

Advertisement for Post-Doctoral Fellowship for the project titled ‘A Technology Platform for Rapid and Total Eradication of Topical Gram-negative Bacteria via Plasmonic Heating’

Gangwal School of Medical Sciences and Technology

IIT Kanpur

Applications are invited for the position of post-doctoral fellows at the Gangwal School of Medical Sciences and Technology, IIT Kanpur for the project titled “**A Technology Platform for Rapid and Total Eradication of Topical Gram-negative Bacteria via Plasmonic Heating**”. The candidate must have a Ph.D. degree in Sciences or Engineering from a reputed university/institute. Candidates from Science backgrounds will be preferred. Candidates who have submitted their dissertation and are awaiting oral examination can also apply.

The aim of this project is to develop Plasmonic Photothermal Therapy for Rapid and Total Eradication of Topical Gram-negative Bacteria Infections. The project is highly interdisciplinary, involving IIT Kanpur faculty from Chemistry, BSBE, Civil Engineering, and Medical Doctors. The project involves synthesis and functionalization of nanoparticles; culture and handling of bacteria cells (nonpathogenic as well as pathogenic); use of various molecular biology assays, handling animal models handling diode lasers, etc.

The applicant must be able to carryout the research independently. The applicant must have proven expertise in either:

- (i) Synthesis, functionalization, electron microscopy characterization of metal nanoparticles and use of standard optical spectroscopy (Uv-Vis, IR, Raman, Fluorescence, etc.) as well as microscopy (fluorescence/confocal); experience in other analytical techniques like DLS, flow-cytometry, zeta-potential measurement, gel electrophoresis will be preferable.

Or,

- (ii) Culture and handling of bacteria cells, handling all standard molecular biology assays, use of standard optical spectroscopy (Uv-Vis, IR, Raman, Fluorescence, etc.) as well as microscopy (fluorescence/confocal) techniques, handling animal models.

Applicants having experience and expertise covering both (i) and (ii) will be highly preferred.

This is an institute post-doctoral position with a starting salary of Rs. 60000 per month, in addition to a performance-based variable salary of up to Rs. 30000 per month. All expenses pertaining to the project, including travel, will be covered by the institute. HRA at 16% of the fellowship amount will be paid if the accommodation is off campus. A contingency amount of Rs. 100000 per year for travel, research publications, etc. will also be available. Other norms can be found here:

https://www.iitk.ac.in/dofa/data/Institute_Postdoctoral_Norms_27_February_2020.pdf Interested candidates may please send their CVs to mchandra@iitk.ac.in and nagma@iitk.ac.in latest by 11th August 2023.