Job Descriptions: Cryo-EM Computational Scientist

Location: Cambridge, UK

Astex Pharmaceuticals is a world leader in innovative drug discovery and development. The company has successfully applied its proprietary Fragment-Based Drug Discovery platform to generate multiple new drug candidates that are progressing in clinical development. Astex continues to grow and focuses on Oncology and Neurological Disorders. We have opportunities at our Cambridge UK Research Centre for experienced and innovative scientists, wishing to develop their career in a thriving multidisciplinary, industrial environment.

**CURIOSITY, CREATIVITY AND INNOVATIVE SCIENCE FOR DRUG DISCOVERY**

...UNLOCK YOUR POTENTIAL

Astex has pioneered fragment-based drug discovery (FBDD) and the company now has multiple, fragment derived, drugs in late stage clinical trials. We utilise multiple biophysical techniques, in particular X-ray crystallography and NMR, within our FBDD platform called Pyramid™ and are continually seeking to enhance and develop our capabilities in structural biology. As such, Astex has been in the vanguard of organisations seeking to pioneer the use of cryo-electron microscopy (cryo-EM) for structure-based drug discovery (SBDD) and has access to a growing number of cryo-electron microscopes in-house and within an industry consortium. As part of Astex’s on-going commitment to develop and expand its structural biology capabilities, our Molecular Sciences Group now has an opportunity for a highly-driven computational scientist to join our cryo-EM team.

In 2016 Astex led the formation of the Thermo-Fisher Pharma Consortium in Cambridge, UK, which guarantees our scientists regular access to Titan Krios microscopes. Additionally, Astex has a state of the art in-house cryo-EM facility, including a Glacios cryo-TEM, a fully equipped sample preparation laboratory and extensive computing infrastructure. We plan to expand this facility with additional microscopes during 2019 and 2020. To support this expansion, we are seeking a cryo-EM computational scientist to join our team to help develop this exciting new technique for drug discovery.

The role is focussed on the development of Astex’s cryo-EM data processing platform, including

- Pushing the limits of single particle analysis automation by contributing to the implementation of new and existing cryo-EM software into the Astex processing pipeline
- Monitoring and evaluating relevant image processing technologies
- Monitoring and evaluating the processing quality of different targets processed with the pipeline
- Creatively seek new and informative ways for displaying results and support data in the Astex cryo-EM front-end
- Contributing to the development of the front-end user interface for the pipeline
- Contributing to the development of the database back-end
- Maintaining the processing platform and support scientists in data processing
- Prepare and optimise cryo-EM samples and collect data

Requirements
• Extensive experience in single particle processing (should contain a post-doctoral period), including a highly distinctive ability to recognise flawed results by evaluating processing quality, substantial knowledge about 2-D and 3-D classification methods, as well as stream-lining single particle analysis
• Proven experience studying multiple systems using cryo-EM
• Demonstrable experience of Python is a must
• Knowledge in HTML/JavaScript/CSS is highly desirable
• Knowledge in SQL, Java, C++ is a plus
• Experience in cryo-EM sample preparation and automated data acquisition on high-end transmission electron microscopes
• Highly motivated with the ability to work independently and creatively
• Excellent communication skills and the ability to work in multi-disciplinary teams

We offer excellent training and career development opportunities as well as a highly competitive salary and benefits package.

Closing date: 30th June 2019

To apply, please send your CV and a cover letter quoting the job reference: CS/0519 HR.UK@astx.com

For information on Astex Pharmaceuticals please visit: www.astx.com
and for information on Otsuka Pharmaceuticals please visit: www.otsuka.co.jp