

## Postdoctoral Researcher in Metabolomics of Cancer

Karolinska Institutet, Department of Medical Biochemistry and Biophysics

The Karolinska Institutet is one of Europe's largest medical universities and contains commensurate resources and infrastructure. A total of 600 research groups span the full spectrum of medical disciplines and includes 2,000 researchers, 1,000 technicians, and 2,300 postgraduate students from all parts of the world who take part in both basic and clinical research.

### Division

The successful applicant will belong to the Division of Physiological Chemistry II in the Department of Medical Biochemistry and Biophysics and will work closely with the Helleday Laboratory in the new Science for Life Laboratory. The daily working environment will include the KI analytical core facility consisting of >30 researchers working with state of the art equipment including 6 Orbitraps and 2 QqQs coupled to dedicated nanoflow and normal flow separation modules.

### Area of responsibilities

We have an opening for an individual wishing to join a multidisciplinary team aiming to understand mechanisms in cancer. The successful candidate will be expected to use and further develop LC-MS-based methods for both non-targeted and targeted metabolomics. Specifically, the candidate will use a combination of Orbitrap-based non-targeted metabolomics and QqQ-based metabolic profiling of reactive oxygen species (ROS)-induced mediators. The project involves the recently developed potent MTH1 inhibitors, which selectively eradicate cancers by enhancing ROS-induced lethal DNA damage, while demonstrating minimal effects on normal cells. The metabolic status of the cancer cell may be highly relevant for the effect and response of the MTH1 inhibition. Accordingly, in order to find biomarkers to predict the efficacy of MTH1 inhibition as well as identify unique responders, we will use non-targeted metabolomics to identify, quantify and understand fluctuations of metabolites in samples from preclinical models (cell lysate, plasma, urine and tissue), and clinical samples (plasma, urine and tumour biopsies) following treatment with MTH1 inhibitors compared to the profile in control samples. Interested candidates are directed to the following articles for more information on the project scope and employed methods (*Nature* 2014, 508(7495):215-21; *Nature* 2014, 508(7495):222-7; *J Proteome Res*, 2014, DOI: 10.1021/pr500782g).

### Further Information

For additional details of the department and research interests:

<http://www.metabolomics.se/>

<http://www.mbb.ki.se>

<http://www.helleday.org>

### Qualifications

A person is eligible for a position as Postdoctoral Researcher if he or she has obtained a PhD no more than seven years before the last date of employment as postdoc.

We are looking for highly motivated candidates with a Ph.D. in mass spectrometry or bioanalytical chemistry and experience in small molecule mass spectrometry as well as biological sample preparation techniques. Candidates should have demonstrated experience in LC-MS based metabolomics. We are especially interested in candidates with prior experience working with oxidative stress and/or inflammatory pathways. Experience or interest in working with bioinformatics tools for pathway reconstruction and network analysis, as well as multivariate statistics is a significant merit, as is biomedical training with experience from clinical research or studies of metabolism. Excellent communication skills and an ability to interact socially and scientifically with other post docs and students in the laboratory and with collaborators in various networks are essential. Previous post doc experience and a strong publication record are strong merits.

### Start date

Funding is available immediately, but the start date is negotiable. This position is initially available for 24 months, with potential renewal for at least an additional 12 months based upon mutual agreement.

### Application process

Applications including research experience, CV and at least two references should be submitted via the Karolinska Institutet NetRecruiter System. For questions or general inquiries contact Craig Wheelock: [craig.wheelock@metabolomics.se](mailto:craig.wheelock@metabolomics.se)

For full consideration, applications should be received by January 31st.

Karolinska Institutet is one of the world's leading medical universities. Its mission is to contribute to the improvement of human health through research and education. Karolinska Institutet accounts for over 40 per cent of the medical academic research conducted in Sweden and offers the country's broadest range of education in medicine and health sciences. Since 1901 the Nobel Assembly at Karolinska Institutet has selected the Nobel laureates in Physiology or Medicine.

Pursuant to the regulations of the Swedish National Archives, applications are kept on file for two years after the appointment has gained legal force. The regulations do not apply to attachments that have been printed or otherwise published.

Karolinska Institutet strives to provide a workplace that has approximately the same number of women and men, is free of discrimination and offers equal opportunity to everyone.

For temp agencies and recruiters, and to salespersons: We politely, yet firmly, decline direct contact with temp agencies and recruiters, as well as those selling additional job announcements.

<b>Type of employment</b>	Temporary position longer than 6 months
<b>Working hours</b>	Full time
<b>Number of positions</b>	1
<b>Working hours</b>	100 %
<b>Reference</b>	2-3824/2014
<b>Published</b>	2014-11-26
<b>City</b>	Solna
<b>Last application date</b>	2015-01-31
<b>County</b>	Stockholms län
<b>Country</b>	Sweden
<b>Contact</b>	Craig Wheelock +46 (0)8-524 876 30
<b>Union representative</b>	Biborka Bereczky Veress, SACO + 46 (0)70-173 85 75 Christina Hammarstedt, OFR +46 (0)8-524 800 00 Gunnar Stenberg, SEKO +46 (0)8-524 880 75
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