

## BIODATA

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Citations	574
h-index	12
i-10 index	16

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## EDUCATION:

**Ph.D., Science, CSIR-IICB, 2020 (CGPA: 8.75/10)**

Concentrations: Biological Sciences, Cancer Biology, Chemical Biology.

Doctoral Thesis: "Chemical modulators targeted to mitochondria and microtubule for cancer therapy."

Thesis Advisor: Professor Surajit Ghosh, IIT Jodhpur

**MSc., Molecular Biology, WBUT, 2014 (CGPA: 9.11/10)**

Thesis: Exploring the Neuronal Potential of UCB derived Mesenchymal Stem Cells

Thesis Advisor: Prof. Subrata Kumar Dey

**BSc. (Hons.), Biotechnology, WBUT, 2012 (CGPA: 9.13/10)**

## PUBLICATIONS:

1. **Gaurav Das**, Nabanita Mukherjee, Surajit Ghosh: *Neurological insights of COVID-19 pandemic*. ACS chemical neuroscience, 2020, 11 (9), 1206-1209, DOI: 10.1021/acschemneuro.0c00201 (**Impact Factor: 4.418**)

2. **Gaurav Das**, Surojit Ghosh, Shubham Garg, Satyajit Ghosh, Aniket Jana, Ramkamal Samat, Nabanita Mukherjee, Rajsekhar Roy, Surajit Ghosh: *An overview of key potential therapeutic strategies for combat in the COVID-19 battle*. RSC Advances, 2020, 10 (47), 28243-28266, DOI: 10.1039/D0RA05434H (**Impact Factor: 3.361**)
3. **Gaurav Das**, Varsha Gupta, Juhee Khan, Deepshikha Mukherjee and Surajit Ghosh: *Generation of Neurospheres from Mixed Primary Hippocampal and Cortical Neurons Isolated from E14-E16 Sprague Dawley Rat Embryo*. Journal of Visualized Experiments: JoVE, 2019, e59800, DOI: 10.3791/59800 (**Impact Factor: 1.355**)
4. **Gaurav Das**, Shyamtanu Chattoraj, Somen Nandi, Prasenjit Mondal, Abhijit Saha, Kankan Bhattacharyya, Surajit Ghosh: *Probing Conformational Dynamics of Photosystem I in Unconfined and Confined Space*. Physical Chemistry Chemical Physics, 2017, 20(1), 449-455, DOI:10.1039/C7CP07375E (**Impact Factor: 3.676**)
5. **Gaurav Das**, Varsha Gupta, Surajit Ghosh: *Glial-Neuron Transformation by "Chemical Cocktail"*. ACS Chemical Neuroscience, 2018, 10 (1), 42-43, DOI:10.1021/acschemneuro.8b00684 (**Impact Factor: 4.418**)
6. **Gaurav Das**, Surajit Ghosh: *Why Microtubules Should Be Considered as One of the Supplementary Targets for Designing Neurotherapeutics*. ACS Chemical Neuroscience, 2019, 10(3), 1118-1120, DOI:10.1021/acschemneuro.9b00002 (**Impact Factor: 4.418**)
7. Saswat Mohapatra#, **Gaurav Das**#, Chirantan Kar#, Masashi Nitani, Yutaka Ie, Yoshio Aso, Surajit Ghosh: *Mitochondria-Targeted New Blue Light-Emitting Fluorescent Molecular Probe*. ACS Omega, 2019, 4(5), 9361-9366, DOI:10.1021/acsomega.8b03331 (# denotes Equal Contribution) (**Impact Factor: 3.512**)
8. Saswat Mohapatra#, **Gaurav Das** #, Varsha Gupta #, Prasenjit Mondal, Masashi Nitani, Yutaka Ie, Shreyam Chatterjee, Yoshio Aso, Surajit Ghosh: *Power of organic electron acceptor in modulation of intracellular mitochondrial ROS: Induces JNK and caspase dependent apoptosis of cancer cells*. ACS Omega, 2021, 6, 11, 7815-7828, DOI:10.1021/acsomega.1c00308 (# denotes Equal Contribution) (**Impact Factor: 3.512**)
9. Surajit Barman#, **Gaurav Das**#, Varsha Gupta, Prasenjit Mondal, Batakrishna Jana, Debmalya Bhunia, Juhee Khan, Deepshikha Mukherjee, Surajit Ghosh: *Dual Arm Nanocapsule Targets Neuropilin-1 Receptor and Microtubule: A Potential Nanomedicine Platform*. Molecular Pharmaceutics, 2019, 16(6), 2522-2531, DOI: 10.1021/acs.molpharmaceut.9b00123 (# denotes Equal Contribution) (**Impact Factor: 4.939**)

10. Krishnangsu Pradhan#, Gaurav Das#, Juhee Khan, Varsha Gupta, Surajit Barman, Anindyasundar Adak, Surajit Ghosh: *Neuro-Regenerative Choline Functionalized Injectable Graphene Oxide Hydrogel Repairs Focal Brain Injury*. ACS Chemical Neuroscience, 2018, 10(3), 1535-1543, DOI:10.1021/acschemneuro.8b00514 (# denotes Equal Contribution) (**Impact Factor: 4.418**)
11. Juhee Khan#, Gaurav Das#, Varsha Gupta, Saswat Mohapatra, Subhajit Ghosh, Surajit Ghosh: *Neurosphere Development from Hippocampal and Cortical Embryonic Mixed Primary Neuron Culture: A Potential Platform for Screening Neuro-Chemical Modulator*. ACS Chemical Neuroscience, 2018, 9(11), 2870-2878, DOI:10.1021/acschemneuro.8b00414 (# denotes Equal Contribution) (**Impact Factor: 4.418**)
12. Parag Savla#, Gaurav Das#, Prasenjit Mondal#, Rahul Laxman Gajbhiye, Parasuraman Jaisankar, Surajit Ghosh: *Methanolic Extract of Papaya Leaves Shows Neuroprotective Effect*. ChemistrySelect, 2017, 2(29), 9454-9457, DOI:10.1002/slct.201701656 (# denotes Equal Contribution) (**Impact Factor: 2.109**)
13. Anindyasundar Adak#, Gaurav Das#, Surajit Barman, Saswat Mohapatra, Debmalya Bhunia, Batakrishna Jana, Surajit Ghosh: *Biodegradable Neuro-Compatible Peptide Hydrogel Promotes Neurite Outgrowth, Shows Significant Neuroprotection, and Delivers Anti-Alzheimer Drug*. ACS Applied Materials & Interfaces, 2017, 9(6), 5067-5076, DOI:10.1021/acsami.6b12114 (# denotes Equal Contribution). (**Impact Factor: 9.229**)
14. Prasenjit Mondal, Gaurav Das, Juhee Khan, Krishnangsu Pradhan, Rathnam Mallesh, Abhijit Saha, Batakrishna Jana, Surajit Ghosh: *Potential Neuroprotective Peptide Emerged from Dual Neurotherapeutic Targets: A Fusion Approach for the Development of Anti-Alzheimer's Lead*. ACS Chemical Neuroscience, 2019, 10(5), 2609-2620, DOI:10.1021/acschemneuro.9b00115 (**Impact Factor: 4.418**)
15. Surajit Barman, Gaurav Das, Prasenjit Mondal, Krishnangsu Pradhan, Batakrishna Jana, Debmalya Bhunia, Abhijit Saha, Chirantan Kar, Surajit Ghosh: *Tripodal Molecular Propeller Perturbs Microtubule Dynamics: Indole acts as a Blade and Plays Crucial Role in Anticancer Activity*. Chemical Communications, 2019, 55(16), 2356-2359, DOI:10.1039/C9CC00074G (**Impact Factor: 6.222**)
16. Surajit Barman, Gaurav Das, Prasenjit Mondal, Krishnangsu Pradhan, Debmalya Bhunia, Juhee Khan, Chirantan Kar, Surajit Ghosh: *Power of Tyrosine Assembly in Microtubule Stabilization and Neuroprotection Fueled by Phenol Appendages*. ACS Chemical Neuroscience, 2018, 10(3), 1506-1516, DOI:10.1021/acschemneuro.8b00497 (**Impact Factor: 4.418**)

17. Krishnangsu Pradhan, Gaurav Das, Varsha Gupta, Prasenjit Mondal, Surajit Barman, Juhee Khan, Surajit Ghosh: *Discovery of Neuro-regenerative Peptoid from Amphibian Neuropeptide Inhibits A $\beta$  Toxicity and Crossed Blood-Brain Barrier*. ACS Chemical Neuroscience, 2018, 10(3), 1355-1368, DOI:10.1021/acschemneuro.8b00427 (**Impact Factor: 4.418**)
18. Krishnangsu Pradhan, Gaurav Das, Prasenjit Mondal, Juhee Khan, Surajit Barman, Surajit Ghosh: *Genesis of Neuroprotective Peptoid from A $\beta$ 30-34 Inhibits A $\beta$  Aggregation and AChE Activity*. ACS Chemical Neuroscience, 2018, 9(12), 2929-2940, DOI:10.1021/acschemneuro.8b00071 (**Impact Factor: 4.418**)
19. Prasenjit Mondal, Gaurav Das, Juhee Khan, Krishnangsu Pradhan, Surajit Ghosh: *Crafting of Neuroprotective Octapeptide from Taxol-Binding Pocket of  $\beta$ -Tubulin*. ACS Chemical Neuroscience, 2017, 9(3), 615-625, DOI:10.1021/acschemneuro.7b00457 (**Impact Factor: 4.418**)
20. Soumen Chakraborty, Gaurav Das, Surajit Ghosh, Dipak Ranjan Mal: *Regioselective synthesis of naphthoquinone/naphthoquinol-carbohydrate hybrids by [4+2] anionic annulations and studies on their cytotoxicity*. Organic & Biomolecular Chemistry, 2016, 14(45), 10636-10647, DOI:10.1039/C6OB02154A (**Impact Factor: 3.876**)
21. Krishnangsu Pradhan, Gaurav Das, Chirantan Kar, Nabanita Mukherjee, Juhee Khan, Tanushree Mahata, Surajit Barman, Surajit Ghosh: *Rhodamine-Based Metal Chelator: A Potent Inhibitor of Metal-Catalyzed Amyloid Toxicity*. ACS omega, 2020, 5 (30), 18958-18967, DOI: 10.1021/acsomega.0c02235 (**Impact Factor: 3.512**)
22. Tanaya Chatterjee, Gaurav Das, Barun K Chatterjee, Jesmita Dhar, Surajit Ghosh, Pinak Chakrabarti: *The role of isoaspartate in fibrillation and its prevention by protein-L-isoaspartyl methyltransferase*. Biochimica et Biophysica Acta (BBA)-General Subjects, 2020, 1864 (3), 129500, DOI: 10.1016/j.bbagen.2019.129500 (**Impact Factor: 3.770**)
23. Anindyasundar Adak, Gaurav Das, Juhee Khan, Nabanita Mukherjee, Varsha Gupta, Rathnam Mallesh, Surajit Ghosh: *Extracellular Matrix (ECM)-Mimicking Neuroprotective Injectable Sulfo-Functionalized Peptide Hydrogel for Repairing Brain Injury*. ACS Biomaterials Science & Engineering, 2020, 6 (4), 2287-2296, DOI: 10.1021/acsbomaterials.9b01829 (**Impact Factor: 4.749**)
24. Tanaya Chatterjee, Gaurav Das, Surajit Ghosh, Pinak Chakrabarti: *Effect of Gold Nanoparticles on the Structure and Neuroprotective Function of Protein L-isoaspartyl methyltransferase (PIMT)*. Scientific Reports, 2021, 11, 14296, DOI: <https://doi.org/10.1038/s41598-021-93752-1> (**Impact Factor: 4.379**)

25. Debmalaya Bhunia, Prasenjit Mondal, **Gaurav Das**, Abhijit Saha, Pallabi Sengupta, Jagannath Jana, Saswat Mohapatra, subhrangsu chatterjee, Surajit Ghosh: *Spatial Position Regulates Power of Tryptophan: Discovery of Major Groove Specific Nuclear Localizing Cell Penetrating Tetrapeptide*. Journal of the American Chemical Society 2017, 140(5), 1697-1714, DOI:10.1021/jacs.7b10254 (**Impact Factor: 15.419**)
26. Debmalaya Bhunia, Krishnangsu Pradhan, **Gaurav Das**, Subhajit Ghosh, Prasenjit Mondal, Surajit Ghosh: *Matrix metalloproteinase targeted peptide vesicles for delivering anticancer drugs*. Chemical Communications, 2018, 54(67), DOI:10.1039/C8CC05687K (**Impact Factor: 6.222**)
27. Prasenjit Mondal, Varsha Gupta, **Gaurav Das**, Krishnangsu Pradhan, Juhee Khan, Prabir Kumar Gharai, Surajit Ghosh: *Peptide-based Acetylcholinesterase Inhibitor Crosses Blood-Brain Barrier and Promotes Neuroprotection*. ACS Chemical Neuroscience, 2018, 9(11), 2838-2848, DOI:10.1021/acschemneuro.8b00253 (**Impact Factor: 4.418**)
28. Abhijit Saha, Saswat Mohapatra, **Gaurav Das**, Batakrisna Jana, Subhajit Ghosh, Debmalaya Bhunia, Surajit Ghosh: *Cancer Cell Specific Delivery of Photosystem I Through Integrin Targeted Liposome Shows Significant Anticancer Activity*. ACS Applied Materials & Interfaces, 2016, 9(1), 176-188, DOI:10.1021/acsami.6b13352 (**Impact Factor: 9.229**)
29. Batakrisna Jana, Prasenjit Mondal, Abhijit Saha, Anindyasundar Adak, **Gaurav Das**, Saswat Mohapatra, Prashant Kurkute, Surajit Ghosh: *Designed Tetra-peptide Interacts with Tubulin and Microtubule*. Langmuir, 2017, 34(3), 1123-1132, DOI: 10.1021/acs.langmuir.7b01326 (**Impact Factor: 3.882**)
30. Debmalaya Bhunia, Abhijit Saha, Anindyasundar Adak, **Gaurav Das**, Surajit Ghosh: *Dual Functional Liposome Specifically Target Melanoma Cells Through Integrin and Ephrin Receptors*. RSC Advances, 2016, 6(114), 113487-113491 DOI:10.1039/C6RA23864E (**Impact Factor: 3.361**)
31. Subhajit Ghosh, Saswat Mohapatra, Anisha Thomas, Debmalaya Bhunia, Abhijit Saha, **Gaurav Das**, Batakrisna Jana, Surajit Ghosh: *Apo ferritin Nanocage Delivers Combination of Microtubule and Nucleus Targeting Anticancer Drugs*. ACS Applied Materials & Interfaces, 2016, 8(45), 30824-30832, DOI:10.1021/acsami.6b11798 (**Impact Factor: 9.229**)
32. Rajsekhar Roy, Krishnangsu Pradhan, Juhee Khan, **Gaurav Das**, Nabanita Mukherjee, Durba Das, Surajit Ghosh: *Human Serum Albumin-Inspired Glycopeptide-Based Multifunctional Inhibitor of Amyloid- $\beta$  Toxicity*. ACS omega, 2020, 5 (30), 18628-18641, DOI: 10.1021/acsomega.0c01028 (**Impact Factor: 3.512**)



33. Batakrishna Jana, Surajit Barman, Rajsekhar Roy, **Gaurav Das**, Nabanita Mukherjee, Anindyasundar Adak, and Surajit Ghosh: *Fluorine Substituted Proline Enhances the Tubulin Binding Potential of a Tetrapeptide at the GTP Binding Pocket Causing the Inhibition of Microtubule Motility and an Antimitotic Effect*. The Journal of Physical Chemistry B, 2021, 125 (31), 8768–8780, DOI: 10.1021/acs.jpcc.1c04323 **(Impact Factor: 2.991)**
34. Debmalya Bhunia, Saswat Mohapatra, Prashant Kurkute, Subhajit Ghosh, Batakrishna Jana, Prasenjit Mondal, Abhijit Saha, **Gaurav Das**, Surajit Ghosh: *Novel tubulin-targeted cell penetrating antimitotic octapeptide*. Chemical Communications, 2016, 52(85), 12657-12660, DOI:10.1039/c6cc05110c **(Impact Factor: 6.222)**
35. Saswat Mohapatra, Somen Nandi, Rajdeep Chowdhury, **Gaurav Das**, Surajit Ghosh, Kankan Bhattacharyya: *Spectral Mapping of 3D Multi-cellular Tumor Spheroid: Time-resolved Confocal Microscopy*. Physical Chemistry Chemical Physics, 2016, 18(27), 18381-18390, DOI:10.1039/C6CP02748B **(Impact Factor: 3.676)**
36. Nabendu Murmu, Debarpan Mitra, **Gaurav Das**: *Increasing incidence of colorectal cancer among Indians: Concerns and the way forward*. Cancer Research, Statistics, and Treatment 2021 4 (4), 771-772. **(Impact Factor: 1.668)**
37. Samrat Dev, Souvik Pandey, Suwendu Maity, Debarpan Mitra, **Gaurav Das**, Nabendu Murmu, Chittaranjan Sinha: *Azophenyl appended Schiff base probe for colorimetric detection of Cu<sup>2+</sup> in semi-aqueous medium and live cell imaging*. Applied Organometallic Chemistry 2022 e6853 DOI: 10.1002/aoc.6853 **(Impact Factor: 4.072)**

## PATENTS:

1. Pharmaceutical compositions comprising nonapeptide. Ghosh, Surajit; Mondal, Prasenjit; **Das, Gaurav**; Khan, Juhee; Pradhan, Krishnangsu. PCT Int. Appl. (2019), WO 2019229771 A2 20191205.
2. Prepn. of peptoid pharmaceutical compns. for treatment of Alzheimer's disease. Ghosh, Surajit; Pradhan, Krishnangsu; **Das, Gaurav**; Mondal, Prasenjit; Barman, Surajit; Ghosh, Subhajit. PCT Int. Appl. (2019), WO 2019211878 A1 20191107.
3. Nonapeptide of formula I, pharmaceutical compositions and methods for preparation thereof. By Ghosh, Surajit; Mondal, Prasenjit; **Das, Gaurav**; Khan, Juhee; Pradhan, Krishnangsu. Indian Pat. Appl. (2018), IN 201811020565.

4. Peptoid of formula I, pharmaceutical compositions and method for preparation thereof. By Ghosh, Surajit; Pradhan, Krishnangsu; **Das, Gaurav**; Mondal, Prasenjit; Barman, Surajit; Ghosh, Subhajit. Indian Pat. Appl. (2018), IN 201811016874.

## ACADEMIC ACHIEVEMENTS:

1. Awarded Gold Medal in BSc. (Hons.) Biotechnology by the University in 2012
2. Awarded Gold Medal in MSc. Molecular Biology by the University in 2014
3. Awarded CSIR-NET Fellowship in June 2014
4. Awarded GATE Biotechnology (BT) 2014
5. Awarded GATE Lifesciences (XL) 2015
6. Awarded ICMR- JRF Fellowship 2015
7. Awarded ARS-NET (Agricultural Biotechnology) 2019
8. Awarded DST Inspire Faculty Award 2020 in Life Sciences (Bio-medical)
9. Awarded AcSIR Best Ph.D. Thesis Award 2020 in Biological Sciences
10. Three articles in Cover page
11. Served as a Reviewer for RSC Advances

## CONFERENCES:

1. Delivered Short oral presentation in a tripartite International Conference, **NDD-2017** held on February 10-12, 2017 at Kolkata, India.
2. Participated in the **NeuroUpdate** Kolkata-2018 conference organized at IICB, Kolkata.

## COVERPAGES:

