



TATA INSTITUTE OF FUNDAMENTAL RESEARCH

National Centre of the Government of India for Nuclear Science and Mathematics and a
Deemed University
Homi Bhabha Road, Colaba, Mumbai 400 005

Recruitment of Post-doctoral Researcher in an ICMR-Funded Project

Applications are invited for **ONE POSITION of Postdoc (Project Research Scientist – II, non-medical)** to work on an **ICMR-funded project** titled **“Development of affordable, safe and triple action Chemo-Immuno-antiangiogenic single molecule agents for treating triple-negative-breast cancers”** in the **Laboratory of Medicinal Chemistry and Cell Biology, Department of Chemical Sciences, TIFR Mumbai.**

Note: Institute accommodation will not be available; however, HRA will be provided as per the rule.

PI	Dr. Malay Patra (Associate Prof., Department of Chemical Science, TIFR Mumbai) Website: https://patralab.wixsite.com/tifr/malay-patra
Lab and location	Medicinal Chemistry Lab, Department of Chemical Sciences, TIFR Mumbai
Brief Description of the project and Key Responsibilities	<p>The project focuses on developing next-generation single-molecule therapeutics for triple-negative breast cancer (TNBC), an aggressive subtype marked by drug resistance, high metastatic potential, and lack of targeted treatment options. Current chemo-immunotherapy combinations have improved outcomes but remain expensive, toxic, and clinically challenging. This project aims to discover novel compounds capable of delivering chemo-immuno-antiangiogenic effects within a single molecular framework, supported by in vitro and in vivo evaluation.</p> <p>Key Responsibilities:</p> <ul style="list-style-type: none">• Design and synthesize a diverse library of novel small molecules with potential anti-TNBC activity.• Characterization & Stability Assessment using chromatography and relevant analytical methods (NMR, LC, MS, IR, UV–Vis)• In Vitro cytotoxicity Screening (2D & 3D TNBC cellular assays)• Preliminary mechanism of action in cell-based assays.• HIT identification and SAR study• Contribution to allied ongoing other projects in collaboration with PhD students in the medicinal chemistry Lab
Essential qualifications	<ul style="list-style-type: none">• PhD in Inorganic/Medicinal Inorganic Chemistry/Synthetic Medicinal Chemistry.• Expertise in the synthesis of small organic and inorganic molecules, mammalian cell culture, and in vitro anticancer screening.• Ability to plan and work independently and train PhD students.• Maximum Age Limit is 34 on 17th Dec. 2025.
Desirable qualifications	<ul style="list-style-type: none">• Strong background in synthetic organic and Inorganic chemistry, spectroscopy, and analytical techniques.• Experience with the determination of lipophilicity, aqutation kinetics, and stability of novel metallodrugs in cell culture medium and human plasma.• Experience with strategic chemical modification of HIT candidates for tuning antitumor activity and physicochemical properties.• On-hand experience with mammalian cell culture and expertise in

	<p>chemotherapeutic activity screening using cell-based assays.</p> <ul style="list-style-type: none"> • Willing to undergo training for advanced cell biology assays for immunotherapy and mechanistic investigation of LEAD candidates.
Project Duration	The initial appointment will be for 12 months and can be extended for 3 additional years, subject to performance and productivity.
Salary	<p>Rs. 87,100 per month [Rs. 67,000 basic + 30% HRA@20,100]</p> <p>[Note: On-campus accommodation will not be available]</p>
How to apply	<ul style="list-style-type: none"> • Interested applicants can send the application to Dr. Malay Patra via email to medchemtifr@gmail.com with the subject line "Application for ICMR-Postdoc Position". • <u>Documents to be attached to the email:</u> <ol style="list-style-type: none"> A) Curriculum vitae clearly indicating your Date of Birth, Nationality, educational background, work experience (if any), current position, scientific expertise, and publications/patents list. Clearly mention your specific contributions to each paper/patent in bullet points. B) Scanned/Digital copy of master's and PhD degree certificates, transcripts, and marksheets. Do not include pre-master's degree certificates/marksheets. C) A 1-page statement of purpose indicating your career goals, how your prior expertise/experience/interests align with this project, and how you can contribute to this project in the MedChemLab Lab. Please do not exceed one page; only the first page will be considered. • For the application to be considered for screening, <u>a minimum of two recommendation letters (one must be from the PhD advisor)</u> should be sent by the referees of the candidate directly to the same email address, with the subject line "Application for ICMR-Postdoc Position_Applicant name". Reference letters sent by the candidates will not be considered. • Both the application and two reference letters must arrive on or before the last date, 17th Dec., 2025. Applications and/or reference letters received after 17th Dec will not be considered.
Selection Procedure	<ul style="list-style-type: none"> • Applicants will be shortlisted based on their eligibility and overall alignment with the requirements for the research project. Please note that meeting the essential qualifications does not automatically ensure an interview call. • Only shortlisted candidates will be notified via email and invited for an online interview with the selection committee within one to two weeks of the last date of application. • The selected candidate will be expected to join within 7 days of receiving the offer letter. • The committee reserves the right not to fill the position if no suitable candidate is identified.

Last date for receipt of applications is
December 17, 2025