

SUNDAY, JUNE 12, 2022

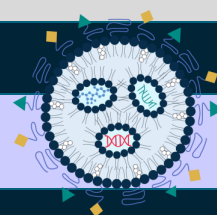
# INDUSTRY DAY

**Registration**  
desk will be open  
**Saturday June 11**  
2 pm until 6 pm  
in the Life Science Institute,  
lower hallway

10:00 am	<b>Tea &amp; Coffee   Registration desk opens</b>
10:15-10:20 am	<b>Opening Remarks</b>
10:20-11:00 am	<b>LNP Systems &amp; the Pharmaceutical Industry</b> <i>Clinical opportunities for messenger RNA-LNP pharmaceuticals</i> <b>Thomas D. Madden</b> (Acuitas Therapeutics) 40 min.   <b>Chair:</b> Pieter Cullis
11:00 am-12:30 pm	<b>Industry Session 1: LNPs &amp; Gene Therapies   Chair:</b> Gert Storm <i>Therapeutic application of messenger RNA-lipid nanoparticles for in vivo gene editing</i> <b>Ying Tam</b> (Acuitas Therapeutics) 30 min. <i>Accelerating the development of genomic medicines – insights into lipid nanoparticle delivery &amp; scalable microfluidic manufacturing</i> <b>Lloyd Jeffs</b> (Precision NanoSystems) 30 min. <i>Tuning lipid nanoparticles for specific applications</i> <b>James Heyes</b> (Genevant) 30 min.
12:30-1:20 pm	<b>Networking Lunch</b>
1:20-3:10 pm	<b>Industry Session 2: LNPs &amp; Gene Therapies   Chair:</b> Michael Michell <i>Lipid technology &amp; the race to beat COVID-19</i> <b>Steve Burgess</b> (Avanti) 30 min. <i>Self-Adjuvanting Lipid Nanoparticle mRNA Vaccine for Solid Tumor Immunotherapy</i> <b>Syed Reza</b> (NOF) 20 min. <i>Novel Lipid Excipient Development for the Covid-19 mRNA Lipid Nanoparticle Vaccine</i> <b>Roger Pak</b> (Pfizer) 30 min. <i>Next-generation lipid nanoparticle technologies tailored to a variety of tissues</i> <b>Dom Witzigmann</b> (NanoVation Therapeutics) 30 min.
3:10-3:30 pm	<b>Networking Break</b>
3:30-5:30 pm	<b>Industry Session 3: LNP &amp; Lipid Design &amp; Manufacturing   Chair:</b> Yvonne Perrie <i>Advancements in liposomal extrusion technology</i> <b>Alex Torres</b> (Evonik) 30 min. <i>Phospholipids in vaccines</i> <b>Bruce Baretz</b> (Lipoid) 30 min. <i>mRNA –vaccines on the fast track – How Polymun contributed to tackling the pandemic</i> <b>Andreas Wagner</b> (Polymun) 30 min. <i>AmBisome: Continued progress &amp; its role in the pandemic</i> <b>Gerard Jensen</b> (Gilead ) 30 min.
5:30-8:00 pm	<b>Opening Reception</b>

## MONDAY, JUNE 13, 2022

7:00-8:00 am	<b>Breakfast   Registration desk opens</b> (8:00 am)
8:00-8:20 am	<b>Opening Remarks   Terry Allen</b>
8:20-8:30	<b>Introductory Remarks: LNPs Rule!   Pieter Cullis</b> 10 min.
8:30-9:10 am	<b>Keynote Speaker 1: Lipids, Liposomes &amp; Lipid Nanoparticles: The Past, The Present &amp; The Future</b> <b>Pieter Cullis</b> (UBC   NMIN) 40 min.   <b>Chair:</b> Avi Schroeder
9:10-9:50 am	<b>Keynote Speaker 2: LNPs &amp; Extra-Hepatic Gene Therapy   Chair:</b> Leaf Huang <i>Species-agnostic in vivo nanoparticle barcoding</i> <b>James Dahlman</b> (Georgia Tech) 40 min.
9:50-10:20 am	<b>Networking Break - Poster viewing</b>
10:20-11:50 am	<b>Invited Lectures 1: LNP Technology - Part A   Chair:</b> Marcel Bally <i>Lipid-based nanopreparations for stimuli-sensitive &amp; organelle-specific targeting</i> <b>Vladimir Torchilin</b> (Northeastern U) 30 min. <i>Multifunctional envelope-type nano device: from controlled intracellular trafficking to clinical application for nanomedicines</i> <b>Hideyoshi Harashima</b> (U Sapporo) 30 min. <i>Polymer/oil-based nanocapsules vs. LNPs as RNA delivery vehicles</i> <b>Maria Jose Alonso</b> (U Santiago de Compostela) 30 min.
11:50 am-12:50 pm	<b>Networking Lunch</b> including mentoring/networking sessions with trainees & senior investigators in rooms 1410 & 1510 LSI
12:50-2:20 pm	<b>Invited Lectures 2: LNPs &amp; Extra-Hepatic Gene Therapy   Chair:</b> Vladimir Torchilin <i>On the mechanism of tissue-specific mRNA delivery by selective organ targeting (SORT) lipid nanoparticles (LNPs)</i> <b>Dan Siegwart</b> (UT Southwestern) 30 min. <i>Boosting intracellular delivery of mRNA therapeutics &amp; its applications</i> <b>Gaurav Sahay</b> (Oregon State U) 30 min. <i>Development of broadly protective influenza vaccines using nucleoside-modified mRNA</i> <b>Norbert Pardi</b> (U Penn) 30 min.
2:20-3:00 pm	<b>Networking Break - Group picture</b>
3:00-4:50 pm	<b>Invited Lectures 3: LNP Technology &amp; Vaccines   Chair:</b> Maria Alonso <i>Army Liposome formulation with QS21 (ALFQ): A potent &amp; safe vaccine adjuvant</i> <b>Carl Alving</b> (Walter Reed Army Institute of Research) 30 min. <i>Optimization of lipid nanoparticles for self-amplifying RNA expression &amp; cellular activation using a design-of-experiment approach</i> <b>Anna Blakney</b> (UBC   NMIN) 30 min. <i>LNP-formulated saRNA – learning from clinical experience</i> <b>Robin Shattock</b> (Imperial College London) 30 min. <i>The development of effective medicinal products in Africa by Africa for Africans</i> <b>Anne Grobler</b> (North-West University) 20 min.
4:50-6:00 pm	<b>Networking Break - Poster viewing</b>
<b>FREE TIME</b>	
7:00-10:00 pm	<b>Banquet</b> Robert H. Lee Alumni Centre, UBC



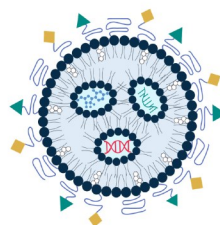
## TUESDAY, JUNE 14, 2022

7:00-8:15 am	<b>Breakfast   Registration desk opens</b> (8:00 am)
8:15-8:30 am	<b>Opening Remarks</b>
8:30-9:10 am	<b>Keynote Speaker 3: LNPs &amp; Immunotherapies   Chair:</b> Phil Felgner <i>Lipid nanoparticles for overcoming biological barriers to mRNA delivery</i> <b>Michael Mitchell</b> (U Penn) 40 min.
9:10 am-10:00 am	<b>Lightning Round Presentations   Chair:</b> Cedric Brimacombe <b>Adjudicated Abstracts</b> 5 min. each
10:00-10:30 am	<b>Networking Break</b> - Poster viewing
10:30 am-12:00 pm	<b>Invited Lectures 4: LNPs for Gene Therapy of Inheritable Diseases   Chair:</b> Frank Szoka <i>RNA &amp; lipid nanoparticles for controlling bleeding &amp; thrombosis</i> <b>Christian Kastrup</b> (Medical College of Wisconsin) 30 min. <i>Overcoming the barrier - Topical gene therapy of skin &amp; lung</i> <b>Sarah Hedtrich</b> (UBC) 30 min. <i>Optimizing lipid nanoparticles for in vivo therapeutic genome editing</i> <b>Colin Ross</b> (UBC) 30 min.
12:00 am-1:00 pm	<b>Networking Lunch</b> including mentoring/networking sessions with trainees & senior investigators in rooms 1410 & 1510 LSI
1:00-2:05 pm	<b>Invited Phospholipid Research Centre Lectures   Chair:</b> Gert Storm <i>Introduction to the Phospholipid Research Centre (PRC)</i> <b>Gert Storm</b> (U Utrecht) 5 min. <i>Translational models to evaluate the performance of lipid based delivery systems</i> <b>Jörg Huwyler</b> (U Basel) 20 min. <i>Targeted liposomal drug delivery to pediatric sarcomas</i> <b>Michele Bernasconi</b> (U Bern) 20 min. <i>Lipid self-assembling nanoparticle for RNA delivery: Toward personalized medicine</i> <b>Giuseppe De Rosa</b> (U Naples Federico II) 20 min.
2:05-3:05 pm	<b>Invited Lectures 5: LNPs &amp; Cancer Chemotherapy   Chair:</b> Christine Allen <i>Liposomal Hydroxychloroquine-An example of what can happen to a liposomologist during the COVID pandemic</i> <b>Marcel Bally</b> (UBC   NMIN) 30 min. <i>Therapeutics based on liposomal drug targeting to well-accessible organs</i> <b>Gert Storm</b> (Utrecht U) 30 min.
3:05-3:45 pm	<b>Keynote Speaker 4: LNPs &amp; Cancer Chemotherapy   Chair:</b> Thomas Andresen <i>Nanomedicine quo vadis? Lessons learned as scientist, developer &amp; entrepreneur</i> <b>Chezy Barenholtz</b> (Hebrew University of Jerusalem) 40 min.



## TUESDAY, JUNE 14, 2022 (continued)

3:45-4:15 pm	<b>Networking Break</b>
4:15-4:55 pm	<b>Bangham Award Keynote Talk : 100 years of vaccine science</b> <b>Phil Felgner</b> (UC Irvine) 40 min.   <b>Chair:</b> Chezy Barenholz
4:55 pm-5:15 pm	<b>Poster Award Presentations   In Memoriam (Andy Janoff)</b> <b>Chairs:</b> Terry Allen and Pieter Cullis
5:15-5:45 pm	<b>LRD Business Meeting</b> <b>Chairs:</b> Gert Storm and Terry Allen
<b>FREE TIME</b>	
6:30-10:00 pm	<b>Speakers' Dinner</b> Cecil Green House - <i>by invitation only</i>



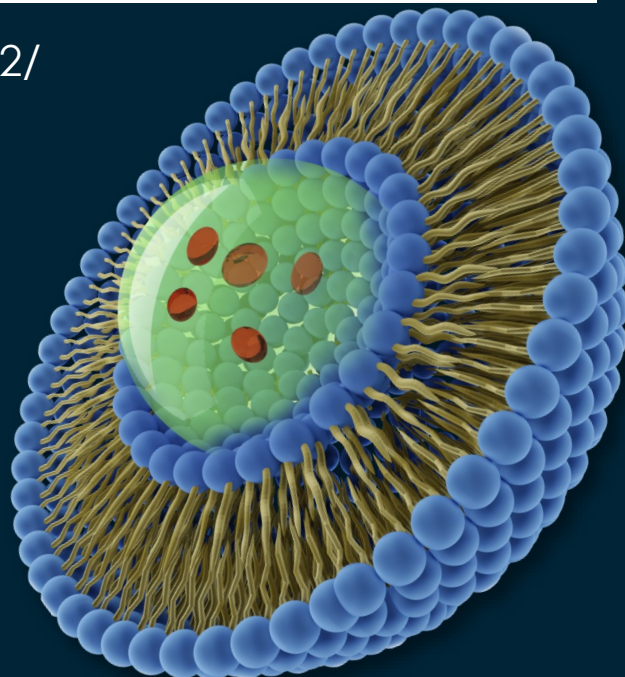
## 17<sup>th</sup> LIPOSOME RESEARCH DAYS 2022

University of British Columbia, Vancouver, Canada

<https://www.nanomedicines.ca/LRD-2022/>

### Student Networking Lunches

Date	Room	Name
June 13	1410 LSI	Avi Schroder & Gang Zheng
June 13	1510 LSI	Maria Jose Alonso & Gerard Jensen
June 14	1410 LSI	Anna Blakney & Christine Allen
June 14	1510 LSI	Gert Storm & Sara Hedrich
June 15	1410 LSI	Pieter Cullis & Yvonne Perrie
June 15	1510 LSI	Chezy Barenholz & Leaf Huang



**Program continues on next page...**

## WEDNESDAY, JUNE 15, 2022

7:00-8:15 am	<b>Breakfast   Registration desk opens</b> (8:00 am)
8:15-8:30 am	<b>Opening Remarks</b>
8:30-9:10 am	<b>Keynote Speaker 5: Complexity &amp; Reality: The Case of Thermosensitive Liposomes</b> <b>Christine Allen</b> (U Toronto   NMIN) 40 min.   <b>Chair:</b> James Dahlman
9:10 am-10:10 am	<b>Invited Lectures 6: LNPs &amp; Cancer Chemotherapy   Chair:</b> Sarah Hedtrich <i>Lipid nanoparticles for cancer immunotherapy</i> <b>Shyh-Dar (Star) Li</b> (UBC   NMIN) 30 min. <i>Enhancing T cell functionality with nanotechnology in adoptive cell therapy</i> <b>Thomas L. Andresen</b> (Technical University of Denmark) 30 min.
10:10-10:40 am	<b>Networking Break</b> - Poster viewing
10:40 am-12:10 pm	<b>Invited Lectures 7: Lipids, Polymers &amp; Other LNP Components—How can they work together?   Chair:</b> Carl Alving <i>The PEG-mediated accelerated blood clearance effect in mRNA-LNP evoked T-cell immunity</i> <b>Ray Schiffelers</b> (University Medical Center Utrecht) 30 min. <i>Porphyrin-lipid nanoparticles: building intrinsic multifunction into LNP</i> <b>Gang Zheng</b> (U Toronto   NMIN) 30 min. <i>The role of mRNA delivery system and route of administration on vaccine potency</i> <b>Yvonne Perrie</b> (U Strathclyde) 30 min.
12:10-1:10 pm	<b>Networking Lunch</b> including mentoring/networking sessions with trainees & senior investigators in rooms 1410 & 1510 LSI
1:10-2:40 pm	<b>Invited Lectures 8: LNPs &amp; mRNA Therapeutics   Chair:</b> Anna Blakney <i>The effect of sex &amp; the tumor microenvironment on liposomal cancer treatments</i> <b>Avi Schroeder</b> (Israel Institute of Technology) 30 min. <i>Liposomal antibiotics induce anticancer immunity by killing the tumor-associated bacteria</i> <b>Leaf Huang</b> (U North Carolina) 30 min. <i>On the structural characterisation of lipid nanoparticle formulations of nucleic acid</i> <b>Jay Kulkarni</b> (NanoVation Therapeutics) 30 min.
2:40-3:10 pm	<b>Networking Break</b> - Poster viewing
3:10-4:50 pm	<b>Keynote Speakers Panel Discussion: LNP Technology—Past &amp; Future</b> <b>Chairs:</b> Terry Allen and Frank Szoka
4:50-5:00 pm	<b>Closing Remarks</b>



**Speaker bios online:** [nanomedicines.ca/lrd-2022-program/#speakers](https://nanomedicines.ca/lrd-2022-program/#speakers)

**WiFi:** LRD2022 pw: liposome