

Postdoctoral scholarship in Cell-based biomedical microsystems

Project description

In this project, we are developing in vitro and in vivo applicable sensing methods for dynamic health monitoring of cells, including neural cells and pancreatic islets. The work includes the development of biomaterials, cell and tissue interfaces and evaluation their relevance for in vitro and in vivo models. Several research challenges in biomaterial functionality and patterning, cell, tissue and sensor integration will be addressed. Your research will be application-focused solving real pre-clinical and clinical needs. You will work in a highly innovative environment in close contact with clinical partners working with diabetic and pre-diabetic patients.

Key references include:

1. Maoz BM, Herland A, FitzGerald EA,.. Ingber DE Parker KK,. **A linked organ-on-chip model of the human neurovascular unit reveals the metabolic coupling of endothelial and neuronal cells'** Nat Biotech 2018 doi:10.1038/nbt.4226, <https://www.nature.com/articles/nbt.4226>
2. Maoz BM, Herland A, Henry OYF, Leineweber WD, Yadid M, Doyle J, Mannix R, Kujala VJ, FitzGerald EA, Parker KK, Ingber DE. Organs-on-Chips with combined multi-electrode array and transepithelial electrical resistance measurement capabilities. *Lab-on-Chip*. 2017;17(13):2294-2302. doi:[10.1039/c7lc00412e](https://doi.org/10.1039/c7lc00412e)
3. Abdulreda MH , ..., Berggren P O, In vivo imaging of type 1 diabetes immunopathology using eye-transplanted islets in NOD mice. *Diabetologia*. 2019 Jul;62(7):1237-1250. doi: 10.1007/s00125-019-4879-0. Epub 2019 May 14.

KTH offers an attractive working environment and generous remuneration in form of scholarship. As a postdoctoral scholar you have many opportunities to participate at conferences, projects and other relevant events which will extend your professional network and benefit your future career.

Qualifications

The successful candidate must hold (or soon hold) her/his PhD degree in bioengineering, medical engineering or stem cell science obtained no later than five years prior to starting the position. The candidate must have significant research laboratory experience, and an excellent record of publications. At least one first author publication is a requirement. Specialization in biomaterials, electrophysiology, calcium imaging as well as microfluidics is highly valued. Additionally, it is valuable if you have worked with organoid research, animal models and diabetes models.

The successful applicant should have an overall outstanding academic track record, and well developed analytical and problem-solving skills. We are looking for a strongly motivated person, who is able to work independently. Good command of English orally and in writing is required.

Application

Apply to this scholarship by e-mail to aherland@kth.se

Application deadline: Your complete application must be received at KTH no later than 2019-10-25.

You are responsible for ensuring that your application is complete according to the instructions below.

The application must include:

1. CV including your relevant professional experience and knowledge.
2. Copy of the degree certificate(s) and transcripts of records from your previously attended university-level institutions. Translations into English or Swedish if the original documents are not issued in one of these languages.
3. Statement of purpose: what are your academic interests, how they relate to your previous studies and future goals; maximum 2 pages long.
4. Representative publications or technical reports: Documents no longer than 10 pages each. For longer documents (e.g. theses), please provide a summary (abstract) and a web link to the full text.
5. At least one letter(s) of recommendation
6. Contact information for two reference persons. We reserve the right to contact references only for shortlisted candidates.

Others

Period: Initially 1 year with possible extension with 1 more year

Extent: Full-time

Access: According to agreement, preferably as soon as possible

Number of positions: 1

City: Stockholm

Contact:

1. Anna Herland, Associate Professor, aherland@kth.se, +46700877005
2. Mikael Visén, HR officer, rekrytering@ee.kth.se, + 46 (0)8 790 84 89