

# Accelerating Child Health Research

## A Systems Biology Symposium

### Program Details

Monday 11th November PRESENTATIONS		Auditorium, Level 5, Perth Children's Hospital
TIME	Presentation Title	Speaker
8.30 – 9.00am	<b>Registration</b>	
9.00 – 9.10am	Welcome Address and Housekeeping	Prof. Jonathan Carapetis
<i>Session Chair: Dr Anthony Kicic</i>		
9.10 – 9.35am	Neonatal sepsis, a riddle, wrapped in a mystery, inside an enigma - is systems biology the key?	Dr Andrew Currie
9.35 – 10.00am	Experimental design aspects that lead to optimal data quality	Dr Stacey Reinke
10.00 – 10.25am	The Airway Epithelium Respiratory Illness and Allergy (AERIAL) Project	Prof. Stephen Stick / Liz Starceovich
<i>Morning Tea Collegiate Lounge</i>		
<i>Session Chair: Prof. Jianguo (Jeff) Xia</i>		
11.05am-12.05pm	Biomarker discovery in health and disease	Prof. Scott Tebbutt
12.05 – 12.30pm	Project Y and the health systems biology of rare diseases	Prof. Gareth Baynam
<i>Lunch Collegiate Lounge</i>		
<i>Session Chair: Dr David Martino</i>		
1.30 – 2.30pm	DNA methylation signatures in mendelian developmental disorders as a diagnostic bridge between genotype and phenotype	Prof. Bekim Sadikovic
2.30 – 3.00pm	Big data analytics & multi-omics integration	Prof. Jianguo (Jeff) Xia
<i>Afternoon Tea Collegiate Lounge</i>		
<i>Session Chair: Prof. Tobias Kollmann</i>		
3.40 – 4.40pm	Predicting an individual's immune responsiveness: the road from prospective elderly cohorts to large population studies and citizen science	Prof. Jaap Goudsmit
4.40 – 4.50pm	Closing Comments	Prof. Tobias Kollmann
5.00 – 7.00pm	<b>Sundowner - Join us for drinks and nibbles in the Collegiate Lounge</b>	

<b>Tuesday 12th November</b>		<b>Auditorium, Level 5, Perth Children's Hospital</b>
<b>PRESENTATIONS</b>		
<b>TIME</b>	<b>Presentation Title</b>	<b>Speaker</b>
8.30 – 9.00am	<b>Registration</b>	
9.00 – 9.10am	Welcome Address and Housekeeping	
<i>Session Chair: Prof. Stephen Stick</i>		
9.10 – 9.35am	Metabolomics from populations to individuals	Michael Evans
9.35 – 10.00am	Bile acids and gut-lung connection in cystic fibrosis respiratory disease	Dr Jose A. Caparrós-Martín
10.00 – 10.25am	Systems biology unveils multi-tissue disease mechanisms	Dr Anthony Bosco
<i>Morning Tea Collegiate Lounge</i>		
<i>Session Chair: Prof. Scott Tebbutt</i>		
11.05am-12.05pm	Applications of systems biology to human medicine	Prof. Bob Hancock
12.05 – 12.30pm	Modelling of macrophage immune responses to bacterial/viral stimuli and functional links to disease-gene associations	Dr Amy Lee
<i>Lunch Collegiate Lounge</i>		
<i>Session Chair: Dr Anthony Bosco</i>		
1.30 – 2.00pm	Does the microbiota in early life influence immune responses to vaccination?	Prof. David Lynn
<b>EMCR Presentations (selected from abstracts)</b>		
2.00 – 2.15pm	Extracting big data from small samples is feasible in low-resource settings	Nelly Amenyogbe (EMCR)
2.15 – 2.30pm	Altered expression of metabolites that predict recurrence of acute wheezing illness	Laura Coleman (PhD Candidate)
2.30 – 2.45pm	Biological mechanisms, drug repurposing, and novel drug discovery in asthma	Dr Thomas Iosifidis (EMCR)
2.45 – 3.00pm	Linking the westernised oropharyngeal microbiome to the innate and adaptive immune response in Chinese immigrants	Jing Guo (PhD Candidate)
<i>Afternoon Tea Collegiate Lounge</i>		
<i>Session Chair: Prof. Bob Hancock</i>		
3.40 – 4.40pm	Big data epidemiology, integration, visualisation - The Global Malaria Project	Prof. Peter Gething
4.40 – 4.50pm	<b>Closing Address and Acknowledgements</b>	Prof. Stephen Stick

Wednesday 13th November INTERACTIVE DATA WORKSHOPS		Meeting Room, Level 5, The Telethon Kids Institute
TIME	Presentation Title	Facilitators
	<b>Data Workshops</b>	Prof. Jianguo (Jeff) Xia
9.00 – 9.20am	Registration and set up	Training Assistant: Dr. Amy Lee
9.20 – 9.30am	Introductions and Housekeeping	
9.30 – 10.30am	RNA-Seq and Microbiome analysis <i>introductory concepts - Demonstration</i>	
<i>Morning Tea Seminar Room</i>		
10.45 – 11.30am	Metabolomics analysis – Lecture	
11.30 – 1.30pm	Free period for data-analysis practice (Lunch will be provided) <b>NB: 12.00 – 1.00pm</b> During this period, participants are welcome to attend the Telethon Kids Institute Seminar, presented by Prof. Rabin Tirouvanziam, which will take place in the room next door.	
1.30 – 2.45pm	Metabolomics analysis <i>Demonstration of online tools</i>	
2.45 – 3.30pm	Multi-omics integration – Lecture/Demo	
<i>Afternoon Tea Seminar Room</i>		
3.45 – 5.00pm	Hands-on practice for omics data analysis and integration	
5.00pm	<b>SYMPOSIUM CLOSE</b>	



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