

## **Position for a PhD-Student in Biology (50% E13)**

The new Heidelberg Ion Therapy Centre (HIT) aims to elucidate the clinical effectiveness of carbon ions for the treatment of cancer. This new irradiation modality may be used separately and in combination with X-rays. Charged particles offer distinct physical and biological properties that enable the application of high local doses to the tumor while sparing the surrounding normal tissue. Moreover, the increased biological effectiveness of carbon ions relative to protons and photons have been shown to improve treatment results for certain tumor entities. The clinical studies will be accompanied by a research program within the frame work of a Clinical Research Group (funded by DFG, see <http://www.klinikum.uni-heidelberg.de/Klinische-Forschergruppe-Schwerionentherapie.113071.0.html>), which shall develop and integrate new technologies in beam delivery and treatment planning as well as to clarify underlying biological mechanisms.

Within the sub-project 3: "Relative biological effectiveness of carbon ions in Normal CNS tissue", we offer a position for a

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The Ph.D.-candidate should have a strong interest in performing animal studies to determine the relative biological effectiveness (RBE) of Carbon Ions in the normal central nervous system (CNS). Ultimate goal is to determine a RBE-depth profile for single and fractionated doses of Carbon ions, to monitor functional parameters after irradiation using non-invasive radiological techniques (CT, Ultrasound, MRI etc.) and to study treatment related alterations on the histological and molecular level.

The position is available for 2 years with the possibility of an extension. The candidate will be employed by the University Clinic Heidelberg.

We are looking for a highly motivated student able to work independently and in a team. Diploma or Masters in Biology, Biochemistry or related areas is required. Experience in animal experimentation as well as in histology and molecular biology is required. Experience in tissue processing immunohisto-chemistry, and microscopy, is of advantage. Applications should include cover letter, CV, copies of high school exam (e.g. Abitur, Baccalaureat) and university exams and address details of 2 referees.

Please send your application until 31. August 2010 to

Contact:

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