Foundation for Liver Research (FLR) PhD Studentship

Studying the role of epigenetic molecules in fatty liver diseases

We have a fully-funded FLR Doctoral Training Grant studentship available, providing fees and a tax-free stipend of at least £15,590 per year for 3 years.

The project would be suitable for graduates in medical or biological science with strong cellular and molecular biology skills. A minimum 2:1 honours degree (or EU equivalent) or an MSc in a relevant subject is required. The student would have access to and would be encouraged to attend both Institute of Hepatology and Birkbeck college seminars and educational programmes.

The student will be based in the Institute of Hepatology which is funded by the Foundation for Liver Research. The Institute is located close to Birkbeck College and the University of London campus and it provides laboratory space for up to 40 scientists. Current areas of research include viral hepatitis, liver cancer, liver inflammation and metabolism, alcohol and drug induced liver cell injury and metabolomic and proteomic studies. The Foundation for Liver Research was established in 1974 to develop basic research into diseases of the human liver with a translational clinical focus and over the years has supported ground-breaking research programmes into liver failure, liver transplantation, immunology of the liver and various other areas important in clinical practice. More details about the Foundation for Liver Research and Institute of Hepatology can be found at: [http://www.liver-research.org.uk/](http://www.liver-research.org.uk/)

Project overview

Liver diseases are leading causes of death, and constitute an enormous social and economic burden in UK and worldwide. Fatty liver (steatosis) is one of the major risk factor for advanced liver injuries. While the underlying mechanisms can be dependent on alcohol injury or on high fat diet-induced obesity, the development of fat infiltrations in the liver has been attributed to a combined increase in the rate of de novo lipogenesis and a decrease in the rate of fatty acid oxidation in the liver. The identification of early markers for fatty liver is of utmost importance for therapeutic interventions.

Experimental evidence strongly suggest that epigenetic modifications of nuclear chromatin such as post-translational histones acetylation or replacement of canonical histones with histone variants play a key role in the development of fatty liver and of advanced liver diseases. This FFLR-funded project will seek to define how nicotinamide adenine dinucleotide (NAD)-regulated SIRT1 histone deacetylase and histone variant macroH2A1 jointly participate in the pathogenesis of fatty liver, and will be attractive to students seeking a PhD in Biomedicine. The study will elucidate how SIRT1/macroH2A1 affect gene expression and metabolism in the liver, with the scope to identify new markers for fatty liver and potentially open new research and therapeutic avenues. This project will also provide excellent training in contemporary research skills and methods, including the analysis of transcriptome profiles and studies of gene function.

References

Eligibility

There are eligibility requirements for this studentship. Candidates should be UK citizens or EU/EAA citizens.

How to Apply:

- Informal enquiries (accompanied by a CV) may be made to the academic supervisor of the project, Dr Manlio Vinciguerra at manliov@hotmail.com
- For details on the application process see www.liver-research.org/jobopportunities. Formal applications must be made using the Birkbeck Postgraduate Application Form http://www.bbk.ac.uk/cgi-bin/apply_redirect.cgi?page=RMPBIOLOG+3011
- If you have queries about the application process please contact the PhD administrator by phone 020 7079 0745 or by email at t.hoe@bbk.ac.uk

Applications will be accepted immediately for October 2011 start.