



**Venue:**  
**Karp Conference Room**  
**Goodman Cancer Research Centre**  
**1160 Pine Ave West**  
**Montreal**

## Advanced TB Diagnostic Research

*An intensive, high-level course on TB diagnostic research methods*

July 9 – 13, 2012

### COURSE SCHEDULE: OUTLINE

Day	Date	Time	Major themes
1	July 9, Mon	8.30 AM – 5.30 PM	Global value chain, pipeline, diagnostic study designs, POC testing; TB diagnostics development
2	July 10, Tues	9.00 AM – 5.30 PM	Incremental value, diagnostic thinking impact, reference standards, imperfect gold standards; RCTs and patient impact
3	July 11, Wed	9.00 AM – 5.30 PM	Implementation research; qualitative research
4	July 12, Thur	9.00 AM – 5.30 PM	Meta-analysis, GRADE, guidelines, modeling
5	July 13, Fri	8.30 AM – 3.15 PM	Modeling, cost effectiveness

### Day 1, July 9, 2012

Time	Lecture	Faculty
8.00 AM	Registration	
8.30 – 9.00 AM	Welcome and Introductions	All
9.00 – 10.15 AM	The global value chain for TB diagnostics and pipeline	M Pai
10.15 – 10.45 AM	Coffee	
10.45 – 11.45 PM	Value chain in action: Xpert MTB/RIF	C Boehme
11.45 – 12.15 PM	Scale-up of Xpert MTB/RIF: Discussion on country experiences	
12.15 – 1.15 PM	Lunch	
1.15 – 2.00 PM	Value chain in action: TB serology	M Pai
2.00 – 3.15 PM	Panel discussion: POC testing – definitions, TPPs, barriers Moderator: M Pai	G Walther C Boehme K Palamountain J Gardiner D Dowdy
3.15 – 3.45 PM	Coffee	
3.45 – 4.30 PM	Enabling POC Diagnostics through Standard-Setting	G Walther
4.30 – 5.30 PM	Panel discussion: TB diagnostics development – industry and test developers' perspectives Moderator: K Palamountain	N Banaei C Nair G Johns G Bhat M McLaren S Kennedy

## Day 2, July 10, 2012

Time	Lecture	Faculty
9.00 – 10.00 AM	Incremental value of new diagnostics	M Pai
10.00 – 11.00 AM	Impact of test results on diagnostic and clinical decisions	M Pai D Ling
11.00 – 11.30 AM	Coffee	
11.30 – 12.45 PM	<i>Reference standards:</i> Brief presentations & discussion Microscopy studies Molecular assays IGRAs Pediatric TB Extrapulmonary TB	A Ramsay C Boehme D Menzies P Jean-Philippe M Caws
12.45 – 1.45 PM	Lunch	
1.45 – 3.00 PM	Statistical approaches for dealing with imperfect reference standards	N Dendukuri
3.00 – 3.20 PM	Coffee	
3.20 – 3.50 PM	Impact on patient outcomes: intro to diagnostic RCTs	M Pai
3.50 – 4.50 PM	Diagnostic RCTs: case study on microscopy	A Ramsay
4.50 – 5.30 PM	Clinical impact of Xpert MTB/RIF	A Cattamanchi

## Day 3, July 11, 2012

Time	Lecture	Faculty
9.00 – 10.00 AM	Operational and implementation research: an overview	A Ramsay
10.00 – 11.00 AM	Implementation research: case study: Improving case detection in Uganda	A Cattamanchi
11.00 – 11.20 AM	Coffee	
11.20 – 12.00 PM	Implementation research: case study: LED microscopy	J Minion
12.00 – 12.45 PM	Lunch	
12.45 – 1.30 PM	Implementation research: case study: IGRA reproducibility	N Banaei
1.30 – 2.10 PM	TB diagnostic end-points in vaccine trials	M Behr
2.10 – 2.50 PM	Deployment of POC technologies: where, why and what impact?	K Palamountain
2.50 – 3.15 PM	Coffee	
3.15 – 3.45 PM	Optimism bias in TB diagnostic package inserts	C Denkinger
3.45 – 4.15 PM	Market for TB diagnostics: case study from India	M Chitalia
4.15 – 5.30 PM	Qualitative research on TB diagnostics	N Engel

## Day 4, July 12, 2012

Time	Lecture	Faculty
9.00 – 10.30 AM	Systematic reviews of diagnostic accuracy	K Steingart
10.30 – 11.00 AM	Coffee	
11.00 – 11.30 AM	SR: case study: LAM	J Minion
11.30 – 12.30 PM	SR: case study: Xpert MTB/RIF & DST for 1 <sup>st</sup> and 2 <sup>nd</sup> line drugs	K Steingart
12.30 – 1.30 PM	Lunch	
1.30 – 2.00 PM	SR: case study: Oral versus blood-based HIV testing	N Pant Pai
2.00 – 3.00 PM	Guideline development in TB diagnostics	K Steingart
3.00 – 3.30 PM	Coffee	
3.30 – 4.00 PM	IGRA guidelines: concordance, discordance or confusion?	C Denkinger
4.00 - 5.30 PM	Mathematical modeling: an introduction	D Dowdy

## Day 5, July 13, 2012

Time	Lecture	Faculty
8.30 – 10.00 AM	Modeling of TB diagnostics: case studies	D Dowdy
10.00 – 10.20 AM	Coffee	
10.20 – 10.50 AM	Case study: economic models of IGRAs	O Oxlade
10.50 – 11.30 AM	Modeling TB diagnostics: current state of the science	D Dowdy
11.30 – 12.30 PM	Cost-effectiveness analysis	D Dowdy
12.30 – 1.15 PM	Lunch	
1.15 – 2.00 PM	Modeling & cost-effectiveness: challenges and future directions	D Dowdy
2.00 – 3.00 PM	Stepped wedge, phased implementation designs	D Dowdy
3.00 – 3.15 PM	Course evaluations	M Pai
3.15 PM	Coffee and closure	

## Speakers/panelists

Niaz Banaei, Stanford University, California	Glenn Johns, Ionian Technologies, San Diego
Marcel Behr, McGill University, Montreal	Sean Kennedy, Applied Visual Sciences Inc, VA
Catharina Boehme, FIND, Geneva	Daphne Ling, McGill University, Montreal
Geeta Bhat, Fio Corporation, Toronto	Meredith McLaren, Luminex Molecular Diagnostics, Inc., Toronto
Adithya Cattamanchi, UCSF, San Francisco	Dick Menzies, McGill University, Montreal
Maxine Caws, Oxford University Clinical Research Unit, Vietnam	Jessica Minion, University of Alberta, Edmonton
Mansi Chitalia, Clinton Health Access Initiative, Delhi	Chandrasekhar Nair, BigTec Labs, Bangalore, India
Nandini Dendukuri, McGill University, Montreal	Olivia Oxlade, McGill University, Montreal
Claudia Denking, Beth Israel Deaconess Medical Center, Boston	Nitika Pant Pai, McGill University, Montreal
David Dowdy, Johns Hopkins University, Baltimore	Kara Palamountain, Kellogg School of Management, Northwestern University, Chicago
Nora Engel, Maastricht University, The Netherlands	Andrew Ramsay, TDR/WHO, Geneva
Jennifer Gardiner, Bill & Melinda Gates Foundation, Seattle	Karen Steingart, University of Washington, Seattle
Patrick Jean-Philippe, NIH, Bethesda	Gene Walther, Bill & Melinda Gates Foundation, Seattle

## Course coordinator

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