



NORDIC POP

NordicPOP Annual Meeting 2021

TUESDAY, MARCH 16

08.30-09.30 Pre-meeting – EXCO and SAB only

10.00 – 10.15 Welcome and introduction
Professor Christel Bergström, Uppsala University

Plenary lectures: Artificial Intelligence and Data Driven Life Science

Chair: Professor Christel Bergström, Uppsala University

10.15 – 10.45 Flexible learning systems driven by data
Professor Thomas Schön, Uppsala University

10.45 – 11.00 *Break*

11.00 – 11.30 Machine learning for risk analysis and personalized medicine using data from electronic health records and PET imaging
Professor Robert Jenssen, UiT The Arctic University of Norway

11.30 – 12.00 Legal dimensions of data sciences and innovation in medical AI
Professor Timo Minssen, University of Copenhagen

12.00 – 13.30 *Lunch*

Session 1 short research presentations (posters)

13.30 – 14.30 Posters in parallel rooms

14.30 – 15.00 *Break*

Session 2 short research presentations (posters)

15.00 – 16.00 Posters in parallel rooms

Plenary lecture: NordicPOP Mobility Action

Chair: Associate Professor Alexandra Teleki, Uppsala University

16.10 – 16.20 The CRS Nordic Chapter and planned interaction with Nordic POP
Associate Professor Alexandra Teleki, Uppsala University

16.20 – 16.50 Surface Plasmon Resonance for biofilm growth monitoring
Anna Slita, Mobility action Åbo Akademi University, University of Helsinki

17.00 – 19.00 *Social Activity*



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WEDNESDAY, MARCH 17

Session 3 short research presentations (posters)

10.00 – 11.00 Posters in parallel rooms

11.00 – 11.15 *Break*

Plenary lectures: ERC Consolidator Grants from NordicPOP

Chair: Professor Gøril Eide Flaten, UiT The Arctic University of Norway

11.15 – 11.35 Analysis of “difficult” proteins by microfluidic based hydrogen/deuterium exchange

Professor Kasper Dyrberg Rand, University of Copenhagen

11.35 – 11.55 Functional nanomaterials for diagnosis and controlled drug delivery in the gastrointestinal tract

Associate Professor Alexandra Teleki, Uppsala University

11.55 – 12.15 Materials and Light for Advanced Drug Formulations

Professor Timo Laaksonen, University of Helsinki

12.15 – 13.15 *Lunch*

Plenary lectures: Green Solutions of Pharmaceutical Importance

Chair: Professor Jukka Rantanen, University of Copenhagen

13.15 – 13.30 NordicPOP – Looking back, looking forward

Professor Jukka Rantanen, University of Copenhagen

13.30 – 14.15 Sustainability aspects important to the pharmaceutical industry

Dr. Bengt Matsson, Policy manager, LIF, Sweden

14.15-14.30 Incorporation of sustainable view to pharmacy education and research – A case example from Finland

Associate Professor Tiina Sikanen, University of Helsinki

14.30 – 15.00 *Break*

Plenary lectures: NordicPOP Mobility Actions

Chair: Professor Håkon Sigurdsson, University of Iceland

15.00 – 15.20 Laser-induced in situ amorphization: a dissolution process inside a tablet

Nele Hempel, Mobility action University of Copenhagen, Uppsala University

15.20 – 15.40 New initiatives in computational pharmaceutics

Dr. Outi Salo-Ahen, Åbo Akademi University in collaboration with University of Copenhagen

Closing plenary lecture

Chair: Professor Christel Bergström, Uppsala University

15.40 – 16.10 Inspirational talk – building your academic career in an international setting

Associate Professor Georgios Sotiriou, Karolinska Institutet

TUESDAY, MARCH 16, SESSION 1 SHORT RESEARCH PRESENTATIONS

Time	Room 1.1: Analytical Tools	Room 1.2: Virtual Tools	Room 1.3: Patient-Centered	Room 1.4: Nanotechnology
	<i>Chair: Tapani Viitala, Univ. Helsinki</i>	<i>Chair: Outi Salo-Ahen, Åbo Akademi Univ.</i>	<i>Chair: Natalja Genina, Univ. Copenhagen</i>	<i>Chair: Jessica Rosenholm, Åbo Akademi Univ.</i>
13.30-13.45	Jessie POULSEN , Univ. Southern Denmark, <i>Inside medicated chewing gums: Novel Raman imaging to understand stability challenges</i>	Aleksei KABEDEV , Uppsala Univ., <i>Multiuser virtual laboratories as a novel environment for distance learning</i>	Berghóra Sigridur SNORRADÓTTIR , Univ. Iceland, <i>Novel patch design for hand osteoarthritis</i>	Shno ASAD , Uppsala Univ., <i>Targeted nanoparticles for non-invasive diagnosis of IBD</i>
13.45-14.00	Moritz ANUSCHEK , NovoNordisk, <i>Non-destructive quantification of fragmentation within tablets after compression from scattering analysis of terahertz transmission measurements</i>	Sepinoud AZIMI , Åbo Akademi Univ., <i>Explainable AI for designing drug carrier nanoparticles</i>	Jenny JOHANNESSON , Uppsala Univ., <i>3D-printing of solid lipid tablets from emulsion gels</i>	Laura Schulte WERNING , The Arctic Univ. Norway, <i>Successful entrapment of chloramphenicol in electrospun nanofiber dressings</i>
14.00-14.15	Mikkel HERZBERG , Univ. Copenhagen, <i>Surface characterization before and after dehydration of theophylline monohydrate</i>	Shakhawath HOSSAIN , Uppsala Univ., <i>Aggregation behavior of structurally similar decapeptides-studied by molecular dynamics simulations</i>	Jiaqi YAN , Åbo Akademi Univ. <i>Peritumoral microgel reservoir for long-term light-controlled triple-synergistic treatment of osteosarcoma with single ultra-low dose</i>	Mette Sloth BOHSEN , Univ. Southern Denmark, <i>Extraction and analysis of archaeal lipids for use in liposomes for oral drug delivery</i>
14.15-14.30	Vahid FOROOQI MOTLAQ , Uppsala Univ., <i>Amphiphilic properties of drug molecules and their self-assembly in presence of phospholipid</i>	Rajendra BHADANE , Åbo Akademi Univ., <i>Applications of drug-polymer simulations in drug development</i>	Unnur Arna THORSTEINSDOTTIR , Univ. Iceland, <i>Mass spectrometry-based plasma assay for therapeutic monitoring in patients with APRT deficiency</i>	Berglind Eva BENEDIKTSDOTTIR , Univ. Iceland, <i>Recent developments in the isolation and quantification of extracellular vesicles (EVs) from the breast epithelial cell lines (D492 and MDA_MB_231)</i>

TUESDAY, MARCH 16, SESSION 2 SHORT RESEARCH PRESENTATIONS

Time	Room 2.1: Controlled Release	Room 2.2: Pharmaceutical Profiling	Room 2.3: Patient-Centered	Room 2.4: Novel Manufacturing
	<i>Chair: May Wenche Jøraholmen, UiT The Arctic Univ. Norway</i>	<i>Chair: Ragna Berthelsen, Univ. Copenhagen</i>	<i>Chair: Leena Peltonen, Univ. Helsinki</i>	<i>Chair: Anette Larsson, Chalmers Univ.</i>
15.00-15.15	Xiaoju WANG , Åbo Akademi, <i>Photoclickable, injectable polysaccharide hydrogel in delivery of therapeutic inorganic ions</i>	Staffan BERG , Uppsala Univ., <i>Formulation aspects of sodium caprate: studies on FITC-dextran</i>	Sofia RANTA-AHO , Univ. Eastern Finland, <i>Hsp90 inhibitors in age related macular degeneration - In vitro therapeutic index</i>	Tobias Palle HOLM , Univ. Copenhagen, <i>Supersaturated amorphous solid dispersions of celecoxib prepared in situ by microwave irradiation</i>
15.15-15.30	Patrick SINKO , Uppsala Univ., <i>A path towards standardizing permeation analysis using hydrodynamic parameters</i>	Margherita FALAVIGNA , The Arctic Univ. Norway, <i>Simultaneous assessment of in vitro lipolysis and permeation in the mucus-PVPA model to predict oral absorption of a poorly water soluble drug in SNEDDSs</i>	Jacopo ZINI , Univ. Helsinki, <i>Drug diffusivities in a nanofibrillar cellulose hydrogel by combined time-resolved Raman and fluorescence spectroscopy</i>	Vivien NAGY , Univ. Iceland, <i>Synthesis of antioxidant chitosan conjugates using tertbutyldimethylsilyl (TBDMS) protection</i>
15.30-15.45	Mette KLITGAARD , Univ. Copenhagen, <i>Luminal and mucosal pH measurements in the gastro-intestinal tract of healthy and dextran sodium sulphate-induced colitis rats</i>	Jonas Borregaard ERIKSEN , Univ. Southern Denmark, <i>Stirred not shaken!? Comparing agitation methods for permeability studies in 96-well</i>	Zahra GOUNANI , Åbo Akademi Univ., <i>Dual species Biofilm model</i>	Rathna MATHIYALAGAN , Åbo Akademi Univ., <i>The extemporaneous manufacturing of veterinary dosage forms utilizing different 3D printing technologies</i>
15.45-16.00	Lina PERSSON , Chalmers Univ., <i>Sialic Acid binding nanoparticle inhibits inflammation</i>	Jingwen LIU , Univ. Copenhagen, <i>Determination of the optimal mixing ratio in co-amorphous systems: strongly interacting drug and co-former</i>	Rasmus Blaaholm NIELSEN , Univ. Southern Denmark, <i>Amorphous solid dispersions of etoposide and zosuquidar increased the oral bioavailability of etoposide</i>	Ástrós ÓSKARSDÓTTIR , Univ. Iceland, <i>3D printing a reusable drug delivery patch</i>

WEDNESDAY, MARCH 17, SESSION 2 SHORT RESEARCH PRESENTATIONS

Time	Room 3.1: Controlled Release	Room 3.2: Novel Materials	Room 3.3: Patient-Centered	Room 3.4: Nanotechnology
	<i>Chair: Astrid Subrizi, Univ. Eastern Finland</i>	<i>Chair: Annette Bauer-Brandl, Univ. Southern Denmark</i>	<i>Chair: Ingunn Tho, Oslo Univ.</i>	<i>Chair: Wei Li, Univ. Helsinki</i>
10.00-10.15	Wenhui ZHOU , Åbo Akademi Univ., <i>MOF-based intracellular delivery of therapeutic messenger RNA for breast cancer therapy</i>	Xue ZHANG , Åbo Akademi Univ., <i>Sustainable nanocellulose-based bioinks towards diverse material functionalities and therapeutic delivery of bioactive cues</i>	Helena HAMZEHPOUR , Univ. Iceland, <i>Tazarotene in the treatment of hand osteoarthritis: Skin permeability and joint examinations</i>	Shaquib ANSARI , Uppsala Univ., <i>In situ amorphization of poorly soluble drug using magnetic nanoparticles</i>
10.15-10.30	Tilia SELLDÉN , Chalmers Univ., <i>A self-adjusting biochemically controlled nanoparticle approach towards precision therapy for inflammatory arthritis</i>	Már MÁSSON , Univ. Iceland, <i>Molecular weight - antimicrobial activity relationship of chitosan and N,N,N- trimethylchitosan (TMC)</i>	Yonghui WANG , Åbo Akademi Univ., <i>Dual-targeting biomimetic delivery for anti-glioma activity via remodeling the tumor microenvironment and directing macrophage-mediated immunotherapy</i>	Wali INAM , Åbo Akademi Univ., <i>Microfluidics as a versatile platform for encapsulating mesoporous silica nanoparticles via nanoprecipitation</i>
10.30-10.45	Oliver HEDGE , Uppsala Univ., <i>Lipolysis-permeation assay of SEDDS with artificial membrane: Impact of assay system variables</i>	Rong DI , Univ. Copenhagen, <i>Determination of the optimal mixing ratio in co-amorphous systems: non-strongly interacting drug and co-former</i>	Zishuo YUAN , Univ. Copenhagen, <i>Polymer-induced oxygen gradient generation for organ-on-a-chip applications</i>	Sybil Akua Okyrewa OBUOBI , UiT The Arctic Univ. Norway, <i>Zwitterionic hybrid nanoparticles for the treatment of biofilm wound infections</i>
10.45-11.00	Chang LIU , Åbo Akademi Univ., <i>Redox-responsive tumor targeted dual-drug loaded biocompatible MOF nanoparticles for enhancing anticancer effects</i>	Helena BALAZIC , Univ. Tartu <i>Development of biocompatible electrospun Alginate/PEO fibrous matrices for tissue engineering applications</i>	Sankar RATHINAM , Univ. Iceland, <i>Chitotriazolan (Chito-1,2,3-triazole) derivatives synthesis, characterization and evaluation of antibacterial activity</i>	Xiaodong MA , Åbo Akademi Univ., <i>Self-assembled disulfide bond bearing paclitaxel—camptothecin prodrug nanoparticle for lung cancer therapy</i>



We thank the speakers and poster presenters, the chairs and moderators of the sessions, and the group leaders of the social activity for their engagement, contribution and support to the first virtual annual meeting within the Nordic POP community!

The Organisation committee @Uppsala University: Christel Bergström, Alexandra Teleki, Shakhawath Hossain, Oliver Hedge, Shaquib Ansari, Staffan Berg.

Organized in collaboration with the CRS Nordic Local Chapter

