

Jury report

Pieter Langerhuizen Lambertuszoom Fonds 2019 – Chemistry

This year the *Pieter Langerhuizen Lambertuszoom Fonds* allocated funding to support activities in the discipline chemistry. Fourteen proposals have been received, either for financing equipment, executing a specific research plan or facilitating a research stay abroad. The different nature in combination with the generally high to excellent quality, made that ranking the proposals was not a trivial task. After careful deliberations, however, the jury unanimously decided to award Dr. Burcu Gümüşçü Sefünç from the University of Twente with the 2019 *Pieter Langerhuizen Lambertuszoom* bate of 25 k€.

After obtaining her BSc degree in Turkey and her MSc degree in Spain, Dr. Gümüşçü Sefünç started her scientific career at the University of Twente, where she obtained a PhD degree in the BIOS Lab-on-a-chip group in 2016. She then worked as a post-doc at the University of California, Berkeley, on determining proteins in single cells and the development of protein-tagged hydrogel particles for diagnosis of genetic disorders. During her career so far, Dr. Gümüşçü Sefünç has built up a rather impressive list of publications, lectures, and contributions to workshops. In addition, she has won a considerable number of awards, including full scholarships allowing her to undertake her BSc and MSc studies.

The research in Berkeley inspired her to continue her efforts in this field after she returned to the University of Twente where she took up a position as a researcher. Her research goal is to enable low-cost solutions for health-related real-world problems, in particular patient incompliance with medicines. She aims to address this by synthesizing hydrogels with unique chemistries to capture specific target metabolites that are indicative of the use of a particular medicine. When combined with microfluidics, she foresees that these hydrogels can make a fundamental impact on health monitoring. As a final goal, she wishes to develop a robust and versatile hand-held device for medication adherence monitoring.

Dr. Gümüşçü Sefünç faces the challenge to establish her own research group in the Netherlands. She has to attract students to join her group, seek funding for fundamental research and has to make alliances with the private sector in order to raise additional funding. To support her in this endeavor, the *Pieter Langerhuis Lambertuszoom Fonds* will provide finances for the purchase of consumables and small equipment that is crucial to execute part of the research in her lab. In particular, it will be essential for fabricating in a cleanroom facility microfluidic channels and connections for sampling and reactions, and for 3D printing of specific adapters. This will allow her to study the characteristics of colorimetric reactions and assess the feasibility of using these reactions for generating quantitative imaging data.

The jury would like to encourage Dr. Gümüşçü Sefünç to continue on this path and strongly feels that this award will be important to pursue her scientific goals. Moreover, it will strengthen her position as an independent researcher and will further stimulate her to build her own scientific career in this field. The jury congratulates Dr. Gümüşçü Sefünç with the award and wishes her success with achieving her ambitious plans.

Prof. dr. I.W.C.E. (Isabel) Arends, Dean Faculty of Science, Utrecht University

Prof. dr. T. (Tilman) Hackeng, Professor of Biochemistry, University Maastricht

Prof. dr. F.P.J.T. (Floris) Rutjes, Professor of Synthetic Organic Chemistry, Radboud University

The jury meeting took place on April 10, 2019, was chaired by Drs J.J.Q. Lampe, director KHMW, and also attended by Prof. dr. A.P. IJzerman, Secretary of Natural Sciences KHMW and Drs. S. van Manen, Secretary (minutes).