Elissa J. Schwartz

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EDUCATION

- Ph.D., Biomedical Sciences (2001), Mount Sinai School of Medicine of New York University, New York, NY. Advisor: Paul Klotman, M.D., Chair, Department of Medicine. Thesis: The Epidemiology and Pathogenesis of HIV-Associated Nephropathy.

- M.Phil., Biomedical Sciences (1997), Mount Sinai School of Medicine of New York University, New York, NY

- A.B., Mathematics (1992), University of California, Berkeley, CA

SCIENTIFIC EXPERIENCE

- Visiting Assistant Professor, Department of Mathematics, Harvey Mudd College, Claremont, CA (2006).

- Postdoctoral Fellow, Department of Biostatistics, University of California, Los Angeles, CA (2002-present). Advisors: William Cumberland, Ph.D., Chair, Department of Biostatistics; Sally Blower, Ph.D., Department of Biomathematics; Otto Yang, M.D., Department of Medicine.

- Principal Investigator, IRB-Approved Study "HIV-1 Viral Dynamics in Dialysis Patients," (1999-2000)

- Graduate Research Assistant (GRA), Center for Nonlinear Studies, Los Alamos National Laboratory, Los Alamos, NM (1995). Advisors: Alan Perelson, Ph.D.; Avidan Neumann, Ph.D.

FELLOWSHIPS AND AWARDS

UCLA Department of Biostatistics AIDS Training Grant Postdoctoral Fellowship, ECMTB 2005 Travel Award, DIMACS Travel Grant, Fields Workshop Travel Award, Gordon Research Conference Travel Grant, Society for Mathematical Biology Travel Award, AIDS Vaccine 2003 Fellow Award, Mount Sinai Alumni Award, Mount Sinai Graduate School of New York University Ph.D. Fellowship

PUBLICATIONS

Schwartz EJ, Szczech LA, Ross MJ, Klotman ME, Winston JA, Klotman PE. (2005) Highly Active Antiretroviral Therapy and the Epidemic of HIV+ End-Stage Renal Disease. J Am Soc Nephrol 16(8):2412-20.

Schwartz EJ, Blower S. (2005) Predicting the Potential Individual- and Population-Level Effects of Imperfect Herpes Simplex Virus Type 2 Vaccines. J Infect Dis 191(10):1734-46.

Blower SM, **Schwartz EJ,** Mills J. (2003) Forecasting the future of HIV epidemics: the impact of antiretroviral therapies and imperfect vaccines. AIDS Reviews 5(2):113-125.

Sunamoto M, Husain M, He JC, **Schwartz EJ,** Klotman PE. (2003) Critical Role for Nef in HIV-1-induced podocyte dedifferentiation. Kidney Int 64(5):1695-1701.

Husain M, Gusella GL, Klotman ME, Gelman IH, Ross MD, **Schwartz EJ**, Cara A, Klotman PE. (2002) HIV-1 Nef induces proliferation and anchorage-independent growth in podocytes. J Am Soc Nephrol 13(7):1806-15.

Schwartz EJ, Fierer DS, Neumann AU, Keller MJ, Parkas V, Klotman ME, Winston JA, Klotman PE. (2002) HIV-1 Dynamics in Hemodialysis Patients. AIDS 16(9):1301-1303.

Schwartz EJ, Neumann AU, Teixeira AV, Bruggeman LA, Rappaport J, Perelson AS, Klotman PE. (2002) Effect of Target Cell Availability on HIV-1 Production in Vitro. AIDS 16(3):341-345.

Schwartz EJ, Cara A, Snoeck H, Ross MD, Sunamoto M, Reiser J, Mundel P, Klotman PE. (2001) HIV-1 Induces Loss of Contact Inhibition in Podocytes. J Am Soc Nephrol 12(8):1677-84.

Schwartz EJ, Klotman PE. (1998) Pathogenesis of Human Immunodeficiency Virus-Associated Nephropathy. Seminars in Nephrology 18(4):436-445.

Rappaport J, Cho Y-Y, Hendel H, **Schwartz EJ,** Schachter F, Zagury J-F. (1997) 32 BP CCR-5 Gene Deletion and Resistance to Fast Progression in HIV-1 Infected Heterozygotes. Lancet 349:922.

Morgello S, Uson RR, **Schwartz EJ,** Haber RS. (1995) The Human Blood-Brain Barrier Glucose Transporter (GLUT1) is a Glucose Transporter of Gray Matter Astrocytes. Glia 14:43-54.

MANUSCRIPTS SUBMITTED

Schwartz EJ, Blower S. Efficacy and Effectiveness of Imperfect Therapeutic HSV-2 Vaccines.

Breban R, McGowan I, Topaz C, **Schwartz EJ,** Anton P, Blower S. Modeling the Potential Impact of Rectal Microbicides to Reduce HIV Transmission in Bathhouses.

MANUSCRIPTS IN PREPARATION

Ibarrondo FJ, **Schwartz EJ**, Boscardin J, Huang X, Jamieson BD, Fuerst M, Price C, Hultin L, Elliot J, Sturgill R, Hultin P, Ng H, Lubong R, Hausner MA, Anton PA, Yang OO. Analysis of HIV-1 Deltoid/Inguinal Immunization Trial TBC-3B.

Schwartz EJ, Cumberland WG, Yang OO. Epitope Escape Kinetics and Antiviral Effectiveness of HIV-1-Specific CTL *In Vivo*.

INVITED TALKS AND CONFERENCES *oral/poster presentation

- Modeling Cancer Progression and Immunotherapy, American Institute of Mathematics, Palo Alto, CA (2005)

- European Conference on Mathematical and Theoretical Biology, Dresden, Germany (2005)*
- Evolutionary Considerations in Vaccine Use Workshop, DIMACS, Rutgers University, Piscataway, NJ (2005)*
- Modeling the Rapid Evolution of Infectious Diseases: Epidemiology and Treatment Strategies Workshop, University of Western Ontario, London, ON (2005)*
- Society for Mathematical Biology Annual Meeting, Ann Arbor, MI (2004)*
- Gordon Conference in Theoretical Biology and Biomathematics, Tilton, NH (2004)*
- Palm Springs Symposium on HIV Pathogenesis, Palm Springs, CA (2004)*
- Mt. Baldy Mathematics Conference, Harvey Mudd College, Claremont, CA (2003)
- Inverse Problems Workshop, Institute for Pure and Applied Mathematics, University of California, Los Angeles, CA (2003)
- AIDS Vaccine 2003, New York, NY (2003)*
- Dynamic Models in Epidemiology, DIMACS, Rutgers University, Piscataway, NJ (2002)
- Mathematical Models in Molecular and Cellular Biology, Santa Fe Institute, Santa Fe, NM (2001)
- Duke University First Conference on Mathematical Immunology, Durham, NC (2000)*
- American Society of Nephrology Annual Meeting, Toronto, ON (2000)*
- Keystone Symposium on Novel Biological Approaches to HIV-1 Infection Based on New Insights into HIV Biology, Keystone, CO (2000)*
- Seventh Conference on Retroviruses and Opportunistic Infections, San Francisco, CA (2000)
- Design Principles for the Immune System and Other Distributed Autonomous Systems, Santa Fe Institute, Santa Fe, NM (1999)
- American Society of Nephrology Annual Meeting, San Antonio, TX (1997)
- Keystone Symposium on AIDS Pathogenesis, Keystone, CO (1997)*
- Society for Mathematical Biology Annual Meeting, Oaxtepec, Morelos, MX (1995)
- Gordon Conference in Theoretical Biology and Biomathematics, Tilton, NH (1994)

- Mathematical Models in Physiology, Mathematical Sciences Research Institute, Berkeley, CA (1992)

TEACHING AND ADVISING EXPERIENCE

- Mathematical Biology (co-taught with Lisette de Pillis, Ph.D.), Department of Mathematics, Harvey Mudd College, Claremont, CA (2006)
- Guest Lecturer, Harvey Mudd College, Claremont, CA (2005)
- Teaching Assistant, Immunology, Mount Sinai School of Medicine, New York, NY (1996-1999)
- Fundamentals of University Teaching class, City University of New York, New York, NY (Fall 1999)
- Mentor (Michael Dwyer, Oberlin College '97), Mount Sinai School of Medicine, New York, NY
- Tutor (undergraduate and graduate students), Mount Sinai School of Medicine, New York, NY

REFEREE ACTIVITIES

Reviewer for *Journal of Clinical Investigation*, *Mathematical Biosciences*, *Journal of Molecular Medicine*, *Kidney International*.

ACADEMIC SERVICE

Advisory Committee, Steering Committee (acquired $11,000 for Graduate School), Career Development Association, Representative of Graduate School to Board of Trustees, Organizer of seminar series on The Molecular Basis of Disease, Mount Sinai School of Medicine, New York, NY (1996-2001).

VOLUNTEER SERVICE

Médecins Sans Frontières (Doctors Without Borders), Santa Monica, CA

PROFESSIONAL SOCIETIES

Society for Mathematical Biology (1994-present)