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Deciphering the complex paramagnetic NMR spectra of small laccase

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Curriculum vitae

Rubin Dasgupta was born in Kolkata, West Bengal, India on 14th February 1992 and raised in Sindhudurg, Maharashtra, India. After completing his schooling, he moved to Dehradun, India (at the foot of the Himalayas) for his Bachelor's degree in 2009. During this time, he got tutored in wide range of disciplines including botany, zoology, chemistry and biotechnology. After taking a gap year to travel across India he moved to his birth place and joined the Master's degree course at Bose Institute in 2013. Here he developed skills and interest for NMR spectroscopy. He did his Master's internship with Prof. Dr. Gautam Basu and discovered a novel helix N-cap motif that might confer stability to the helix and allows it to participate in long range interactions in proteins. This discovery led to his first peer review article and a best poster award at the 7th peptide engineering meeting, Pune, India. Rubin was also involved in refurbishing a time-resolved fluorimeter and establishing a protocol to study peptide/protein and nanoparticle interaction. After obtaining his Master's degree in 2015, he obtained a fellowship from the council of scientific and industrial research (CSIR), India, to work as a junior research fellow and develop NMR methodology in combination with time resolved fluorescence spectroscopy. After a year, in 2016 he joined Leiden University for his PhD with Prof. Dr. Marcellus Ubbink and Prof. Dr. Huub J.M. de Groot. Here, he developed paramagnetic NMR methodology to study the active site of laccase. He was successful in obtaining the first two-dimensional NMR spectrum of small laccase and identify motions at its active site. He also optimized solid state NMR methods to study paramagnetic molecules. He presented his work at the 19th international Conference on Biological Inorganic Chemistry, Interlaken, Switzerland for which he was awarded the Kroese-Duijters travel grant from Leids Universiteits Fonds, Leiden University. He also presented his work at CHAINS 2020, The Netherlands, Biophysical Society Virtual networking meeting: Magnetic resonance meet the future of Biophysics 2020 and NMR Discussion group meeting, 2020, The Netherlands. After completing his thesis, he will join Dr. Katja Petzold's group at Karolinska Institute, Sweden for his post-doctoral research.

List of Publications

Dasgupta, R., H.K. Ganguly, E.K. Modugula, and G. Basu. 2017. Type VIa β-turn-fused helix N-termini: A novel helix N-cap motif containing cis-proline. *Peptide Science*. 108:e22919.

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