# Resume of Dr. Krishnananda Chattopadhyay

## Krishnananda Chattopadhyay

Senior Principal Scientist and Head Structural Biology and Bioinformatics Division CSIR-Indian Institute of Chemical Biology, Kolkata 700032, INDIA

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Date of Birth: Nov 06, 1970

## **EDUCATION**

1991-1994: MSc in Chemistry, The University of Burdwan, Burdwan, India, first class.

- 1988-1991: BSc in Chemistry, Hooghly Mohsin College, The University of Burdwan, India, first class.
- 1994-1999: PhD in Chemical Sciences, Tata Institute of Fundamental Research (TIFR), Mumbai

# **EMPLOYMENT HISTORY**

- Sep 2014 to Current: Senior Principal Scientist, Structural Biology and Bioinformatics Division CSIR-Indian Institute of Chemical Biology Professor in Chemistry and Biology Academy of Scientific and Innovative Research
- Feb 2017 to Current: Head Structural Biology and Bioinformatics Division CSIR-Indian Institute of Chemical Biology
- Jun 2019 onwards: Head Library and Documentation Division CSIR-Indian Institute of Chemical Biology
- Sep 2010 to Sep 2014: Principal Scientist
   Structural Biology and Bioinformatics Division
   Indian Institute of Chemical Biology, Kolkata 700032
   Associate Professor in Chemistry and Biology
   Academy of Scientific and Innovative Research
- Dec 2006-2010: Senior Scientist
   Protein Folding and Dynamics Laboratory
   Structural Biology and Bioinformatics Division
   Indian Institute of Chemical Biology, Kolkata 700032
- 2005 2006: Senior Scientist, Formulation Development and Product Enhancement, Pfizer Global Biologics, St. Louis, MO 63017, USA

 2000-2005: Post doctoral research Advisor: Dr. Carl Frieden, Biochemistry and Molecular Biophysics, Washington University School of Medicine, St. Louis, MO 63110

#### **LIST OF PUBLICATIONS:**

- Mahapatra, A; Mandal, A & Chattopadhyay, K (2021) Cholesterol in Synaptic Vesicle Membranes Regulates the Vesicle-Binding, Function, and Aggregation of α-Synuclein Journal of Physical Chemistry B (American Chemical Society), DOI: <a href="https://doi.org/10.1021/acs.jpcb.1c03533">https://doi.org/10.1021/acs.jpcb.1c03533</a> (Approved for the Cover)
- Chakraborty, R.; Dey, S.; Sil, P., Paul, S. S.; Bhattacharya, D.; Bhunia, A.; Sengupta, J.; Chattopadhyay, K\*. (2021) Conformational distortion in a fibril-forming oligomer arrests alpha-Synuclein fibrillation and minimizes its toxic effects; Communications Biology (Springer Nature); DOI:10.1038/s42003-021-02026-z
- Sannigrahi, Achinta; Chowdhury, Sourav; Das, Bidisha; Banerjee, Amrita; Halder, Animesh; Saleem, Mohammed; Naganathan, Athi N; Karmakar, Sanat; Chattopadhyay, K\* (2021) The metal cofactor zinc and interacting membranes modulate SOD1 conformation-aggregation landscape in an in vitro ALS Mode, eLife; DOI: <a href="https://doi.org/10.7554/eLife.61453">https://doi.org/10.7554/eLife.61453</a>
   Highlights in the journal: <a href="https://elifesciences.org/articles/61453#digest">https://elifesciences.org/articles/61453#digest</a>
   Highlights in other scientific blogs: <a href="https://www.scisoup.org/article/2021/CSIR-IICB-led-researchers-provide-new-insights-into-ALS-disease.html">https://elifesciences.org/article/2021/CSIR-IICB-led-researchers-provide-new-insights-into-ALS-disease.html</a>
- Chattopadhyay K\* (2021) Probing the influence of mutations on FUS condensates, one molecule at a time;
   Communications Biology (Springer Nature) DOI: <a href="https://doi.org/10.1038/s42003-020-01560-6">https://doi.org/10.1038/s42003-020-01560-6</a>
- Bandyopadhyay, A; Sannigrahi, A; & Chattopadhyay K\* (2021) Membrane composition and lipid to protein ratio modulate amyloid kinetics of yeast prion protein; RSC Chemical Biology DOI: 10.1039/d0cb00203h
- Mahapatra, A; Sarkar, S; Biswas, SC; & Chattopadhyay K\* (2020) Modulation of α-Synuclein Fibrillation by Ultrasmall and Biocompatible Gold Nanoclusters; ACS Chemical Neuroscience DOI: <a href="https://doi.org/10.1021/acschemneuro.0c00550">https://doi.org/10.1021/acschemneuro.0c00550</a>
- Mandal, N; De, N; Jana, P; Sannigrahi, A; & Chattopadhyay K\* (2020) Correlation between CNS Tuberculosis and the COVID-19 Pandemic: The Neurological and Therapeutic Insights; ACS Chemical Neuroscience DOI: <a href="https://doi.org/10.1021/acschemneuro.0c00546">https://doi.org/10.1021/acschemneuro.0c00546</a>
- 8. Sannigrahi, A; De, N; & **Chattopadhyay K\*** (2020) The bright and dark sides of protein conformational switches and the unifying forces of infections;
- 9. Communications Biology (Springer Nature), DOI: <a href="https://doi.org/10.1038/s42003-020-1115">https://doi.org/10.1038/s42003-020-1115</a>
- 10. Kulsi, G; Sannigrahi, A; Mishra, S; Saha, KD; Datta, S; Chattopadhyay, P; & Chattopadhyay K\* (2020) A Novel Cyclic Mobile Transporter Can Induce Apoptosis by Facilitating Chloride Anion Transport into Cells;

- ACS Omega; DOI: <a href="https://doi.org/10.1021/acsomega.0c00438">https://doi.org/10.1021/acsomega.0c00438</a>
- 11. Ghosh, G; Sakshi, Swain, BC; Chakraborty, R; Tripathy, U; & **Chattopadhyay K**\* (2020) A Novel Tool to Investigate the Early and Late Stages of α-Synuclein Aggregation; ACS Chemical Neuroscience DOI: <a href="https://doi.org/10.1021/acschemneuro.0c00068">https://doi.org/10.1021/acschemneuro.0c00068</a> (**Highlights in Telengana Today:** <a href="https://telanganatoday.com/a-novel-tool-to-help-gain-deeper-insight-into-parkinsons-disease">https://telanganatoday.com/a-novel-tool-to-help-gain-deeper-insight-into-parkinsons-disease</a>)
- 12. Halder, A; Sannigrahi, A; De, N; **Chattopadhyay K**\*, S Karmakar (2020) Kinetoplastid membrane protein 11 induces pores in anionic phospholipid membranes: Effect of cholesterol, Langmuir 36, 3522
- 13. Goswami, A; Mukherjee, K; Mazumder, A; Ganguly, S; Mukherjee, I; Chakrabarti, S; Roy, S; Sundar, S; Chattopadhyay K; & Bhattacharyya, SN (2000) MicroRNA exporter HuR clears the internalized pathogens by promoting pro-inflammatory response in infected macrophages, EMBO Molecular Medicine 12, e11011
- 14. Saha, S; Sannigrahi, A; Chattopadhyay, K; & Chowdhury, J (2020) Interaction of KMP-11 and its mutants with ionic liquid choline dihydrogen phosphate: Multispectroscopic studies aided by docking and molecular dynamics simulations Journal of Molecular Liquids 301, 112475
- 15. Chowdhury, S; Sanyal, D; Sen, S; Uversky, VN; Maulik, U & **Chattopadhyay K\*** (2019) Biomolecules 9, 826
- 16. Basak, S; Sengupta, S & Chattopadhyay K\* (2019) Understanding biochemical processes in the presence of sub-diffusive behavior of biomolecules in solution and living cells Biophysical Reviews 11, 851 (Invited Review Article)
- 17. Mahapatra, A, Sarkar, S., Biswas, SC, & Chattopadhyay K\* (2019) An aminoglycoside antibiotic inhibits both lipid-induced and solution-phase fibrillation of α-Synuclein in vitro Chemical Communication 55, 11052 (Highlights in Nature India, <a href="https://www.natureasia.com/en/nindia/article/10.1038/nindia.2019.130">https://www.natureasia.com/en/nindia/article/10.1038/nindia.2019.130</a>)
- Sannigrahi A, Nandi I, Chall S, Jawed JJ, Halder A, Majumdar S, Karmakar S, Chattopadhyay K\*, (2019) Conformational switch driven membrane pore formation by Mycobacterium secretory protein MPT63 induces macrophage cell death, ACS Chemical Biology, (DOI https://doi.org/10.1021/acschembio.9b00327)
- Chowdhury S, Sen S, Banerjee A, Uversky VN, Maulik U & Chattopadhyay K\* (2019) Network mapping of the conformational heterogeneity of SOD1 by deploying statistical cluster analysis of FTIR spectra
   Cellular and Molecular Life Sciences, 1-10 (DOI https://doi.org/10.1007/s00018-019-03108-2)

- 20. Sannigrahi A, Mullick D, Sanyal D, Sen S, Maulik, U & Chattopadhyay K\* (2019) Effect of ergosterol on the binding of KMP-11 with phospholipid membranes: implications in leishmaniasis ACS Omega 4, 5155
- 21. Som SC, Sannigrahi A, Nandi M, Mishra VK, De P, **Chattopadhyay K...** (2019) A novel PEGylated block copolymer in new age therapeutics for Alzheimer's disease Molecular Neurobiology (DOI https://doi.org/10.1007/s00018-019-03108-2)
- 22. Chakraborty R, **Chattopadhyay**, **K**\* (2019) Cryo-Electron Microscopy Uncovers Key Residues within the Core of Alpha-Synuclein Fibrils ACS Chemical Neuroscience 10, 1135.
- 23. Sen S, Dey, A, Chowdhury, S, Maulik, U, **Chattopadhyay, K** (2019) Understanding the evolutionary trend of intrinsically structural disorders in cancer relevant proteins as probed by Shannon entropy scoring and structure network analysis BMC Bioinformatics 19, 549.
- 24. Chatterjee, S., Ghosh, S., Mishra, S., Banerji, B., Saha, K.D, & **Chattopadhyay K**\* (2019) Efficient detection of early events of alpha synuclein aggregation using a cysteine specific hybrid scaffold Biochemistry, 58, 1109
- 25. Hazra S., Bodhak, C., Chowdhury S., Sanyal D, Mandal, S. **Chattopadhyay K**, Pramanik, A. (2019) A novel tryptamine-appended rhodamine-based chemosensor for selective detection of Hg<sup>2+</sup> present in aqueous medium and its biological applications Analytical and Bioanalytical Chemistry https://doi.org/10.1007/s00216-018-1546-0 (Cover)
- 26. Ghosh S., Mahapatra A, **Chattopadhyay**, **K**\* (2019) Modulation of Alpha-Synuclein Aggregation by Cytochrome c Binding and Hetero-di-Tyrosine Adduct Formation ACS Chemical Neuroscience, 10, 1300
- 27. Chakraborty, R., Sahoo, S., Halder, N., Rath, H., **Chattopadhyay, K**\*. (2018) Conformational-Switch Based Strategy Triggered by [18]  $\pi$  Heteroannulenes toward Reduction of Alpha Synuclein Oligomer Toxicity ACS Chemical Neuroscience 10, 573
- 28. Mukherjee S, Hazra, S., Chaowdhury, S., **Chattopadhyay, K**. .. (2018) A novel pyrrole fused coumarin based highly sensitive and selective fluorescence chemosensor for detection of Cu2+ ions and applications towards live cell imaging, Journal of Photochemistry and Photobiology A: Chemistry 364, 635-644
- 29. Tripathi T. & **Chattopadhyay**, **K**\* (2018) Interaction of α-Synuclein with ATP Synthase: Switching Role from Physiological to Pathological, ACS Chemical Neuroscience 10 (1), 16-17
- 30. Nandi I., Chall, S., Chowdhury, S. Mitra, T., Roy SS, **Chattopadhyay**, **K**\*. (2018) Protein Fibril-Templated Biomimetic Synthesis of Highly Fluorescent Gold Nanoclusters and Their Applications in Cysteine Sensing, ACS Omega 3 (7), 7703-7714

- 31. Ghosh, S., Kundu, A. & Chattopadhyay, K\* (2018) Small Molecules Attenuate the Interplay between Conformational Fluctuations, Early Oligomerization and Amyloidosis of Alpha Synuclein, Scientific Reports 8(1) 5481 (Highlights in The Hindu, Jun 03, 2018: <a href="https://www.thehindu.com/sci-tech/health/on-parkinsons-trail/article24069288.ece">https://www.thehindu.com/sci-tech/health/on-parkinsons-trail/article24069288.ece</a>; The Hindu BusinessLine, May 30, 2018; <a href="https://www.thehindubusinessline.com/news/science/indian-scientists-find-new-clues-to-parkinsons/article24035714.ece">https://www.thehindubusinessline.com/news/science/indian-scientists-find-new-clues-to-parkinsons/article24035714.ece</a>; Rajya Sabha TV Aug 11, 2018; <a href="https://www.youtube.com/watch?v=wAzklKeGzXA&t=11s&index=6&list=PLVOgwAzklKeGzXA&t=11s&index=6&list=11s&index=6&list=11s&index=6&list=
- 32. Sarkar-Banerjee, S., Goyal, S., Gao, N. Mack, J. Thompson, Dunlap, D., **Chattopadhyay, K**\*, Finzi, L\* (2018) Specifically bound lambda repressor dimers promote adjacent non-specific binding Plos One 13 (4), e0194930
- 33. Sannigrahi A., Chall, S., Jawed JJ., Kundu, A., Majumdar, S., & Chattopadhyay, K\*., Nanoparticle Induced Conformational Switch Between α-Helix and β-Sheet Attenuates Immunogenic Response of MPT63, Langmuir 34 (30), 8807-8817 (Highlights in The Hindu Jul 29, 2018; <a href="https://www.thehindu.com/todays-paper/tp-opinion/a-chink-in-tbs-armour/article24543746.ece">https://www.thehindu.com/todays-paper/tp-opinion/a-chink-in-tbs-armour/article24543746.ece</a> The Times of India, Aug 11, 2018; <a href="https://timesofindia.indiatimes.com/city/kolkata/kolkata-researchers-develop-molecule-for-tb-vaccine/articleshow/65361922.cms">https://timesofindia.indiatimes.com/city/kolkata/kolkata-researchers-develop-molecule-for-tb-vaccine/articleshow/65361922.cms</a>)
- 34. Saha, B., Chowdhury, S., Sanyal, D., **Chattopadhyay, K**, Suresh Kumar, G. (2018) Comparative Study of Toluidine Blue O and Methylene Blue Binding to Lysozyme and Their Inhibitory Effects on Protein Aggregation ACS Omega 3 (3), 2588-2601.
- 35. Singharoy, D., Chowdhury, S., Mati, SS, Ghosh, S., **Chattopadhyay K**\*, Bhattacharya, SC\* (2017) Photoinduced Electron Transfer Switching Mechanism of a Naphthalimide Derivative with its Solvatochromic Behaviour: An Experimental and Theoretical Study with...

  Chemistry-A European Journal 23 (65), 16516-16524
- 36. Chall, S., Matti, SS, Das, I., Kundu, A. & Chattopadhyay, K\* (2017) Understanding the Effect of Single Cysteine Mutations on Gold Nanoclusters as Studied by Spectroscopy and Density Functional Theory Modeling Langmuir 33(43) 12120-12129.
- 37. Kundu A., Kundu, S. & Chattopadhyay, K\*. (2017) The presence of non-native helical structure in the unfolding of a beta sheet protein MPT63, Protein Science 26(3) 536-549.
- 38. Sannigrahi A., Maity, P., Karmakar, S. & **Chattopadhyay**, **K**\*. (2017) Interaction of KMP-11 with Phospholipid Membranes and Its Implications in Leishmaniasis: Effects of Single Tryptophan Mutations and Cholesterol, The Journal of Physical Chemistry B 121, 1824
- 39. Banerjee-Sarkar, S., Chowdhury, S., Paul, S.S., Dutta, D., Ghosh, A., & Chattopadhyay, K\*. (2016) The Non-native Helical Intermediate State May Accumulate

- at Low pH in the Folding and Aggregation Landscape of the Intestinal Fatty Acid Binding Protein
- Biochemistry 55 (32) 4457-4468.
- 40. Paul, S. S., Sil, P., Chakraborty, R., Haldar, S., & **Chattopadhyay**, **K\*.** (2016) Molecular crowding affects the conformational fluctuations, peroxidase activity and folding landscape of yeast cytochrome c Biochemistry 55, 2332-2343.
- 41. Kundu, A, Ghosh, S., & **Chattopadhyay**, **K**\*. (2016) The effect of small molecules on early and late events of alpha synuclein aggregation in solution and inside living cells Biophysical J. 110, 533a.
- 42. Paul, S.S., Sil, P., Haldar, S., Mitra, S. & **Chattopadhyay**, **K\*.** (2015) Subtle change in the charge distribution of surface residues may affect the secondary functions of cytochrome c,
  - J. Biol. Chem. 290, 14476-14490. (Highlights: Shape your duty, Eggleston AK et al Nature Chemical Biology https://doi.org/10.1038/nchembio.1829).
- 43. Mukherjee, M., Ghosh, R., **Chattopadhyay, K**\*. & Ghosh, S. (2015) pH-induced structural change of a multi-tryptophan protein MPT63 with immunoglobulin-like fold:identification of perturbed tryptophan residue/residues,

  Journal of Biomolecular Structure and Dynamics DOI:10.1080/07391102.2014.992043
- 44. Haldar, S., Sil, P., Thangamuniyandi, M., & **Chattopadhyay K\***. (2014) Conversion of amyloid fibrils of cytochrome c into matured nano rods through a honeycomb morphology, Langmuir 31, 4213-4223.
- 45. Joshi, N., Basak, S., Kundu, S., De, G., Mukhopadhyay, A., & **Chattopadhyay**, **K**\*. (2014) The attenuation of the early events of alpha-synuclein aggregation: A fluorescence correlation spectroscopy and laser scanning microscopy study in the presence of surface coated Fe<sub>3</sub>O<sub>4</sub> nanoparticles, Langmuir 31, 1469-1478.
- 46. Basak, S., Prasad, G.V., Varkey, J. & Chattopadhyay, K\*. (2014) Early SDS induced collapse of alpha synuclein correlates with its amyloid formation, ACS Chemical Neuroscience 6, 239-246 (Highlights in Journal Web Page).
- 47. Parmanik, B., Kundu, A., **Chattopadhyay, K\***.,& Patra, A\*. (2014) Study of binding interactions between MPT63 protein and Au nanocluster, RSC Advances 4, 35059-35066.
- 48. Basak, S. & Chattopadhyay, K\*. (2014) Studies of protein folding and dynamics using single molecule fluorescence spectroscopy, Physical Chemistry Chemical Physics, DOI: 10.1039/C3CP55219E. (invited review article)
- 49. Sarkar, S. & **Chattopadhyay**, **K**\*. (2014) Studies of early events of folding of a predominately beta sheet protein using fluorescence correlation spectroscopy and other biophysical methods, Biochemistry 53, 1393-1402

- Lahiri, S., Banerjee, S., Dutta, T., Sengupta, S., Dey, S., Roy, R., Sengupta, D., Chattopadhyay, K. & Ghosh, A. K\*. (2014) Enzymatic and regulatory attributes of Trehalose-6-Phosphate Phosphatase from Candida utilis and its role during thermal stress, Journal of Cellular Physiology, DOI: 10.1002/jcp.24562.
- 51. Basak S., **Chattopadhyay K\***. (2013) Fluorescence Correlation Spectroscopy Study on the Effects of the Shape and Size of a Protein on Its Diffusion Inside a Crowded Environment, Langmuir 29, 14709-14717.
- 52. Sharma, S., Sarkar, S., Paul, S.S., Roy, S. & **Chattopadhyay**, **K**\*. (2013) A small molecule chemical chaperone optimizes its unfolded state contraction and denaturant like properties, Sci. Rep. 3, 3525; DOI:10.1038/srep03525, Nature Publishing Group
- 53. Joshi N., Mukhopadhyay, A., Basak, S., De, G., **Chattopadhyay**, **K.\*** (2013) Surface Coating Rescues Proteins from Magnetite Nanoparticle Induced Damage, Part. Part. Syst. Charact. 30, 683–694 (**Journal Front Cover Article**).
- 54. Sharma, S., Pathak, N., **Chattopadhyay, K**\*. (2012) Osmolyte induced stabilization of protein molecules: A Brief Review, Journal of Proteins and Proteomics 3(2):129-139.
- 55. Ghosh R., Mukherjee M., **Chattopadhyay K\***, Ghosh S\*. (2012) Unusual optical resolution of all four tryptophan residues in MPT63 protein by phosphorescence spectroscopy: assignment and significance, J Phys Chem B 116(41):12489-500.
- 56. Haldar, S., & **Chattopadhyay**, **K**\*. (2012) The interconnection of salt induced hydrophobic compaction and secondary structure formation depends on solution conditions: revisiting early events of protein folding at single molecule resolution, Journal of Biological Chemistry 2012, 287,11546–11555.
- 57. Haldar, S., Paul, S. S., Joshi, N., Dasgupta, A., **Chattopadhyay, K\***. (2012) The Presence of the Iron-Sulfur Motif Is Important for the Conformational Stability of the Antiviral Protein, Viperin, Plos One Volume 7 Issue 2 e31797.
- 58. Lahiri, S., Basu, A., Sengupta, S., Banerjee, S., Dutta, T., Soren, D., **Chattopadhyay, K**., Ghosh, A. K\*. 2012 Purification and characterization of a trehalase–invertase enzyme with dual activity from Candida utilis, Archives of Biochemistry and Biophysics 522, 90–99.
- 59. Mukhopadhyay, A., Joshi, N., **Chattopadhyay, K\***., De, G\*. (2011) A facile synthesis of PEG-coated magnetite (Fe3O4) nanoparticles and their prevention of the reduction of cytochrome c, ACS Appl Mater Interfaces 2012, 4, 142-9.
- 60. Sen, T., Mandal, S., Haldar, S., **Chattopadhyay, K\***., and Patra, A\*., (2011) J. Phys. Chem. C 115 (49), 24037–24044.

- 61. Haldar, S., & **Chattopadhyay**, **K**\*. (2011) Effects of arginine and other solution additives on the self-association of different surfactants: an investigation at single molecule resolution, Langmuir 27, 5842-5849
- 62. Mukhopadhyay, A., Basak, S., Das, JK., **Chattopadhyay, K**. & De, G\*. (2010) Ag-TiO2 nanoparticle co-doped SiO2 films on ZrO2 barrier-coated glass substrates with antibacterial activity in ambient condition ACS Appl. Mater. Interfaces 9, 2540-6.
- 63. Haldar, S, Mitra, S. & **Chattopadhyay**, **K**\* (2010) The role of the protein stabilizers on the conformations of the unfolded states and its early folding kinetics: An investigation at single molecular resolution
  J. Biol. Chem. 285, 25314-23.
- 64. Ghosh, R., Sharma, S. & **Chattopadhyay, K**\*. (2009) Effect of Arginine on Protein Aggregation Studied by Fluorescence Correlation Spectroscopy and Other Biophysical Methods
  Biochemistry 48 (5), 1135 1143.
- 65. **Chattopadhyay**, **K**. & Frieden, C. (2006) Steady State and Time-resolved fluorescence studies of the intestinal fatty acid binding proteins Proteins 63, 327-335.
- 66. **Chattopadhyay, K.,** Elson, E. L., & Frieden, C. (2005) Measurements of microsecond dynamics of the unfolded state by using fluorescence methods Proc. Natl. Acad. Sci (USA) 102, 2385-2389 (**Faculty of 1000 Recommended**).
- 67. **Chattopadhyay, K.**, Saffarian, S., Elson, E. L., & Frieden, C. (2005) Measuring unfolding of proteins in the presence of denaturant using fluorescence correlation spectroscopy, Biophysical Journal 88, 1413-1422.
- 68. **Chattopadhyay**, **K.,**& Mazumdar, S. (2003) Stabilization of partially folded states of cytochrome c in aqueous micelles: effects of ionic and hydrophobic interactions, Biochemistry 42, 14606-14613.
- 69. **Chattopadhyay**, **K**., Saffarian, S., Elson, E. L., & Frieden, C. (2002) Measurement of microsecond dynamic motion in the intestinal fatty acid binding protein by using fluorescence correlation spectroscopy, Proc. Natl. Acad. Sci. (USA) 99, 14171 14176.
- 70. Frieden, C., **Chattopadhyay, K.**, & Elson, E.L. (2002) What Fluorescence Correlation Spectroscopy can tell us about unfolded state of a protein. Adv. Prot. Chem. 62, 91-109.
- 71. **Chattopadhyay, K,** Das, T. K, Majumdar, A, & Mazumdar, S (2002) NMR studies on interaction of lauryl maltoside with cytochrome c oxidase: a model for surfactant interaction with the membrane protein J. Inor. Biochem 91, 116-124.
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- 73. **Chattopadhyay**, **K**., & Mazumdar, S. (2001) Direct electrochemistry of heme proteins: effect of electrode surface modification by neutral surfactants
  Bioelectrochemistry 53, 17-24.
- 74. **Chattopadhyay**, **K.**& Mazumdar, S. (2000) Structural and conformational stability of horseradish peroxidase: effect of temperature and pH Biochemistry 39, 263-270.
- 75. **Chattopadhyay, K.**& Mazumdar, S. (1999) Direct electrochemical oxidation of horseradish peroxidase: cyclic voltammetric and spectroelectrochemical studies New J Chem 23, 137-139.
- 76. Chattopadhyay, K.& Mazumdar, S. (1997) Direct electrochemistry of heme undecapeptide in aqueous surfactant solutions: The effect of hydrophobicity and axial ligation on redox potential of heme CurrSci 73, 65-68.

#### SELECTED LIST OF INVITED TALKS

- Indo-Finland Joint Workshop, Turku Biomaterial Day, University of Turku, Finland, Oct 28-30, 2015
- International Bioanalytical Congress, Berlin, Germany, Sep 27, 2011
- Center for Physics in living Cell, University of Illinois at Urbana Champaign, USA, Sep24, 2010
- Physics Colloquium, Department of Physics, Emory University, USA, Oct 08, 2010.
- Pfizer Lunch and Learn Talk, Pfizer Inc., Saint Louis, USA Aug 16, 2010

## **CONFERENCES CHAIR:**

- International conference on chemical Biology, CSIR-Indian Institute of Chemical Biology, Jan 27-29, 2013
- International conference on protein folding and dynamics, National Centre for Biological Sciences, Tata Institute of Fundamental Research, Bangalore Nov05-07, 2014
- FCS 2012, Tata Institute of Fundamental Research, Mumbai, CSIR-Indian Institute of Chemical Biology & Saha Institute of Nuclear Physics, Dec 07, 2012.

## List of PhD degrees awarded from the group and their present institution (last known):

- Dr. Ranendu Ghosh (Biocon, India)
- Dr. Sunny Sharma
- Dr. Shubhasis Haldar (Ashoka University, India)
- Dr. Sujit Basak (University of Massachusetts Medical School)
- Dr. Nidhi Joshi
- Dr. Suparna Sarkar (Rice University)
- Dr. Sagar Lahiri (University of Michigan)
- Dr. Gautam Kulsi
- Dr. Amrita Kundu (Indian Institute of Science)

<sup>\*</sup>Corresponding author

- Dr. Simanta sarani Paul (Max-Planck-Institut für Biochemie)
- Dr. Pallabi Sil (University of Alberta)
- Dr. Sourav Chowdhury (Harvard University)
- Dr. Sumanta Ghosh (MD Anderson Cancer Center)
- Dr. Achinta Sannigrahi (Indian Institute of Science)
- Dr. Arnab Bandyopadhyay (Beckman-Coulter)

## **AWARDS/HONORS**

- 2019: Fellow of West Bengal Academy of Science and Technology
- 2019: Editorial Board Member, Communication Biology, Springer Nature
- 2019: Academic Editor, Plos One
- 2019: Fellow of Royal Society of Chemistry
- 2015; American Chemical Society Membership Award
- 2010: Visiting Faculty, The Department of Physics, University of Illinois at Urbana Champaign,
- IL, USA
- 2009: Indo-US Science and Technology Forum Research Fellowship
- 2006: Pfizer performance recognition award