

# Developing genetic drugs using nucleic acids and LNP

February 6, 2020 • 12:30–6:00 pm • UBC Biomedical Research Centre

With the recent release of the first LNP/nucleic acid drug ONPATRO®, the promise of developing genetic drugs for additional targets has been reignited. LNP delivery tools can enable delivery of functionalized nucleic acid payloads to a variety of tissue types and organisms. This event will provide a brief overview of LNP and functional genomics tools, followed by a series of talks on specific applications in this exciting new field. Finally there will be a trainee 3-minute slide competition. Trainees will be asked to devise a novel or “proof of principle” experiment utilizing these combined technologies that could move forward a particular problem in their field of research or create a tool that would be useful to others.

Time	Activity	Presenter
12:30–12:45 pm	Welcome	Bob Setter, IDT
12:45–1:00 pm	NanoCore Overcoming the Gene Delivery Barrier Using Lipid Nanoparticles	Dominik Witzigmann, PhD, UBC
1:00–1:15 pm	NanoCore Portal	Bob Setter, IDT
1:15–1:30 pm	Targeted knockdown with functional genomics reagents: DsiRNAs and ASOs to knockdown mRNA, lncRNA and other cellular RNAs	Garrett Rettig, PhD, IDT
1:30–2:00 pm	siRNA knockdown of coagulation factors and other blood proteins	Christian Kastrup, PhD, UBC
2:05–2:35 pm	Engineering Dengue resistant mosquitoes using LNP with nucleic acid cargo	Carl Lowenberger, PhD, SFU
2:40–3:10 pm	Topical Gene Delivery	Sarah Hedtrich, PhD, UBC
3:10–3:30 pm	Coffee break	
3:30–4:00 pm	Characterization of synthetic single guide RNAs for CRISPR genome editing - An extensive evaluation of gRNA formats, purity, and delivery methods	Ashley Jacobi, IDT
4:00–5:00 pm	Student competition 3-minute research proposal	Graduate students and postdocs
5:00–6:00 pm	Networking	

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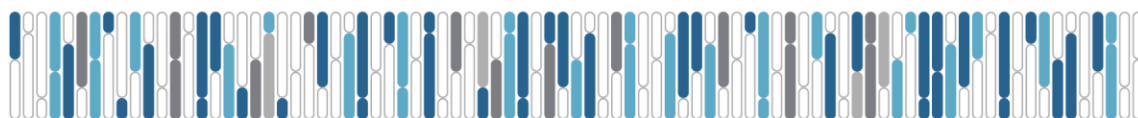


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