

Nanopore Course

27th May – 29th May 2019

Aalborg - Denmark

27th of May 2019

09.00-09.45	Welcome <ul style="list-style-type: none"> • Practical information • DNAsense + Participants 	RWO/RHK/SMK/MA
09.45-10.00	Break	
10.00-10.45	Nanopore Theory – Part I <ul style="list-style-type: none"> • Basic components • Ligation-based and transposase-based workflows • Flow cell schematics 	RWO (RHK)
10.45-11.00	Break	
11.00-11.45	Nanopore Theory – Part II <ul style="list-style-type: none"> • Flow cell QC • Introduction to MinKnow GUI • Library QC 	RWO (RHK)
11.45-12.30	Lunch	
12.30-13.15	Hands-on Rapid Library Preparation – Part I <ul style="list-style-type: none"> • Protocol • Library Preparation 	RWO (RHK)
13.15-13.30	Break	
13.30-15.30	Hands-on Rapid Library Preparation – Part II <ul style="list-style-type: none"> • Library Preparation (continued) • Flow cell priming and loading • Sequencing run evaluation <ul style="list-style-type: none"> • Basic parameters • MinKnow (in-depth) 	RWO (RHK)

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09.00-09.45	Post-Sequencing operations	RWO
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	<ul style="list-style-type: none"> • File-types • How to locate files • Re-using a flow cell • Flow cell wash kit (hands-on) 	(RHK)
09.45-10.00	Break	
10.00-10.45	Hands-on Ligation-based library Preparation – Part I <ul style="list-style-type: none"> • Protocol • Library Preparation 	RWO (RHK)
10.45-11.00	Break	
11.00-11.45	Hands-on Ligation-based library Preparation – Part II <ul style="list-style-type: none"> • Library Preparation (continued) 	RWO (RHK)
11.45-12.30	Lunch	
12.30-16.00	Hands-on Rapid Library Preparation – Part III <ul style="list-style-type: none"> • Library Preparation (continued) • Priming flow cell and loading 	RWO (RHK)
19.00	Social dining	

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Data analyses will involve Windows and Linux-based software. We will also demonstrate how we can implement cloud-computing and how this can speed things up.

09.00-09.45	Data pre-processing – Part I <ul style="list-style-type: none"> • Basecalling fast5 files <ul style="list-style-type: none"> • Ex. Guppy / flip-flop • Data QC <ul style="list-style-type: none"> • Ex. NanoPlot 	RWO (RHK)
09.45-10.00	BREAK	
10.00-10.45	Data pre-processing – Part I <ul style="list-style-type: none"> • Demultiplexing and adaptor trimming <ul style="list-style-type: none"> • Ex. Guppy / Porechop • Data-filtering <ul style="list-style-type: none"> • Ex. FiltLong 	RWO (RHK)
10.45-11.00	Break	
11.00-11.45	Assembly, polishing and data evaluation – Part I <ul style="list-style-type: none"> • Details to be announced 	RHK (RWO)
11.45-12.30	Lunch	
12.30-13.15	Assembly, polishing and data – Part II <ul style="list-style-type: none"> • Details to be announced 	RHK (RWO)
13.15-15.00	Assembly, polishing and data – Part III <ul style="list-style-type: none"> • Details to be announced 	RHK (RWO)
15.00-15.30	Course evaluation	All

RWO: Rasmus Wollenberg, RHK: Rasmus H. Kirkegaard, SMK: Søren M. Karst, MA: Mads Albertsen