



## Career Development Award

### Project

«Rationally designed peptides to inhibit prion toxicity»

<b>Granted amount</b>	CHF 150'000
<b>Starting date</b>	1.6.2022
<b>Duration</b>	18 months



### Main applicant

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### Therapie Approach-Research

Prion diseases are a group of infectious neurodegenerative diseases with lethal outcome, which affect humans and a large variety of animals. Despite their high impact, no effective treatment for prion diseases has been found. The diseases can be inherited, transmitted or originate sporadically. The responsible agent is an abnormally folded protein (scrapie), which propagates itself by imposing its conformation onto the (healthy) cellular prion protein. In this project I will use rational design and computer simulations combined with experimental validation to develop a strategy to block the toxicity triggered by the prion protein scrapie.

In particular, I will design agents to bind to the cellular prion protein with high specificity, which will in turn inhibit the abnormal folding of the protein and prevent the development of the disease. The successful outcome of this project will lay the structural foundation for the development of multifunctional drugs against prion diseases