

- **PERSONAL DETAILS:-**

1. Name: ARUNDHATI BANERJEE

2. Father's Name: NILOTPAL BANERJEE

3. Date of Birth: 23rd June, 1992



4. Temporary Address: A-72/104, SHUKHOBRIHTI COMPLEX, SHAPOORJI PALONJI HOUSING COMPLEX, ACTION AREA III, NEWTOWN, KOLKATA – 700135, WEST BENGAL, INDIA

5. Permanent Address: A-26/9, BATAYAN COOPERATIVE, GROUP HOUSING COMPLEX, SECTOR 2A, BIDHANNAGAR, DURGAPUR-713212, WEST BENGAL, INDIA

6. Contact:

E-mail: arundhati.92star@gmail.com, arundhati.bt92star@gmail.com

Phone numbers: 8145245649 & 9474533102

- **ACADEMIC DETAILS:-**

Qualification	Institution	Year of Passing	Board	% of Marks
PhD Department of Biochemistry	University of Kalyani (under CSIR-SRF Direct)	1st March 2022	---	Coursework : 88%
M.Tech (Biotechnology)	National Institute of Technology Durgapur	2016	National Institute of Technology, Durgapur	CGPA: 8.5 (points out of 10)
B.Tech (Biotechnology)	West Bengal University of Technology (now MAKAUT)	2014	West Bengal University of Technology	DGPA: 8.9 (points out of 10)
Class XII-CBSE	Hem Sheela Model School, Durgapur	2010	CBSE-XII	84%
Class X - ICSE	Carmel Convent High School, Durgapur	2008	CISCE	88%

Title of the PhD Thesis: *In silico* Analysis and Interactions among Associated Proteins for AIDS and Leukemia: An Insight to Explore the Therapeutic Aspects of Gp130

Curriculum Highlights: Recombinant DNA Technology, Bioreactor Designing and Analysis, Bioinformatics, Molecular Modeling and Drug Designing, Immunology, Human Genomics, Biochemistry, Proteomics, Plant and Animal Biotechnology, Food Technology, Molecular Biology and Genetics.

- **PROFESSIONAL QUALIFICATION**

1. **Guest Faculty** in Department of Biotechnology, Nutrition Science, Medical Lab Technology and Physiotherapy at Durgapur Paramedical College (affiliated under MAKAUT (formerly West Bengal University of Technology) and WBUHS) - 16th September 2022 – present

2. **Worked as a Faculty (Assistant Professor)** in Durgapur Institute of Science and Technology for B.Sc and M.Sc (Department of Biotechnology and Biochemistry), under KAZI NAZRUL UNIVERSITY, January 2017 to June 2017

3. As a **Faculty (Lecturer)** at Erudite (2014-2015)

- **PROFESSIONAL RESPONSIBILITY**

- Conducting semester examinations
- Working as Examiner & Scrutinizer for Biochemistry in Kazi Nazrul University, 2017
- Conducting meetings through conference calls
- Presenting slides in meetings
- Guiding Bachelor students for projects
- **Guided THREE Dissertations from Bachelors Level**
- **Presently, examiner under the affiliation of MAKAUT**

- **PUBLICATIONS**

Publications in:	National	International
Research Papers	-	26 published (details attached below) h-index as per SCOPUS: 5 Cumulative Impact Factor: 54.76 Citations so far: 79
Book Chapters	-	9
Conference Proceedings	-	16

- **AS A REVIEWER**

Articles Reviewed (Nos.)	60 (Elsevier, Springer, Nature and Taylor & Francis)
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- **PARTICIPATION**

Participation in:	Numbers
Seminars	5
Workshops	3
Conference Paper Presentation	8 (International Conferences)

- **GUIDED UG DISSERTATIONS: THREE IN NUMBER**

- **RESEARCH TRAINING UNDERGONE**

	Numbers
Laboratory Training	3
Computer Training	4

- **AWARDS/CERTIFICATES**

- Awarded **Senior Research Fellowship (Direct)** by CSIR (Council of Scientific and Industrial Research), India – 2018 (for two years and one extension)
- Awarded **Senior Research Fellow** by ICMR (Indian Council of Medical Research), India
- Have conducted workshop classes (theory and practical) in 21 days Summer Training Programme at **Bioinformatics Infrastructure Facility (BIF)**, University of Kalyani
- **Have been invited as a Keynote Speaker in The ESMED General Assembly in August , 2022**
- Attended a Seminar on “*Networking Drug Discovery and Pharm Innovation*” on 6th February, 2012.
- Attended Workshops on Spoken Tutorial Project on "Python" and "Linux" developed by IIT Bombay, an initiative of NATIONAL MISSION on Education through Information and Communication Technology (NMEICT), MHRD GOVT OF INDIA.

- Awarded Merit Certificates for securing 1st and 2nd Rank in 4th year and 3rd year, respectively in B. Tech
- Merit certificates for *PowerPoint Presentation* (stood first in competitions).
- Merit Certificate in *National Science Olympiad* (NSO), for rank 8 in School, 11 in City.

● **COMMUNICATION SKILLS**

Languages	Speak	Read	Write
English	√	√	√
Bengali	√	√	√
Hindi	√	√	√

● **COMPUTER PROFICIENCY:**

- C-Language.
 - Perl Programming.
 - MODELLER9.14 Software packages
 - Discovery Studio packages from Accelrys.
 - Competent user of basic MS Office packages like MS Word, MS Excel, MS Power Point.
- **Strength:** Determination, Organization, Communication, Task Prioritization and Team Leader
 - **Weakness:** Being too honest, selflessly helpful, Too attached, Inability to say “no”.
 - **Skills/Attitude:** Deep Critical Thinking, Investigate and develop new strategies, Eager to solve problems, motivated, efficient in team work, committed to a work, efficient in managing time for a particular work.
 - **About Yourself :**
 - **Special Interest in:** Bioinformatics, Computational Structural Biology and *In silico* Studies, Drug Discovery and Molecular Modelling, Pharmacogenetics, Genomics, rDNA technology, Bioreactor Designing and Analysis.
 - Have rendered Theory and Hands on Demonstration Sessions in 21 Days Summer Training Programme 2019 at Bioinformatics Infrastructure Facility (BIF), University of Kalyani
 - Skilled in preparing presentations, doing team work and have secured awards for presentations.
 - Have sent CV upon invitation for the Editorial Board Membership for International Peer-Review Journals.
 - Skilled in preparing presentations, doing team work and have secured awards for presentations.
 - Confident in research work documentation and authoring technical reports.
 - Have performed as an examiner and scrutinizer for university semester examinations.

● **REFERENCES (any 2)**

Name: Dr. N.B Hui	Name: Dr. Apurba Dey
Designation: Professor	Designation: Senior Professor
Company Name: National Institute of Technology, Durgapur	Company Name: National Institute of Technology, Durgapur
Contact No.: 9434788117, Email: nirmal.hui@me.nitdgp.ac.in	Contact No.: 9434788098 Email: apurba.dey@bt.nitdgp.ac.in

Arundhati Banerjee

Date: 21st November, 2023

[ARUNDHATI BANERJEE]

LIST OF PUBLICATIONS:

(a) For Refereed Journal Papers

Sl. No.	Author(s)	Title of paper	Name of the Journal	Impact Factor	Volume	Year	Pages
1	Shreya Bhattacharya, Arundhati Banerjee , Sujay Ray	Development of new vaccine target against SARS-CoV2 using envelope (E) protein: An evolutionary, molecular modeling and docking based study	International Journal of Biological Macromolecules	8.025	172	2021	pp: 74-81
2	Arundhati Banerjee , Sujay Ray	Molecular level biodegradation of phenol and its derivatives through dmp operon of <i>Pseudomonas putida</i> : A biomolecular modelling and docking analysis	Journal of Environmental Sciences	6.796	36	2016	144-151
3	Arundhati Banerjee , Sujay Ray	Molecular modeling, mutational analysis and conformational switching in IL27: An <i>in silico</i> structural insight towards AIDS research	Gene	3.913	610	2017	72-78
4	Arundhati Banerjee , Sujay Ray	Structural insight with mutational impact on tyrosinase and PKC- β interaction from Homo sapiens: Molecular modeling and docking studies for melanogenesis, albinism and increased risk for melanoma	Gene	3.913	610	2017	99-109
5	Arundhati Banerjee , Sujay Ray	Mutations and Interactions in Human ER α and bZIP Proteins: An <i>In silico</i> Approach for Cell Signaling in Breast Oncology	Gene	3.913	592 (1)	2016	90-102

6	Arundhati Banerjee , Sujay Ray	Stability in Interactions with Human Beta-Catenin and Helix-to-Coil Transitions upon Mutations in Human SOX17 Protein: A Computational Molecular Outlook for Histogenesis and Organogenesis	Gene	3.913	576 (1)	2015	118-126
7	Sujay Ray, Abishek Basnet, Shreya Bhattacharya, Arundhati Banerjee , Koustav Biswas	A comprehensive analysis of NAC gene family in <i>Oryza sativa japonica</i> : a structural and functional genomics approach	Journal of Biomolecular Structure & Dynamics	5.235	41 (3)	2023	1-15
8	Arundhati Banerjee , Sujay Ray	Molecular interactions and mutational impact upon rhodopsin (G90→D90) for hindering dark adaptation of eye: A comparative structural level outlook for signaling mechanism in night blindness	Mutation Research/Fundamental and Molecular Mechanisms of Mutagenesis	3.15	814	2019	7-14
9	Arundhati Banerjee , Rakhi Dasgupta, Sujay Ray	Residual Participation and Thermodynamic Stability Due to Molecular Interactions in IL11, IL11R α and Gp130 from <i>Homo sapiens</i> : An In Silico Outlook for IL11 as a Therapeutic Remedy	International Journal of Peptide Research and Therapeutics	2.191	26	2020	2009–2020
10	Shreya Bhattacharya, Pragati Prasad Sah, Arundhati Banerjee , Sujay Ray	Structural impact due to PPQEE deletion in multiple cancer associated protein - Integrin α V: An In silico exploration	Biosystems	1.957	198	2020	104216

11	Shreya Bhattacharya, Shreyeshi Dhar, Arundhati Banerjee , Sujay Ray	Structural, Functional, and Evolutionary Analysis of Late Embryogenesis Abundant Proteins (LEA) in Triticum Aestivum: A Detailed Molecular Level Biochemistry Using in Silico Approach	Computational Biology and Chemistry	3.737	82	2019	9-24
12	Shreya Bhattacharya, Arundhati Banerjee , Pragati P. Sah, Chittobrata Mal, Sujay Ray	Mutations and Functional Analysis of 14-3-3 Stress Response Protein from Triticum Aestivum: An Evolutionary Analysis through in Silico Structural Biochemistry Approach	Computational Biology and Chemistry	3.737	77	2018	343–353
13	Pragati Sah, Shreya Bhattacharya, Arundhati Banerjee , Sujay Ray	Identification of novel therapeutic target and epitopes through proteome mining from essential hypothetical proteins in Salmonella strains: An In silico approach towards antivirulence therapy and vaccine development.	Infection, Genetics and Evolution	4.393	83	2020	104315
14	Shreya Bhattacharya, Shreyeshi Dhar, Arundhati Banerjee and Sujay Ray	Detailed Molecular Biochemistry for Novel Therapeutic Design against Nipah and Hendra Virus: A Systematic Review	Current Molecular Pharmacology	3.855	13 (2)	2020	108 - 125
15	Arundhati Banerjee , Rakhi Dasgupta and Sujay Ray	A Computational Study to Prevent HIV Invasion by Bovine LF in Mucosal- Layer via Blocking of DC-SIGN_GP120 Interaction	Current Proteomics	0.642	17 (5)	2020	413 - 424

16	Arundhati Banerjee , Shreya Bhattacharya, Rakhi Dasgupta, Sujay Ray	Mutational, Functional and Evolutionary Analysis of Interleukin-11 in <i>Homo sapiens</i> : A Detailed <i>In silico</i> Exploration for Platelet Recovery due to Chemotherapy Induced Thrombocytopenia.	Meta Gene	0.201	21	2019	100591
17	Shreyeshi Dhar, Shreya Bhattacharya, Arundhati Banerjee , Sujay Ray	Evolutionary, gene ontology and physiochemical relationships in LEA proteins of <i>Oryza sativa indica</i> : Detailed computational sequence-based insight.	Plant Gene	0.427	21	2020	100218
18	Shreya Bhattacharya, Puja Ghosh, Debasmita Banerjee, Arundhati Banerjee , Sujay Ray	In silico Drug Target Discovery Through Proteome Mining from M. tuberculosis: An Insight towards Antiviral Therapy.	Combinatorial Chemistry & High Throughput Screening.	1.714	23(3)	2020	253-268
19	Shreya Bhattacharya, Pragati Prasad Sah, Arundhati Banerjee and Sujay Ray	Exploring Single Nucleotide Polymorphisms in ITGAV for Gastric, Pancreatic and Liver Malignancies: An Approach Towards the Discovery of Biomarker	Combinatorial Chemistry & High Throughput Screening.	1.714	23(6)	2021	860 - 873
20	Arundhati Banerjee* and Rakhi Dasgupta	Molecular Modeling, Interacting Residues and other Structural Analyses for Human SOCS3, Gp130 and JAK Proteins: A Detailed Computational Approach for Proteins Involved in Feedback Inhibition	Current Biotechnology	NA	10(3)	2021	218 - 229

21	Sujay Ray and Arundhati Banerjee	Computational structural biology and modes of interaction between human annexin A6 with influenza A virus protein M2: a possible mechanism for reducing viral infection	International Journal of Bioinformatics Research and Applications	0.184	14(4)	2018	321-336
22	Arundhati Banerjee , Rakhi Dasgupta* and Sujay Ray*	Mutational Impact on the Interaction Between Human IL27 and gp130: In silico Approach for Defending HIV Infection	Current HIV Research	0.802	15(5)	2017	327 - 335
23	Arundhati Banerjee , Sujay Ray*	Novel insight into mutational impacts and binding mechanism of human glutaminase and glutaminase-interacting protein: A bio-molecular modeling and docking analysis	Gene Reports	NA	8	2017	49-60
24	Sujay Ray and Arundhati Banerjee	Comparative Binding Mode and Residual Contribution from Lactoferrins (bLF and hLF) and HIV Gp120: An In silico Structural Perspective to Design Potent Peptide Inhibitor for HIV	Current Enzyme Inhibition	NA	13(3)	2017	226 - 234
25	Arundhati Banerjee , Sujay Ray*	Structural Exploration and Conformational Transitions in MDM2 upon DHFR Interaction from Homo sapiens: A Computational Outlook for Malignancy via Epigenetic Disruption	<i>Scientifica</i> ,	NA	2016	2016	11 pages
26	Sujay Ray and Arundhati Banerjee	A Proteome-Level Computational Biology Insight on Sequence Based Aggregation Propensity Profile of	Current Biotechnology	NA	4(1)	2015	46 - 55

		Human Hydrolase Structural Enzymes					
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(b) Papers publication in National/ International Conferences: 16 in number

Sl. No.	Title of paper	Co-author(s), if	Name of the Conference	Date
1.	Identification and targeting Orphan G-Protein Coupled Receptor (GPCR) in mosquito for application of herbal repellent	Krishnendu Adhikary	SASE-2023, BHU, Varanasi (Nesa India)	April 22- 23, 2023
2.	Molecular Computing and Structural Biology for Interactions in ER α and bZIP Proteins from <i>Homo sapiens</i> : An Insight into the Signal Transduction in Breast Cancer Metastasis	Sujay Ray	FICTA 2015, NIT Durgapur (Springer)	Nov 16, 2015 – Nov 18, 2015
3.	Structural and Bio- Molecular Interactions in Human Tenascin C and HIV: An <i>In silico</i> Approach to Avert AIDS, for Infants under the Exposure of HIV	Sujay Ray	ICRCICN, Kolkata (IEEE) 2015	November 20-22, 2015
4.	Interactions with Human CD4 Cells Leads to Helix to Coil Transition in HIVgp120 Aiding CCR5 Attachment and Viral Entry: An <i>In silico</i> Structural Biology Approach for AIDS	Sujay Ray	ICSNCS (LNEE) 2016 [JNU, New Delhi]	Feb 25, 2016 - Feb 27, 2016
5.	Coils to β -Sheets Transitions and Residual Interactions in Human SOX4 and Syntenin Protein: An In silico Insight into the Cytological Regulation	Sujay Ray	MicroCom, NIT Durgapur (IEEE) 2016	January 23-25, 2016
6.	Bio-Molecular Interactions and Conformational Switches in Human ER β and SRC-1 Protein: A Molecular Docking and Simulation Approach to Suppress Tumor in Breast Cancer Malignancies	Sujay Ray	MicroCom, NIT Durgapur (IEEE) 2016	January 23-25, 2016
7.	Computational Molecular Analysis of Human Rhodopsin, Transducin and Arrestin Interactions: An Insight into Signal Transduction for Ophthalmology	Tanushree Mukherjee, Sujay Ray	ICIC2 2016 (Springer) [University of Kalyani, Kalyani,	Feb 18, 2016 - Feb 19, 2016
8.	Structural and Molecular Insight into Human Glutaminase Protein Domain: An <i>In silico</i> Drug Targeting Approach	Sujay Ray, Apurba Dey	ABRMP 2016 (CBS), Kolkata	January 8-9, 2016
9.	Molecular Modeling and Computing for PDZ Protein (α -1 Syntrophin) from <i>Homo sapiens</i> : A Comparative Optimization Approach for Protein/Drug Affinity	Sujay Ray, Apurba Dey	ICADVC 2016 (Springer) NIT Durgapur	25-27 February 2016
10.	Molecular and Protein Interaction Studies for Inhibiting Growth of Human Leukemic Cells: An <i>In silico</i> Structural Approach to Instigate Drug Discovery	Rakhi Dasgupta, Sujay Ray	Biospectrum, 2017 (Springer)	25th to 26th August 2017
11.	Residual Exploration into Apoptosis of Leukemic Cells through Oncostatin M: A Computational Structural Oncologic Approach	Rakhi Dasgupta, Sujay Ray	ICCI 2018, Springer	10-11 Dec, 2018

12.	A Limelight on Human Gp130 and its Deleterious Mutations: A Computational Sequence Level Approach for Hepatocellular Carcinomas	Shreya Bhattacharya, Debina Basu, Ritika Nandi, Puja Ghosh, Sujay Ray	International Conference on Computing and Communication Systems, I3CS	Apr 28, 2020 - Apr 30, 2020
13.	Molecular Level Insight into the Interactions of SoxC and SoxD from Epsilonproteobacteria <i>Sulfurimonas denitrificans</i> : A Bio-Molecular Computational Approach	Sujay Ray, Angshuman Bagchi.	IC3T 2015, CMR Technical Campus, Hyderabad (Springer)	24th to 26th July 2015
14.	A Computational Structural Biology of SoxR and DNA: A Modelling and Interactive Discern to express the sox operon in <i>Pseudaminobacter salicylatoxidans</i> (KCT001) for global sulphur oxidation	Sujay Ray, Angshuman Bagchi.	ICICA 2014, NIT Durgapur (Springer)	22-23 December 2014
15.	Study of the effect of pH on adsorption of phenol and catechol by the use of commercial activated carbon and assessment of toxicity reduction	Anuj Kumar, Tamal Mandal, Dalia Dasgupta	ChemCon2013	December 27, 2013
16.	Isolation and characterization of phenol degrading bacteria from phenol contaminated industrial wastewater	Anuj Kumar, Tamal Mandal, Dalia Dasgupta.	ChemCon2012	December 27 - 30, 2012

(c) Books/Monographs/Book chapters written:

Sl. No.	Name of book/monograph/ Book chapters	Name of Co-author, if any	Year of Publication	Publisher with address
1	<i>In silico</i> Perspective into Interactions and Mutations in Human TLR4 and Ebola Glycoprotein: An <i>In silico</i> Insight to Defend Ebola Virus Entry	Sujay Ray	2016	IGI Global, Pennsylvania, United States
2	Positive Regulation via DNA Interaction in Cellular Decisions for Arg to Ala Mutation in SOX11: An Optimized <i>In silico</i> Neuroinformatics Approach	Sujay Ray	2016	IGI Global, Pennsylvania, United States
3	Molecular Computing and Residual Binding Mode in ER α and bZIP Proteins from Homo Sapiens: An Insight into the Signal Transduction in Breast Cancer Metastasis	Sujay Ray	2016	Advances in Intelligent Systems and Computing book series (AISC, volume 404)
4	A Limelight on Human Gp130 and Its Deleterious Mutations: A Computational Sequence Level Approach for Hepatocellular Carcinomas	Shreya Bhattacharya, Debina Basu, Ritika Nandi, Puja Ghosh, Sujay Ray	2021	Lecture Notes in Networks and Systems book series (LNNS, volume 170)
5	Molecular and Protein Interaction Studies for Inhibiting Growth of Human Leukemic Cells: An In Silico Structural Approach to Instigate Drug Discovery	Rakhi Dasgupta, Sujay Ray	2020	Biotechnological Applications in Human Health. Springer, Singapore.
6	Residual Exploration into Apoptosis of Leukemic Cells Through Oncostatin M: A Computational Structural Oncologic Approach	Rakhi Dasgupta, Sujay Ray	2020	Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore.

7	Computational Molecular Analysis of Human Rhodopsin, Transducin and Arrestin Interactions: An Insight into Signal Transduction for Ophthalmology	Tanushree Mukherjee, Sujay Ray	2017	Advances in Intelligent Systems and Computing, vol 458. Springer, Singapore.
8	Interactions with Human CD4 Protein Leads to Helix-to-Coil Transition in HIV-gp120 Aiding CCR5 Attachment and Viral Entry: An In Silico Structural Biology Approach for AIDS	Sujay Ray	2016	Lecture Notes in Electrical Engineering, vol 396. Springer, New Delhi.
9	Exploring the Human USP Gene Family and Its Association with Cancer: An In Silico Study	Sujay Ray	2023	Advances in Data Science and Computing Technologies pp 685–694 Lecture Notes in Electrical Engineering book series (LNEE, volume 1056)

(d) **Number of UG and PG students guided** THREE (UG) Dissertations