

Curriculum Vitae – Madhukar Pai, MD, PhD

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A. Contact Information

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www.teachepi.org](http://www.teachepi.org)

B. Education

Medical

1993 MB BS
Stanley Medical College, Chennai, India
Dr MGR Medical University, Chennai, India

1997 MD (Community Medicine)
Christian Medical College, Vellore, India
Dr MGR Medical University, Chennai, India
Residency training in community and preventive medicine

Graduate/doctoral

2004 PhD (Epidemiology)
University of California, Berkeley, CA, USA
Dissertation: Evaluation of Newer Diagnostic Tests for Tuberculosis
Supervisor: Professor John M Colford, Jr.

Post-graduate/post-doctoral

2005 – 2006 Postdoctoral fellowship
University of California, San Francisco & University of California, Berkeley, CA
Focus: tuberculosis epidemiology
Supervisors: Professor Philip C Hopewell & Professor Arthur L Reingold

Postgraduate Clinical Training

1993 – 1994 Rotating Internship

Stanley Medical College Hospital, Chennai, India

1994 – 1997 Community Medicine Residency Program
Christian Medical College, Vellore, India

1997 – 2000 Consultant in Community Medicine
Sundaram Medical Foundation Hospital, Chennai, India

Professional certifications

1994 – Present Unrestricted medical license, Indian Medical Council, India

1998 – Present Diplomate of the National Board of Examinations (Board certification in
Preventive & Social Medicine), National Board of Examinations, India

2008– Present Member, Council of Physicians, Dentists and Pharmacists (CPDP), McGill
University Health Centre, Montreal

C. Appointments

University

2006 – Present Assistant Professor, Department of Epidemiology, Biostatistics &
Occupational Health, McGill University, Montreal

2006 – Present Associate Member, Department of Medicine, McGill University,
Montreal

2007 – Present Member, McGill Centre for the Study of Host Resistance, McGill
University, Montreal

Hospital

2006 – Present Medical Scientist, McGill University Health Centre (MUHC), Divisions of
Respirology and Infectious Diseases

2006 – Present Member, Respiratory Epidemiology & Clinical Research Unit
(RECRU), Montreal Chest Institute, Montreal

2006 – 2008 Assistant Director for Global Health Research, Research Institute of
the McGill University Health Centre (MUHC-RI), Montreal

Visiting professorships

2000 – Present Visiting Faculty, Department of Medicine, Mahatma Gandhi
Institute of Medical Sciences, Sevagram, India

- 2008 – Present Professor Extraordinary, Department of Community Health,
Faculty of Health Sciences, Stellenbosch University, South Africa
- 2009 – Present Honorary Professor, Department of Medicine, Faculty of Health
Sciences, University of Cape Town, South Africa

D. Special honors, awards, recognition

Career (Salary) Awards

- | | | |
|-----------|---|-----------|
| 2007–2012 | CIHR New Investigator Award
Canadian Institutes of Health Research (CIHR) | \$300,000 |
| 2007–2011 | FRSQ Chercheur Boursier – Junior 1
Fonds de la recherche en santé du Québec (FRSQ) | Declined |
| 2007–2010 | Établissement de jeunes chercheurs
Fonds de la recherche en santé du Québec (FRSQ) | \$45,000 |

Research Awards

- 1994 Dr Rangarajan Memorial Award in Community Health
Christian Medical College, Vellore, India
- 2005 Warren Winkelstein Award for Excellence in Epidemiology
University of California, Berkeley, USA
- 2006 Millennium Research Award
Research Institute of the McGill University Health Centre, Montreal
- 2007 Union Scientific Prize
International Union Against Tuberculosis and Lung Disease, France

Teaching Awards

- 2002 *Outstanding Graduate Student Instructor Award*, University of California,
Berkeley.
- 2007 *Core Teaching Award*, Epidemiology, Biostatistics & Occupational Health
Students' Society (EBOSS), McGill University.
- 2008 *Core Teaching Award*, Epidemiology, Biostatistics & Occupational Health
Students' Society (EBOSS), McGill University.

- 2009 *Core Teaching Award*, Epidemiology, Biostatistics & Occupational Health Students' Society (EBOSS), McGill University.
- 2009 Certificate of Merit award for teaching excellence from the Canadian Association for Medical Education (CAME).

Other awards

- 2007 *Student Advocacy Award*, Epidemiology, Biostatistics & Occupational Health Students' Society (EBOSS), McGill University.

E. Teaching

E1. McGill Courses

Year/term	Course title	Course number	Credits	Role	# of students	In class hours
Fall 2006	Substantive Epidemiology 2	EPIB642	1	Instructor	23	13
Winter 2007	Practicum	EPIB640	1	Co-instructor	21	13
Summer 2007	Systematic reviews & meta-analysis	EPIB672	2	Instructor	20	26
Fall 2007	Fundamentals of Epidemiology 1	EPIB601	4	Instructor	22	52
Summer 2008	Systematic reviews & meta-analysis	EPIB672	2	Instructor	22	26
Fall 2008	Fundamentals of Epidemiology 1	EPIB601	4	Instructor	33	52
Summer 2009	Systematic reviews & meta-analysis	EPIB672	2	Instructor	25	26
Fall 2009	Fundamentals of Epidemiology 1	EPIB601	4	Instructor	34	52
Summer 2010	Systematic reviews & meta-analysis	EPIB672	2	Instructor	27	26

E2. Research Trainees Supervised

Graduated

- 2006 – 2009 Yasmin Akcikir
MSc (epidemiology)
Co-supervisor
Thesis: Correlates of treatment outcomes of Multidrug-Resistant Tuberculosis (MDR-TB): a systematic review and meta-analysis
Primary supervisor: D Menzies
Funding: MUHC-RI studentship (2007 - 2008)

- 2007 – 2010 Kelty-Anne Hillier
MSc (epidemiology)
Primary supervisor
Thesis: *The impact of increasing antiretroviral therapy use on trends in pediatric admissions and in-hospital mortality at a large South African referral hospital*
Funding: MUHC-RI studentship (2008 - 2009)
- 2008 – 2010 Jessica Lee Minion
MSc (epidemiology)
Primary supervisor
Thesis: *Evaluating light-emitting diode fluorescent microscopy for the diagnosis of active tuberculosis*
Co-supervisor: D Menzies
Funding: Quebec Respiratory Health Training Fellowship (2009 - 2010)
- 2008 – 2010 Laurence Brunet
MSc (epidemiology)
Primary supervisor
Thesis: *Tobacco smoking in South African patients with suspected tuberculosis*
Funding: European Commission, EU-FP7 Award (2009 - 10)
- Current**
- 2008 – Present Alice Anne Zwerling
PhD (epidemiology)
Primary supervisor
Thesis: *Novel diagnostics and biomarkers for tuberculosis infection in healthcare workers*
Funding: MUHC-RI studentship (2008 - 2009)
Frederick Banting & Charles Best CIHR Doctoral Award (2009 - 2012).
- 2008 – Present Daphne Ling
PhD (epidemiology)
Primary supervisor
Thesis: *Alternative and innovative approaches to TB diagnostics research: going beyond the test accuracy paradigm*
Funding: MUHC-RI studentship (2009 - 2011)
Harrison Watson Scholarship, Faculty of Medicine, McGill Univ. (2009-11)
- 2009 – Present Hojoon Sohn
PhD (epidemiology)
Primary supervisor
Thesis: *Impact and cost-effectiveness of point-of-care tests for tuberculosis*

Funding: European & Developing Countries Clinical Trials Partnership
(2010-2013)

2009 – Present Caroline Chartrand
Msc (epidemiology)
Primary supervisor
Thesis: *Rapid diagnostic tests for influenza*
Funding: CHU Sainte-Justine Hospital Foundation (2009 - 2011)

2009 – Present Ioana Nicolau
Msc (epidemiology)
Primary supervisor
Thesis: *Urine-based Rapid Tests for Smoking and Isoniazid Treatment Adherence in Adult Patients in a Tuberculosis Clinic Setting*
Funding: European Commission, EU-FP7 Award (2010 - 11)

Contributions on Thesis Committees, McGill University

2007 – 2009 Caroline Gallant
PhD Thesis Committee
Thesis: *Genetic determinants that control anti-mycobacterial immune reactivity*
Supervisor: Erwin Schurr

2009 – Present Patricia Fontela
PhD Thesis Committee
Thesis: *Surveillance of Catheter-Related Bloodstream Infections in Quebec Intensive Care Units*
Supervisors: Robert Platt & Caroline Quach

2007 – Present Olivia Oxlade
PhD Thesis Committee
Thesis: Development and application of a comprehensive tuberculosis transmission model to evaluate approaches to tuberculosis control
Supervisor: Dick Menzies

2008 – 2010 Erika Leung
MSc Thesis Committee
Thesis: *MODS for tuberculosis diagnosis*
Supervisor: Dick Menzies

E3. Invited Lectures, Talks, Seminars, Presentations (2006 - 2010)

1. Pai M. Serial testing with IFN-g assays: how should we define conversions, reversions and thresholds? Invited presentation at the First Global Symposium on Interferon-g Assays – Rethinking the epidemiology of tuberculosis infection, Vancouver, February 21-22, 2007.

2. Pai M. IFN-g assays in contact and outbreak investigations: intriguing differences across exposure-gradient studies Invited presentation at the First Global Symposium on Interferon-g Assays – Rethinking the epidemiology of TB infection, Vancouver, February 21-22, 2007.
3. Pai M. Tuberculosis infection among household contacts in rural India: comparison of a whole-blood interferon-gamma assay with the tuberculin skin test. Oral presentation at the First Global Symposium on Interferon-g Assays – Rethinking the epidemiology of tuberculosis infection, Vancouver, February 21-22, 2007.
4. Pai M. Applications of IGRAs in the developing world: what is their potential? Invited presentation at the American Thoracic Society International Conference, San Francisco, May 20, 2007.
5. Pai M. What is known about interferon-gamma assays and what are the areas of controversy? Invited presentation at the 4th European Regional Congress of the International Union Against Tuberculosis and Lung Disease, Riga, Latvia. June 28, 2007.
6. Pai M. Research Master Class, Stellenbosch University, Cape Town, South Africa. Title: Confounding in health research: how many ways to skin this cat? August 6, 2007.
7. Pai M. Screening healthcare workers for TB infection: should T cell assays replace the tuberculin skin test? Invited seminar presentation at the University of Cape Town, South Africa, Aug 13, 2007.
8. Pai M. New tests for TB infection: what can they contribute to childhood TB diagnosis in high-burden regions? Invited symposium presentation at the 38th World Conference on Lung Health, Cape Town, S Africa, Nov 9 - 12, 2007.
9. Pai M, Dheda K. Challenges in the diagnosis of TB among individuals with HIV infection. Invited symposium presentation at the 38th World Conference on Lung Health, Cape Town, S Africa, Nov 9 - 12, 2007.
10. Pai M. Role of new T-cell based diagnostic tests to evaluate children and adults exposed to active TB. Invited symposium presentation at the 38th World Conference on Lung Health, Cape Town, S Africa, Nov 9 - 12, 2007.
11. Pai M. Introduction of what is known about IGRA tests. Invited presentation at the meeting on Interferon-gamma release assays, KNCV Tuberculosis Foundation, Cape Town, S. Africa, November 13, 2007.
12. Pai M. IGRA reproducibility, conversions and reversions: longitudinal studies from India. Invited presentation at the meeting on Interferon-gamma release assays, KNCV Tuberculosis Foundation, Cape Town, S. Africa, November 13, 2007.
13. Pai M. T-cell assay conversions and reversions among contacts of TB patients in rural India. Oral symposium presentation at the American Thoracic Society International Conference, Toronto, May 19, 2008.
14. Pai M. New tools and emerging technologies for the diagnosis of active tuberculosis and drug resistance. Invited symposium presentation at the Canadian Respiratory Conference, Montreal, June 20, 2008.
15. Pai M. Evidence-based TB diagnosis. Invited seminar presentation at the Institute of Infectious Diseases and Molecular Medicine (IIDMM), University of Cape Town, South Africa, July 30, 2008.
16. Pai M. Introduction to systematic reviews and meta-analysis. Invited guest lecture in the Clinical Research Methods course, Department of Medicine, University of Cape Town, South Africa, July 30, 2008.
17. Pai M. How close are we in differentiating infected from diseased in tuberculosis? Invited symposium presentation at the 39th World Conference on Lung Health, Paris, France, October 16 - 20, 2008.
18. Pai M. Evidence for active and passive smoke exposure and increased risk of TB infection, TB disease, and TB mortality. Invited symposium presentation at the 39th World Conference on Lung Health,

Paris, France, October 16 - 20, 2008.

19. Pai M. Comparison of gamma interferon in human and animal tuberculosis: human. Invited symposium presentation at the 39th World Conference on Lung Health, Paris, France, October 16 - 20, 2008.
20. Pai M. Tobacco, TB and mortality in India and China. Invited symposium presentation at the 39th World Conference on Lung Health, Paris, France, October 16 - 20, 2008.
21. Pai M. LTBI diagnosis: advances and prospects. Annual Meeting of the Stop TB Partnership New Diagnostics Working Group, 39th World Conference on Lung Health, Paris, France, October 16, 2008.
22. Pai M. Evidence-based TB Diagnosis: How evidence informs practice and policy. Annual Meeting of the Stop TB Partnership New Diagnostics Working Group, 39th World Conference on Lung Health, Paris, France, October 16, 2008.
23. Pai M. IGRAs for the diagnosis of LTBI: are they relevant in TB endemic settings? FIND Scientific Forum on Recent Advances in TB Diagnostics, 39th World Conference on Lung Health, Paris, France, October 17, 2008.
24. Pai M, Scano F. What is the evidence available to support TB infection control interventions? Invited symposium presentation at the 39th World Conference on Lung Health, Paris, France, October 16 - 20, 2008.
25. Pai M. Serial Testing for Tuberculosis: Can We Make Sense of T-Cell Assay Conversions and Reversions? BCCDC Public Health Grand Rounds, BC CDC, Vancouver, October 30, 2008.
26. Pai M. Tuberculosis among healthcare workers in the era of HIV and XDR-TB. Invited seminar presentation at Faculty of Health Sciences, Simon Fraser University, Burnaby, British Columbia, October 31, 2008.
27. Pai M. Closing Plenary- New Technologies for TB Diagnosis: What's in the Cards? Ontario Lung Association TB Conference, Toronto, Canada, November 25, 2008.
28. Pai M. Protecting healthcare workers from TB in the era of HIV and XDR-TB. Invited seminar presentation at the Hinduja Hospital, Mumbai, India, December 18, 2008.
29. Pai M. Introduction to diagnostic meta-analysis. Workshop presentation at the South Asian Cochrane Centre, Christian Medical College, Vellore, India, January 12, 2009.
30. Pai M. New diagnostics for tuberculosis: what's in the pipeline. Invited seminar presentation at St. John's Research Institute (SJRI), Bangalore, India, January 17, 2009.
31. Pai M. Diagnosis of tuberculosis: stepping out of Robert Koch's shadow. Invited symposium presentation at Christian Medical College, Vellore, Winter Symposium 2009, January 22, 2009.
32. Pai M. New technologies for TB diagnosis: what's in the pipeline. Invited symposium presentation organized by VM Medical College & Safdarjung Hospital, India International Centre, New Delhi, India, January 20, 2009.
33. Pai M. Effective Use of PubMed and EndNote for Searching and Managing Medical Literature. Workshop presentation at the University of Cape Town, Lung Infection and Immunity Unit, Department of Medicine and the School of Child Health, University of Cape Town, March 9, 2009.
34. Pai M. New technologies for TB diagnosis: what's hot and what's not? Invited seminar at the Department of Pediatrics, Chris Hani Baragwanath Hospital, Johannesburg, S Africa, March 10, 2009.
35. Pai M. Evidence-based TB diagnosis: incorporating evidence into new policies. Invited symposium talk at the 5th Union Conference European Region, Dubrovnik, Croatia, May 30, 2009.
36. Pai M, Joshi R, Gajalakshmi D, Reddy MVR, Kalantri SP. Unstable IGRA conversions and revisions in a high-incidence setting. Oral symposium presentation at the 2nd Global Symposium on IGRAs, Dubrovnik, Croatia, May 30, 2009.
37. Pai M. Guidelines on IGRAs: concordant or discordant? Invited symposium talk at the 2nd Global

- Symposium on IGRAs, Dubrovnik, Croatia, June 1, 2009.
38. Pai M. New diagnostics for TB: Current Status. Invited seminar presentation at the Research Institute of Tuberculosis, Tokyo, Japan, June 30, 2009.
 39. Pai M. Serial Testing for TB Infection: How do We Interpret IGRA Conversions and Reversions? 6th Meeting of Research Unit for TB Infection Diagnostics, Sapporo, Hokkaido, Japan, July 1, 2009.
 40. Pai M. Diagnosis of LTBI in BCG recipients. Invited symposium presentation at the 49th InterScience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) Annual Meeting, San Francisco, USA, Sept 12, 2009.
 41. Pai M, Minion J. Optimism bias, inflated accuracy estimates, and contradicted findings in TB diagnostic research. Invited seminar presentation, Department of Epidemiology & Biostatistics, McGill University, Montreal, October 5, 2009.
 42. Pai M. New tests and biomarkers for LTBI. Invited seminar presentation at the Public Health Laboratory - Toronto, Ontario Agency for Health Protection and Promotion, Toronto, October 8, 2009.
 43. Pai M. Interpreting Interferon Gamma Release Assays – “Show me the data”. Invited symposium presentation at the IDSA 47th Annual Meeting, Philadelphia, Oct 31, 2009.
 44. Pai M. Diagnosis of TB infection in HIV-infected persons. Invited symposium presentation at the IDSA 47th Annual Meeting, Philadelphia, Oct 31, 2009.
 45. Pai M. Mapping the landscape and quality of TB diagnostic research. Invited symposium presentation at the Annual Meeting of the Stop TB Partnership's New Diagnostics Working Group, 40th Union World Conference on Lung Health, Cancun, Mexico, Dec 3, 2009.
 46. Pai M. TB Diagnostics: Translating Evidence to Policy and Practice. Invited symposium presentation at the Annual Meeting of the Global Laboratory Initiative, 40th Union World Conference on Lung Health, Cancun, Mexico, Dec 3, 2009.
 47. Pai M. Do IGRAs have a role in developing countries? Invited symposium presentation at the 40th Union World Conference on Lung Health, Cancun, Mexico, Dec 5, 2009.
 48. Pai M. Understanding the epidemiology of smoking and TB. Invited symposium presentation at the 40th Union World Conference on Lung Health, Cancun, Mexico, Dec 5, 2009.
 49. Pai M. Optimism bias, inflated accuracy estimates, and contradicted findings in TB diagnostic research. Beer Seminar, Meakins-Christie Laboratories, Montreal, Feb 1, 2010.
 50. Pai M. Landscape of TB diagnostics in India. ICGEB International Symposium on TB Diagnostics: Innovating to Make an Impact, 16 December 2010, New Delhi, India.
 51. Pai M. TB Diagnosis in 2011: The Good, the Bad and the Ugly. Keystone Symposium on *Tuberculosis: Immunology, Cell Biology and Novel Vaccination Strategies*, Vancouver, British Columbia, Canada, January 15 – 20, 2011.
 52. Pai M. Squeezing predictive value out of IGRAs. Special Grand Rounds, BC CDC, Vancouver, British Columbia, Canada, January 18, 2011.
 53. Pai M. TB elimination: a realistic goal? World TB Day presentation, McGill AIDS Coalition, McGill University, Montreal, 24 March, 2011.
 54. Pai M. Improving TB diagnosis : difference between knowing the path and walking the path. IFMSA-Québec's Global Health Colloquium. Montreal, 27 March, 2011.
 55. Pai M. Improving TB diagnosis : knowing the path is not the same as walking the path. Scott J. Thaler Lecture Series, AERAS Global TB Vaccine Foundation, Rockville, Maryland, 30 March 2011.

E4. Clinical Teaching

1. Diagnosis of latent TB infection. Inter-hospital Infectious Diseases Grand Rounds, Montreal General Hospital, 9 November, 2006.
2. Introduction to systematic reviews & meta-analysis. Guest lecture in EPIB-679, Clinical Epidemiology, June 22, 2007. Instructors: Kevin Schwartzman & Dick Menzies.
3. IFN-gamma release assays for TB infection: time to abandon the tuberculin skin test? Inter-hospital Infectious Diseases Grand Rounds, Jewish General Hospital, May 1, 2008.
4. The diagnosis and misdiagnosis of tuberculosis. Invited presentation at Tropical Diseases: A Clinical and Laboratory Update. McGill Centre for Tropical Diseases, Montreal, June 3, 2008.
5. Evidence-based TB diagnosis. Grand Rounds presentation at the MUHC Medical Grand Rounds, Department of Medicine, McGill University, Montreal, Canada. September 23, 2008.
6. Diagnosis of tuberculosis: stepping out of Robert Koch's shadow. Respiratory Rounds, Ottawa General Hospital, University of Ottawa, Ottawa, Feb 2, 2009.
7. Diagnosis of latent TB infection: advances and challenges. Pneumo Club, University of Ottawa, Ottawa, Feb 2, 2009.
8. Interpreting diagnostic evidence. Invited teaching seminar at the Division of Gynecological Oncology, Department of Obstetrics & Gynecology, Royal Victoria Hospital, McGill University Health Centre, Montreal, April 2, 2009.
9. Tuberculosis - new tests, new guidelines. Invited lecture at conference on "Tropical diseases: a review of clinical and laboratory medicine", McGill Centre for Tropical Diseases, Montreal, 10 May 2010.
10. Introduction to systematic reviews & meta-analysis. Guest lecture in EPIB-679, Clinical Epidemiology, June 21, 2010. Instructors: Kevin Schwartzman & Sasha Bernatsky.

E5. Guest lectures in other McGill courses

1. Introduction to systematic reviews & meta-analysis (4 hours). Guest lecture in EPIB-695, Intermediate Epidemiology, Winter, 2007. Instructor: Jean-Francois Boivin.
2. Diagnostics for infectious diseases (2 hours). Guest lecture in EPIB-678, Introduction to Infectious Diseases Epidemiology, Winter 2007. Instructor: Ameer Manges.
3. Outbreak investigations in developing countries (2 hours). Guest lecture in EPIB-677, Global Health: Epidemiologic Research, Winter, 2008. Instructor: Theresa Gyorkos.
4. Diagnostics for infectious diseases (2 hours). Guest lecture in EPIB-678, Introduction to Infectious Diseases Epidemiology, Winter 2008. Instructor: Ameer Manges.

E6. Teaching contributions in other universities

1. Module on Diagnostic Research. Master's in Clinical Epidemiology, Stellenbosch University, Cape Town, South Africa. 4 day course. March 4 to 7, 2009.
2. Effective Use of PubMed and EndNote for Searching and Managing Medical Literature. Workshop on 9th March 2009, Faculty of Medicine, University of Cape Town, South Africa.

E7. Coordination of short courses and workshops

1. EPIB-668: Advanced Diagnostic Research, May 6 - 9, 2008, as part of Summer Session in Epidemiology & Biostatistics, McGill University. Instructor: Professor Karel Moons, Julius Center for Health Sciences and Primary care, Utrecht, Netherlands. Course coordinator: Madhukar Pai.
2. "Systematic reviews & meta-analyses of diagnostic test accuracy". 2 day workshop (25/26 May 2009) held at the Montreal Chest Institute. Instructors: Dr Mariska Leeflang, University of Amsterdam, and Madhukar Pai. Course coordinator: Madhukar Pai.
3. "Montreal TB Course". 1-day course held on 30 October, 2009, at the Montreal Chest Institute. Instructors: Madhukar Pai, Dick Menzies, Kevin Schwartzman, Marcel Behr, Christina Greenaway, Jessica Minion and Barry Rabinovitch. Course coordinator: Madhukar Pai.
4. "GRADE approach to diagnostic tests and strategies." 1-day course held on 12 February 2010 at the Montreal Chest Institute. Instructors: Professor Holger Schünemann & Dr Jan Brozek, McMaster University, Hamilton. Course coordinator: Madhukar Pai.
5. "Montreal TB Course". 1-day course held on 26th November 2010, at the Montreal Chest Institute. Instructors: Madhukar Pai, Dick Menzies, Kevin Schwartzman, Marcel Behr, Erwin Schurr, Maziar Devangahi and Barry Rabinovitch. Course coordinator: Madhukar Pai.
6. "TB diagnostic research - beyond the basics". 3-day advanced course on TB diagnostic research from 12 - 15 December 2010, at the Tuberculosis Research Centre, Chennai, India. Course coordinator: Madhukar Pai.

F. Other contributions

F1. Journals

Editorial Boards

2006 – Present	Editorial Board Member, <i>Indian Journal of Medical Microbiology</i>
2007 – Present	Associate Editor, <i>Int Journal of Tuberculosis & Lung Disease</i>
2007 – Present	Section Editor for Tuberculosis, <i>PLoS One</i>
2008 – Present	Editor, Cochrane Infectious Diseases Review Group
2009 – Present	Academic Editor & Editorial Board Member, <i>PLoS Medicine</i>

Ad hoc reviews

Science
New England Journal of Medicine
JAMA
Lancet
Annals of Internal Medicine
PLoS Medicine
PLoS One
Lancet Infectious Diseases
American Journal of Respiratory & Critical Care Medicine
Clinical Infectious Diseases
International J of Tuberculosis & Lung Disease
BMC Medicine
BMC Infectious Diseases

Respiratory Medicine
Emerging Infect Diseases
Expert Rev of Anti-Infective Therapy
Scandinavian J of Infectious Diseases
Vaccine
Tuberculosis
Journal of Clinical Investigation
European Respiratory Journal
Expert Rev of Molecular Diagnostics
Nephrology Dialysis Transplantation
Clinical Microbiology and Infection
Trends in Microbiology
Journal of Infection
Medical Letter
Thorax
Cochrane Library
Epidemiology
Trends in Biotechnology

F2. Grant Reviews

Ad hoc reviews

2004	Young Epidemiology Scholars Competition, College Board, USA
2005	Medical Research Council (MRC), South Africa
2006	UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR), World Health Organization (WHO)
2007	McGill University Health Centre Research Institute Pilot Project Awards
2007	Research Council of Norway
2008	Natural Sciences and Engineering Research Council of Canada (NSERC)
2008	National Research Foundation (NRF), South Africa
2008	Canadian Institutes of Health Research (CIHR), Canada
2009	National Research Foundation (NRF), South Africa
2009	Ontario Ministry of Health, Canada
2009	Canadian Institutes of Health Research (CIHR), Canada
2009	McGill University Health Centre Research Institute Studentship Awards
2010	The Wellcome Trust, UK
2010	McGill University Health Centre Research Institute Studentship Awards

Review committees

2011-	Canadian Institutes of Health Research (CIHR), Public, Community and Population Health (PH1/2) Peer Review Committee
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F3. Administrative Responsibilities, McGill University

- 2006 – 2007 Coordinator, Weekly Departmental Seminar Series, Department of
Epidemiology, Biostatistics & Occupational Health, McGill University
- 2009 – 2010 PhD Advisor, Department of Epidemiology, Biostatistics &
Occupational Health, McGill University

F4. Committees

McGill University

- 2006 – 2008 Member, PhD Admissions Committee, Department of Epidemiology,
Biostatistics & Occupational Health
- 2006 – 2008 Member, PhD Committee, Department of Epidemiology, Biostatistics
& Occupational Health
- 2009 - Present Member, Epidemiology Programs Committee, Department of
Epidemiology, Biostatistics & Occupational Health
- 2011- Member, Appointments/Reappointments/Promotions Committee, Department
of Epidemiology, Biostatistics & Occupational Health
- 2011 Member, PhD Admissions Committee, Department of Epidemiology,
Biostatistics & Occupational Health

External Committees, Panels & Expert Groups

- 2005 – 2006 Member, Steering Committee, International Standard for Tuberculosis
Care, American Thoracic Society & World Health Organization (WHO)
- 2005 – 2006 Member, 2nd Scientific Working Group on Tuberculosis, WHO Special
Programme for Research and Training in Tropical Diseases (TDR)
- 2006 – Present American Thoracic Society representative on the Stop TB Partnership's
New Diagnostics Working Group
- 2006 – 2007 Member, Steering Committee, Tuberculosis and Smoking, International
Union Against Tuberculosis & Lung Disease & WHO, Geneva
- 2007 – 2008 Member, Diagnostics Expert Evaluation Panel (DEEP), WHO Special
Programme for Research and Training in Tropical Diseases (TDR)
- 2007 – 2008 Temporary Advisor, TB Infection Control Global Consultation, World
Health Organization, Geneva
- 2006– 2007 Expert Member, Working Group for Canadian TB Committee Advisory
Committee Statement on Interferon-gamma release assays, Public Health
Agency of Canada
- 2007– 2008 Chair, Working Group for Updated 2008 Canadian TB
Committee Advisory Committee Statement on Interferon-gamma release
assays, Public Health Agency of Canada
- 2009 – 2010 Expert Member, Working Group for Updated 2010 Canadian TB
Committee Advisory Committee Statement on Interferon-gamma release
assays, Public Health Agency of Canada
- 2008 – Present Member, TDR Scientific Advisory Committee for TB/HIV research,
WHO Special Programme for Research and Training in Tropical
Diseases (TDR), Geneva

2008 – 2010	Tuberculosis X Prize Advisory Board, X Prize Foundation, USA
2008 – 2009	Member, American Thoracic Society, Assembly for Microbiology, Tuberculosis and Pulmonary Infections (MTPI) Program Committee
2008 – 2009	Member Guideline Development Group (TDG) for TB treatment guidelines, World Health Organization, Geneva
2008 – 2009	Core group member, TB-IC operational research project for outcome and impact indicators of TB infection control interventions, KNCV Tuberculosis Foundation, The Hague
2009– 2010	Member, WHO Expert Group on Approaches to Improve Smear Microscopy for Tuberculosis Diagnosis & Non-commercial Culture Methods for MDR-TB, WHO, Geneva.
2009– 2010	Member, Update of Global Plan to Stop TB, Stop TB Partnership & World Health Organization, Geneva
2009 – Present	Co-chair, Stop TB Partnership’s New Diagnostics Working Group, WHO, Geneva
2009 – Present	Member, Stop TB Partnership Coordinating Board, Stop TB Partnership & WHO, Geneva
2009 – Present	Member, Disease Reference Group (DRG) on TB, leprosy and buruli ulcer, WHO Special Programme for Research and Training in Tropical Diseases (TDR), Geneva
2009 – Present	Chair, TB Research Movement Task Force, Stop TB Partnership & World Health Organization, Geneva
2007– Present	Member, ATS/CDC/IDSA Committee, Diagnostic Standards and Classification of Tuberculosis in Adults and Children, American Thoracic Society
2010– 2010–	Member, World Bank TB India Joint Monitoring Mission, World Bank Member, WHO Expert Group on interferon-gamma release assays and commercial serodiagnostics for TB, WHO, Geneva.
2010– 2011	Member, Canadian Thoracic Society Tuberculosis Committee Member, Scientific Advisory Committee, Workshop on TB and HIV Diagnostics in Adult and Pediatric Populations, Molecular Diagnostics Working Group of the US Federal TB Taskforce, NIH, USA.
2011-2012	Chair, Working Group for Updated 2012 Canadian TB Committee Advisory Committee Statement on Interferon-gamma release assays, Public Health Agency of Canada

F5. Contributions as Examiner, McGill University

2006	Olivia Oxlade, Examiner for PhD Protocol Defence
2007	Maala Bhatt, Internal Examiner for MSc thesis
2009	Mathieu Giroux, Internal Examiner for MSc thesis
2009	Ann Burchell, Internal Member, PhD Oral Defense Committee
2011	Data Teltsch, Internal Member, PhD Oral Defense Committee

F6. Professional and/or Learned Societies

2004 – Present	Member, American College of Epidemiology, USA
2004 – Present	Member, Society for Epidemiologic Research, USA
2005 – Present	Member, American Thoracic Society, USA
2005 – Present	Member, International Union Against Tuberculosis & Lung Disease
2007 – Present	Member, Canadian Thoracic Society, Canada

F7. Other Professional and Scientific Contributions

Consulting

2006 – 2010	Consultant, Foundation for Innovative New Diagnostics (FIND), Geneva
2010 – Present	Consultant, Bill & Melinda Gates Foundation, Seattle, USA

G. Research

G1. Research Activities

My general interests include infectious diseases epidemiology, global health research, evidence based medicine, diagnostic research methodology, knowledge synthesis and knowledge transfer (systematic reviews, meta-analyses, and guideline development). My specific research program is on TB, focused on:

- 1) Evaluation of novel diagnostic tools and biomarkers for TB
- 2) Nosocomial TB and TB infection control in developing countries
- 3) Knowledge Synthesis: Evidence-based TB diagnosis
- 4) Knowledge Translation: Development of evidence-based standards for TB care and control

1) Evaluation of novel diagnostic tools and biomarkers for TB

Research on LTBI diagnostics: Detection and treatment of latent TB infection (LTBI) is an important component of TB control. Currently, diagnosis of LTBI relies on the tuberculin skin test (TST), a century-old test with several limitations. A breakthrough in recent years has been the development of interferon-g release assays (IGRAs) for LTBI. From a clinical and public health perspective, it is important to determine if IGRAs should replace the TST, and to assess their role and relevance in high burden countries. By conducting field evaluations of IGRAs in India, our work has generated interesting and useful information on how these tests perform in a high burden country, especially in high-risk populations such as healthcare workers (Pai M et al. *JAMA* 2005), children (Dogra S et al. *J Infect* 2007), and TB patients with HIV co-infection (Pai M et al. *Infection* 2007). For example, our study in India compared the TST with an IGRA in over 700 healthcare workers – the largest study of its kind in healthcare workers (Pai M et al. *JAMA* 2005). Our data has informed evidence-based guidelines on how IGRAs should be used in clinical practice, especially in the context of serial testing (Pai M et al. *Am J Resp Crit Care Med* 2006 & Pai M et al. *Int J Tuberc Lung Dis* 2009). They have also been used to develop a research agenda for the evaluation of these tests in resource-limited settings (Pai M et al. *Lancet Infect Dis* 2007;7:428-38).

My work on LTBI diagnostics has been supported by 3 grants (as PI). Using my first CIHR operating grant (2006 - 2009), we assembled a large cohort of healthcare workers in Montreal and India, and are conducting serial testing with TST and IGRAs, to evaluate the performance of IGRAs in HCW screening. As of July 2010, we have recruited over 1000 HCWs. These HCWs are undergoing serial testing every year. In 2009, I re-applied and successfully renewed this CIHR operating grant (2009 - 2012). In addition, I received a smaller pilot project grant from the MUHC Research Institute. Because LTBI has no gold standard, we have used methods such as mixture analysis and Bayesian latent class analyses to improve estimation of prevalence and test accuracy. To support such work, we received a CIHR operating grant (Dendukuri & Pai as Co-PIs).

Research on active TB diagnostics: In 2008, I received a separate 3-year grant from CIHR to evaluate novel diagnostics for TB in Montreal, India and S Africa. In this project, we are evaluating tests such as MODS (Sarojini JM et al. *IJTL* 2010), optimization of sputum smear microscopy (Daley P et al. *PLoS One* 2009), urinary antigen detection [LAM] (Daley P et al. *IJTL* 2009; Dheda K et al. *PLoS One* 2010), and LED microscopy and several publications have come out of this project, mostly based on work in India and South Africa. We have also evaluated the methodological quality of diagnostic research in TB, HIV and malaria (Fontela P et al. *PLoS One* 2009).

2) Nosocomial TB and TB infection control in resource-limited settings

TB is a significant but neglected occupational problem among healthcare workers (HCWs) in poor countries. With the emergence of extensively drug-resistant TB (XDR-TB), there is growing concern about a real need to protect HCWs and HIV infected patients from TB. To inform policies and guidelines on TB infection control in developing countries, it is important to conduct research on dynamics of nosocomial transmission in high burden settings, and determine the effectiveness and feasibility of simple and low-cost interventions that may work in resource limited settings.

Our research in India and South Africa has shown that TB is an important problem among HCWs (Pai et al. *Emerg Infect Dis* 2006; Joshi R et al. *PLoS Med* 2006; Joshi et al. *PLoS One* 2007), and the annual risk of TB infection is high, even among young medical and nursing trainees (Christopher et al. *PLoS One* 2010) who are frequently exposed to TB (Pai M et al. *J Occup Med* 2006). Our work in India, for the first time, showed that interpretation of serial testing with novel T-cell based assays is complicated because of non-specific variations, conversions and reversions (Pai et al. *AJRCCM* 2006; 174 349-355). This led to our work on evaluating the reproducibility of T-cell-based assays in HCWs in India and S Africa (Veerapathran et al. *PLoS One* 2008 & van-Zyl Smit. *AJRCCM* 2009). Using data from India, we used Bayesian latent class analysis and mixture models to improve our estimates of TB prevalence in HCWs (Pai M et al. *IJTL* 2008).

3) Knowledge Synthesis: Evidence-based TB diagnostics

Knowledge synthesis and knowledge translation are increasingly important for evidence-based clinical practice and evidence-based public health. High quality diagnostic studies are critical to evaluate new tools, to develop evidence-based policies on TB diagnostics, and, ultimately, for effective control of the global TB epidemic. Systematic reviews and meta-analyses provide the best synthesis of current evidence and have the potential to impact policy. I have conducted and supervised several meta-analyses on various TB diagnostics. In addition to informing the field of evidence-based TB diagnosis (Pai M et al. *PLoS*

Med 2008), and the development of the International Standards for TB Care (Hopewell et al. *Lancet Infect Dis* 2006), these reviews have been helpful in making policy decisions and in identifying key knowledge gaps and unresolved questions. For example, our review on yield of serial sputum smear examination (*IJTL* 2007;11(5):484-95) influenced WHO's policy decision to reduce the number of sputum smears from three to two. Our meta-analyses on line-probe assays (Ling D et al. *ERJ* 2008), serological assays (Steingart KR et al. *PLoS Med* 2007), and IGRAs (Pai M et al. *Annals Int Med* 2008) have all been used by WHO for policy recommendations on TB diagnostics. Our systematic reviews on IGRAs have also informed policy recommendations in Canada (ACS by PHAC, CCDR publications) and US Centers for Disease Control (MMWR 2010). In 2010, I was invited by the Lancet to lead a review article on TB diagnostics for a special series on TB, published in May 2010 (Wallis & Pai, *Lancet* 2010). In 2010, I also had the opportunity contribute an editorial on TB diagnosis for the *N Eng J Med* (Small PM & Pai M, *NEJM* 2010).

4) Knowledge translation: Development of evidence-based standards for TB care and control

In order to control the TB epidemic, we need to ensure that our standards of TB care are based on rigorous scientific evidence, are clear and well understood, and are accessible to and applied by all types of health care providers -- public, private, certified, and non-traditional -- in all corners of the world. I participated in the development of the “*International Standards for Tuberculosis Care (ISTC)*,” an initiative to develop evidence-based standard of care guidelines for TB, aimed primarily at the private healthcare sector. My role was to compile evidence-based guidelines on TB care, and co-author the standards. The ISTC report was published in 2006 (*Lancet Infect Dis* 2006;6:710-25). The ISTC is now an integral part of the new Global Stop TB Strategy. Also, I participated in developing the Canadian TB Committee’s Advisory Committee Statements on Interferon- γ assays for TB infection (*Can Commun Dis Rep* 2007; CCDR 2008; CCDR 2010). I have also contributed to WHO guidelines on TB treatment (WHO, 2010), TB infection control (WHO 2009), and several WHO policies on TB diagnostics (previous section).

Having participated in several WHO guideline committees, I have attempted to analyze the entire policy process for TB diagnostics, with a focus on transparent guideline development approaches such as GRADE (Pai M et al. *Curr Op Pul Med* 2010). I have also participated in producing a Stop TB Partnership monograph entitled: Pathways to better diagnostics for tuberculosis, a blueprint for the development of TB diagnostics (WHO, 2009). Lastly, I served as an Associate Editor for a new textbook on tuberculosis: *Tuberculosis: A Comprehensive Clinical Reference*. H. Simon Schaaf & Alimuddin I. Zumla [Editors], John Grange, Mario Raviglione, Wing Wai-Yew, Peter Donald, Madhukar Pai, and Jeffrey Starke [Associate Editors], 2009. London, UK: WB Saunders Elsevier.

G2. Personal Salary Awards

2007 – 2012	CIHR New Investigator Award Canadian Institutes of Health Research (CIHR) Rating (score): 4.36/5.00 Rank within the committee: 4	\$300,000
2007–2011	FRSQ Chercheur Boursier – Junior 1 Fonds de la recherche en santé du Québec (FRSQ)	Declined

Rating (score): 96/100
Rank within the committee: 1

2007 – 2010 Établissement de jeunes chercheurs \$45,000
Fonds de la recherche en santé du Québec (FRSQ)
Rating (score): 96/100
Rank within the committee: 1

G3. Research Grants

Completed Grants

As principal investigator (PI):

MOP-81362 Pai, M (PI) 10/01/06 – 9/30/09
Canadian Institutes of Health Research (CIHR)
Validation of interferon-gamma assay for the diagnosis of tuberculosis infection in health care workers.
This study was a 3-year cohort study of new in-vitro tests for the diagnosis of latent TB infection among healthcare workers in Montreal and India.
Role: PI
Amount: \$249,285
Rating (score): 4.23/5.00
Rank within the committee: 4

MISRI Pai, M (PI) 07/01/07 – 06/30/08
McGill University: McGill-India Strategic Research Initiative
Improving the Diagnosis of Tuberculosis Among HIV Infected and Non-Infected Individuals in India.
This was a pilot project for evaluation of new diagnostic tests for TB in HIV patients in India.
Role: PI
Amount: \$15,000
Rating and rank: Not provided

MUHC-RI Pai, M (PI) 05/15/07 – 05/14/09
McGill University Health Centre - Research Institute
Tuberculosis contact investigation in Montreal: comparison of T cell based interferon-g assays with the tuberculin test.
This was a pilot project for evaluation of a new diagnostic test for TB.
Role: PI
Amount: \$20,000
Rating and rank: Not provided

As co-applicant (co-investigator):

GGH-84625 Vissandjee, B (PI) 07/01/07 – 06/30/09
Canadian Institutes of Health Research (CIHR)

Integrating gender sensitivity in TB programs in India: Building international partnerships and models for equitable access.

This was a CIHR seed grant for gender and health research.

Role: Co-applicant

Amount: \$72,372

Rating (score): 4.13/5.00

Rank within the committee: 4

MELS-MRI-MDEIE Vissandjee, B (PI)

04/01/07 – 03/31/09

Government du Quebec, Initiative Inde 2007

Préoccupations liées aux rapports sociaux de genre dans les programmes de prévention et de traitement contre la tuberculose en Inde: Vers une construction de partenariats internationaux et approches pour un accès équitable

This was a seed grant for collaborative research in India.

Role: Co-applicant

Amount: \$20,000

Rating and rank: Not provided

Current Grants

As principal investigator (PI):

MOP-81362 Pai, M (PI)

10/01/09 – 9/30/12

Canadian Institutes of Health Research (CIHR)

Tuberculosis screening of health care workers: do novel blood tests have a role?

This study is continuation of a cohort study of new in-vitro tests for the diagnosis of latent TB infection among healthcare workers in Montreal and India.

Role: PI

Amount: \$336,725

Rating (score): 4.26/5.00

Rank within the committee: 1

MOP-89918 Pai, M (PI)

10/01/08 – 9/30/11

Canadian Institutes of Health Research (CIHR)

Innovative approaches for diagnosing tuberculosis in the era of HIV.

This study is a 3-year study of new tests for the diagnosis of TB in Canada, India and S Africa.

Role: PI

Amount: \$319,878

Rating (score): 4.18/5.00

Rank within the committee: 2

MOP-89857 Dendukuri & Pai (Co-PIs)

10/01/08 – 9/30/11

Canadian Institutes of Health Research (CIHR)

Novel statistical methods for tuberculosis diagnostic studies.

This is a 3-year study of new statistical approaches for evaluating tests for the diagnosis of TB.

Role: Co-PI

Amount: \$182,976

Rating (score): 4.13/5.00

Rank within the committee: 3

As co-applicant (co-investigator):

RRD-153877 Menzies, R (PI)

04/01/06 – 03/31/11

Canadian Institutes of Health Research (CIHR) - Team Grant (Research Resource Grant)

Understanding the keys to TB: exposure to infection, and infection to disease.

This study is a cohort study of TB transmission among household contacts of TB cases in Montreal.

Role: Co-applicant

Amount: \$ 919,550

Rating (score): 4.6/5.00

Rank within the committee: Not provided

MCT - 94831 Menzies, R (PI)

01/01/09-03/31/16

Canadian Institutes of Health Research (CIHR)

A Randomized Trial of 4 Months Rifampin vs. 9 Months Isoniazid for Latent Tuberculosis Infection.

This is a randomized controlled trial of a short drug regimen for treatment of latent TB infection.

Role: Co-applicant

Amount: \$4,877,968

Rating (score): 4.42/5.00

Rank within the committee: Not provided

QRHTP Maltais, F et al (PI)

01/01/09-01/31/14

Canadian Institutes of Health Research (CIHR)

CIHR - Quebec Respiratory Health Training Program (QRHTP)

This is a multi-centric training grant for respiratory health in Quebec.

Role: Co-applicant

Amount: \$1,950,000

Rating (score): 4.45/5.00

Rank within the committee: 7

TBSusgent Dheda, K (PI)

02/01/09 – 01/31/11

European Commission (EU-FP7)

Sustaining research momentum over the coming decades: mentoring the next generation of researchers for tuberculosis.

This is a multi-country training grant for mentoring new researchers in TB.

Role: Co-applicant

Amount: € 60,600

Rating and rank: Not provided

KRS-102067 Pai, NP (PI) 01/01/10 – 03/31/11
Canadian Institutes of Health Research (CIHR)
Diagnostic performance of rapid tests for HIV and related coinfections in vulnerable populations.
This is a knowledge synthesis grant.
Role: Co-applicant
Amount: \$55,395
Rating and rank: Not provided

TB-NEAT Dheda, K (PI) 07/12/10 – 06/30/13
European & Development Countries Clinical Trial Partnership (“EDCTP”)
Evaluation of multiple novel and emerging technologies for TB diagnostics, in smear-negative and HIV-infected persons, in high burden countries.
This is a multi-country grant for evaluating new diagnostics for TB.
Role: Co-applicant
Amount: € 150,000
Rating and rank: Not provided

G4. Publications

G4a. Peer reviewed articles: original research contributions

1. Rao S, Pai M, Iyanar A, Joseph A. Sanitation for rural communities: first win the people's support. *World Health Forum* 1997, Vol 18:262-265.
2. Pai M, Zachariah A, Rose W, Satyajit S, Verghese S, Joseph A. Malaria and migrant labourers: socio-epidemiological inquiry. *Economic and Political Weekly*, Vol XXXII, No 16, 1997.
3. Pai M, Kang G, Ramakrishna BS, Venkataraman A, Muliylil JP. An epidemic of diarrhoea in south India caused by enteroaggregative *Escherichia coli*. *Indian J Med Res* 1997;106:7-12.
4. Abraham M, Pai M, Kang G, Asokan GV, Magesh SR, Bhattacharji S, Ramakrishna BS. An outbreak of food poisoning in Tamil Nadu associated with *Yersinia enterocolitica*. *Indian J Med Res* 1997;106:465-468.
5. Pai M, Sundaram P, Radhakrishnan KK, Thomas K, Muliylil JP. Hepatitis B immunization coverage and awareness in middle and upper class population in Chennai City. *Indian Pediatrics* 1998; 35:922-23.
6. Alaganantham TP, Pai M, Vaidehi T, Thomas J. Seroepidemiology of *Helicobacter pylori* infection in an urban, upper-class population in Chennai City. *Indian J Gastroenterology* 1999;18(2):66-68.
7. Pai M, Sundaram P, Radhakrishnan K K, Thomas K, Muliylil JP. A high rate of caesarean sections in an affluent section of Chennai City: Is it cause for concern? *Natl Med J India* 1999;12(4)156-158.
8. Rajaram R, Rajagopalan RE, Pai M, Mahendran S. Survival after cardiopulmonary resuscitation in an urban Indian hospital. *Natl Med J India* 1999;12(2):51-55.
9. Rajagopalan RE, Chandrasekaran S, Pai M, Rajaram R, Mahendran S. Pre-hospital delay in

- acute myocardial infarction in an urban Indian hospital: a prospective study. *Natl Med J India* 2001;14(1):8-12.
10. Santhanam I, Pai M, Kasturi K, Radhamani MP. Mortality after admission in the pediatric emergency department: a prospective study from a referral, children's hospital in south India. *Ped Crit Care Med* 2002;3:358-363.
 11. Singh M, Pai M, Kalantri SP. Accuracy of perception and touch for detecting fever in adults: a hospital-based study from a rural, tertiary hospital in Central India. *Trop Med & Int Health* 2003;8:408-14.
 12. †Indra R, Patil SS, Joshi R, Pai M, Kalantri SP. Accuracy of physical examination in the diagnosis of hypothyroidism: a cross-sectional, double-blind study. *J Postgrad Med* 2004;50(1):7-11.
 13. †Joshi R, Singh A, Jajoo N, Pai M, Kalantri SP. Accuracy and reliability of palpation and percussion for detecting hepatomegaly: a rural hospital-based study. *Indian J Gastroenterol* 2004;23:171-74.
 14. †Patil SS, Joshi R, Gupta G, Reddy MVR, Pai M, Kalantri SP. Risk factors for acute myocardial infarction in a rural population in central India: a hospital-based case-control study. *Natl Med J India* 2004;17:189-94.
 15. Pai M, Gokhale K, Joshi RJ, Dogra S, Kalantri SP, Mendiratta DK, Narang P, Daley CL, Granich RM, Mazurek GH, Reingold AL, Riley LW, Colford, JM. *Mycobacterium tuberculosis* infection in health care workers in rural India: comparison of a whole-blood, interferon-g assay with tuberculin skin testing. *JAMA* 2005;293:2746-55.
 16. †Geetadevi Y, Joshi R, Pai M, Kalantri SP. Simple clinical predictors of brain lesions in patients with impaired consciousness: a cross sectional study from a rural, tertiary hospital in central India. *Clin Neurol Neurosurg* 2005 Dec;108(1):25-31.
 17. Pai M, Joshi R, Dogra S, Mendiratta DK, Narang P, Kalantri SP, Reingold AL, Colford, JM, Riley LW, Menzies D. Serial testing of health care workers for tuberculosis using interferon-g assay. *Am J Respir Crit Care Med* 2006; 174 349-355.
 18. Pai M, Joshi R, Dogra S, Mendiratta DK, Narang P, Dheda K, Kalantri SP. Persistently elevated T cell interferon-g responses after treatment for latent tuberculosis infection among health care workers in India: a preliminary report. *J Occup Med Toxicol* 2006;1:7.
 19. Farhat M, Greenaway C, Pai M, Menzies D. False-positive tuberculin skin tests: what is the absolute effect of BCG and non-tuberculous mycobacteria? *Int J Tuberc Lung Dis* 2006;10(11):1192-1204.
 20. †Dogra S, Narang P, Mendiratta DK, Chaturvedi P, Reingold AL, Colford, JM, Riley LW, Pai M. Comparison of a whole-blood, interferon-g assay with tuberculin skin testing for the detection of tuberculosis infection in hospitalized children in rural India. *J Infect* 2007;54:267-76. [Corresponding author]
 21. Kalantri SP, Joshi R, Lokhande T, Singh A, Morgan M, Colford JM, Pai M. Accuracy and reliability of physical signs in the diagnosis of pleural effusion. *Resp Med* 2007;101:431-38. [Corresponding author]
 22. Pai M, Joshi R, Banydpdophadyay M, Narang P, Dogra S, Taksande B, Kalantri S. Sensitivity of a whole-blood interferon-gamma assay among patients with pulmonary tuberculosis and variations in T cell responses during anti-tuberculosis treatment. *Infection* 2007;35:98-103.
 23. Pai NP, Joshi R, Dogra S, Taksande B, Kalantri SP, Pai M, Narang P, Tulskey JP, Reingold AL. Evaluation of Diagnostic Accuracy, Feasibility and Client Preference for Rapid Oral Fluid-Based Diagnosis of HIV Infection in Rural India. *PLoS ONE* 2007;2(4):e367.

24. Dheda K, Pooran A, Pai M, Miller RF, Lesley K, Booth H, Scott GE, Akbar A, Zumla A, Rook GA. Interpretation of *M. tuberculosis* antigen-specific IFN- γ release assays (T-SPOT.TB) and factors that may modulate test results. *J Infect* 2007;55:169-73.
25. Birkner MD, Kalantri SP, Solao V, Badam P, Joshi R, Goel A, Pai M, Hubbard AE. Creating Diagnostic Scores using Data-Adaptive Regression: An application to prediction of 30-day Mortality among Stroke Victims in a Rural Hospital in India. *Therapeutics and Clinical Risk Management* 2007;3(3):475-84.
26. †Joshi R, Patil S, Kalantri SP, Schwartzman K, Menzies D, Pai M. Prevalence of abnormal radiological findings in health care workers with latent tuberculosis infection and correlations with T cell immune response. *PLoS ONE* 2007;2(8):e805. [Corresponding author]
27. †Anandharaman V, Joshi R, Goswami K, Dogra S, Moodie EM, Reddy MVR, Kalantri SP, Schwartzman K, Behr M, Menzies D, Pai M. Short-term reproducibility of a whole-blood interferon-gamma release assay for tuberculosis infection: a pilot study from India. *PLoS ONE* 2008;3(3):e1850. [Corresponding author]
28. Menzies D, Gardiner G, Farhat M, Greenaway C, Pai M. Thinking in three dimensions: A web-based algorithm to aid the interpretation of the tuberculin skin test results. *Int J Tuberc Lung Dis* 2008;12(5):498-505..
29. Pai NP, Barick R, Tulsy JP, Shivkumar PV, Cohan D, Kalantri S, Pai M, Klein MB, Chhabra S. Impact of round-the-clock, rapid oral fluid HIV testing of women in labor in rural India. *PLoS Med* 2008;5(5):e92.
30. ****Pai M, **Dendukuri N, Wang L, Joshi R, Kalantri S, Rieder HL.** Improving the estimation of TB infection prevalence using T-cell-based assay and mixture models. *Int J Tuberc Lung Dis* 2008;12(8):895-902. [**joint first authors]
31. Pai M, Joshi R, Dogra S, Zwerling AA, Gajalakshmi D, Goswami K, Reddy MVR, Kalantri S, Hill PC, Menzies D, Hopewell PC. T-cell assay conversions and reversions among household contacts of TB patients in rural India. *Int J Tuberc Lung Dis* 2009;13(1):84-92.
32. Pai NP, Joshi R, Moodie EM, Taksande B, Kalantri S, Pai M, Tulsy JP, Reingold A. Profile of adults seeking voluntary HIV testing and counseling in rural Central India: results from a hospital-based study. *AIDS Care* 2009;21:294-300.
33. †van Zyl Smit R, Pai M, Peprah K, Meldau R, Kieck J, Juritz J, Badri M, Zumla A, Bateman E, Dheda K. Within-subject variability and boosting of T cell IFN- γ responses following tuberculin skin testing. *Am J Resp Crit Care Med* 2009;180:49-58.
34. Daley P, Michael JS, Kalaiselvan S, Latha A, Mathai D, John KR, Pai M. A Pilot Study of Short-duration Sputum Pretreatment Procedures for Optimizing Smear Microscopy for Tuberculosis. *PLoS ONE* 2009;4(5): e5626. [Corresponding author]
35. Daley P, Michael JS, Hmar P, Latha A, Chordia P, Mathai D, John KR, Pai M. Blinded Evaluation of Commercial Urinary Lipo-Arabinomannan for Active Tuberculosis: A pilot study. *Int J Tuberc Lung Dis* 2009;13(8):989-995. [Corresponding author]
36. Oxlade O, Schwartzman K, Behr MA, Benedetti A, Pai M, Heymann J, Menzies D. Global tuberculosis trends: a reflection of changes in tuberculosis control or in population health? *Int J Tuberc Lung Dis* 2009 13(10):1238-46.
37. †Fontela PS, Pai NP, Schiller I, Dendukuri N, Ramsay A, Pai M. Quality and Reporting of Diagnostic Accuracy Studies in TB, HIV and Malaria: Evaluation Using QUADAS and STARD Standards. *PLoS One* 2009;4(11): e7753. [Corresponding author]
38. Sarojini JM, Daley P, Kalaiselvan S, Latha A, Mathai D, John KR, Pai M. Diagnostic Accuracy of Microscopic Observation Drug Susceptibility assay (MODS): A Pilot Study from India. *Int J*

- Tuberc Lung Dis* 2010;14(4):482-88. [Senior author]
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 40. Oxlade O, Schwartzman K, Pai M, Heymann J, Benedetti A, Royce S, Menzies D. Predicting outcomes and drug resistance with standardized treatment of active tuberculosis. *Eur Resp Journal* 2010;36: 870-877.
 41. Christopher DJ, Daley P, Armstrong L, James P, Gupta R, Premkumar B, Michael JS, Radha V, Zwerling A, Schiller I, Dendukuri N, Pai M. Tuberculosis infection among young nursing trainees in South India. *PLoS One* 2010;5(4): e10408. [Corresponding author]
 42. Oxlade O, Schwartzman K, Benedetti A, Pai M, Heymann J, Menzies D. Developing a tuberculosis transmission model that accounts for changes in population health. *Med Decis Making* 2011; 31:53-68.
 43. Fontela P, Platt RW, Rocher I, Frenette C, Moore D, Fortin E, Buckeridge D, Pai M, Quach C. Surveillance Provinciale des Infections Nosocomiales (SPIN) Program: Implementation of a mandatory surveillance program for central line-associated bloodstream infections. *Am J Infect Control* 2010 (in press).
 44. O'Donnell MR, Jarand J, Loveday M, Padayatch N, Zelnick J, Werner L, Naidoo N, Master I, Osburn G, Kvasnovsky C, Shean K, Pai M, Van der Walt M, Horsburgh CR, Dheda K. High Incidence of Hospital Admissions with Multidrug Resistant and Extensively Drug Resistant Tuberculosis among South African Health Care Workers. *Annals Int Med* 2010;153:516-522.
 45. Shenai S, Minion J, Vadwai V, Tipnis T, Shetty S, Salvi A, Udhwadia Z, Pai M, Rodrigues C. Evaluation of LED based fluorescence microscopy for the detection of mycobacteria in a TB endemic region. *Int J Tuberc Lung Dis* 2011;15(4):1-6.
 46. *Brunet L, Pai M, Davids V, Ling D, Paradis G, Lenders L, Meldau R, van-zyl Smit RV, Calligaro G, Allwood B, Dawson R, Zumla A, Dheda K. High prevalence of smoking among patients with suspected tuberculosis in South Africa. *Eur Resp J* 2010 (published ahead of print).
 47. *Zwerling A, Behr M, Varma A, Brewer T, Menzies D, Pai M. The BCG World Atlas: A Database of Global BCG Vaccination Policies and Practices. *PLoS Med* 2011;8(3): e1001012.
 48. *D.I. Ling, M. Pai, V. Davids, L. Brunet, L. Lenders, R. Meldau, G. Calligaro, B. Allwood, R. van Zyl-Smit, J. Peter, E. Bateman, R. Dawson, and K. Dheda. Are interferon- γ release assays useful for active tuberculosis in a high-burden setting? *Eur. Respir. J.* published 24 February 2011, 10.1183/09031936.00181610
 49. Moyo S, Isaacs F, Gelderbloem S, Verver S, Hawkridge A, Hatherill M, Tameris M, Workman L, Pai M, Hussey G, Hanekom W, Mahomed H. Tuberculin skin test and QuantiFERON assay in young children investigated for tuberculosis in South Africa. *Int J Tuberc Lung Dis* (in press).
 50. Joshi R, Narang U, Zwerling A, Jain D, Jain V, Kalantri SP, Pai M. Predictive value of latent TB tests in Indian health-care workers: a cohort study. *Eur Resp J* (in press).
 51. *Minion J et al. Re: Fading of auramine-stained mycobacterial smears and implications for external quality assurance. *J Clin Micro* (published ahead of print).

Under review:

52. Behr M, Schwartzman K, Pai M. Choice of end-points in tuberculosis vaccine trials: trade-offs between power, precision and bias. *Vaccine* (under review).

53. Fontela PS, Platt RW, Rocher I, Frenette C, Moore D, Fortin E, Buckeridge D, Pai M, Quach C. Epidemiology of Central Line-Associated Bloodstream Infections in Quebec Intensive Care Units: A 6-year Review. *ICHE* (under review).
54. Whitelaw A, Peter J, Sohn H, Viljoen D, Theron G, Badri M, Pai M, Dheda K. Cost and performance outcomes of LED microscopy compared with other microscopy methods in HIV-TB co-infected persons. *ERJ* (under review).
55. Rangaka MX, Gideon H, Wilkinson K, Pai M, Mwansa J, Maartens G, Boulle A, van Cusem G, Glynn J, Fielding K, Goliath R, Titus R, Mathee S, Wilkinson RJ. Discriminatory value of Mantoux and interferon release added to clinical algorithms for smear negative HIV-tuberculosis. *Am J Resp Crit Care Med* (under review).
56. Dowdy D et al. Serological Testing for Active Tuberculosis in India is More Costly and Less Effective than Sputum Smear Microscopy. *PLoS Med* (under review).
57. Dendukuri N et al. Bayesian meta-analysis of the accuracy of a test for tuberculous pleuritis in the absence of a gold-standard reference. *Biometrics* (under review).

*First author was student/trainee under my supervision

†First author was student/trainee under my co-supervision

G4b. Peer reviewed articles: meta-analyses and systematic reviews

1. Pai M, Flores LL, Pai N, Hubbard A, Riley LW, Colford JM. Diagnostic accuracy of nucleic acid amplification tests for tuberculous meningitis: a systematic review and meta-analysis. *Lancet Infect Dis* 2003;3:633-43.
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*First author was student/trainee under my supervision

†First author was student/trainee under my co-supervision

G4c. Peer reviewed articles: narrative reviews

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*First author was student/trainee under my supervision

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G4d. Editorials, commentaries & perspectives (not peer reviewed)

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G4e. Guidelines, Standards & Policy Recommendations

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G4f. Books, monographs and book chapters

Book (as editor)

Tuberculosis: A Comprehensive Clinical Reference. H. Simon Schaaf & Alimuddin I. Zumla [Editors], John Grange, Mario Raviglione, Wing Wai-Yew, Peter Donald, Madhukar Pai, and Jeffrey Starke [Associate Editors], 2009. London, UK: WB Saunders Elsevier, ISBN 9781416039884 (hardback) and ISBN 9788131221518 (international edition).

Monographs (as contributor)

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Book chapters (as contributor)

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G4g. Letters, book reviews, and notes

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10. Bates MN, Khalakdina A, Pai M, Smith KR. Smoking and Tuberculosis: Infection, Disease, and Mortality—Reply. *Arch Intern Med*. 2007;167:2009.
11. Menzies D, Pai M. New tests for the diagnosis of latent tuberculosis infection. *Ann Intern Med* 2007;147(9):673-74.
12. Perkins MD, Pai M. Biomarkers and diagnostics for tuberculosis. *Lancet* 2010;376:1540.

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G4h. Conference presentations/abstracts/posters:

1. Pai M, McCulloch M, Colford JM, Bero L. Evaluation of study quality, heterogeneity, and publication bias: a survey of systematic reviews on HIV/AIDS. Oral presentation at the conference on “Statistical challenges for meta-analysis of medical and health policy data,” Mathematic Sciences Research Institute, Berkeley, May 11, 2002.
2. Pai M, Flores LL, Pai N, Hubbard A, Riley LW, Colford JM. Quality of studies evaluating the accuracy of nucleic acid amplification tests (NAAT) for tuberculosis. Poster presented at the 4th National Conference on Laboratory Aspects of Tuberculosis, San Francisco, December 10 – 13, 2002.
3. Pai M, Flores LL, Hubbard A, Riley LW, Colford JM. Nucleic acid amplification tests in the diagnosis of tuberculous pleuritis: a meta-analysis. Poster presented at the California Tuberculosis Controllers Association Spring 2003 Conference, Oakland, CA, April 24 & 25, 2003.
4. Pai M, Flores LL, Pai N, Hubbard A, Riley LW, Colford JM. Comparison of Diagnostic Accuracy of Commercial and In-house Nucleic Acid Amplification Tests for Tuberculous Meningitis: a Meta-analysis. Poster presented at the American Society for Microbiology 103rd General Meeting, Washington, D.C, May 18 - 22, 2003.
5. Pai M, Flores LL, Hubbard A, Riley LW, Colford JM. Quality assessment in meta-analyses of diagnostic studies: what difference does email contact with authors make? Poster presented at the XI Cochrane Colloquium, Barcelona, October 26 – 31, 2003.
6. Pai M, Flores LL, Hubbard A, Riley LW, Colford JM. Use of meta-regression methods in the evaluation of heterogeneity in meta-analyses of diagnostic studies. Oral presentation at the XI Cochrane Colloquium, Barcelona, October 26 – 31, 2003.
7. Bitarakwate E, Hwang J, Dorsey G, Rosenthal P, Reingold A, Pai M. Efficacy of chloroquine or amodiaquine combined with sulfadoxine/pyrimethamine for treating uncomplicated malaria – a meta-analysis. Presented at the American Society of Tropical Medicine & Hygiene 53rd Annual Meeting, Miami Beach, Florida, November 7 – 11, 2004.
8. Pai N, Tulsy JP, Pai M, Colford JM, Sheppard HW, Reingold AL. Structured treatment interruption of antiretroviral treatment in the management of HIV infection in adults. Presented at 15th International Conference on AIDS, Bangkok, Thailand, July 11 - 16, 2004.
9. Pai N, Joshi R, Wankhade A, Dogra S, Pai M, Mendiratta DK, et al. Evaluation of the diagnostic accuracy of OraQuick HIV1/2 rapid test in a rural patient population in central India. Presented at the CDC HIV Diagnostics Conference: New Developments and Challenges, Orland, Florida, February 28 – March 1, 2005.
10. Pai N, Joshi R, Wankhade A, Dogra S, Pai M, Mendiratta DK, et al. Evaluation of the acceptability, feasibility, patient preference for OraQuick rapid HIV tests in a rural patient population in India. Presented at the CDC HIV Diagnostics Conference: New Developments and Challenges, Orland, Florida, February 28 – March 1, 2005.
11. Pai M, Riley LW, Colford, JM. Interferon-g assays in the diagnosis of tuberculosis: impact of antigens on diagnostic accuracy. *Proceedings of the American Thoracic Society* 2005(2):A270.
12. Pai M, Gokhale K, Joshi R, et al. Mycobacterium tuberculosis in health care workers in India: comparison of a whole-blood interferon-gamma assay with tuberculin skin testing.

- Proceedings of the American Thoracic Society 2005(2):A20.*
13. Morrison JL, Pai M, Hopewell P. Yield of tuberculosis contact investigations within households in high incidence countries: a systematic review. Presented at the 43rd Annual Meeting of the Infectious Diseases Society of America (IDSA), San Francisco, October 6 – 9, 2005.
 14. Pai M, Joshi R, Dogra S, et al. Preliminary results from an evaluation of a whole-blood, interferon-gamma assay in individuals with tuberculosis infection and disease in a rural Indian hospital. Presented at the 36th Union World Conference on Lung Health, Paris, October 18 - 22, 2005.
 15. Dogra S, Narang P, Mendiratta DK, Chaturvedi P, Reingold AL, Colford JM, Riley LW, Pai M. Interferon-gamma assay for the detection of tuberculosis infection among children in a rural Indian hospital. Presented at the 36th Union World Conference on Lung Health, Paris, October 18 - 22, 2005.
 16. Mase S, Ng V, Henry M, Hopewell P, Ramsay A, Cunningham J, Urbanczik R, Perkins M, Aziz M, Pai M. Yield of Serial Sputum Smear Examinations in the Evaluation of Pulmonary Tuberculosis Suspects. 10th Annual Conference of the International Union Against Tuberculosis and Lung Disease - North American Region. Chicago, March 2-4, 2006.
 17. Pai M, Joshi R, Dogra S, Mendiratta DK, Narang P, Kalantri SP, Reingold AL, Colford JM, Riley LW, Menzies D. Quantiferon-TB Gold Assay for Serial Testing in Health Care Workers: Boosting, Conversions, and Reversions. 10th Annual Conference of the International Union Against Tuberculosis and Lung Disease - North American Region. Chicago, March 2-4, 2006.
 18. Steingart K, Ng V, Henry M, Hopewell P, Ramsay A, Cunningham J, Urbanczik R, Perkins M, Aziz MA, Pai M. Sputum Processing Methods to Improve Sensitivity and Yield of Smear Microscopy for Tuberculosis: A Systematic Review. 10th Annual Conference of the International Union Against Tuberculosis and Lung Disease - North American Region. Chicago, March 2-4, 2006.
 19. Steingart K, Henry M, Ng V, Hopewell P, Ramsay A, Cunningham J, Urbanczik R, Perkins M, Aziz MA, Pai M. Fluorescence Versus Conventional Sputum Microscopy for Tuberculosis. 10th Annual Conference of the International Union Against Tuberculosis and Lung Disease - North American Region. Chicago, March 2-4, 2006.
 20. Pai M, Joshi R, Dogra S, Mendiratta DK, Narang P, Kalantri SP, Reingold AL, Colford JM, Riley LW, Menzies D. Performance of the Quantiferon-TB Gold In Tube Assay in Serial Testing of Health Care Workers. Oral presentation at the 27th Annual Conference of the European Society of Mycobacteriology. London, UK, 9 – 12 July 2006.
 21. Pai N, Joshi R, Mendiratta DK, Taksande B, Kalantri SP, Pai M, Narang P, Tulsy JP, Reingold AL. Differential in HIV seropositivity by gender and marital status: results from a cross sectional study from a rural hospital in India. Presented at the XVI International AIDS Conference, Toronto, Aug 13-18, 2006.
 22. Pai N, Joshi R, Mendiratta DK, Taksande B, Kalantri SP, Pai M, Narang P, Tulsy JP, Reingold AL. Comparable high accuracy of the OraQuick Rapid HIV-1/2 test with oral fluid and finger-stick specimens in patients with suspected HIV infection in a rural Indian hospital. Presented at the XVI International AIDS Conference, Toronto, Aug 13-18, 2006.
 23. Pai M, Dendukuri N, Wang L, Joshi R, Dogra S, Kalantri SP, Mendiratta DK, Narang P, Menzies D, Rieder HL. Estimation of prevalence of tuberculosis infection among Indian healthcare workers: a comparison of conventional and model-based approaches. Presented at the 37th Union World Conference on Lung Health, Paris, November 1 - 4, 2006.
 24. Pai M, Joshi R, Bandopadaya M, Mendiratta DK, Narang P, Dogra S, Taksande B, Kalantri SP.

- Longitudinal changes in T cell interferon-gamma responses during anti-tuberculosis treatment. Presented at the 37th World Conference on Lung Health, Paris, Nov 1 - 4, 2006.
25. Morrison J, Pai M, Hopewell PC. Yield of tuberculosis contact investigations in high income countries: a systematic review and meta-analysis. Poster (PS-71957-10) Presented at the 38th World Conference on Lung Health, Cape Town, S Africa, Nov 9 - 12, 2007.
 26. Michael JS, Daley P, Armstrong L, Kalaiselvan S, Chordia P, Asha M, Mathai D, John KR, Pai M. Comparison of QuantiFERON-TB Gold In-Tube to Tuberculin Skin Test for the Diagnosis of Active Tuberculosis (TB) in India - Preliminary Analysis. *Int J Infect Dis* 2008; Suppl. 1 ;12: E323-E324 .
 27. Michael JS, Daley P, Armstrong L, Kalaiselvan S, Chordia P, Asha M, Mathai D, John KR, Pai M. Prospective Evaluation of Microscopic Observation drug-susceptibility (MODS) assay for the Diagnosis of Active Tuberculosis (TB) in India - Preliminary Analysis. *Int J Infect Dis* 2008; Suppl. 1 ;12: E324-E324.
 28. Zwerling AA, Menzies D, Pai M. T-cell based assays for the diagnosis of latent tuberculosis infection: updated meta-analysis. Thematic slide presentation at the 39th World Conference on Lung Health, Paris, France, October 16 - 20, 2008.
 29. Zwerling AA, Ladurantaye J, Menzies D, Pai M. T-cell IFN-gamma responses in patients treated for LTBI. *Presented at 2nd Global Symposium on IGRAs*, Dubrovnik, Croatia, May 30, 2009.
 30. Zwerling AA, Ladurantaye J, Pietrangelo F, Behr M, Schwartzman K, Dendukuri N, Menzies D, Pai M. Conversions and Reversions in Health Care Workers in Montreal, Canada Using QuantiFERON-TB-Gold In-Tube. *Am. J. Respir. Crit. Care Med.*, Apr 2009; 179: A1012.
 31. Zwerling AA, M Behr, T Brewer, D Menzies, M Pai. Which Countries Are Most Likely To Benefit from Highly Specific IGRAs? Findings from the World Atlas of BCG Policies and Practices. *Am. J. Respir. Crit. Care Med.*, Apr 2009; 179: A4773.
 32. RN van Zyl-Smit, M Pai, K Peprah, R Meldau, J Kieck, J Juritz, M Badri, A Zumla, ED Bateman, and K Dheda. Within-Subject Variability and Boosting of T-Cell IFN-g Responses Following Tuberculin Skin Testing. *Am. J. Respir. Crit. Care Med.*, Apr 2009; 179: A1013.
 33. Brunet L, Minion J, Lienhardt C, Pai M. Mapping The Landscape Of Tuberculosis Diagnostic Research. *Am. J. Respir. Crit. Care Med.*, May 2010; 181: A2255.
 34. Ling D, Pai M, Davids V, Brunet L, Lenders L, Meldau R, van Zyl-smit R, Peter J, Dawson R, Zumla A, Dheda KUJ. Incremental Value Of Interferon-Gamma Release Assays For Diagnosis Of Active Tuberculosis In Smear-Negative Patients In A High-Burden Setting: A Multivariable Analysis. *Am. J. Respir. Crit. Care Med.*, May 2010; 181: A2262.
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 38. Zwerling A, van den Hof S, Scholten J, Cobelens F, Menzies D, Pai M. Interferon-g Release Assays For TB Screening Of Healthcare Workers: A Systematic Review. *Am. J. Respir. Crit. Care*

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39. Leung E, Minion J, Pai M, Menzies D. Using MODS And/or TLA Techniques For Active Tuberculosis Diagnosis: A Systematic Review And Meta-Analysis. Am. J. Respir. Crit. Care Med., May 2010; 181: A1768.
 40. Khan FA, Minion J, Pai M, Royce S, Burman W, Harries AD, Menzies D. Treating Active Tuberculosis In HIV Co-infected Patients: A Systematic Review And Meta-analysis. Am. J. Respir. Crit. Care Med., May 2010; 181: A5196.
 41. Pai M. Are IGRAs adequate for LTBI diagnosis and disease prediction? Invited symposium presentation at the 41st Union World Conference on Lung Health, Berlin, November 13, 2010.
 42. Pai M. Interferon-gamma release assays and serological tests for tuberculosis: the evidence is reviewed. Stop TB Partnership's New Diagnostics Working Group Annual Meeting. 41st Union World Conference on Lung Health, Berlin, November 11, 2010.