



AISHI DASGUPTA
Biosciences & Bioengineering
Indian Institute of Technology Bombay
Specialization: BIOTECHNOLOGY

195300021
2 year M.Sc.
Female
DOB: 08/05/1998

Examination	University	Institute	Year	CPI / %
Post Graduation	IIT Bombay	IIT Bombay	2020	9.85
Graduation	PRESIDENCY UNIVERSITY, KOLKATA	PRESIDENCY UNIVERSITY, KOLKATA	2019	91.30
Intermediate/+2	CENTRAL BOARD OF SECONDARY EDUCATION	SOUTH POINT HIGH SCHOOL, KOLKATA	2016	94.20
Matriculation	WEST BENGAL BOARD OF SECONDARY EDUCATION	SOUTH POINT HIGH SCHOOL, KOLKATA	2014	88.14

AREAS OF INTEREST

Molecular Biology | Genetic Engineering | Computational Biology | Healthcare Solutions | Data Science and Data Analytics | Cell Biology | Immunology | Health Diseases | Neuroscience | Bioinformatics | Drug Designing | Nano-biotechnology

SCHOLASTIC ACHIEVEMENTS

- Qualified **CSIR-UGC NET Life Sciences** as **JRF** in December, 2019. [2019]
- Selected for **summer internship** at **NBRC, Manesar** through **Indian Academy of Sciences Summer Research Fellowship (IAS)**; at **IISER, Thiruvananthapuram** through **JNCASR Summer Research Fellowship Programme (SRFP)** and **NCBS, Bangalore**. [2019-20]
- Secured **All India Rank 6** out of **10510** students in **IIT JAM Biological Sciences Entrance Examination**. [2019]
- Achieved **All India Rank 17** out of **6453** students in **IIT JAM Biotechnology Examination**. [2019]
- Secured **1st Rank** in **B.Sc. Life Sciences** at **Presidency University, Kolkata** and hence **Gold Medalist** of the **Batch of 2016-2019**. [2019]
- Cleared **TIFR GS, 2019 (Joint Graduate Entrance Examination for Biology and Interdisciplinary Life Sciences)**. [2018-19]
- Selected for pursuing **MSc-PhD in Chemical and Molecular Biology** from **IITKGP- IACS** & for pursuing **MSc-PhD in Life Sciences** from **Bose Institute, Kolkata**. [2019]
- Selected for pursuing **Integrated PhD in Biological Sciences** at **IISER Kolkata**. [2019]
- **Ranked 6th** in **PUMDET** for pursuing **MSc Life Sciences** at **Presidency University, Kolkata**. [2019]
- Received interview calls from eminent research institutes such as **TIFR, IISER Pune, NCBS, JNCASR, IISER Mohali, RCB, NBRC**. [2019]
- Received **Prof. Achintya Kr. Mukherjee Memorial Fund Book Prize, Arun Kr. Ray Memorial Fund Scholarship & Centenary Scholarship Fund-Govt. Eden Hindu Hostel Cash Prize** for securing **First position in B.Sc. First year and Second Year, Life Sciences**. [2018]
- Selected for summer internship at **IIT Bhubaneswar**. [2018]

INTERNSHIP

Two months' internship at **IISER Thiruvananthapuram** (IISER TVM Summer Research Programme.) | [May'18 - Jul'18]
Dr. Satish Khurana, Assistant Professor, School of Biology, IISER TVM

- Worked on marking splenic niche cells with Periostin (Postn) and Lyve 1, to see if Lyve 1 expressing cells are also expressing Postn by looking at Lyve 1 expression in conjunction with Postn by immunohistochemistry.
- Checked primer efficiency of primers by RT-PCR and plotted their standard graphs.
- Designed GLUT1, GLUT2 and GLUT3 primers using NCBI Primer-Blast.
- Performed staining of mouse brain paraffin sections with Hematoxylin and Eosin.
- Performed Image analysis of Wild-type and Integrin-Knockout mouse spleen by ImageJ Software.

COURSES UNDERTAKEN

Current Courses: Python Programming, Molecular Biophysics, Bioenergetics and Metabolism, Cell Biology, Microbiology Laboratory, Biophysics Laboratory, Analytical Biochemistry, Biomolecular Spectroscopy, Molecular biology, Biological Thermodynamics and Kinetics, Mathematical Methods for Biologists and Biochemistry Laboratory [Jul'19 - Mar'20]
Major Courses at Undergraduate Level: Biophysical Principles, Biochemistry, Biostatistics, Cell Biology, Molecular Biology, Genetics, Microbiology, Biology of Diseases, Immunology, Enzymology, Genome regulation, Bioenergetics & Intermediary Metabolism, Genetic Engineering, Bioinformatics [Aug'16- Jul'19]

POSITION OF RESPONSIBILITY

- **STUDENT COMPANION** | *Institute Student Companion Programme (ISCP), IIT Bombay* [April'20-Present]
 - Part of a 177-member team of PG Students across 20+ departments, ensuring proper transition from undergraduate to postgraduate life of freshmen students.
 - Part of a 4-member department team of ISCP, helping the Overall Coordinators (OCs) and Department Coordinator (DC) in conducting both institute and department level PG orientation of new entrants.
 - Selected as Student Companion among 300+ applicants and responsible for mentoring 7 students by providing continuous guidance and support both on academic and non-academic fronts.

- **INSTITUTE INTERNSHIP COORDINATOR** | *Institute Placement Team, IIT Bombay* [Sep'19-Present]
 - Part of a **35-member team**, acting as an affiliate between **1900+ students** of IIT Bombay and the corporate world.
 - Procured **highest selections** for **Biosciences and Bioengineering Department Internships** ever at IIT Bombay.
 - Forging good relationships with top universities across the world, thereby creating great opportunities for international research exposure amongst students.
 - Facilitating the organizing of GD/PIs, resume-making and other preparatory sessions.
 - Appointed as a **SPOC (Single Point of Contact)** and coordinated interviews of major companies during **Placement season, 2019-2020**.
 - Facilitated and managed GD/PIs/online and written tests of students for several reputed companies for final placement interviews.

- **ORGANISER, Creative & Design Team** | *Symbiotek, BSBE, IIT Bombay* [Sep'19-Jan'20]
 - Part of a team of **15+ members**, involved in designing posters, flyers, promotional videos for sponsors.
 - Responsible for organizing **Genvision**, the annual technical event of BSBE department, IIT Bombay and for promoting **Genvision** across the country via designed clothes, videos, posters.

- **COORDINATOR, Criminal Case Event, Genvision 2020** | *Symbiotek, BSBE, IIT Bombay* [Sep'19-Jan'20]
 - Part of a team of 6+ members, involved in preparing questionnaires, creating clues for participants in the Criminal Case event, during **Genvision, 2020**.

TECHNICAL SKILLS

Laboratory Techniques	Microscopy slide preparation and staining techniques (monochrome and Gram staining) Plating techniques and isolation of pure bacterial colonies Streaking of plates, slants Antibiotic Sensitivity Assay Spectrophotometry Gel electrophoresis for proteins and DNA Isolation of plasmid DNA, genomic DNA (bacteria and plant) and avian RNA Cloning techniques (restriction digestion, transformation, PCR, blue-white screening) Use of Nanodrop Microplate Reader qRT-PCR Isolation of leukocytes from human blood Haemocytometer cell count Cell Diameter measurement using Ocular and Stage Micrometer MTT Assay and Cell Viability Test Immunohistochemistry Hematoxylin and Eosin Staining Cryosectioning of mouse spleen Gel Filtration SNP Detection by RFLP PCR Forming crystals of Lysozyme Protein Thin Layer Chromatography
Computational Skills	Primer Designing Image Analysis using Image J software Protein Network and Interaction Analysis using STRING software Gene Prediction using GenScan Protein Primary, Secondary and Tertiary Structure Determination using ProtParam, Chou Fasman and Swiss Modelling respectively Sequence Alignment using BLAST
Technical Skills	Proficient with MS Office, Python, Adobe Photoshop (basics), C (basics), Adobe Publisher (basics), HTML, CSS
Statistical Methods	t/z test, Chi-square test, Hypothesis Testing, ANOVA, Regression Analysis

ONLINE COURSES (* - pursuing)

Principles of Biochemistry - Harvard University - by edX *	Computer Programming for Everyone - University of Leeds - by futurelearn
Frontend Fundamentals by Pirple *	Thriving in the Digital Workplace - University of Leeds - by futurelearn
Bacterial Genomes: Comparative Genomics using Artemis Comparison Tool(ACT) - by futurelearn *	COVID - 19 : Tackling the Novel Coronavirus - London School of Hygiene and Tropical Medicine - by futurelearn
Bacterial Genomes: From DNA to Protein function using Bioinformatics - by futurelearn *	Digital Skills: Social Media - Accenture - by futurelearn

Bacterial Genomes: Antimicrobial Resistance in Bacterial Pathogens - by futurelearn *	Digital Skills: Artificial Intelligence - Accenture - by futurelearn
Bacterial Genomes: Disease Outbreaks and Antimicrobial Resistance - by futurelearn *	Learn to Code for the Web - University of Leeds - by futurelearn *
Web Development for Beginners - Learncode Academy - by Cursa *	Creating a Great User Experience for Mobile Apps - University of Leeds - by futurelearn *

ACADEMIC WORKSHOPS

- **Life in Space – The Conscious Universe** Workshop in Pune organized by **Indian Astrobiology Research Centre**. [Feb'20]
- **Data Analytics Workshop** organized by **Data Analytics Club**, Department of Biosciences and Bioengineering, IIT Bombay. [Oct'19]

QUIZZES

- Secured a position among **top 25** in **SciQuiz: Online Quizzing Competition** organized by Department of Biotechnology, Delhi Technological University under the Annual Technical Fest, Karyon'20. [April'20]
- Participated in **Mimamsa**, organized by IISER, Pune. [Jan'18]

WEBINARS

- The Coronavirus Roadmap – Coronacures Webinar by Dr. Rahul Roy, IISc, Bangalore [2020]
- Covid-19: A wake-up call to progress towards sustainability – Dr. B. Lal Institute of Biotechnology, Jaipur
- Multi-paced data science workshop – Astringe IP
- Effective Research Paper Writing – Career College, Bhopal
- Vaccine against Covid-19: Any possibilities and Current Status of Drug and Vaccine Development against Covid-19 – Mizoram University, Aizawl
- Principles of Cell Signalling – Mizoram University, Aizawl
- Data Science – upGrad
- Artificial Intelligence – upGrad
- Healthcare Avenues Post Covid-19
- Attitude and Skill Sets for Post Covid Phase – Biotechnika
- Future of Artificial Intelligence – IETE Pantech
- Molecular Medicine – Bhavan's Vivekananda College

EXTRA-CURRICULAR ACTIVITIES

- Part of a 20+ member team that took part in the chorus singing function during Saraswati Puja Cultural Programme at **IIT Bombay**. [2020]
- Secured **2nd Place** in **Spelling Bee Competition** organized during **Cult Carnival, 2019** at IIT Bombay. [2019]
- Part of the department team of volunteers, which handled the convocation ceremony of **60+ students** in the **57th Convocation Ceremony of IIT Bombay**. [2019]
- Attended the **COLS CPR Workshop**, organised by **Abhyuday, IIT Bombay** on the occasion of World Heart Day and conducted by Doctors from Hiranandani Hospital, members of the Indian Society of Anaesthesiologists and Indian Resuscitation Council. [2019]
- Participated in Rangoli Competition in **PG Cult, Phase I at IIT Bombay**. [2019]
- Participated in the Singing Programme during the **Bicentennial Closing Ceremony, 2018** of **Presidency University, Kolkata**. [2018]
- Was an active member of the **Presidency University Choir**. [2018]