

Prajwal V Bharadwaj

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Indian Institute of Science Education and Research Bhopal, Bhopal Bypass Road, Bhauri,
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EDUCATION

BS-MS Dual Degree (Biological Sciences)

Indian Institute of Science Education and Research Bhopal
Bhopal

Duration: 2017- 2022 (ongoing)

CPI: 8.91/10

Class XII

Sri Kumaran Childrens Home CBSE
Bangalore

Year of Completion: 2017

Percentage: 95% [Science Aggregate: 95%]

EXPERIENCE

Team Member, iGEM Project 2020 -Department of Biological Sciences, IISER Bhopal

January 2020 - October 2020

Project: BIG-PIE (Beta-cells in Gut Producing Insulin)- A new method of providing insulin to patients with diabetes (https://2020.igem.org/Team:IISER_Bhopal)

- > Helped Brainstorm project ideas during the nascent stage
- > Helped with building the Project Website
- > Contributed to Outreach and Science Communication by conducting seminars for School students

Gold Medal Winning Project at The Giant Jamboree, iGEM 2020

Team Member, iGEM Project 2019 -Department of Biological Sciences, IISER Bhopal

January 2019 - October 2019

Project: ELSA (Ecoli Learns Suboptimal Acclimatisation): Synthetically modifying Ecoli to grow optimally at 4 degrees Celsius (https://2019.igem.org/Team:IISER_Bhopal)

- > Helped manage the Wet Lab experiments by performing Growth Curve experiments to analyse the effect of our Gene of Interest
- > Helped the Outreach and Integrated Human Practices team by talking to people in the industry regarding our product.

Silver Medal Winning Project at The Giant Jamboree, iGEM 2019

Research Project in Behavioral Ecology under Prof. Renee Borges -Centre for Ecological Sciences, IISc Bangalore

May 2019 - July 2019

- > Understanding the natural history and behaviour of the Pentatomid bug on *Ficus racemosa*
- > Standardising a new system to work with as the Pentatomid bug is very poorly characterised
- > Trying to understand the relation between the Pentatomid bug and it's temporary, dependent host *Ficus racemosa*
- > Designing experiments to study phoresy in the Nematode-Fig Wasp system

> Basics of statistical analysis using R

Reading Project under Dr. Vikas Jain - Dept. of Biological Sciences, IISER Bhopal

Jan 2018- Sept 2018

> A detailed study of *Recombinant DNA Technology*

> Review of papers followed by a presentation given during their lab meetings

Laboratory Project in NMKRV College, Bangalore

Dec 2016 - Jan 2017

> Project was on Microbial analysis of water samples to test potability by using the *MPN method*

> Was familiarized with laboratory techniques such as broth preparation and preparation of culture plates.

FELLOWSHIPS

KVPY Fellowship (2016)

One of India's most highly selective and prestigious fellowships awarded to undergraduate students pursuing basic sciences by Department of Science and Technology, Govt. of India. (<1% of total applicants).

CONFERENCES AND WORKSHOPS

Climate Change and the Essential Service of Pollination:

Organized by Prof. Renee Borges in the Indian Institute of Science, Bangalore between 17th and 19th July 2019. A series of talks by eminent persons in the field of Pollination Biology was conducted along with a Practical demonstration session.

Nobel Prize Series India 2018:

Organized in association with Nobel Media and Government of India. The Nobel Prize Series is an exciting initiative that brings together Nobel Laureates and eminent scientists to stimulate innovation and creative thinking amongst young students of science.

TEDx Conferences 2016, 2017:

Organized by Infosys, Bangalore (2016) and by IISER Bhopal in Bhopal (2017).

Vijyoshi National Science Camp 2016:

Organized by and held in IISc Bangalore during December 2016. It is an annual national science camp in India organized by KVPY. It provides a forum for interactions between bright young students and leading researchers in various branches of Science.

INTERESTS

I want to learn the basics of computational and theoretical methods used to study biological systems. I want to be able to use this to understand ecological and evolutionary processes and the driving forces that govern these mechanisms. Understanding these mechanisms will help us predict how such dynamics will change in the future especially considering factors like habitat loss, climate change, etc. Some of the broad topics that I am interested in are:

- Understanding the forces that drive evolution at individual and population levels
- Mechanisms that maintain mutualism between organisms
- Dynamics and characteristics of collective behaviour

COURSEWORK

Relevant Coursework in Dept. of Biological Sciences, IISER Bhopal,

1. Biology Laboratory:

Experience in techniques involving Culture/Media Preparation and Bacterial Growth Curve, DNA/RNA Isolation, Competent cell preparation and transformation, Conjugation, Transduction, Beta-galactosidase based mutation analysis assay, PCR, Restriction digestion, cloning, Blue white selection, screening.

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| 2. BIO301: Cell Biology. | 3. BIO311: Cell Signaling and Stress Biology |
| 4. BIO313: Virology | 5. BIO302/3: Biochemistry I&II |
| 6. BIO304 Molecular Biology | 7. BIO312 Recombinant DNA Technology |
| 8. BIO411: Advances in Microbiology | 9. BIO414: Behavioral Biology |
| 10. BIO4017: Advances in Omics | 11. BIO402: Bioinformatics |
| 12. BIO406: Evolutionary Ecology | 13. BIO407: Biostatistics |

EXTRA CURRICULAR ACTIVITIES

1. **Department Representative**, Biological Sciences for the academic year 2019-2021
2. **Organising Committee member** and **PR Head** for organizing Enthuzia, IISER Bhopal's Cultural Fest as well as Arts and Letters, Literary Fest
3. I have been an active member of the **Model United Nations Circuit** and have been part of 10+ conferences as a delegate and have been part of the Executive Board in Kumarans Model UN and the **Secretary-General** of IISERB Model UN and of Kumarans Model UN.
4. **Content Developer** and **Associate Writer** for the Career Development Cell, IISER Bhopal.
5. I have received accolades for participating in **Panel Discussion** on My Vision: Corruption Free India during Vigilance Awareness Week 2017 in IISER Bhopal.
6. Have been the **Quiz-master** for the Kalakumbh Quiz conducted in Kumarans Literary Fest 2016, 2017 and 2018
7. Have also actively participated in numerous **debates/elocution** in the past few years and have won a large number of individual as well as team events.
8. Held the post of **Editor-in-Chief** of our school magazine Gnyanamanthanam (2016).

LANGUAGES

Functional proficiency in **English, Hindi**. Native proficiency in **Kannada**. Elementary proficiency in **Sanskrit**.