

## PhD position on Microchip Multiple Screening of Tropical Fevers

### Specifications

Location	Delft
Function type	PhD position
Scientific fields	Physical-Chemistry, Engineering, Health
Hours	38.0 hours per week
Salary	€ 2191 - € 2801
Education	University Graduate
Job number	
About employer	Delft University of Technology

**Job description:** In the framework of the Global Research Fellowships Initiative of the Delft University of Technology (TU Delft) a PhD position of 4 years is available at the Dept. of Chemical Engineering (in collaboration with the Dept. of Precision and Microsystems Eng.) on the development of the fundamentals of a lab-on-a-chip platform to screen tropical fevers such as Zika, Chikungunya and Dengue. The final project goal is to develop a proof of concept microchip technology for the simultaneous detection of mentioned tropical fevers which present an increasing threat to global public health.

**Project description:** This is a multi-disciplinary project. Our approach is based on a very recent platform developed by us where very large arrays of biocompatible nanowires formed by ultralong stable block copolymer micelles will be used as a physical support for viruses antibody detection. Development of chemically modified nanowire will allow specific antibody detection. Detection methods of various natures will then be further investigated. A prototype of the chip will be tested in The Netherlands as well as in cooperation with colleagues of the Chemistry Dept. Univ. Western Cape, South Africa.

**Eligibility criteria:** TU Delft is an equal opportunity employer and all suitably qualified candidates irrespective of gender or nationality are welcome to apply as long as the following conditions have been fulfilled

- Applicants should have completed a MSc degree or equivalent by the time of start.
- Applicants should have good knowledge of English, both written and oral in order to be able to submit reports and a doctoral thesis in English.
- Applicants should have a strong background on one of the following fields: pharmacy / biochemistry / chemistry or chemical engineering / physics or materials science whereas experience with microbiology and cell culture is a plus.
- Applicants should be willing to learn microfabrication, signal processing, viral antibody handling and device design integration.
- Applicants are expected to be open-minded and possess good lab skills.
- Applicants agree with an external stay of a few months (to be defined) in cooperation with colleagues of Cape Town University in South Africa.

**Information and Application:** Please send your application and personal statement of motivation with c.v. (including contact information for at least two academic references) and transcripts from your Bachelors and/or Masters degrees as a SINGLE PDF file. All applications should be sent by email to: Prof. Eduardo Mendes email: [e.mendes@tudelft.nl](mailto:e.mendes@tudelft.nl) with "Application PhD Tropical Fever" as subject of the message.

**Deadline:** Please, send your applications by 21th of April

**Conditions of employment**

The TU Delft offers a customisable compensation package, a discount for health insurance and sport memberships, and a monthly work costs contribution. Flexible work schedules can be arranged. An International Children's Centre offers childcare and an international primary school. Dual Career Services offers support to accompanying partners. Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities.