

The Faculty of Science and the Leiden Institute of Chemistry are looking for a:

Postdoctoral researcher, Theoretical modelling of light-activated metal-based metabolic enzyme inhibitors (1.0 fte)

Vacancy number: (wordt door HRM ingevuld)

Description of the project

This postdoctoral position is part of the NWO-funded VICI project '*Ru2TARGET: Synergistic light-activated metal-based metabolic enzyme inhibitors*'. The aim of this project is about developing photoactivated chemotherapy, a new form of anticancer treatment based on light-activated pharmacological compounds.

The candidate will have experience in the theoretical modelling of drugs and drug-proteins interactions and is interested in developing new modelling tools and approaches for metal-containing drugs.

The postdoc position will be hosted within the group of Dr. Sylvestre Bonnet, whose research focus is on performing photochemistry in biological and biomimetic environments. Embedded within a multidisciplinary project, the postdoctoral collaborator will work within the coordination chemistry and catalysis group (MCBIM), which houses excellent facilities for synthesis, photochemistry, and photobiology, and hosts several PhD student and postdocs with expertise in the field of light-activated metallodrugs. Computing time will be available via a local cluster and SURFSARA, the Dutch high-performance computing facility. Strong interactions between the theoretical postdoc and the members of the experimental team are expected, aiming at designing, altogether, highly selective and effective light-activated metal-based metabolic enzyme inhibitors. The MCBIM group is internationally recognized for its work in biomimetic and biological inorganic chemistry. The postdoctoral project will be realized in close collaboration with the team of Dr. Franco Buda, from the Biophysical Organic Chemistry/Solid State NMR group, also part of the LIC. Dr. Buda is a theoretical chemical physicist specialized in QM/MM approaches and the modelling of photochemical processes.

Selection Criteria

- The candidate should hold a PhD degree in medicinal computational chemistry or a related field;
- He/she should have a good knowledge of state-of-the-art methods for the modeling drug-protein interactions;
- Excellent proficiency in English is required (as proven by IELTS: ≥ 6.5 or TOEFL: internet based 90, or equivalent);
- The candidate should have a convincing publication record;
- He/she should have proven ability to work in team, to communicate with experimental chemists, and be interested in developing new tools for theoretical modeling;
- Previous experience in modelling photoreactive and/or inorganic compounds is a plus.

The planned starting date is **July 1/August 1, 2019** (or earlier).

Research at our Faculty and Institute

The Faculty of Science is a world-class faculty where staff and students work together in a dynamic international environment. It is a faculty where personal and academic development are top priorities. Our people are committed to expand fundamental knowledge by curiosity and to look beyond the

borders of their own discipline; their aim is to benefit science, and to make a contribution to addressing the major societal challenges of the future.

The research carried out at the Faculty of Science is very diverse, ranging from mathematics, information science, astronomy, physics, chemistry and bio-pharmaceutical sciences to biology and environmental sciences. The research activities are organized in eight institutes. These institutes offer eight bachelor's and twelve master's programs. The faculty has grown strongly in recent years and now has more than 1,300 staff and almost 4,000 students. We are located at the heart of Leiden's Bio Science Park, one of Europe's biggest science parks, where university and business life come together.

The chemistry and life science research in the Leiden Institute of Chemistry (LIC) <https://www.universiteitleiden.nl/en/science/chemistry> is organized around two major research areas: 'Chemical Biology' and 'Energy & Sustainability'. The institute's research themes illustrate the central position of chemistry between biology, medicine and physics. The various research topics carried out within these themes are ideal for executing interdisciplinary research.

Terms and conditions

We offer a full-time position for initially one year, with possible extension for another year after positive evaluation of the progress of the research. Salary range from €2.709,- to €4.274,- gross per month (pay scale 10 in accordance with the Collective Labour Agreement for Dutch Universities).

Leiden University offers an attractive benefits package with additional holiday (8%) and end-of-year bonuses (8.3%), training and career development and sabbatical leave. Our individual choices model gives you some freedom to assemble your own set of terms and conditions. Candidates from outside The Netherlands may be eligible for a substantial tax break.

Diversity

Leiden University is strongly committed to diversity within its community and especially welcomes applications from members of underrepresented groups.

Information

Enquiries can be made to Dr. Sylvestre Bonnet bonnet@chem.leidenuniv.nl. If you have any questions about the procedure, please contact the secretary of the Mrs. Yvonne Snellenberg snellenberg@chem.leidenuniv.nl, telephone: +31 (0)71 527 4450.

Applications

To apply for this vacancy, please send **no later than June 1, 2019** an email to the secretary of the 'Metals in Catalysis, Biomimetics & Inorganic Materials' group Mrs. Yvonne Snellenberg snellenberg@chem.leidenuniv.nl.

Please ensure that you join to your application the vacancy number and the following documents:

- A letter of motivation;
- An updated CV of at most 3 pages, including a well-defined publication list;
- Two written letters of recommendation, including at least one by a former PhD supervisor;
- A digital copy of your PhD degree.