

# Midhun K Madhu

Computational Biology Researcher

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## EDUCATION

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### Indian Institute of Science Education and Research (IISER), Bhopal

Madhya Pradesh, India

August 2011 - May 2016

*Bachelor of Science - Master of Science (BS-MS) in Biological Sciences  
with a minor in Mathematics*

CGPA: 8.4/10

### Holy Cross HSS, Cherpunkal

Kerala, India

June 2009 - March 2011

*Higher Secondary Education (Science and Computer Science as majors)*

Percentage: 95

### Holy Cross HSS, Cherpunkal

Kerala, India

March 2009

*Secondary School Leaving Certificate (SSLC)*

Percentage: 90

## EXPERIENCE

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### Graduate Research — Indian Institute of Science Education and Research (IISER), Bhopal

On the topic “Allosteric Regulation in G protein-Coupled Receptors”  
under the mentorship of Dr. Rajesh K Murarka, Associate Professor,  
Computational biophysics and soft matter group.

December 2016 - -Present

### MS Thesis — Research Indian Institute of Science Education and Research (IISER), Bhopal

On the topic “Prediction of Antigenicity of Proteins Using Machine  
Learning Techniques” under the guidance of Dr. Vineet K Sharma,  
Associate Professor, Metabiosys Lab.

May 2015 - March 2016

### Summer Internship — Institute for Intensive Research in Basic Sciences (IIRBS), Kerala

Under the guidance of Dr. I Ibnu Saud, Director, IIRBS, Mahatma Gandhi  
University, Kerala

May 2012 - June 2012

## AWARDS AND FELLOWSHIPS

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- ★ CSIR-UGC Junior Research Fellowship and Eligibility for Lectureship (NET) — December 2015
  
- ★ 3rd Prize In National Level Essay Writing Competition, on the topic ‘Healthcare’ held by IMPRINT INDIA, Ministry of Human Resource Development, India — September 2015
  
- ★ Innovation in Science Pursuit for Inspired Research (INSPIRE) Fellowship Department of Science and Technology(DST), India. — August 2011

## SKILLS AND TECHNIQUES

<b>Languages</b>	English (fluent), Malayalam (native), Hindi (basic)
<b>Programming</b>	Python, Perl, R, Matlab
<b>OS / Software</b>	Microsoft Office, Amber, Pymol, Visual Molecular Dynamics
<b>Techniques</b>	Machine learning, Molecular Dynamics Simulation, Graph and information theoretical analysis techniques
<b>Online certifications</b>	<ul style="list-style-type: none"><li>• <a href="#">MATLAB Basics course by Mathworks</a></li><li>• <a href="#">Machine Learning course by Sololearn</a></li><li>• <a href="#">Python 3 Tutorial course by Sololearn</a></li></ul>

## RESEARCH PUBLICATIONS

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1. Gupta, Ankit, Ahmad Ahmad, Dipesh Chothwe, Midhun K. Madhu, Shireesh Srivastava, and Vineet K. Sharma. "Genome-scale metabolic reconstruction and metabolic versatility of an obligate methanotroph. Methylococcus capsulatus str. Bath." PeerJ 7 (2019): e6685.
  
2. Gupta, Sudheer, Midhun K. Madhu, Ashok K. Sharma, and Vineet K. Sharma. "ProInflam: a webserver for the prediction of proinflammatory antigenicity of peptides and proteins." Journal of translational medicine 14, no. 1 (2016): 178.
  
3. Gupta, Sudheer, Ashok K. Sharma, Vibhuti Shastri, Midhun K. Madhu, and Vineet K. Sharma. "Prediction of anti-inflammatory proteins/peptides: an in silico approach." Journal of translational medicine 15, no. 1 (2017): 7.
  
4. Gupta, Sudheer, Parul Mittal, Midhun K. Madhu, and Vineet K. Sharma. "IL17eScan: a tool for the identification of peptides inducing IL-17 response." Frontiers in immunology 8 (2017): 1430.

## CONFERENCES

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### Oral Presentations

- ★ Inter-Disciplinary Exploration in Chemistry (I-DEC 2018), held at Visitors' Hostel, IISER BHOPAL during December 06-08, 2018
- ★ Annual Biology Meet organized by IISER Bhopal held in January 2020

### Poster presentation

- ★ Recent Advances in Dynamics at the Interface of Chemistry and Biology (DICB 2019), held in the Faculty Hall, Indian Institute of Science, Bengaluru during February 18-20, 2019

## REFEREES

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[Dr. Rajesh K. Murarka](#)

Associate Professor

Department of Chemistry, IISER Bhopal

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[Dr. Vineet K Sharma](#)

Associate Professor

Department of Biological Sciences, IISER Bhopal

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