CURRICULUM VITAE

ARINDAM BHATTACHARYYA (Professor)

Mailing

***Official*:**Immunology Lab,Department of Zoology, University of Calcutta,35, Ballygunge Circular Road, Kolkata-700019, West Bengal, India

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Academics:

- PhD awarded in 2006 from Bose Institute, Kolkata.
- M.Sc. in Zoology from University of Calcutta

Employment:

Associate Professor in Department of Zoology, University of Calcutta.

Past Assistant Professor in Department of Zoology, University of Calcutta and in Department of Environmental Science, University of Kalyani.

Honors'/ Awards:

(a)National:

- National Scholarship (1997 – 1999)
- Graduate Aptitude Test for Engineering (2000), Indian Institute of Science, Govt. of India.
- National Eligibility Test for Lecturership, 2001

(b) International:

- European Scholarship to Present the Paper at International Workshop, Turkey, 2004
- Swiss National Science Foundation Grant
- Royal Society Collaborative Grant
- European Mathematical Society Travel Grant
- DAAD Fellowship selected
- Fulbright Nehru Senior Research Fellowship
- International Training of Mathematical modeling in Austria and Lab safety and Blood borne pathogen in USA
- European Respiratory Society Travel Grant.
- EuropeanCancerSociety Travel Grant

LIFE MEMBER:

- Indian Association of Cancer Research **(IACR)**
- Indian Immunological Society **(IIS)**
- IndianParasitologicalSociety **(IPS)**
- Indian Association of Neuroscience **(IAN)**
- Indian Cell Biology Society **(ICBS)**
- Zoological society of India **(ZSI)**
- Indian Science Congress Association **(ISCA)**

Research Focus: Immunology

Dendritic cell and T reg cell regulation in Infectious (malaria) and Non-infectious disease(Breast cancer and pulmonary fibrosis).

Publications:

(1) Mitra S, Ghosh N, Sinha P, Chakrabarti N, **Bhattacharyya A**.Alteration of nuclear factor-kappaB pathway promote neuroinflammation depending on the functions of estrogen receptors in substantia nigra after 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine treatment. Neurosci Lett. 2016 Mar 11;616:86-92.

(2) Mitra S, Ghosh N, Sinha P, Chakrabarti N, **Bhattacharyya A**.Alteration in Nuclear Factor-KappaB Pathway and Functionality of Estrogen via Receptors Promote Neuroinflammation in Frontal Cortex after 1-Methyl-4-Phenyl-1,2,3,6-Tetrahydropyridine Treatment.Sci Rep. 2015 Sep 14;5:13949.

(3) Mitkin N, Hook C, Schwartz A, Biswas S, Kochetkov D, Muratova A, Afanasyeva M, Kravchenko J, **Bhattacharyya A**, Kuprash D. p53-dependent expression of CXCR5 chemokine receptor in MCF-7 breast cancer cells. *Sci Rep* 2015 19;5:9330. IF- 5.078

(4) Moitra S, Chakraborty K**,Bhattacharyya A**, Sahu S. Impact of occupational cadmium exposure on spirometry, lung leukocyte count, and lung cell DNA damage among Indian Goldsmith.*American Journal of Industrial Medicine* 2015. IF-1.73

(5) Keswani T, Mitra S, **Bhattacharyya A**.Copper-Induced Immunotoxicity Involves Cell Cycle Arrest and Cell Death in the liver. Environmental Toxicology. 30(4):411-21. IF-2.8

(6) Keswani T, Sengupta A, Sarkar S, **Bhattacharyya A**.Dendritic cells subsets mediated immune response during Plasmodium berghei ANKA and Plasmodium yoelii infection. Cytokine. 2015 Jun;73:198-206. IF- 2.8

(7) Mitra S, Chakrabarti N, Dutta SS, Ray S, Bhattacharya P, Sinha P, **Bhattacharyya A**. Gender Specific Brain Regional Variation of Neurons, Endogenous Estrogen, Neuroinflammation and Glial Cells During Rotenone Induced Mouse Model of Parkinson's Disease.2015. Neuroscience. IF- 3.27

(8) Mallick S, Ghosh K M, Sarkar A, Jana S, **Bhattacharyya A**, Mohapatra S. Acetylacetonato chelated ruthenium organometallics incorporating imine–phenol function: Spectroscopic, structural, electrochemical and cytotoxicity studies. Inorganica Chimica Acta 05/2015; 430.IF: 2.04.

(9) Keswani T, **Bhattacharyya A**. Differential role of T regulatory and Th17 in Swiss mice infected with Plasmodium berghei ANKA and Plasmodium yoelii. *Exp Parasitol* 2014; 141:82-92. IF-2.21

(10) Dalui S, **Bhattacharyya A.** Herbicide paraquat induces sex-specific variation of neuroinflammation and neurodegeneration in Drosophila melanogaster. Indian J Biochem Biophys. 2014 Dec;51(6):567-73.

(11) Saha R, Sengupta S, Dey SK, Steele IM, **Bhattacharyya A**, Biswas S, Kumar S. A pharmaceutical cocrystal with potential anticancer activity. RSC Adv., 2014, 4, 49070. IF-3.84.

(12) Karthik L, Kumar G, Keswani T, **Bhattacharyya A**, Chandar SS, Bhaskara Rao KV. Protease inhibitors from marine actinobacteria as a potential source for antimalarial compound. *PLoS One* 2014; 9(3):e90972. IF-3.47

(13) Roy Chowdhury S, Sengupta S, Biswas S, Sinha TK, Sen R, Basak RK, Adhikari B, **Bhattacharyya A**.Bacterial fucose-rich polysaccharide stabilizes MAPK-mediated Nrf2/Keap1 signaling by directly scavenging reactive oxygen species during hydrogen peroxide-induced apoptosis of human lung fibroblast cells.PLoS One. 2014 Nov 20;9(11):e113663. IF- 3.23

(14) Chowdhury SR, Sengupta S, Biswas S, Sen R, Sinha TK, Basak RK, Adhikari B, **Bhattacharyya A**.Low fucose containing bacterial polysaccharide facilitate mitochondria-dependent ROS-induced apoptosis of human lung epithelial carcinoma via controlled regulation of MAPKs-mediated Nrf2/Keap1 homeostasis signaling..Mol Carcinog. 2014 Oct 30. IF- 4.81

(15) Chakraborty K, Chatterjee S, **Bhattacharyya A**. Modulation of phenotypic and functional maturation of murine bone-marrow-derived dendritic cells (BMDCs) induced by cadmium chloride. *Int Immunopharmacol* 2014; 20(1):131-40. IF-2.4

(16) Biswas S, Sengupta S, Roy Chowdhury S, Jana S, Mandal G, Mandal PK, Saha N, Malhotra V, Gupta A, Kuprash DV, **Bhattacharyya A**. CXCL13-CXCR5 co-expression regulates epithelial to mesenchymal transition of breast cancer cells during lymph node metastasis. *Breast Cancer Res Treat* 2014; 143(2):265-76. IF-4.5

(17) Keswani T, Chowdhury S, Mukherjee S, **Bhattacharyya A**.Palladium(II) Complex Induces Apoptosis through ROS-Mediated Mitochondrial Pathway in

human lung adenocarcinoma cell line (A549). Current Science.2014. IF- 0.8

(18) Sengupta S, Jana S, **Bhattacharyya A**. TGF-β-Smad2 dependent activation of CDC 25A plays an important role in cell proliferation through NFAT activation in metastatic breast cancer cells. *Cell Signal* 2014; 26(2):240-52. IF-4.3

(19) Kundu S, Sengupta S, **Bhattacharyya A**. NF-κβ acts downstream of EGFR in regulating low dose cadmium induced primary lung cell proliferation. *BioMetals*, 2013: In press. IF-3.284

(20) Sengupta S, Jana S, Biswas , Mondal PK, **Bhattacharyya A**. Cooperative involvement of NFAT and SnoN mediates transforming growth factor-β (TGF-β)induced EMT in metastaticbreast cancer (MDA-MB 231) cells. *Clinical and Experimental metastasis,* IF-3.52

(21) L. Karthik, Kumar G, keswani T, **Bhattacharyya A**, Reddy B.P, Bhaskara Rao K.V., Marine Actinobacterial mediated Gold nanoparticles synthesis and their antimalarial activity. *Nanomedicine: Nanotechnology, Biologyand Medicine*. 2013. In press. IF- 6.692

(22) Sengupta S, Kundu S, **Bhattacharyya A**. Attenuation of Smad2 activity shows the resistance to TGF-β signaling in Mammary adenocarcinoma (MCF-7) cell. 2013, *Cell biol. Int*.37: 449-457. IF-1.482

(23) Mitra S, Keswani T, Ghosh N, Goswami S, Datta A, Das S, Maity S, **Bhattacharyya A**. Copper induced immunotoxicity promote differential apoptotic pathways in spleen and thymus of swiss albino mice. *Toxicology*. 2012. 2013; 306:74–84. IF 3.68.

(24) Keswani T and **Bhattacharyya A**. Impact of pentoxifylline on liver and thymus of Plasmodium berghei ANKA infected Swiss Albino mice. *Proc Zool Soc* 2013

(25) Keswani T and **Bhattacharyya A**. Splenocyte apoptosis in *Plasmodium berghei ANKA* infection: Possible Role of TNF- α and TGF- β.*Parasite Immunology*, 2012. IF 2.601

(26) Paul S, Sengupta S, Bandyopadhyay TK, **Bhattacharyya A**. Stevioside induced ROS-mediated apoptosis through mitochondrial pathway in human breast cancer cell line MCF-7. *Nutrition and Cancer*, 2012. IF-2.553

(27) Mitra S, Keswani T, Dey M, Bhattacharya S, Sarkar S, Goswami S, Ghosh N, Dutta A, **Bhattacharyya A**. Copper-induced immunotoxicity involves cell cycle arrest and cell death inthe spleen and thymus. *Toxicology*. 2012. 293:78-88. IF 3.68.

(28) Sen GS, Mohanty S, Hossain DMS, Bhattacharyya S, Banerjee S, Chakraborty J, Saha S, Ray P, Bhattacharjee P, Mandal D, **Bhattacharya A**, Chattopadhyay S, Das T and Sa G. Curcumin enhances the efficacy of chemotherapy by tailoring p65NF B-p300 crosstalk in favor of p53-p300 in breast cancer. *Journal of biological Chemistry*. 2011. doi/10.1074/jbc.M111.262295 IF 4.773

(29) Mitra S, Chakrabarti N and **Bhattacharyya A**. Differential regional

expression patterns of alpha-synuclein, TNF-alpha, and IL-1beta; and variable status of dopaminergic neurotoxicity in mouse brain after Paraquat treatment. *Journal of Neuroinflammation*, (8:163). 2011 IF 3.83

(30) Kundu S, Sengupta S and **Bhattacharyya A**. EGFR upregulates inflammatory and proliferative responses in human lung adenocarcinoma cell line (A549), induced by lower dose of cadmium chloride. *Inhalation Toxicology*, 2011 – IF 3.20

(31) Mukherjee S , Chowdhury S, Chattapadhyay AP and **Bhattacharya A**. Spectroscopic, cytotoxic and DFT studies of a luminescent palladium(II) complex of a hydrazone ligand that induces apoptosis in human prostate cancer cells. *Inorg Chim Acta*, 2011-IF 2.32

(32) Paul S, Bandyopadhyay TK and **Bhattacharyya A**. Immunomodulatory effect of leaf extract of *Murraya koenigii* in diabetic mice. *Immunopharmacology and Immunotoxicology*, 2011 IF 1.1

(33) Chatterjee S, Biondi I,Dyson PJ, **Bhattacharyya A**. A bifunctional organometallic ruthenium drug with multiple 3 modes of inducing apoptosis, *J. Bio.Imorg, Chem*, 2011IF 3.3

(34) Paul S,**Bhattacharyya A**and Bandyopadhyay TK. An efficient regeneration system viadirect and indirect somatic. Embryogenesis for the medicinal tree Murraya koenigii. *Plant CellTiss Organ Cult, 2010* IF 1.1

(35) P Pratihar, JL Patra D, Mitra S, Bhattacharyya A, Lee HM, Chattopadhyay S Synthesis structure and reactivity of *azosalophen* complexes of vanadium(IV): studies on cytotoxic properties. .*Dalton Trans.*, 2009, 6220 - 6230, IF 2.91

(36) Kundu S, Sengupta S, Chatterjee S, Mitra S, **Bhattacharyya A**. Cadmium induces lunginflammation independent of lung cell proliferation: a molecular approach .*Journal ofInflammation* 2009, 6:19 (12 June 2009) IF 2.04

(37) Chatterjee S, Kundu S, Sengupta S, **Bhattacharyya A**. Divergence to apoptosis from ROS induced cell cycle arrest: effect of cadmium. Mutat Res. 2009 Apr 26; 663(1-2):22-31. PubMed PMID: 19475715. IF 3.20

(38) Chatterjee S, Hartinger CG, Dyson PJ, **Bhattacharyya A.** The ruthenium(II)-arene compound RAPTA-C induces apoptosis in EAC cells through mitochondrial and p53-JNK pathways. *J Biol Inorg Chem*. 2008 Sep;13(7):1149-55. Epub 2008 Jul 3. PubMed PMID: 18597125.IF 3.3

(39) Lahiry L, Saha B, Chakraborty J, Bhattacharyya S, Chattopadhyay S, Banerjee S, Choudhuri T, Mandal D, **Bhattacharyya A**, Sa G, Das T. Contribution of p53-mediated Bax transactivation in theaflavin-induced mammary epithelial carcinoma cell apoptosis. Apoptosis. 2008 Jun;13(6):771-81. PubMed PMID: 18454316.IF 4.4

(40) Chatterjee S, Kundu S, **Bhattacharyya A**. Mechanism of cadmium induced

apoptosis in the immunocyte. Toxicol Lett. 2008 Mar 5;177(2):83-9. Epub 2007 Dec 28. PubMed PMID: 18281164.IF 3.60

(41) Pratihar J, Shee B, Pattanayak P, Patra D, **Bhattacharyya A**, Puranik V, Hung C.H, Chattopadhyay S Synthesis, Structure, and Reactivity of Diazoketiminato Complexes of Platinum(II) and Palladium(II):Properties of a Platinum Complex*E. J. In.Chem* 2007,27,4272-4281.IF-2.91

(42) **Bhattacharyya A**, Mandal D, Lahiry L, Bhattacharyya S, Chattopadhyay S, Ghosh UK,Sa G, Das T. Black tea-induced amelioration of hepatic oxidative stress through antioxidative activity in EAC-bearing mice. J Environ Pathol Toxicol Oncol. 2007;26(4):245-54. PubMed PMID: 18197822.IF1.1

(43) Dasgupta R, Saha I, Pal S, **Bhattacharyya A**, Sa G, Nag TC, Das T, Maiti BR.Immunosuppression, hepatotoxicity and depression of antioxidant status by arecoline in albino mice. *Toxicology*. 2006 Oct 3; 227(1-2):94-104. Epub 2006 Jul 22. PubMed PMID: 16945459.IF 3.64

(44) Mandal D, Lahiry L, **Bhattacharyya A**, Bhattacharyya S, Sa G, Das T.Tumor-induced thymic involution via inhibition of IL-7R alpha and its JAK-STAT signaling pathway: protection by black tea. *Int mmunopharmacol*. 2006 Mar;6(3):433-44. Epub 2005 Oct 26. PubMed PMID: 16428079.IF 2.32

(45) Mandal D, **Bhattacharyya A**, Lahiry L, Choudhuri T, Sa G, Das T. Failure inperipheral immuno-surveillance due to thymic atrophy: importance of thymocyte maturation and apoptosis in adult tumor-bearer. *Life Sci*. 2005 Oct7;77(21):2703-16. PubMed PMID: 16019036.IF 4.6

(46) **Bhattacharyya A**, Lahiry L, Mandal D, Sa G, Das T. Black tea induces tumor cellapoptosis by Bax translocation, loss in mitochondrial transmembrane potential,cytochrome c release and caspase activation. *Int J Cancer*. 2005 Nov1;117(2):308-15. PubMed PMID: 15880367.IF-4.5

(47) Mandal D, Lahiry L, **Bhattacharyya A**, Chattopadhyay S, Siddiqi M, Sa G, Das T. Black tea protects thymocytes in tumor-bearing animals by differential regulationof intracellular ROS in tumor cells and thymocytes. *J Environ Pathol Toxicol Oncol*. 2005;24(2):91-104. PubMed PMID: 15831082.IF 1.1

(48) Bandyopadhyay S, **Bhattacharyya A**, Mallick A, Sen AK, Tripathi G, Das T, Sa G,Bhattacharya DK, Mandal C. Over-expressed IgG2 antibodies against O-acetylatedsialoglycoconjugates incapable of proper effector functioning in childhood acute lymphoblastic leukemia. *Int Immunol*. 2005 Feb;17(2):177-91. Epub 2005 Jan 3.PubMed PMID: 15629900.IF 3.3

(49) **Bhattacharyya A**, Mandal D, Lahiry L, Sa G, Das T. Black tea protects immunocytesfrom tumor-induced apoptosis by changing Bcl-2/Bax ratio. *CancerLett*. 2004 Jun 25;209(2):147-54. PubMed PMID: 15159016.IF 4.4

(50) **Bhattacharyya A**, Choudhuri T, Pal S, Chattopadhyay S, K Datta G, Sa G, Das T.Apoptogenic effects of black tea on Ehrlich's ascites carcinoma cell.

Carcinogenesis. 2003 Jan;24(1):75-80. PubMed PMID: 12538351.IF-5.6

(51) Pal S, Choudhuri T, Chattopadhyay S, **Bhattacharya A**, Datta GK, Das T, Sa G Mechanisms of curcumin-induced apoptosis of Ehrlich's ascites carcinoma cells. *BiochemBiophys Res Commun*. 2001 Nov 2;288(3):658-65. IF 2.7

List of books/ reviews written:

(1) Sinha P, Ghosh N, Mitra S and**Bhattacharyya A**. Neuroinflammation during Parkinson's Disease: Key Cells and Molecules invoved in it. (In Press)

(2) Chakraborty K and **Bhattacharyya A**. Role of Protease in Inflammatory Lung Diseases. Part A: Molecular and Biochemical Aspects of Proteases. Proteases in Health and Disease",Springer Series Advances in Biochemistry in Health and Disease. 7: 21:2013.

(3) Banerjee A, Mukhopadhyay AK, Paul S, **Bhattacharyya A** and Swarnakar S. Unveiling the Intricacies of *Helicobacter pylori*-Induced Gastric Inflammation: T Helper Cells and Matrix Metalloproteinases at a Crossroad. *Current Views of Gastritis - Topics 2012, InTech - open science | open minds, Croatia*.

(4) Lahiry L, Mandal D, **Bhattacharyya A**, Sa G & Das T. Cancer prevention by cancer regression and rejuvenation of host defense system: Dual role of tea. In: *Tea Therapeutics* (Eds. B Banerjee & TC Chaudhury) Science Publishers, INC., New Hampshire,USA 89-112, 2006.

(5) **Bhattacharyya A**, Chattopadhyay S & Das T. Tea: A journey across time from beverage to anticanceragent. In: *Emerging Pollutants: Impact on Agriculture, Environment and Health* (Ed. De A and Gupta S), Allied Publishers, India.

(6) Mandal D,Lahiry L, **Bhattacharyya A**, Bhattacharyya A, Sa G, Das T. Pharmacotherapeutics of Tea: Proposed Strategies. Chapter 42 vol 3, 2004.

Details of project grant proposals submitted by (all participating) Institutions to Ministry/ all otherfunding organizations which are currently under consideration:

Sl. No.	Title	Funding Agency	Duration (Years)	Date of Commencement	Total Grant (Rupees)	Remarks
1.	A study of cross-talk between TGF-beta and Proteasome in cancer	ICMR	3	24.10.2007	11,20,000/-	**Completed**
2.	Involvement of apoptosis in cadmium induced immunosupression	DST	3	05.06.2007	10,20,000/-	**Completed**
3.	Regulation of cell cycle by transforming growth factor beta	DBT	3	17.10.2007	16,47,000/-	**Completed**
4.	Evaluation of p53-CXCL13 cross talk in breast cancer	DST- RFBR	2	29.11.2010	19,46,620/-	**Completed**
5.	Cellular and molecular implications of environmental copper toxicity in immune system	ICMR	3	01.02.2010	17,95,084/-	**Completed**
6.	Mitochondrial dysfunction directs autophagyinParkinson's disease: roleof p53	UGC	3	01.02.2010	4,50,000/-	**Completed**

7.	Inhibition of Dendritic cell function and maturation in Malaria.	DST- SERB	1	09.02.2012	6,75,000/-	**Completed**
8.	Modulation of T regulatory cell by TGF beta in malaria	DAE-BRNS	3	29.11.2010	17,16,000/-	**Completed**
9.	A study on Mechanistic basis of IL-12/23 in functional maturation of myloid dendritic cell(mDC) in breast cancer	CSIR	3	01.04.2011	19,000,00/-	**Completed**
10.	Mechanism of Neuroinflammation in Parkinson's disease: Putative role of Estrogen and Nf-kβ	DBT	3	18.07.2013	61,31,000/-	Running Third Year
11.	Organometallic 2-pyridinecarbothioamide complexes as potential inhibitors of cyclooxygenases in anticancer chemotherapy	UGC Sponsored India-Newzealand	1.5	01.07.2014	24,00,000/-	**Completed**
12.	Role of TGFß in metastasis and biology of breast cancer stem cells	DST Sponsored Indo-South Africa	3	01.08.2014	30,00,000/-	Running Second Year
13.	Role of DC subsets in Treg/Th17 mediated immune response	DST (GoI)	3	04.01.2015	45,75,000/-	2

	during experimental cerebral malaria					
14.	Role of Dendritic cells in Cytokine mediated Treg-Th17 cross talk in malaria	WB-DBT	3	01.07.2015	29,40,000/-	2
15.	Role of TGF-β SMAD signaling nexus in Treg/Th17 differentiation during experimental cerebral malaria	DAE-BRNS	3	10.28.2014	33,96,250/-	3

Research Guidance:

SL. No.	M. Phil. or Equivalent Ph.D. or Equivalent Post Doctoral Fellow	Fellow	Thesis Submitted	Degree Awarded	PhD registered
1.	M.Phil M.Tech			2 1	
2.	Ph.D		0	6	8
3.	**Post Doctorate (Ex.)**	1			

Lab members:

Alumni:

1. Soumya Chatterjee (PhD awarded)
2. Santanu Paul (PhD awarded)
3. Subhadip Kundu (PhD awarded)

4. Suman Sengupta (PhD awarded)
5. Soham Mitra (PhD awarded)
6. Tarun Keswani (PhD awarded)

Present:

7 PhD student and One Inspire Faculty