

Petros C. Karakousis, M.D.

CURRICULUM VITAE

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointment:

Assistant Professor

Department of Medicine, Johns Hopkins University School of Medicine

Department of International Health, Johns Hopkins Bloomberg School of Public Health

Personal Data

Center for Tuberculosis Research

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Education and Training (in chronological order):

Year, Degree/Certificate, Institution, Discipline

- Undergraduate: 1994, B.A., Johns Hopkins University, Natural Sciences
- Doctoral/graduate: 1998, M.D., Washington University School of Medicine, Medicine
- Postdoctoral: 1999, Internship, Hosp. of the Univ. of PA, Internal Medicine
2001, Residency, Hosp. of the Univ. of PA, Internal Medicine
2005, Fellowship, Johns Hopkins Univ. School of Medicine, Infectious Diseases

Professional Experience (in chronological order, earliest first)

Dates	Positions	Institutions
Jan-Jun/1994	Research Assistant	Dept. of Medicine, Johns Hopkins
Jul-Dec/2000	Research Assistant	Dept. of Ophthalmology, Univ. of Pennsylvania
Jan-Jun/2002	Clinical Instructor	Dept. of Medicine, Univ. of Pennsylvania
Jun/2005-	Assistant Professor	Dept. of Medicine, Johns Hopkins

RESEARCH ACTIVITIES

Peer-reviewed Research Publications:

1. **Karakousis PC**, Williams EP, Bishai WR. Altered expression of isoniazid-regulated genes in drug-treated dormant *Mycobacterium tuberculosis*. *J Antimicrob Chemother.* 2007 Dec 21; [Epub ahead of print].
2. Lee, J-H, **Karakousis PC**, Bishai WR. Characterization of sigma factor regulation in *Mycobacterium tuberculosis* by SigB and SigF. *J Bacteriol.* 2007 Nov 9; [Epub ahead of print].
3. Williams EP, Lee JH, Bishai WR, Colantuoni C, **Karakousis PC**. *Mycobacterium tuberculosis* SigF regulates genes encoding cell wall-associated proteins and directly regulates the transcriptional regulatory gene phoY1. *J. Bacteriol.* 2007;189:4234-42.
4. Jain SK, Hernandez-Abanto, Cheng Q-J, Singh P, Ly LH, Klinkenberg LG, Morrison NE, Converse PJ, Nuermberger EL, Grosset J, McMurray DN, **Karakousis PC**, Lamichhane G, Bishai WR. Accelerated detection of *Mycobacterium tuberculosis* genes essential for bacterial survival in guinea pigs compared with mice. *J. Infect. Dis.* 2007;195:1634-42.
5. Riddell J 4th, Kaul DR, **Karakousis PC**, Gallant JE, Mitty J, Kazanjian PH. *Mycobacterium avium* complex immune reconstitution inflammatory syndrome: Long term outcomes. *J Transl Med.* 2007; 5(1):50 [Epub ahead of print].
6. **Karakousis PC**, Sifakis FG, Montes de Oca R, Amorosa VC, Page, KR, Manabe YC, Campbell J. Medical resident familiarity with national tuberculosis guidelines. *BMC Infect Dis.* 2007;7:89.
7. **Karakousis PC**, Yoshimatsu T, Lamichhane L, Woolwine SC, Nuermberger EL, Grosset J, Bishai WR. Dormancy phenotype displayed by extracellular *Mycobacterium tuberculosis* within artificial granulomas in mice. *J. Exp. Med.* 2004; 200:647-57.
8. **Karakousis PC**, Bishai WR, Dorman SE. *Mycobacterium tuberculosis* cell envelope lipids and the host immune response. *Cell. Microbiol.* 2004; 6:105-116.
9. **Karakousis PC**, Moore RD, Chaisson RE. *Mycobacterium avium* complex in patients with HIV infection in the era of highly active antiretroviral therapy. *Lancet Infect. Dis.* 2004; 4:557-65.
10. Coppola AG, **Karakousis PC**, Metz DC, Go MF, Mhokashi M, Howden CW, Raufman JP, Sharma VK. Hepatitis C knowledge among primary care residents: is our teaching adequate for the times? *Am. J. Gastroenterol.* 2004; 99:1720-5.
11. **Karakousis PC**, John SK, Behling KC, Surace EM, Smith JE, Hendrickson A, Tang W-X, Bennett J, Milam AH. Localization of pigment epithelium derived factor (PEDF) in developing and adult human ocular tissues. *Mol. Vis.* 2001; 7:154-163.
12. Canning BJ, Udem BJ, **Karakousis PC**, Dey RD. Effects of organotypic culture on parasympathetic innervation of guinea pig trachealis. *Am. J. Physiol.* 1996; 271:L698-L706.

Inventions, Patents, Copyrights (pending, awarded)

Date	Title
09/06/2005	Hollow fiber technique for in vivo study of cell populations (pending)

Extramural Funding (current, pending, previous)

Current Funding:

K08 AI64229-01 Karakousis (PI), 75% effort 3/15/05-02/28/10
NIH/NIAID \$679,488/5 yrs

Modeling latent TB infection.

This study will investigate the genetic requirements of *Mycobacterium tuberculosis* survival in a novel in vivo granuloma model of latent TB infection.

Bill and Melinda Gates Foundation

Co-PI: Karakousis, 20% effort 11/01/07-10/31/09

TB Drug Accelerator (RFP GH-TB-06) \$831,281/2 yrs

This study will evaluate the sterilizing activity of standard and novel anti-TB agents in the guinea pig aerosol and mouse hollow fiber models of TB infection.

Previous funding:

Potts Memorial Foundation Karakousis (PI) 2/31/05-12/30/06

Pathogen and host factors involved in latent TB infection. \$6050/1 yr

This study investigated the role of host microenvironmental conditions on *Mycobacterium tuberculosis* dormancy in a novel in vivo granuloma model of latent TB infection.

Potts Memorial Foundation Karakousis (PI) 8/31/03-08/30/04

The hollow fiber encapsulation/implantation technique as a model for latent tuberculosis infection.

This study helped establish a dormancy model of *Mycobacterium tuberculosis* using semi-diffusible hollow fibers in vivo.

EDUCATIONAL ACTIVITIES

Educational Publications:

1. **Karakousis PC**, Magill SS, Gupta A. Paraplegia due to invasive spinal aspergillosis- Reply from the authors. *Neurology*. 2007;69:222-23.
2. **Karakousis PC**, Magill SS, Gupta A. Paraplegia due to invasive spinal aspergillosis. *Neurology*. 2007;68:158.
3. Brastianos PK, Swanson J, Torbenson M, Sperati J, **Karakousis PC**. Tuberculosis-associated hemophagocytic syndrome. *Lancet Infect. Dis*. 2006;6:447-54.
4. **Karakousis PC**, Trucksis M, Dumler JS. Chronic Q fever in the United States. *J. Clin. Microbiol*. 2006;44:2283-7.
5. **Karakousis P**, Moore RD, Chaisson RE. Non-tuberculous mycobacteria in HIV-infected patients: geographic, behavioural, and immunological factors - Authors' reply. *Lancet Infect Dis*. 2005; 5:396.
6. **Karakousis PC**, Page KR, Bishai WR. From the IDSA meeting—Important new findings in HIV treatment and pathogenesis, 2003. *Hopkins HIV Rep*. 2004; 16:2-3.

7. Page KR, **Karakousis PC**, Maslow J. Postoperative pneumococcal cellulitis in systemic lupus erythematosus. *Scand. J. Infect. Dis.* 2003; 35:141-3.
8. **Karakousis PC**, Lee MS, Grostern RJ, Nichols CW. The role of conjunctival biopsy in the diagnosis of Wegener's granulomatosis: a case report. *Can. J. Ophthalmol.* 2002; 37:179-181.
9. **Karakousis PC**, Page KR, Varello MA, Howlett PJ, Stieritz DD. Waterhouse-Friderichsen syndrome after infection with Group A streptococcus. *Mayo Clin. Proc.* 2001; 76:1167-1170.
10. **Karakousis PC**, Tomaszewski JE. Ulcerating subcutaneous nodules and advanced renal failure: is it time for a new liver? *Nephrol. Dial. Transplant.* 2001; 16: 2095-2096.

Book chapters

Karakousis PC. "Mechanisms of Action and Resistance of the Antimycobacterial Agents" in *Antimicrobial Drug Resistance: Principles for the Clinic and Bench*, Lerner S, Ouellette M, Sobel S, Mayers D, ed. (in press).

Karakousis PC, Chaisson RE. "Mycobacterial infection and HIV infection" in *Fishman's Pulmonary Diseases and Disorders*, J. Fishman, ed. (in press).

Other media

Karakousis PC. "XDR-TB Scare", Fox National News, 11:00 AM, Thursday, May 31, 2007.

Karakousis PC, Bishai WR, Chaisson RE. Management of community-acquired pneumonia: Improving patient outcomes; a satellite symposium preceding the 40th IDSA Annual Meeting. JHU antibiotic guide website (<http://hopkins-abxguide.org>). Posted December 2002.

Karakousis PC, Bishai WR. Synopsis of key presentations at the 40th annual meeting of IDSA (October 24-27, 2002, Chicago). JHU antibiotic guide website (<http://hopkins-abxguide.org>). Posted November 2002.

Karakousis PC, Page KR, Bishai WR. Greetings from sunny (most of the time) San Diego: Highlights from the 41st annual meeting of the Infectious Diseases Society of America. JHU antibiotic guide website (<http://hopkins-abxguide.org>). Posted November 2003.

Mentoring (pre- and post-doctoral)

Post-doctoral Trainees

Lee G. Klinkenberg, PhD Post-doctoral fellow, JHUSOM 09/05 –present
 Potts Memorial Foundation Postdoctoral Fellowship recipient, Sept 2006-Sept 2008

Short-Term Trainees

Tonya Jackson		06/05-08/05
Omar A. Contreras	JHU Summer Internship Program	06/05-08/05

Present position: NIH Academy Student, Section on Cellular Neurobiology
Lesley Sutherland 05/07-08/07
Present position: Senior, Connecticut College

Oral examination committee member for Maia Schoonmaker, graduate student in Cellular and Molecular Medicine, JHU, Oct 9, 2007

CLINICAL ACTIVITIES

Certification

Medical Licensure: State of Pennsylvania, 2000, expired
State of Maryland, 2005, D0063686
Diplomate Internal Medicine 2002, American Board of Internal Medicine
Diplomate Infectious Diseases 2005, American Board of Internal Medicine

Clinical (Service) Responsibilities (dates, specialty, role, time commitment)

Jul–Aug 2006, Infectious Diseases Inpatient Consult Service, Johns Hopkins Hospital, Attending Physician, 5% effort

Dec 2006-Jan 2007, Polk Inpatient HIV service, Johns Hopkins Hospital, Attending Physician

Oct-Nov 2007, Polk Inpatient HIV service, Johns Hopkins Hospital, Attending Physician

ORGANIZATIONAL ACTIVITIES

Editorial Activities

- Journal peer review activities: *Journal of Experimental Medicine* (2007), *Journal of Clinical Investigation* (2005), *Lancet Infectious Diseases* (2005), *American Journal of Respiratory and Critical Care Medicine* (2007), *Molecular Microbiology* (2006-07), *Journal of Bacteriology* (2005-07), *Infection and Immunity* (2005-07), *Journal of Clinical Microbiology* (2006), *Microbiology* (2007), *Antimicrobial Agents and Chemotherapy* (2005-07), *Journal of Antimicrobial Chemotherapy* (2007), *Current Microbiology* (2007), *Tuberculosis* (2006), *Transplant Infectious Disease* (2007)

Professional Societies:

2000-present: American College of Physicians

2002-present: Infectious Disease Society of America

2002-present: American Society for Microbiology

2004-present: American Thoracic Society

RECOGNITION

Awards, Honors

2005 Arthur M. Dannenberg, Jr. Award for Postdoctoral Research

2004 Best abstract, Assembly of Microbiology, Tuberculosis, and Pulmonary Infections, American Thoracic Society (ATS) annual meeting

2004 ATS Travel Grant to ATS annual meeting
2004 Basic Research Award Nominee, Department of Medicine Research Retreat
2003 Special citation, Infectious Diseases Society of America Annual Meeting
2003 Basic Research Award Nominee, Department of Medicine Research Retreat
2001 Edward W. Holmes Resident Research Award
2000 Maurice F. Attie Resident Teaching Award
1998 Alpha Omega Alpha
1998 Missouri State Medical Association Award
1997 Hellenic Medical Student Scholarship
1995 Antoinette Frances Dames Prize in Cell Biology and Physiology
1994 Distinguished Alumni Scholarship (full-tuition academic scholarship at Washington University School of Medicine)
1994 Phi Beta Kappa
1993 National Science Foundation Scholarship
1992 Ford Foundation Scholarship
1990-4 Dean's List

Invited Talks

December 8, 2006, “*Mycobacterium tuberculosis*: The persistent pathogen.” Depts. of Molecular Microbiology, and Medicine, Division of Infectious Diseases, Washington University School of Medicine, St. Louis, MO.

September 26, 2007, “*Mycobacterium tuberculosis* pathology in the mouse model”, Many Hosts of Mycobacteria Meeting, Ames, Iowa.

April 2008, “Phosphate regulation in *Mycobacterium tuberculosis*”, Jiao Tong U School of Medicine, Shanghai, China.