gauri Dutta Sharma and Mahuya Sengupta. Immunomodulatory properties of *Tinospora cordifolia* in carbon tetrachloride intoxicated Swiss albino mice. Assam University Journal of Science & Technology, 2009. 4(1): 35-39
37. Sneha Gang, Gauri Dutta Sharma and Mahuya Sengupta. Intracellular survival of *Staphylococcus aureus* due to alteration of cellular activity in cadmium intoxicated Swiss albino mice. Assam University Journal of Science & Technology, 2009. 4(1): 61-65
38. Mahuya Sengupta, Biswajit Chakraborty, Sneha Gang and Gauri Dutta Sharma. Protective effect of *Tinospora cordifolia* on lipid peroxidation and antioxidant enzymes in Streptozotocin-induced diabetic rats. Assam University Journal of Science & Technology, 2008. 3(1): 60-64
39. B. Bishayi and Mahuya Sengupta. Synergism in immunotoxicological effects due to repeated combined administration of arsenic and lead in mice. International Immunopharmacology, 2006. 6:454-464. IF 2.417

40. B. Bishayi, Mahuya Sengupta and S. Ghosh. Lead induced modulation of splenic macrophage responses on humoral and cell mediated immunity. Acta Microbiologica Hungarica, 2004. 51(1): 31-45. IF 0.7
41. B. Bishayi and Mahuya Sengupta. Intracellular survival of Staphylococcus aureus due to alteration of cellular activity in arsenic and lead intoxicated mature Swiss albino mice. Toxicology, 2003. 184: 31-39. IF 4.017
42. Mahuya Sengupta and B. Bishayi. Effect of lead and arsenic on murine macrophage response. Drug and Chemical Toxicology Journal, 2002. 25(4): 459-472. IF 1.293
43. B. Bishayi, S. Roychowdhury, S. Ghosh and Mahuya Sengupta. Hepatoprotective and immunomodulatory properties of Tinospora cordifolia in CCl4 intoxicated mature albino rats. The Journal of Toxicological Sciences, 2002. 27(3): 139-146. IF 1.380
44. B. Bishayi, A.A. Sarkar and Mahuya Sengupta. Cold stress induced functional alteration in splenic macrophages including antibody production. Biomedicine, 2000. 20(2): 149-157

b. Chapters in Edited Books Published:

1. Targeting Metabolic Pathways for Disease Therapy. In Trends in Experimental Biology. Ed. Kma L. Excel India Publishers, New Delhi, 2015.
2. Trends in Experimental Biology. Excel India publishers, 2015.
3. Cadmium Toxicity in Fish: An Overview. Emerging Trends in Scientific Research (International Book of Scientific Research), AikNik Publications, 2020.

xvii. Seminars, Workshops, Training Programs: Seminars-45, Workshops-9
Training Programs-5

xviii. Research Projects-1 UGC-MRP as P.I.; 3 DBT projects (as Co-P.I.)

1. Dr. M. Sengupta, Principal Investigator, “Potential anti-cancer property of arsenic nanoparticles: a study of its anti-cancer efficacy and the underlying mechanism using cancer cell lines” [Sanction Order No. F.43/91/2014(SR) Dt. 22/08/2015].
2. Dr. M. Sengupta, Co-Investigator, “Multifunctional Janus Nanoparticles for Cancer Imaging and Therapy” [Sanction Order No.: BT/277/NE/TBP/2012 Dt. January 16, 2013].

3. Dr. M. Sengupta, Co-Investigator, “DBT sponsored Departmental Project for the teaching, training and Research in Biotechnology” worth Rs 128 lakhs [BT/HRD/01/002/2007 Dt.] (completed in 2012).
4. Dr. M. Sengupta, Co-Investigator, “Characterisation and utilization of Cyanobacterial Bioresourse in Sourthern Assam, North-East India” Worth Rs 35.43 lakhs in collaboration with Department of Ecology & Environmental Science, Assam University, Silchar [BT/PR7479/AGR/21/214/2006 Dt.30.7.2008] (completed in 2011).