Midhun K Madhu

Computational Biology Researcher

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EDUCATION

Indian Institute of Science Education and Research (IISER), Bhopal
Madhya Pradesh, India

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

August 2011 - May 2016
CGPA: 8.4/10

Holy Cross HSS, Cherpunkal
Kerala, India

Higher Secondary Education (Science and Computer Science as majors)

June 2009 - March 2011
Percentage: 95

Holy Cross HSS, Cherpunkal
Kerala, India

Secondary School Leaving Certificate (SSLC)

March 2009
Percentage: 90

EXPERIENCE

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 - March2016

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

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

May 2012 - June201

AWARDS AND FELLOWSHIPS

★ 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

Languages	English (fluent), Malayalam (native), Hindi (basic)
Programming	Python, Perl, R, Matlab
OS / Software	Microsoft Office, Amber, Pymol, Visual Molecular Dynamics
Techniques	Machine learning, Molecular Dynamics Simulation, Graph and information theoretical analysis techniques
Online certifications	• MATLAB Basics course by Mathworks • Machine Learning course by Sololearn • Python 3 Tutorial course by Sololearn

RESEARCH PUBLICATIONS

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

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

Dr. Rajesh K. Murarka
Associate Professor
Department of Chemistry, IISER Bhopal
E-Mail: rkm@iiserb.ac.in
Phone: +91 755 269 1319

Dr. Vineet K Sharma
Associate Professor
Department of Biological Sciences, IISER Bhopal
E-Mail: vineetks@iiserb.ac.in
Phone: +91 755 269 1401