

## **Vacancy 15/10-8**

The Physikalisch-Technische Bundesanstalt (PTB) is the National Metrology Institute of the Federal Republic of Germany with scientific and technical service tasks.

It furthers progress and reliability in metrology for society, economy and science.

Department 8.1 'Medical Metrology' conducts research and development in the fields of magnetic resonance imaging (MRI) and spectroscopy (MRS). In particular, the applicability of the noble gas Xenon as an MR-probe is investigated. For research and development within the framework of the grant project 'Biosensor based  $^{129}\text{Xe}$ -MRI on cells and animal models of autoimmunity', a winner in the competition '[Innovationswettbewerb Medizintechnik 2009](#)', we are looking for a

### **doctoral or a post-doctoral candidate in molecular imaging**

The position of the doctoral student in the field of physics or chemistry is limited to 3 years.

The tasks are in compliance with the characteristics of Salary Group IIa of the BAT remuneration scheme; the remuneration will be paid according to the regulations of the TVöD (85 %). The position of the post doctoral candidate is limited to 30 months. The tasks are in compliance with the characteristics of Salary Group IIa of the BAT remuneration scheme; the remuneration will be paid according to the regulations of the TVöD (100 %).

#### **Tasks:**

The position aims at developing novel MR technology for biomedical imaging and spectroscopy and its application to models of various diseases. Work will be focused on the detection and analysis of important molecular processes in immunology. The project is implemented in cooperation with the Leibniz Institute of Pharmacological Research (Berlin). State-of-the-art MRI scanners (3T and 7T human whole body scanner) und NMR spectrometers (300 to 900 MHz) are available.

Among other things the applicant will be responsible for the following activities

- Development and setting-up of experimental equipment
- Conduct of experiments on phantoms, cells and rodents.
- Analysis and modeling of data
- Presentation and publication of results

#### **Qualifications:**

- Graduated physicist or chemist (Master or Diploma) for the doctoral position; a doctor's degree (PhD or Dr. rer. nat.) for the post-doc position
- Good knowledge of biophysical imaging or spectroscopy (particularly MR), optical spin polarization techniques, or animal studies
- Proficiency in scientific programming (particularly LabView, MatLab, or Mathematica)
- Readiness and ability to work in an interdisciplinary team with strong commitment

Minimum requirements must be met with regard to physical aptitude for setting up equipment and carrying out measurements while standing and for going on business trips.

For further information, please contact

Dr. Lorenz Mitschang (phone: +49 30-34817632, [Lorenz.Mitschang@ptb.de](mailto:Lorenz.Mitschang@ptb.de)) and

Dr. Wolfgang Kilian (phone: +49 30-34817952, [Wolfgang.Kilian@ptb.de](mailto:Wolfgang.Kilian@ptb.de)).

The PTB ensures equal treatment of the genders and thus aims at increasing the share of women in the scientific and technical staff. Women are therefore expressly requested to file their application.

# **Physikalisch-Technische Bundesanstalt**

## **Braunschweig und Berlin**

Disabled persons will be given priority if they have the same occupational aptitude.

PTB supports the reconciliation of work and family life by flexible part-time models within the scope of the official possibilities.

For further information, see our flyer 'Familienfreundliche PTB' (Compatibility of family and profession at PTB) at [www.ptb.de/Jobs/Ausbildung](http://www.ptb.de/Jobs/Ausbildung).

Are you interested? Then we are looking forward to hearing from you. Please send your detailed application to the address below by **9 August 2010**, quoting the reference number 15/10-8

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