

4 years PhD student position:

Nano-delivery system, molecular imaging and immunology

Department of Radiology, Leiden University Medical Center (LUMC)

Note: position is only open to CSC applicants

Project

The research group **Nanomedicine and Molecular Imaging** at the Radiology Department of Leiden University Medical Center investigates novel nanotechnologies for molecular imaging in immunology and medicine for *in vitro* and *in vivo* applications. In this context we have one PhD position available for an outstanding young scientist who has an interest to design and develop novel nanoparticles and nanoprobe for molecular imaging and immunological purposes.

Our project aims to develop nanocarrier systems based on polymer vesicles, which can be loaded with different components (drugs, antigens, adjuvant and contrast agents). In the project we will use specific tumor models to study the influence of distinct nanoformulations *in vitro* and *in vivo* on tumor progression and the overall immunological response. Our nanocarrier systems harbour three key elements allowing detection and treatment of cancer: i) real-time visualization based on contrast agents; ii) specific targeting; iii) and activation of immune cells by Toll-like receptor ligands.

We will incorporate innovations from chemistry, nanotechnology, molecular imaging, and immunology. We envision that these nanocarriers will mark the advent of a new era of anti-tumor treatments, and that they could be further honed to enable non-invasive monitoring of tumors at different stages of development.

Requirements

Candidates should have:

- a Master of Science degree on Biomedical sciences or comparable study;
- experience with culturing mammalian cells and molecular biological techniques;
- excellent experimental skills in general;
- strong background in immunology, oncology, or related disciplines;
- knowledge or affinity to cancer biology, molecular imaging, and nano-delivery system is highly desirable;
- the ability to work both as part of a team and independently;
- fluency in English, both written and orally;
- interest in bio-medical research;

Organisation

LUMC

At the Leiden University Medical Centre (LUMC), we are continually seeking to improve the quality of healthcare. The LUMC aims for excellence in patient care, research, teaching, training and continuing education. Our key strength is medical life-sciences and clinical practice, with an impressive infrastructure comprising state-of-the-art technology platforms and (translational) research facilities. The LUMC is therefore uniquely positioned in the emerging Dutch healthcare infrastructure to play a leading role in the new healthcare paradigm of prediction, prevention and personalised medicine.

Department

The group of Nanomedicine and Molecular Imaging at the Radiology Department is a young and international research team of about 15 people. Major focus of the research interest is to investigate novel nanotechnologies for molecular imaging in immunology and medicine for *in vitro* and *in vivo* applications. The group has excellent laboratory facilities on molecular imaging and works in close collaboration with the immunology group at the LUMC. The group has a track record in the development of targeted nanoparticles. The described research will be performed at the Radiotherapy Department of the LUMC within collaboration between our group in nanomedicine and medical imaging, and the group of tumor immunology.

More information

This position is ONLY open to the China Scholarship Council– Leiden University Joint Scholarship Programme candidates. Once the candidate is accepted after our research group selection procedure, an acceptance letter will be provided for the candidate's application of scholarship to CSC (application period March, 2018). Please note that your admission to the Graduate School is conditional upon your obtainment of funding through the China Scholarship Council – Leiden University Joint Scholarship Programme.

If you have any questions on the research position, please contact Dr. Y. Li, Department of Radiology, telephone +31 (0)71 526 2549, email y.li.radi@lumc.nl.

For questions regarding the CSC scholarship, please visit the CSC website <http://www.csc.edu.cn>.

For questions regarding the Leiden University and studying abroad, please visit the university website <https://www.universiteitleiden.nl>.

Apply

If you are interested in this position and you satisfy the requirements, please send in your motivation letter and CV before February 1, 2018 to y.li.radi@lumc.nl. An online interview and references will be requested following the application assessment.

You may rest assured that your details will be treated with strict confidentiality.