



## Principal Investigator Grant

### Project

«Elucidation of the role of brain barriers on fluid drainage and antibody access in Alzheimer's disease»

<b>Granted amount</b>	CHF 281'988
<b>Starting date</b>	1.4.2022
<b>Duration</b>	36 months



### Main applicant

Dr. Steven Proulx  
Group Leader  
Theodor Kocher Institute  
University of Bern  
Freiestrasse 1  
3012 Bern

### New insights in Alzheimer's disease

Recent research findings have ignited a debate about how fluid and waste products clear from the central nervous system (CNS). However, the studies that have stimulated these discussions largely ignored the presence of anatomical barriers that separate the CNS into multiple compartments.

We have developed mouse models that allow for visualization of these barriers and blood and lymphatic vessels during microscopic imaging. Using these "reporter mice", we here will determine how fluid and molecules circulate in the spaces surrounding the brain and how fluid and molecules are cleared from the CNS. In a mouse model of Alzheimer's Disease (AD), we will examine the effects of the developing pathology on the fluid circulation and evaluate the response to anti-amyloid antibodies.

The knowledge gained in this proposal will improve our understanding on AD pathogenesis and may lead to more optimized drug delivery for Alzheimer's patients.