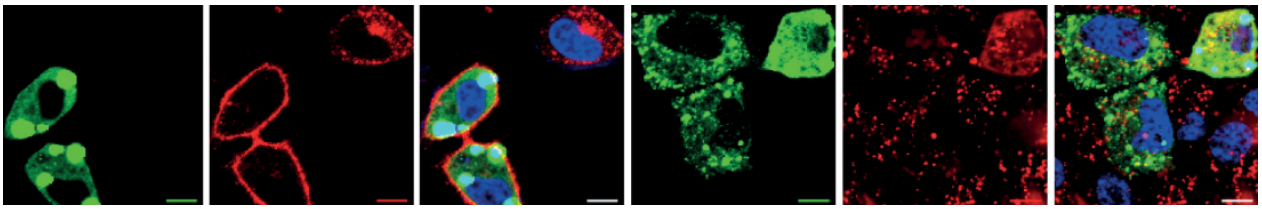
The Widmann lab Cell-penetrating peptide and homeoprotein uptake mechanisms



Project for SUR students in 2022

We are offering SUR students the possibility to investigate the mechanistic aspects of cell-penetrating peptide (CPP) and homeoprotein entry into cells. CPPs allow the intracellular delivery of cargo molecules that are hooked to them. They are used in biology and medicine for therapeutic or research purposes. Homeoproteins are physiological proteins naturally bearing CPP sequences. The SUR students will work with Postdoctoral fellows and PhD students on a newly identified endocytic pathway that we have discovered (Trofimenko et al. Cell Reports 2021) and that needs now to be further characterized at the molecular, mechanistic, and physiological levels. This projects will involve live imaging microscopy, molecular biology approaches to construct fluorescent tools to be used during live imaging, cell culture and some biochemical techniques. Please refer to our website for further information and in particular to our Research page for information on the ways CPPs enter cells.