

Program 7th RNA-seq data analysis course

November 6	Activity	Speaker / Practical Supervisor
<i>Chair: Leon Mei</i>		
09:00 - 09:30	<i>Registration @ LUMC & Coffee - FSW buiding, room 1A-21</i>	
09:30 - 10:30	Introduction to RNA-seq technology and sample preparation protocols	Peter-Bram 't Hoen (LUMC)
10:30 - 10:45	<i>Coffee Break</i>	
10:45 - 11:45	Biases in RNA-seq data	Perry Moerland (AMC)
11:45 - 12:30	Tools and measures for Quality Control	Peter-Bram 't Hoen (LUMC)
12:30 - 13:30	<i>Lunch</i>	
13:30 - 14:30	Alignment and quantification	Szymon Kielbasa (LUMC)
14:30 - 14:45	<i>Coffee Break</i>	
14.45 - 17:00	<i>Practical: Galaxy practicals</i>	Leon Mei (LUMC)/Jan Oosting (LUMC)/Saskia Hiltermann (ErasmusMC)
November 7	Activity	Speaker / Practical Supervisor
<i>Chair: Szymon Kielbasa - FSW buiding, room 1A-37</i>		
08:30 - 09:00	<i>Coffee</i>	
09:00 - 10:00	Experiment design, comparison of counts	Jelle Goeman/Szymon Kielbasa (LUMC)
10:00 - 11:00	Principles of design, transcript discovery, variant calling, differential gene expression analysis	Szymon Kielbasa (LUMC)
11:00 - 11:15	<i>Coffee Break</i>	
11:15 - 12:30	R practicals: how count tables are created, QC, DGE, edgeR	Szymon Kielbasa/Ioannis Mouskas (LUMC)
12:30 - 13:30	<i>Lunch</i>	
13:30 - 15:00	R practicals: how count tables are created, QC, DGE, edgeR	Szymon Kielbasa/Ioannis Mouskas (LUMC)
15:00 - 15:15	<i>Coffee Break</i>	
15:15 - 16:30	Extras: VCF file; detect variants with Varscan; create allele counts	Szymon Kielbasa/Ioannis Mouskas (LUMC)
November 8	Activity	Speaker / Practical Supervisor
<i>Chair: Jan Oosting - FSW buiding, room 1A-21</i>		
08:30 - 09:00	<i>Coffee</i>	
09:00 - 10:00	Variant calling in RNAseq data, eQTL analysis and allele-specific expression	Lude Franke (UMCG)
10:00 - 10:45	Allele-specific expression to study X-inactivation	Hendrik Marks (Radboudumc)
10:45 - 11:00	<i>Coffee Break</i>	
11:00 - 11:45	Fusion gene detection	Wibowo Arindrarto (LUMC)
11:45 - 12:30	Single-cell sequencing (10x)	Ahmed Mahfouz (LUMC)
12:30 - 13:30	<i>Lunch</i>	
13:30 - 14:15	PacBio	Yahya Anvar (LUMC)
14:15 - 15:00	Single-cell sequencing (Smart-seq)	Anna Alemany Arias (Hubrecht)
15:00 - 15:15	<i>Coffee Break</i>	
15:15 - 16:00	Salmon: an alignment-free method for RNAseq quantification	Gergana Bounova, Tesa Severson (NKI)
16:00 - 16:30	Questions and answers, evaluation	Jan Oosting (LUMC)