

# Program 6<sup>th</sup> RNA-seq data analysis course

September 26		Speaker / Practical Supervisor
<i>Chair: Peter-Bram 't Hoen</i>		
09:00 - 09:30	<i>Registration @ LUMC, PO-112/115, Leiden &amp; Coffee</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) (TBC)
11:45 - 12:30	Tools and measures for Quality Control	Peter-Bram 't Hoen (LUMC)
12:30 - 13:30	<i>Lunch</i>	
13:30 - 14:15	Alignment, transcript deconvolution and quantification	Bowo Arindrarto (LUMC)
14:15 - 14:30	Getting ready for the practicals / working with VMs	Bowo Arindrarto (LUMC)
14:30 - 14:45	<i>Coffee Break</i>	
14.45 - 17:00	<i>Practical: quality control, alignment, visualization - Part 1</i>	Bowo Arindrarto, Sander de Zeeuw, Jan Oosting (LUMC)
17:00 - 18:00	<i>Drinks</i>	
September 27		Speaker / Practical Supervisor
<i>Chair: Jan Oosting</i>		
08:30 - 09:00	<i>Coffee</i>	
09:00 - 09:45	Small RNA profiling	Youri Hoogstrate (EMC)
09:45 - 10:30	Fusion transcript detection in cancer	David van IJzendoorn (LUMC)
10:30 - 10:45	<i>Coffee Break</i>	
10:45 - 12:00	<i>Practical: quality control, alignment, visualization - Part 2</i>	Bowo Arindrarto, Sander de Zeeuw, Jan Oosting (LUMC)
12:00 - 13:00	<i>Lunch</i>	
13:00 - 14:00	Statistical tests for differential expression in count data and pathway analysis	Jelle Goeman (LUMC)
14:00 - 14:15	<i>Coffee Break</i>	
14:15 - 16:30	<i>Practical: Differential expression analysis in R (edgeR, DESeq, limma)</i>	Peter-Bram 't Hoen, Sander de Zeeuw, Jan Oosting (LUMC)
18:30 - 20:30	<i>Dinner</i>	
September 28		Speaker / Practical Supervisor
<i>Chair: Jan Oosting (morning), Peter-Bram 't Hoen (afternoon)</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 (RUMC)
10:45 - 11:00	<i>Coffee Break</i>	
11:00 - 12:30	<i>Practical: Alignment, transcript quantification and variant calling in Galaxy - Part 1</i>	Saskia Hiltemann (EMC)
12:30 - 13:30	<i>Lunch</i>	
13:30 - 14:45	<i>Practical: Alignment, transcript quantification and variant calling in Galaxy - Part 2</i>	Saskia Hiltemann (EMC)
14:45 - 15:00	<i>Coffee Break</i>	
15:00 - 15:45	Single Cell RNA sequencing	Anna Alemany Arias (Hubrecht)
15:45 - 16:30	The future of RNA-seq: direct RNA sequencing and whole transcript structure determination	Yahya Anvar (LUMC)
16:30 - 17:00	Questions and answers, evaluation	Peter-Bram 't Hoen (LUMC)