



Ph.D. Student position

June 8, 2013

Background: Osteoarthritis (OA) is a common musculoskeletal disease occurring worldwide. Despite extensive research, etiology of OA is still poorly understood. Histopathological grading (HPG) of 2D tissue sections is the gold standard reference method for determination of OA stage. However, traditional 2D-HPG is destructive and based only on subjective visual evaluation. These limitations induce bias to clinical *in vitro* OA diagnostics and basic research that both rely strongly on HPG.

Aim: To develop 3D histopathological grading of OA using cutting-edge nano/micro-CT (Computed Tomography) technologies *in vitro*, and finally test the established grading with clinical CT scanner *in vivo*.

Research environment: The main location and workplace will be in Oulu at the Institute of Biomedicine, University of Oulu, Finland. The research will be conducted also at the Department of Physics, University of Helsinki, Finland. The research will include measurements with the synchrotron light sources.

Requirements: Applications are invited from **motivated** students from various fields. The suitable background could be biomedical engineering, anatomy, biology, medicine, medical physics, biophysics, or other relevant field. Candidates with a recently completed first or upper second class honours degree, M.Sc. degree, or candidates who are currently finishing their M.Sc. degree, are invited to apply. Capability to independent laboratory working is required, and experience in histology, microscopy, synchrotron/micro-CT imaging and demonstrated writing skills are considered as an advantage.

Salary: Selected candidate will enroll as an employee in the University of Oulu. Salary will be defined according to the YPJ salary system of Finnish universities (approx. 2260 – 3120 €/month) according to the job specific and personal performance.

Starting date: September 1st, 2013, or as soon as possible thereafter.

The length of the contract: The work contract will be initially made by the end of 2015. The continuation of the contract is possible until 2016 or further upon mutual agreement.

Application documents: The application documents should include: 1) A cover letter, 2) Grades of completed courses and degree certificates, 3) Curriculum Vitae, 4) Full name and email address of one referee (preferably a supervisor of M.Sc. thesis).

Deadline for application: July 14th, 2013

Contact details: Please send your application by email to Simo Saarakkala (simo.saarakkala@oulu.fi). Please, direct any questions or correspondence to:

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