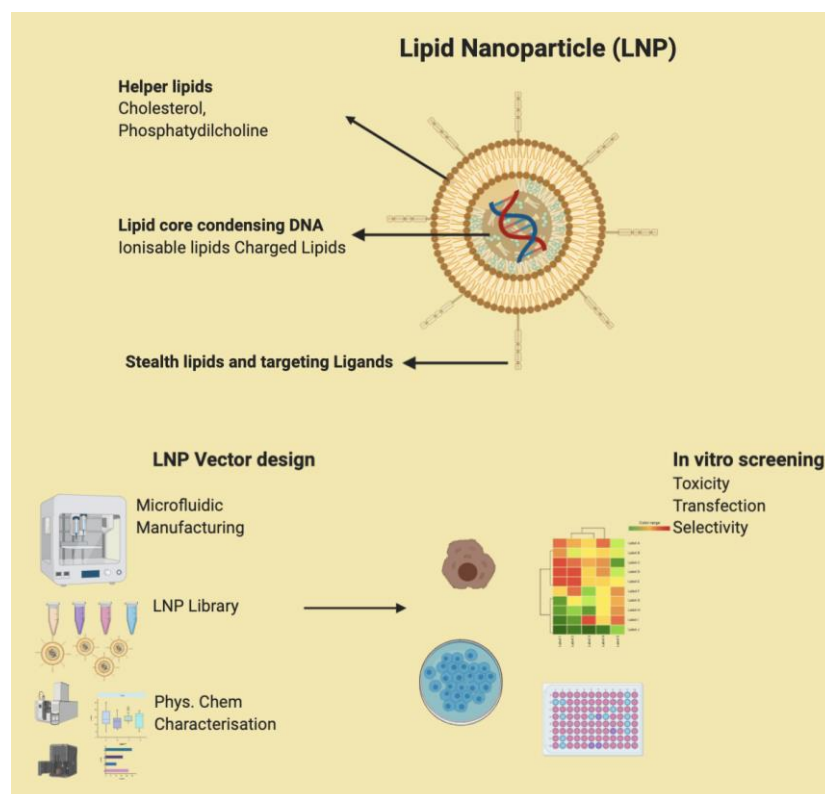


Mechanisms of cellular uptake: A comparison study between extracellular vesicles: Exosomes, Apoptotic bodies, Plasma membrane vesicles and beyond.

Are you a motivated student who would like to work in an interdisciplinary team of pharmacists, biologists and nanoscientists? Then this might be perfect for you. At the department of Pharmaceutical Sciences – Pharmaceutical Technology we are looking for one (optionally two) master students whose contribution will be key in improving lipid nanoparticle drug delivery. The projects are shared between the Dept. of Phys Chemistry (Schwerpunkt Physik) or Dept. of Biology (Schwerpunkt Biologie) and are executed at the Department of Pharmaceutical Sciences – Group Pharmaceutical Technology of Prof. Dr. Jörg Huwyler. Preferable start date is end of spring 2020 / fall 2020.

We have recently had great experience in our group with Nanoscience students doing their Master thesis at our department.



Lipid nanoparticles (LNP) are a key pharmaceutical technology platform of the 21st century. Their use in gene delivery is indispensable. They are a fundamental prerequisite for nucleic acid-based therapeutics and have an absolute influence on the therapeutic potency and toxicity of nucleic acid therapies. Control of LNP biodistribution, cellular entry and endosomal sequestration are still challenging and poorly understood. Experimental work will include state of the art preparation and characterization of novel lipid nanoparticles, independent work in cell culture under aseptic conditions, investigation of mechanisms of cellular uptake of the respective LNPs by confocal laser scanning microscopy, fluorescence correlation spectroscopy and fluorescence activated cell sorting.

Interested? Contact: tomaz.einfalt@unibas.ch