



**Laudatio for the Award Ceremony
of the Prix Schläfli Biology 2022
of the Swiss Academy of Sciences (SCNAT)
for Dr Anna-Katharina Pfitzner**

The jury of the Prix Schläfli (Biology) 2022 of the Swiss Academy of Sciences (SCNAT), consisting of Prof. Dr Irene Adrian-Kalchauer (University of Bern), Prof. Dr Oliver Heiri (University of Basel) and Prof. Dr. Carmen Faso (University of Bern) reviewed 16 applications. Amongst the many excellent candidates, the jury suggested to award the prize to Dr Anna-Katharina Pfitzner for her achievements in understanding a fundamental aspect of how membrane deformation and fission are regulated by proteins called ESCRTs. Dr Pfitzner investigated this basic mechanism in mammalian cells and published her findings in the journal *Cell* with the title: An ESCRT-III Polymerization Sequence Drives Membrane Deformation and Fission.

Following the jury's suggestion, the board of the Platform Biology has unanimously decided to award the 2022 Prix Schläfli in Biology to Dr Anna-Katharina Pfitzner.

Dr Pfitzner tackled a fundamental and extremely challenging question in the basic cell biology of eukaryotic cells namely, how is membrane fission and fusion regulated at different subcellular locations. This calls ESCRT proteins into question, known for their ability to shape and deform membranes. ESCRT-III is an especially fascinating ESCRT complex since it is ancient, derived from eukaryotes' archeal ancestors and active at several cellular sites. Through a pain-staking work of in vitro reconstitution, identification of essential components and fine-tuning of reaction conditions, Dr Pfitzner was able to determine the exact sequence of events that ensures the right filamentous structures are formed at the right rate of subunit turn-over. This is a fundamental contribution to our understanding of how cells achieve membrane remodelling at different subcellular sites using the same conserved ESCRT-III complex.

Dr Pfitzner obtained both her Bachelors and Masters in Biochemistry at the Eberhard Karls University of Tübingen, Germany. In 2017, Dr Pfitzner joined Prof. Aurelien Roux's laboratory at the Department of Biochemistry at the University of Geneva where she pursued her graduate studies until the end of 2021. In early 2022, Dr Pfitzner moved to Boston, Massachusetts, where she took up a post-doc position at Harvard Medical School. During her tenure as a graduate student and aside from the awarded paper, Dr. Pfitzner co-authored 4 high profile original research publications and, in 2020, she won the International Birnstiel Award for Doctoral Research in Molecular Life Sciences.

Prof. Dr Adrian-Kalchauer (University of Bern), Prof. Dr Carmen Faso (University of Bern) and Prof. Dr Oliver Heiri (University of Basel) are members of the board of the Platform Biology of the Swiss Academy of Sciences (SCNAT).

Prof. Carmen Faso, member of the jury of the Prix Schläfli Biology 2022

Award Ceremony, 17. February 2023, LS² Annual Meeting, Zurich