

# CURRICULAM VIATE

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## Dr. CHINMAY PAL

**Assistant Professor**, Department of Chemistry, Gobardanga Hindu College, P.O. Khantura, North 24 Parganas, West Bengal 743273, INDIA

Date of Birth : 10<sup>th</sup> October 1984  
Permanent Address : C/O Tamal Pal  
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### PROFESSIONAL EXPERIENCE

- A. **ASSISTANT PROFESSOR**, Department of Chemistry, Gobardanga Hindu College, P.O. Khantura, North 24 Parganas, West Bengal 743273, INDIA [2015- Till now]
- B. **INSPIRE FACULTY**; Life science & Bio-technology Department, Jadavpur University, 188, Raja S.C. Mallick Rd,Kolkata - 700032.West bengal, INDIA [October 2014- March 2015]
- C. **Postdoctoral Associate**; Infectious Diseases Division; Singapore-MIT Alliance For Research and Technology Centre (SMART) [2013-2014]  
Under guidance of **Prof. Steven R. Tannenbaum**, Underwood Prescott Professor of Biological Engineering, Chemistry, and Toxicology; Massachusetts Institute of Technology (MIT), USA

**Project:** Identification of biomarkers in dengue infectious diseases using mass spectroscopy

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### ACADEMIC INFORMATION

- A. Doctor of Philosophy (PhD) in **Chemical Biology**, from CSIR-Indian Institute of Chemical Biology [JADAVPUR UNIVERSITY], INDIA [2007-2012] Under guidance of **Dr. Uday Bandyopadhyay**, Principal Scientist, CSIR-IICB, INDIA  
*Title of the Ph.D thesis:*  
Design, synthesis and biological evaluation of some novel antioxidant–antiapoptotic molecules to protect organ damage due to oxidative stress
  - B. *Master of Science* (M.Sc) in **Chemistry**, from Indian Institute of Technology Roorkee (IITR) (2005 - 2007) (**7.96 CGPA, 1<sup>st</sup> class**).
  - C. *Bachelor of Science* (B.Sc) in **Chemistry**, from Habra Sree Chaitanya College, University of Calcutta, West Bengal, INDIA (2002 - 2005).Other Subjects Physics and Mathematics (**68.9%, 1<sup>st</sup> class**).
  - D. *Higher secondary (10+2)* in **Science** from, Habra High School, W.B.C.H.S.E [2002] (**75.6% , 1<sup>st</sup> class**)
  - E. *Secondary (10<sup>th</sup>)* from, Janaphul High school, W.B.B.S.E [2000] (**81.9%, 1<sup>st</sup> class**)
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## PROFESSIONAL ACHIEVEMENTS

- DST-INSPIRE Faculty Award in Chemistry (2014)
  - CSIR-NET/JRF in Chemistry: (Dec. 2006) National Eligibility Test for junior research fellowship (JRF) and Lectureship in Indian University, conducted by Council for Scientific and Industrial Research (CSIR) New Delhi, India.[ Was amongst the top 25 selected for the prestigious **Shyama Prasad Mukherjee award 2007**]
  - GATE in Chemistry: (2007) Graduate Aptitude Test for doing research work at Indian Institute of Technology, held by Ministry of Human Resource.
  - JAM in Chemistry: (2005) Joint Admission Test to Master of Science conducted by Indian Institute of Technology.
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## AREA OF INTEREST

- Bio-organic and Medicinal Chemistry
  - Drug discovery and development
  - Chemical biology and analytical biochemistry
  - Redox Biology
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## RESEARCH EXPERIENCE

### A. Gobardanga Hindu College [2015-Till now]

Design synthesis of some novel imines and amides having antioxidant activity

### B. Singapore-MIT Alliance For Research and Technology Centre (SMART)[2013-2014]

Discrimination between primary and secondary dengue virus infection by quantitative analysis of sphingolipids and eicosanoids for lipidomics using triple quadrupole mass spectrometers

### C. CSIR-Indian Institute of Chemical Biology, 4, Raja S. C. Mullick Road, Kolkata-700032 [2007-2012]

Design, synthesis and biological evaluation of some novel antioxidant–antiapoptotic molecules to protect organ damage due to oxidative stress

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## TEACHING EXPERIENCE

### A. GOBARDANGA HINDU COLLEGE, Department of Chemistry [2015- Till now]

- **Basic organic Chemistry:** Stereochemistry, Pericyclic, Organic Synthesis, Heterocyclic Chemistry
- **Biophysical Chemistry:** Enzyme Kinetics, Colloidal chemistry
- **Bio-organic Chemistry:** Protein structure, Nucleosides, Nucleic acid

### B. ACHARYA PRAFULLA CHANDRA COLLEGE, MSc chemistry [2016-Till now]

### C. HABRA SREE CHAINTANYA COLLEGE, MSc chemistry [2018-till date]

#### D. JADAVPUR UNIVERSITY, life science and biotechnology department [2014-2015]

- DNA Structure and properties, Higher Order DNA Structure and Properties, Functional and structural properties of Hemoglobin and Myoglobin, Hill equation.
- **Bioenergetics** – Carbon cycles, bioenergetics and metabolism, the ATP cycle and glycolysis, electron transport chain, oxidative phosphorylation and regulation of ATP production, oxidative degradation of fatty acids and amino acids, nitrogen fixation - mechanism and control.
- **Kinetics** – Principles of chemical kinetics, elementary and multi step reactions. Physicochemical properties and kinetics of enzymatic reactions.

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#### PROJECT

DST-INSPIRE [2014-2019] Total Cost 35 Lakhs (7 Lakhs per year) at GOBARDANGA HINDU COLLEGE

STUDENTS SUPERVISED [Project]

1. **Mr. Rakesh Mondal** –MSc Final year dissertation, 2017
2. **Mr. Sarthak Bhattacharyya**–MSc Final year dissertation, 2018
3. **Ms. Nabanita Dey**- MSc Final year dissertation, 2018
4. **Ms. Aishwarya deb**- MSc Final year dissertation, 2018
5. **Mr Bikram Kumar Moulick** , MSc Final year dissertation, 2019
6. **Mr. Swagata Laga**, MSc Final year dissertation, 2019
7. **Mr. Uday Sarkar**. MSc Final year dissertation, 2019

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#### LIST OF PUBLICATIONS AND PATENT

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1. **Chinmay Pal**, “*Design synthesis of some novel imines and amides having antioxidant activity*” **Chemistry & Biology Interface**, 2021, 11, 1, 40-47.
2. **Chinmay Pal** and Uday Bandyopadhyay “ *Redox active anti parasitic drug*” **Antioxid Redox Signal**. (2012), 17(4), 555-582.
3. **Chinmay Pal**, Milan Kumar Kundu , Uday Bandyopadhyay , Susanta Adhikari “*Synthesis of novel heme-interacting acridone derivatives to prevent free heme-mediated protein oxidation and degradation*” **Bioorg Med Chem Lett**. 21 (2011) 3563–3567.
4. **Chinmay Pal**, Samik Bindu , Sumanta Dey , Athar Alam , Manish Goyal , Mohd. Shameel Iqbal, Pallab Maity , Susanta S. Adhikari , Uday Bandyopadhyay . “*Gallic acid prevents nonsteroidal anti-inflammatory drug-induced gastropathy in rat by blocking oxidative stress and apoptosis*” **Free Radic Biol Med**. 49 (2010), 258-267.
5. **Chinmay Pal** , Souvik Sarkar , Somnath Mazumder , Susanta Adhikari ,Uday Bandyopadhyay . “*Synthesis and biological evaluation of primaquine–chloroquine twin drug: a novel heme-interacting molecule prevents free heme and hydroxyl radical-mediated protein degradation*” **Med. Chem. Commun.**, 2013, 4 (4), 731 – 736
6. Athar Alam\*, **Chinmay Pal**\*, Manish Goyal, Milan Kumar Kundu, Sumanta Dey, Samik Bindu, Mohd Shameel Iqbal, Rahul Kumar, Uttam Pal, Nakul C. Maiti, Susanta Sekhar Adhikari, and Uday Bandyopadhyay “*Synthesis and bio-evaluation of human macrophage migration inhibitory factor inhibitor to develop anti-inflammatory agent*” **Bioorg Med Chem**. 2011, 19(24):7365-73  
[Athar Alam and **Chinmay Pal** contributed equally]
7. Samik Bindu, **Chinmay Pal**, Sumanta Dey, Manish Goyal, Athar Alam, Mohd.Shameel Iqbal, Shubam Dutta, Souvik Sarkar, Rahul Kumar, Pallab Maity, and Uday Bandyopadhyay “*Translocation of Heme Oxygenase-1 to Mitochondria is a Novel Cytoprotective Mechanism against Nonsteroidal Anti-inflammatory Drug-induced Mitochondrial Oxidative Stress, Apoptosis and Gastric Mucosal Injury*” **J Biol Chem**. 2011, 286: 39387-39402

8. Sumanta Dey, Samik Bindu, Manish Goyal, **Chinmay Pal**, Athar Alam, Mohd. Shameel Iqbal, Rahul Kumar, Souvik Sarkar and Uday Bandyopadhyay “*Impact os intravascular hemolysis in malaria on liver dysfunction: involment of hepatic free iron overload, NF-kB activation and neutrophil infiltration*” **J Biol Chem.** **2012** **287: 26630-26646.**
9. Samik Bindu, Somnath Mazumder, Sumanta Dey, **Chinmay Pal**, Manish Goyal, Athar Alam, Mohd. Shameel Iqbal, Souvik Sarkar, Asim Azhar Siddiqui, Chinmoy Banerjee, and Uday Bandyopadhyay “*Non-steroidal anti-inflammatory drug induces proinflammatory damage in gastric mucosa through NF-kB activation and neutrophil infiltration: anti-inflammatory role of heme oxygenase-1 against non-steroidal anti-inflammatory drug*” **Free Radic Biol Med.** **65 (2013) 456–467**
10. Manish Goyal , Athar Alam , Mohd Shameel Iqbal , Sumanta Dey, Samik Bindu, **Chinmay Pal** , Anindyajit Banerjee , Saikat Chakrabarti and Uday Bandyopadhyay . “*Identification and molecular characterization of an Alba-family protein from human malaria parasite Plasmodium falciparum*”. **Nucleic Acids Res.** (2012) **40(3):1174-90**
11. Athar Alam, Saikat Haldar, Hirekodathakallu V. Thulasiram, Rahul Kumar, Manish Goyal, Mohd Shameel Iqbal, **Chinmay Pal**, Sumanta Dey, Samik Bindu, Souvik Sarkar, Uttam Pal, Nakul C. Maiti and Uday Bandyopadhyay “*Novel anti-inflammatory activity of epoxyazadiradione against macrophage migration inhibitory factor: inhibition of macrophage migration inhibitory factor-mediated NF-kB translocation, induction of inducible nitric oxide synthase and production of proinflammatory cytokines*” **J Biol Chem.** **2012, 287(29):24844-61.**
12. Athar Alam , Manish Goyal , Mohd. Shameel Iqbal , Samik Bindu , Sumanta Dey , **Chinmay Pal**, Pallab Maity, Nahren Manuel Mascarenhas, Nanda Ghoshal, Uday Bandyopadhyay. “ *Cysteine-3 and cysteine-4 are essential for the thioredoxin-like oxidoreductase and antioxidant activities of Plasmodium falciparum macrophage migration inhibitory factor* ” **Free Radic Biol Med.** **50 (2011) 1659–1668.**
13. Athar Alam, Manish Goyal, Mohd Shameel Iqbal, **Chinmay Pal**, Sumanta Dey, Samik Bindu, Pallab Maity and Uday Bandyopadhyay “ *Novel antimalarial drug targets: hope for new antimalarial drugs*” **Expert Rev. Clin. Pharmacol.** **2(5), 469–489 (2009).**
14. Pallab Maity, Samik Bindu, Sumanta Dey, Manish Goyal, Athar Alam, **Chinmay Pal**, Kalyan Mitra, and Uday Bandyopadhyay “*Indomethacin, a Non-steroidal Anti-inflammatory Drug, Develops Gastropathy by Inducing Reactive Oxygen Species-mediated Mitochondrial Pathology and Associated Apoptosis in Gastric Mucosa*” **J Biol Chem.** **284(2009), 5, 3058–3068.**
15. Pallab Maity, Samik Bindu, Sumanta Dey, Manish Goyal, Athar Alam, **Chinmay Pal**, Russel Reiter and Uday Bandyopadhyay “*Melatonin reduces indomethacin-induced gastric mucosal cell apoptosis by preventing mitochondrial oxidative stress and the activation of mitochondrial pathway of apoptosis*” **J Pineal Res.** **2009; 46:314–323.**
16. Sumanta Dey, Mithu Guha , Athar Alam , Manish Goyal , Samik Bindu , **Chinmay Pal** , Pallab Maity , Kalyan Mitra, Uday Bandyopadhyay.“*Malarial infection develops mitochondrial pathology and mitochondrial oxidative stress to promote hepatocyte apoptosis.*” **Free Radic Biol Med.** **46 (2009) 271–281.**
17. Pallab Maity, Samik Bindu, Vinay Choubey, Athar Alam, Kalyan Mitra, Manish Goyal, Sumanta Dey, Mithu Guha, **Chinmay Pal**, and Uday Bandyopadhyay. “*Lansoprazole Protects and Heals Gastric Mucosa from Non-steroidal Anti-inflammatory Drug (NSAID)-induced Gastropathy by Inhibiting Mitochondrial as Well as Fas-mediated Death Pathways with Concurrent Induction of Mucosal Cell Renewal*” **J Biol Chem.** **283(2008), 21, 14391–14401.**
18. Manish Goyal , Priyanka Singh , Athar Alam , Sajal Kumar Das , Mohd Shameel Iqbal, Sumanta Dey , Samik Bindu, **Chinmay Pal** , Sanjit Kumar Das , Gautam Panda and Uday Bandyopadhyay “ *Aryl aryl methyl thio arene, a heme interacting molecule prevents highly lethal multi-drug resistant malaria in mouse by promoting oxidative stress in parasite*” **Free Radic Biol Med.** **53 (2012) 129–142.**

## PATENT

1. Uday Bandyopadhyay, **Chinmay Pal**, Samik Bindu, Susanta Adhikari, Patent “*Tryptamine derivatives, their preparation and their use in gastropathy*”. **US Patent US8,901,317B2 December 2, 2014**
  2. Uday Bandyopadhyay, **Chinmay Pal**, Samik Bindu, Susanta Adhikari, Patent “*Tryptamine derivatives, their preparation and their use in gastropathy*”. **EUROPEAN Patent , EP 2 616 439 B1 16.12.2015**
  3. Uday Bandyopadhyay, **Chinmay Pal**, Samik Bindu, Susanta Adhikari, Patent “*Tryptamine derivatives, their preparation and their use in gastropathy*”. **Japanese Patent No: 5868980 January 15, 2016**
  4. Uday Bandyopadhyay, **Chinmay Pal**, Samik Bindu, Susanta Adhikari, Patent “*Tryptamine derivatives, their preparation and their use in gastropathy*”. **Indian Patent No: 327424 20/12/2019**
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