

Postdoctoral Scientist – Single Molecule Localization Microscopy - 1 year fixed term

This role is for a 1 year fixed term period.

Based at Alderley Park, the Medicines Discovery Catapult collaborates with academia and industry to develop new approaches for discovering the medicines of the future. It is one of eleven Catapult centres, established by Innovate UK to encourage innovation and growth in the UK's high-potential industrial sectors. The aim of the *Catapults* is to bring expertise, innovation and investment together to improve the pathway towards national and international commercial success for new discoveries and businesses.

The Catapult has established a comprehensive Advanced Light Microscopy platform to support the delivery of its scientific strategy, specifically in the areas of target engagement, complex medicines, biomarkers and multi-modal imaging. It hosts a range of cutting-edge light microscopy systems including confocal, multiphoton and super resolution microscopes, as well as an image processing and analysis platform using commercial and open source software.

Job purpose:

We are looking for a post-doctoral scientist with significant experience in Single Molecule Localization Microscopy (SMLM) to apply their expertise to new and cutting-edge questions in the drug discovery field, including cellular mechanism of action studies and biomarker analysis.

The successful individual will establish novel imaging methods & workflows utilizing the advanced imaging platform available at MDC and will apply them in collaborative projects with external partners, focussed on the discovery and development of small molecules and novel therapeutics. The project is a great opportunity to further develop SMLM applications and accelerate medicines discovery. The prospect to join a world class laboratory team in this high-profile national organisation should provide a fantastic platform for career development.

Main duties and responsibilities:

- Establish novel biological Single Molecule Localization Microscopy workflows in cells and tissues sections, through de novo method development and adaptation of existing Catapult protocols.

- Apply these methods in target engagement, target validation, mechanism-of-action, drug delivery and biomarker studies focussed on MDC collaborations.
- Develop single and two-colour STORM imaging workflows including labelling optimisation, imaging and data analysis to measure target-specific and proximal changes in response to drug treatment.
- Optimize STORM imaging workflows and analysis in ex vivo and clinical tissue to find novel biomarkers for improving diagnosis and patient stratification.
- Deliver high quality data in a complex and time pressured research team environment.
- Implement effective lab processes, experimental records and safety.
- Demonstrate effective communication and research collaboration skills, working routinely with colleagues across both the Catapult and partner organizations.
- Communicate results, through publication and external presentation

Qualifications and Experience:

- The successful candidate will possess a PhD and preferably post-doctoral experience, ideally working in a bioscience or medicines discovery environment.
- Proven expertise in Super Resolution imaging in biological samples, including Single Molecule Localization Microscopy (STORM and/or PALM), demonstrated by a track record of delivery and a strong publication record.
- Substantial experience of working with Single Molecule Localization Microscopy data analysis using open source software.
- Experience in 2-colour STORM imaging workflows and custom script writing will be an advantage.
- Track record of establishing novel methods and workflows.
- Experience in data analysis, handling and interpretation.
- Familiarity with cell culture and cell biology techniques will be an advantage .
- Ability to work on multiple projects simultaneously in a highly collaborative and inter-disciplinary environment.

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Location

Alderley Park

Department

Discovery Science and Technology

Job Title

Postdoctoral Scientist – Single Molecule Localization Microscopy - 1 year fixed term

City

Cheshire

Country

United Kingdom
