



LUND UNIVERSITY

Faculty of Medicine

Department of Clinical Sciences, Lund
Scholarship administrator

Announcement of post-doc scholarship at the Department of Clinical Sciences, Lund. Division Orthopedics. Lund University.

Project

Controlled drug delivery in hard and soft tissue tumors

The goal of the project is to study the delivery of tumor drugs using hydroxyapatite (HA) particles as a delivery or a recruiting platform for drugs that have a chemical affinity to HA. Our group has recently discovered that some cytostatics have a high binding affinity to HA not only in-vitro but also in-vivo, which provides a simple method for long-term controlled release of these drugs locally within the tumor. Cytostatics injected systemically into the blood stream have also been shown to preferentially find and bind synthetic HA particles implanted in an animal.

Owing to their high surface area, nano sized HA particles provide an excellent local platform for intracellular delivery of tumor drugs, which can eventually aid in reducing chemotherapy associated burden on other vital organs.

The goal of this project is to study the efficacy of local cytostatic delivery using nano and micro HA particles on tumor cells both in-vitro and in animal models of tumor.

Reference number: V 2021/1427

Scholarship period: The scholarship covers a period of 6 months with possibility of prolongation up to a maximum of 24 months in total.

Preliminary start date: 2021-10-01 (to be discussed)

Application deadline: 2021-08-22

Supervisor/contact person: Magnus Tägil/Deepak Raina, +46-46-2220740, magnus.tagil@med.lu.se or deepak.raina@med.lu.se

Qualifications:

- To be eligible for a post-doc scholarship at Lund University the recipient must hold a PhD degree within a relevant field (Note that the degree must be awarded at the time of application). The PhD degree must not be from Lund University.
- The PhD degree must not be older than three years and should preferably be from one of the Nordic countries. The applicant must not have been employed at Lund University in the past two years.
- We are looking for a candidate who is motivated to research at the interface of materials science and biology. Prior experience with xenograft tumor models (prostate, breast, liver or lung cancers) in immunocompromised mice and prior education involving animal handling (handling, injecting, anesthetizing and organ harvesting) is mandatory and the candidate must have a FELASA certification (or equivalent) for working with animals as per the EU regulations.
- Candidates who, in addition have a well-documented experience with nano-particle tracking both intra-cellularly and in in-vivo models will be given priority.
- Documented technical knowledge of experimental methods involving SEM, TEM, Confocal microscopy, mammalian cell culture, molecular biology techniques (western blotting, immuno-cyto/histochemistry), tissue processing and histology is important.
- Prior experience of using techniques such as micro-CT, PET/SPECT-CT would be of additional merit for the applicant.

Written application, including reference number, is to be sent via e-mail to the supervisor and must include the following:

- CV
- Personal letter stating the reasons why the study suits the applicant (maximum one page)
- List of publications
- References (2)
- PhD diploma

Information regarding scholarships at Lund University

- The scholarship sum is paid out quarterly
- A scholarship awarded will be reviewed every six months
- Scholarships are tax-exempt
- Scholarships do not give rise to sickness benefits, compensation from the Social Insurance Office or retirement pension.
- A scholarship holder cannot be hired after the scholarship period due to tax reasons.
- The scholarship follows the regulations established by the Vice-Chancellor of Lund University (October 1st 2020; Reg. No STYR 2020/1283).