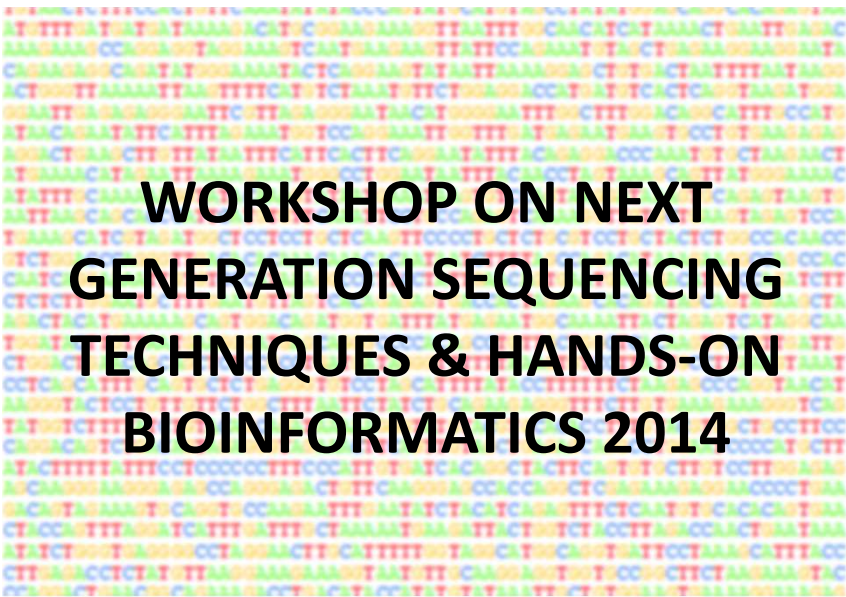




WORKSHOP ON NEXT GENERATION SEQUENCING TECHNIQUES & HANDS-ON BIOINFORMATICS 2014

Date:

1st and 2nd December 2014

Venue:

UKM Medical Molecular Biology Institute (UMBI),
Jalan Ya'acob Latiff,
Bandar Tun Razak, 56000 Cheras,
Kuala Lumpur, MALAYSIA

Organized by



In Collaboration with



Introduction

The development of next generation sequencing techniques and applications have paved the path towards personalized medicine in health management and clinical decision making. This workshop is designed to introduce the concept to clinicians, biomedical researchers, research fellows and graduate students on how NGS based research developments are being translated into routine DNA diagnostic. This workshop will also provide participants the exposure to NGS data analysis and results interpretation, tailoring medical treatment to the individual characteristics of each patient.

Invited Speakers and Instructors



Dr. Marcel Nelen is a clinical laboratory geneticist heading the Core Genome Analysis Laboratory of the Human Genetics Department at the Radboud university medical center Nijmegen, The Netherlands. In close collaboration with the Genome Research group headed by Dr. Joris Veltman this laboratory was the first to perform exome sequencing in a diagnostic setting. Dr. Nelen got his training as a clinical laboratory genetics at the Department of Medical Genetics, UMC Utrecht, the Netherlands where he was responsible for the diagnostic implementation of ArrayCGH. Prior to that, he worked as a postdoc at the Department of Cell Biology (Radboudumc) studying the role of DNA repair in repeat expansion diseases (i.e. Myotonic Dystrophy).



Dr. Kornelia Neveling studied Biology at the Heinrich-Heine-University in Düsseldorf, Germany, and subsequently performed her PhD in Human Genetics at the Julius-Maximilians-University Würzburg, Germany. In her PhD thesis, she studied the molecular causes and consequences of genetic instability syndromes, with a special interest in Fanconi anemia. In 2009, she started as a postdoc in the research group of Joris Veltman at the Department of Human Genetics of the Radboud university medical center Nijmegen, where she learned all about next generation sequencing.



Dr. Christian Gilissen has a master's degree in computer science and works as a post-doc in bioinformatics within the Translation Genomics team. He is specialized in the analysis of Next Generation Sequencing data and interpretation of single nucleotide variation. In 2012 he was awarded the Young Investigator Award by the Dutch bioinformatics consortium for his thesis on the identification of disease genes through next generation sequencing methods. In 2013 he obtained a Dutch veni grant to study bioinformatics methods to interpret single nucleotide variants in relation to disease. Recently he received the international Isabelle Oberlé award for his work on whole genome sequencing of patients with intellectual disability.

Session 1: 1 st December 2014 , Monday	
8am–9am	Registration of participants
9am–9.15am	Opening Ceremony
9.15am–10am	Targeted sequencing for inherited cancers using the IonTorrent. Dr. Marcel Nelen
10 am–10.15am	Coffee Break
10.15am–11am	Using the Ion Torrent platform to replace Sanger sequencing. Dr. Kornelia Neveling
11am–11.45am	Setting up the molecular diagnostic laboratory: Requirements, processes and accreditation. Dr. Marcel Nelen
11.45am–12.30pm	Bioinformatics for next generation sequencing. Dr. Christian Gilissen
12.30 m–1.30pm	LUNCH
1.30pm–2.15pm	Exome sequencing for disease gene identification. Dr. Christian Gilissen
2.15 pm–3pm	Implementation of exome sequencing in the clinic. Dr. Marcel Nelen
3pm–3.15pm	Coffee Break
3.15pm–4pm	Non-invasive prenatal testing. Dr. Kornelia Neveling
4.pm–4.45pm	Whole genome sequencing. Dr. Christian Gilissen
4.45 pm: End of programme	

Session 2: 2 nd December 2014 , Tuesday	
8am–8.30am	Registration of participants
8.30am–10.30am	Hands-On Bioinformatics Workshop. Dr. Christian Gilissen / Maartje van de Vorst
10.30am –11am	Coffee Break
11am–1pm	Hands-On Bioinformatics Workshop. Dr. Kornelia Neveling / Maartje van de Vorst
1pm–2pm	LUNCH
2pm–5pm	Hands-On Bioinformatics Workshop. Dr. Kornelia Neveling / Maartje van de Vorst
5pm	Coffee Break and end of workshop

Sessions	International
Session 1 Lectures 1 st Dec 2014	USD\$100
Session 2 Hands-On 2 nd Dec 2014	USD\$300

The fee includes lectures materials, meals and certificates. Registration will be on a first-come first-served basis. The session 2 Hands-On bioinformatics workshop will be limited to 26 participants.

Computer Requirements:

Participants will need to bring their own laptops or portable computers with wireless connectivity. System requirement for this workshop is at least 4GB RAM and 10 GB of free hard disc space.

For registration, kindly contact:

<http://www.ukm.my/umbi/ngsbioinfo>

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