

WEBINAR

Experimental challenges in studying oral delivery of biopharmaceuticals

Prof. Hanne Mørck Nielsen

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12 PM (EST) – 6 PM (CET)

Hanne Mørck Nielsen is leading the *Center for Biopharmaceuticals and Biobarriers in Drug Delivery (BioDelivery)* and the research group *Drug Delivery and Biophysics of Biopharmaceuticals* at the Department of Pharmacy, University of Copenhagen. In 2000, she received her PhD on research conducted at the Royal Danish School of Pharmacy (Denmark) and Leiden/Amsterdam Center for Drug Research (The Netherlands) and completed postdoctoral studies at the Department of Chemistry and Applied Biosciences, Swiss Federal Institute of Technology Zürich (ETHZ, Switzerland) in 2002. Since then, she has worked at the University of Copenhagen. In 2016, she was employed as a full Professor in Biopharmaceuticals - Drug Design and Delivery.



The aim of her research is towards designing and evaluating drug delivery systems to efficiently deliver biopharmaceuticals to otherwise seriously ill patients. Hanne focuses on drug design and delivery of therapeutic peptides/proteins and other challenging hydrophilic drugs like antibiotics and oligonucleotides for them to reach their target in sufficiently high amounts. Focus is on designing drug delivery systems that overcome the biological barriers to efficient drug delivery.

Present projects comprise research in self-assembling complexes, particulate systems as well as the use of membrane interacting peptides (such as antimicrobial peptides and cell-penetrating peptides), tailor-made polymers and lipids for cellular delivery enhancement of biopharmaceuticals investigating the (potential targeting) effect and mechanisms leading to the desired response. For mechanistic assessment of biomembrane interactions, cellular uptake and trafficking, and transepithelial and transmucosal transport, suitable cell culture models and *in vivo* models are continuously refined and applied.