

Seeking qualified applicants for a Postdoctoral Researcher in Applying Metabolomics to Characterize the Exposome at the Karolinska Institute International Open Laboratory, Gunma University Initiative for Advanced Research

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| 1. Positions Offered | <p>Postdoctoral Researcher Fellowship</p> <p>Affiliation: Gunma University Initiative for Advanced Research</p> <p>Work location: 3-39-22 Showa-Machi,
Maebashi, Gunma 371-8511 JAPAN</p> |
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| 2. Research | <p>Since the human genome was sequenced, an extensive effort has been placed on mapping the role of genes in the onset of disease. It was expected that we would be able to explain the cause of disease, as well as understand the genetic basis of health. However, we have found that while the genetic contribution to different diseases varies, non-genetic factors have much greater attributable risks, often in the range of 80–90%. Environmental hazards such as ambient air pollution, environmental tobacco smoke, industrial chemicals, and pesticides may lead to serious, chronic pathologies. Metabolomics—the study of the chemical fingerprints that cellular processes leave behind—is emerging as an important method for characterizing exposure. The successful applicant will be part of an international team using metabolomics as a tool to characterize the exposome. A particular focus will be placed on examining the relationship between early childhood exposure to environmental chemicals of concern and onset of disease. The project involves working with collaborators in the National Institute for Environmental Studies that conducts the Japan Environment and Children’s Study (JECS), which is one of the largest longitudinal birth-cohort studies to date, including 100,000 mother-child pairs and extensive environmental monitoring data. These efforts will require significant experience in mass spectrometry, as well as sample preparation and bioanalytical methods. The large well characterized cohort, extended timeframe of financing, and cutting-edge equipment available represent an unprecedented opportunity to develop novel methods to characterize the exposome and investigate the relationship between environmental exposure and disease.</p> |
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| 3. Environment | <p>The Karolinska Institute (KI) has recently launched a new Molecular Phenotyping group at Gunma University (GU). The current post-doctoral position is being recruited to work in this new facility under the supervision of</p> |
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Prof. Takashi Izumi from GU and Associate Prof. Craig Wheelock from KI. The successful candidate will have access to dedicated state-of-the-art instrumentation including 3 QToFs and 1 triple quadrupole purchased in 2015, as well as extensive newly renovated laboratory facilities. The official language of the lab is English, and all affiliated researchers and administrative support staff speak English.

4. **Qualifications** 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 method development and sample preparation. It is expected that a significant amount of time will be placed on developing novel sample preparation procedures for high-throughput metabolomics. In addition, the applicant should have significant and demonstrable experience in dealing with data acquisition, analysis protocols and associated software. Experience with computer programming (*e.g.*, R, Matlab) and multivariate statistics (*e.g.*, SIMCA) would be highly advantageous. 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. It is expected that the position will entail international travel, especially between Japan and Sweden.

5. **Duties** (1) Perform research in the field of metabolomics and analytical chemistry
(2) Promote formation of a research base for domestic and overseas researchers.

6. **Term of Employment** Type of contract: Fixed-term employee
Contract Period: The position is part of a recently funded 3-year project starting in April 2017. Accordingly, the contract period can be annually renewed for a maximum of 3 years until March 31st, 2020.

7. **Salary and Benefits** According to Gunma University Employment Regulations for Part-time Employees
Salary: determined based on the successful applicant's experience.
The position includes health insurance, pension, and labor insurance.

8. **Selection of Candidates** (1) Initial screening will be done via examination of application materials.
(2) Selected applicants will be interviewed via Skype and may be requested to interview in person at GU with a formal research seminar.

9. Starting Date	The initial start date is flexible, but the position is available immediately.
10. Deadline	May 31, 2017
11. Application Materials	<p>(1) A Curriculum Vitae (Form 1)</p> <p>(2) A List of Publications and Activities (Form 2)</p> <p>(3) A Summary of previous research activities and a Statement of Future Research Plans (Approximately one A4-size page)</p> <p>(4) A list of persons to whom the applicant's research and educational achievement can be referred (including name and contact information)</p> <p>The necessary forms are available on the following website: http://www.giar.gunma-u.ac.jp/en/2015/07/10/application-forms/</p>
12. Send application by e-mail to	<p>To Craig Wheelock, Karolinska Institutet craig.wheelock#@#metabolomics.se</p> <p>AND</p> <p>To Advanced Research Support Office Research Promotion Division, Gunma University miraisentan#@#jimu.gunma-u.ac.jp (Please note that “#@#” should be replaced with “@”.)</p>
13. For further information, contact	<p>More information can be found at: http://www.metabolomics.se/ http://ki.se/en/startpage http://www.gunma-u.ac.jp/ http://www.giar.gunma-u.ac.jp/english/</p> <p>Questions regarding the position can be directed to Craig Wheelock (craig.wheelock#@#metabolomics.se)</p> <p>OR</p> <p>Advanced Research Support Office, Research Promotion Division Gunma University Phone: +81 (0)27-220-8116 / 8112 FAX: +81 (0)27-220-8114 E-mail: miraisentan#@#jimu.gunma-u.ac.jp (Please note that “#@#” should be replaced with “@”.)</p>
14. Other	Gunma University promotes a society based on equal opportunity by actively hiring women when applicants are equally qualified in performance evaluation (research and educational achievement, social contributions and personality).