Post-doc Position in Peptide Engineering and Diagnostic Assay Development

EPFL / BÜHLMANN Laboratories Research Project

In the frame of a collaborative project of the EPFL and BÜHLMANN Laboratories (Schönebuch, Switzerland), a post-doc position is available in the group of Prof. Christian Heinis at the EPFL in Lausanne (https://lppt.epfl.ch).

The goal of the post-doc project is to generate peptides that bind with high affinity to a disease marker and to apply the peptides for developing a diagnostic assay. The peptides are to be generated/optimized by phage display (1, 2) and/or by the chemical synthesis of large numbers of peptide variants and their high-throughput screening (3). The project further involves the characterization of the peptides (affinity, specificity, stability etc.) , their application as affinity reagents in a diagnostic assay, and the testing of the assay using samples containing disease marker.

The post-doctoral student will work at EPFL in Lausanne and interact closely with scientists at BÜHLMANN Laboratories in Schönebuch near Basel, as well as exchange with scientists of the Fachhochschule Nordwestschweiz (FHNW) and the Kantonal Hospital Baden.

Applicants need to be highly motivated, capable to lead a project independently, and able to interact and communicate well. They should have an education in chemistry, biochemistry or a related subject and a publication record documenting research achievements as first author. Entrance date: January 2022 - June 2022

To apply for the position, please send a short letter of motivation, a CV and a list of references to Prof. Christian Heinis (christian.heinis@epfl.ch).

Figure: Phage display selection of target-specific peptides, X-ray structure of a phage display-selected peptide bound to target protein, and photo of lateral flow assay.
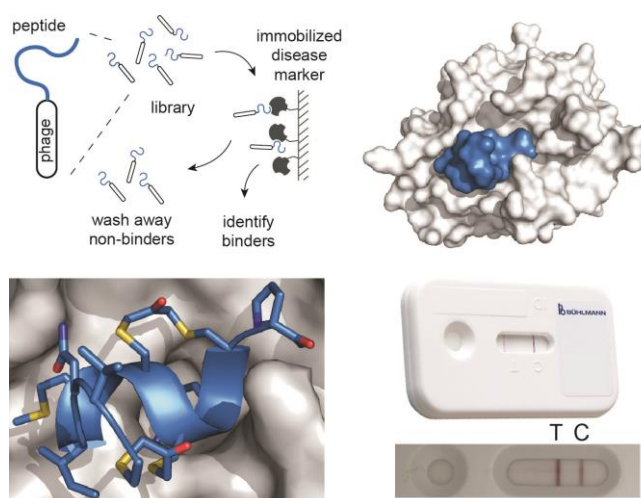
Literature:

1. Heinis, C., et al., Nature Chemical Biology, 6, 2009
2. Kong, X.D., et al., Nature Biomedical Engineering, 4, 2020
3. Kale, S. et al., Sciences Advances, 5 (8), 2019