



Laboratory of the Physics of Biological Systems

Antibodies are key components of protein- and cell-based therapies. One tool for antibody development that laboratories around the world are focusing on is artificial intelligence (AI), leveraging structural and binding data to create prototypes of proteins that bind their targets well. However, AI tools are currently far from generating good designs with high success rates. Further, 'smart' proteins that switch on or off are not within the scope of AI-based tools currently. More importantly, we also need breakthroughs in experimental techniques that make it easy (and cheap) to test and improve on designs. We want a PhD student to join our lab, who is interested in developing both

- 1) novel experimental directed evolution techniques and
- 2) AI-based design methods

to make better binding, smarter, more controlled, and cheaper antibodies.

Contact Prof. Sahand Rahi (sahand.rahi@epfl.ch) for more information.