

GOPAL SINGH RANA

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Summary

Dynamic and accomplished Biomedical Engineer with a Master's degree from IIT Bombay. Eager to contribute my expertise in in-vitro investigations, biophysical studies, and leadership experience to a challenging role in the biomedical field.

Skill Highlights

- **Software:** MS Excel, MS Word, MS PowerPoint, SigmaPlot
- **Statistical Analysis:** Probability, Descriptive and Inferential Analysis, Regression, Hypothesis Testing
- **Programming:** Basic C++, Javascript
- **Biotechnical Skills:** Cell Culture, DNA Cloning & Point Mutation, PCR, Protein Expression and Purification; Chromatography: Ion Exchange, Size Exclusion, & Paper; Spectroscopy: UV/Visible, Fluorescence, & NMR; Electrophoresis: SDS PAGE, Agarose Gel; Bioinformatics: BLAST, CLUSTALX, SWISS-MODEL, Pymol

Projects And Internships

In-Vitro Investigation of Interaction of Cpr3 with Divalent Metals (Jul'16–Dec'17) | IIT Bombay

- Investigated the regulatory role of Cpr3 in metal-induced cytotoxicity, revealing potential applications in drug design.

Biophysical Investigation of T7 Lysozyme Wild Type and Mutants (Jul'14–Apr'15) | IIT Roorkee

- Unraveled structure-stability characteristics of T7 Lysozyme, with implications for therapeutic use.

Protein Purification and Peptide Synthesis (Jun'14–Jul'14) | IISc Bangalore

- Successfully purified Conotoxin for structural stability analysis and therapeutic applications.

Course Projects

Fluid Mechanics-Based Biosensor to Diagnose Malaria (Jan'16–May'16) | IIT Bombay

- Designed a biosensor for early detection of malaria parasites in infected blood samples.

Statistical Analysis of the Impact of Playing Hours on Studying Hours (Jan'16–May'16) | IIT Bombay

- Conducted an online survey, observed a negative regression between playing and studying hours.

Education

- **Master of Tecnology: Biomedical Engineering** | IIT Bombay, Dec 2017 | CGPA: 8.53/10
- **Bachelor of Tecnology: Biotechnology** | IIT Roorkee, Jun 2015 | CGPA: 6.21/10

Projects And Internships

Teaching Assistant, IIT Bombay (Jan'17–May'17) | IIT Bombay

- Developed and delivered syllabus modules, presentations, and tutorials to B.Tech first-year students, fostering interest in biotechnology.

Hostel Sports Councilor (May'16–Mar'17) | IIT Bombay

- Supervised and managed sports affairs, leading to a four-place jump in the sports tally board.

Captain Hockey Team (Jan'16) IIT Bombay

- Organized coaching camps, qualified the team in groups for the first time.

Awards and Accomplishments

- Secured AIR 67 in CSIR-UGC NET 2018.
- GATE 2015: Secured 96.07 percentile in GATE (Biotechnology), AIR 350, received MHRD scholarship.
- Sports Citation Award for outstanding contribution to hostel sports (2016-17).
- Third prize in Chess inter-department PG General Championship, IIT Bombay.