

CURRICULUM VITAE

Name: Edward L. Murphy, Jr., M.D., M.P.H.

Position: Professor in Residence, Step 3
Departments of Laboratory Medicine and Epidemiology/Biostatistics
University of California San Francisco

Senior Investigator, Blood Systems Research Institute, and
Associate Medical Director, Blood Centers of the Pacific

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Place of Birth: New York, N.Y.

Citizenship: United States

Marital Status: Married, two children

Languages: Fluent spoken and written French
Conversational Spanish

EDUCATION

1966-70	Regis High School, New York, NY		
1970-74	Massachusetts Institute of Technology	B.S.	Marine Biology
1976-80	Stanford University School of Medicine	M.D.	
1981	U.C. Berkeley School of Public Health	M.P.H.	Epidemiology
1981-84	Boston University Medical Center, University Hospital Internship and Residency in Internal Medicine		

LICENSES AND CERTIFICATIONS

1984	Board Certified, Internal Medicine
1984	Board Eligible, Preventive Medicine
1984	Massachusetts Medical License (inactive)
1985	Jamaica, West Indies, Medical License (inactive)
1988	California Medical License

PRINCIPAL POSITIONS HELD

1974-1976	COMEX Diving Company, Marseille, France. Research Assistant. Human deep-sea diving physiology.
1984-1988	National Cancer Institute, Bethesda, Maryland. Medical Staff Fellow, Viral Epidemiology Section. Epidemiology of Human Retroviruses. Stationed in Kingston, Jamaica, 1985-1986 as Project Officer for HTLV-I research.
1988-1994	University of California San Francisco Assistant Professor in Residence, Departments of Laboratory Medicine, Medicine, and Epidemiology/Biostatistics
1994-2000	University of California San Francisco. Associate Professor in Residence, Departments of Laboratory Medicine, Medicine, and Epidemiology/Biostatistics
2000-present	University of California San Francisco Professor in Residence, Departments of Laboratory Medicine and Epidemiology/Biostatistics.

OTHER POSITIONS HELD CONCURRENTLY

1979	Centers for Disease Control. Medical Student Elective.
1979-1981	Occupational Health Clinic, S.F. General Hospital. Medical volunteer.
1980-1981	California Department of Health Services. Graduate Student Researcher.
1982	Massachusetts Department of Public Health. Medical Residency Elective.

1985-1986	University of the West Indies, Kingston, Jamaica. Honorary Lecturer.
1986	University Hospital of the West Indies, Kingston, Jamaica. Consultant Physician.
1988 - 2001	Attending Physician, AIDS Clinic and Medical Service, San Francisco General Hospital, San Francisco, CA.
2001-present	Senior Investigator, Blood Systems Research Institute, and Associate Medical Director, Blood Centers of the Pacific

HONORS AND AWARDS

1970	Westinghouse scholarship
1980	University of California Graduate Fellowship
1984	Chateaubriand prize of the French Government
1984	International Agency for Cancer Research Fellowship (declined)
1988	FDA Commissioner's Special Citation
1989	Charles E. Culpeper Foundation Medical Scholar
1995	Fulbright Scholarship
1995	NIH Fogarty Senior International Fellowship
1997	Japan Society for the Promotion of Science Travel Fellowship
2001	UCSF Positive Health Program Distinguished Service Award
2003	Diwan Award, International Conference on Human Retrovirology

CLINICAL ACTIVITIES

1988-2001	Attending Physician, AIDS clinic and Inpatient Medical Service Department of Medicine San Francisco General Hospital
2001-present	Associate Medical Director Blood Centers of the Pacific

OTHER PROFESSIONAL ACTIVITIES

Membership in Professional Organizations:

Society for Epidemiologic Research
American Association for the Advancement of Science
American Public Health Association

International Retrovirology Association (President, 2003-present)
American Association of Blood Banks
International Society of Blood Transfusion

Conference Chairman and Organizing Committees

First International UCSF-Institut Pasteur Conference on Globally Emerging Viruses
San Francisco, CA October 29-30, 1998 (attendance approx 100)

XI International Conference on Human Retrovirology: HTLV and Related Viruses
San Francisco, CA June 9-12, 2003 (attendance 275)

Organizing Committee, XII International Conference on Human Retrovirology: HTLV
and Related Viruses, Montego Bay, Jamaica, June 22-25, 2005 (expected attendance 300)

International Programs

Consultant, UCSF-Institut Pasteur Collaboration on Epidemiology of Infectious Diseases
Host to Visiting Professor Guy de The, UCSF Dept. of Epidemiology
Research Training in International Transfusion Safety, Blood Systems Research Institute

Invited Presentations

International

Human Retroviruses and AIDS Symposium, Taipei, Taiwan ROC 11/11-11/13/1988
Immuno-in-Contri Symposium, London, UK 11/8-11/11/1991
Nagasaki Univ. Medical School, Department of Microbiology, Grand Rounds,
11/11/1993
Tottori University Medical School, Japan, Invited Lecture in Virology 1/25/1995
Neurology Seminar Porto Alegre, Brazil, 6/23/1995
Mathematical and Epidemiological Models of HTLV, Bielefeld, Germany 10/11/1995
Pasteur Institute, Retrovirology Dept. Seminar, Paris France 1/31/1996
Fulbright Society Lecture, Paris, France 2/26/1996
IV International Symposium on HTLV in Brasil, Belo Horizonte, Brasil 6/28/1996
Nagasaki University, Dept of Microbiology Seminar, Nagasaki, Japan 3/21/1997
Satellite Symposium, VIII International Conference on Human Retrovirology: HTLV,
Rio de Janeiro, Brasil 6/8/1997
V International Symposium on HTLV in Brasil, Fortaleza, Brasil 5/28/1998
First International UCSF-Institut Pasteur Conference on Globally Emerging Viruses,
San Francisco, CA 10/29-30, 1998
Ninth International Conference on Human Retrovirology: HTLV,
Kagoshima, Japan, 4/9/1999
Centre Leon Berard, Wattel Lab, Lyon, France 7/11/2000

Infectious Disease Epidemiology Course, Univ of Bielefeld, Bielefeld, Germany
8/29-31, 2000
Tenth International Conference on Human Retrovirology: HTLV and Related Viruses,
Dublin, Ireland, June 2001
Univ. Federal de Bahia School of Medicine, Salvador, Brasil 11/01/2001
Univ. of Sao Paulo School of Medicine, Sao Paulo, Brasil 11/05/2001
VII International Symposium on HTLV in Brasil, Belem, Brasil 8/19/2002
Rotary TTK Blood Bank, Bangalore, India 11/10/2003
XII Asia-Pacific Conference of the International Society of Blood Transfusion,
New Delhi, India 11/16/2003
Pan American Health Organization, Washington DC 2/11-2/12, 2004
HTLV Myelopathy Workshop, Montego Bay, Jamaica 5/20/2004
IX International Symposium on HTLV in Brazil, Sao Paulo, Brazil 01/17-19, 2005
Conference on Transfusion Safety, Lima, Peru, 5/9-11, 2005
XII International Conference on Human Retrovirology: HTLV and Related Viruses,
Montego Bay, Jamaica 5/22-25, 2005
Argentina Association of Hemotherapy, Buenos Aires, Argentina 9/27/2005
6th Colloquium of the Asian Network for Clinical Lab Standardization, Ho Chi Minh
City, Vietnam 10/27-29, 2005
Institut Pasteur Seminar, Paris, France 1/16/2006
Mexican Society for Hematology, Vera Cruz, Mexico 5/4-6, 2006
HTLV European Network Meeting, Verona, Italy 5/19-21, 2006

National

Laboratory of Tumor Cell Biology, NCI Annual Meeting 9/1/1987
Research Seminar, Charles E. Culpeper Foundation, New York, NY 6/15/1992
Laboratory of Tumor Cell Biology, NCI Annual Meeting 8/17/1990
Training on HTLV diagnoses, REDS Study, Bethesda MD 5/10/1991
Training on HTLV health effects, REDS study, Bethesda MD 12/17/1991
NHLBI AIDS Advisory Board presentation 6/24/1992
Clinical Trials Course, UCSF Dept. Epidemiology 3/26/1993
Mt. Sinai School of Medicine, Division of Infectious Disease 11/21/2000
American Red Cross Holland Labs, Rockville, MD 10/8/2003
National Heart, Lung and Blood Institute "Think Tank" on International Transfusion
Safety 5/28/2004
U.S. Food and Drug Administration Conference on Transfusion-Transmitted Infections,
Bethesda, MD 3/8/2006

Regional and Other Presentations

Laboratory Medicine Journal Club, S.F. General Hospital 8/24/1990
UCSF Transfusion Medicine Seminar, 9/18/1990
Laboratory Medicine Grand Rounds 2/25/1991
California Blood Bank Society, 2 day seminar 3/7-3/8/1991

S.F. Community Consortium of AIDS researchers 4/3/1991
Journal Club, Department of Laboratory Medicine 4/11/1991
Brecher Morphology Conference, Laboratory Medicine 6/27/1991
California Clinical Chemistry Association 9/23/1991
Laboratory Medicine Journal Club 12/5/1991
S.F. General Hospital Infectious Disease Grand Rounds 2/26/1992
Laboratory Medicine Faculty Research Seminar, Asilomar, CA 3/3/1992
Transfusion Medicine Seminar 3/10/1992
Laboratory Medicine Journal Club 3/26/1992
Transfusion Medicine Seminar 11/3/1992
Laboratory Medicine Journal Club 12/3/1992
S.F. General Hospital Medical Grand Rounds 12/22/1992
Division of Molecular Cytometry Seminar 7/15/1993
Laboratory Medicine Grand Rounds 8/9/1993
UCSF Department of Medicine Journal Club 9/28/1993
Genetic Epidemiology Seminar, UC Berkeley 4/27/1994
Dept. of Epidemiology - Research Course for Fellows 1/4/1995
AIDS Program, SF General Hospital, 9/25/2000
Methadone Clinic, SF General Hospital, 11/13/2000
AIDS Program, SF General Hospital, 1/26/2001
Blood Systems Foundation Board of Directors, Scottsdale, AZ 11/29/2001
Blood Systems Medical Directors Conference, Scottsdale, AZ 4/27/2002
Blood Systems Medical Directors Conference, Scottsdale, AZ 4/26/2003
Blood Systems Medical Directors Conference, Scottsdale, AZ 5/7/2004
Moore Foundation, San Francisco, CA 8/3/2004
Blood Systems Research Institute Laboratory Meeting, San Francisco, CA 1/25/2005
Blood Systems Medical Director Conference, Scottsdale, AZ 4/8/2005
UCSF Laboratory Medicine Grand Rounds 11/7/2005
Blood Systems Foundation Board of Directors Meetings, 3/20-21, 2006
Blood Systems Medical Director Meeting, Scottsdale, AZ 4/7-8, 2006
UCSF Laboratory Medicine Resident Research Meeting, San Francisco, CA 7/27/2006

CURRENT RESEARCH GRANT AND CONTRACT SUPPORT

National Heart, Lung and Blood Institute

Research Grant 2R01-HL-62235

February 2005 – January 2009, Annual Direct Costs: \$876,280

Pathophysiology of HTLV-I and HTLV-II Infection (HTLV Outcomes study)

PI: E.L. Murphy (15% effort)

National Heart, Lung and Blood Institute

Research Grant K24-HL075036 (Mid Career Research and Training Award)

January 2004 - December 2008, Annual Direct Costs: \$122,460

Clinical Epidemiology of HTLV-I and HTLV-II Infection

PI: E.L. Murphy (30% effort)

National Heart, Lung, and Blood Institute

Research Contract N01-HB-47174

September 2004 - August 2009, Annual Direct Costs: \$459,658

Blood Center for Retrovirus Epidemiology in Donors Study-2 (REDS-2)

PI: E.L. Murphy (20% effort)

National Heart, Lung, and Blood Institute

Research Contract HHSN268200417175C

February 2006 – December 2009; Annual Direct Costs: \$17,948

Retrovirus Epidemiology Donor Study-II (REDS-II) International Component – Blood Center

PI: M.P. Busch (10% effort)

National Heart, Lung and Blood Institute

Research Grant R01-HL-076902

September 2003 – August 2008; Annual Direct Costs: 26,585

Hepatitis C: Natural History, Pathogenesis, Therapy and Prevention

PI: M.P. Busch (10% effort)

National Heart, Lung, and Blood Institute

Research Grant P50-HL-81027

September 2005 – August 2010, Annual Direct Costs: \$211,943

Specialized Centers of Clinically-Oriented Research in Transfusion Biology and Medicine

PI: P. Toy (5% effort)

Centers for Disease Control and Prevention

Research Grant R01-CI000214

September 2004 – August 2007; Annual Direct Costs: \$152,905

Natural History and Pathogenesis of WNV in Viremic Donors

PI: M.P. Busch (5% effort, no salary)

National Cancer Institute

Conference Grant: 1R13CA98290-1

June 2003 - May 2008; Annual Direct Costs: \$10,000

International Conference on Human Retrovirology: HTLV and Related Viruses

PI: E.L. Murphy

Blood Systems Foundation

Investigator and Core Grants (combined)

January 2006 - December 2006; Annual Direct Costs: \$270,000

Epidemiology of Blood Donation

PI: E.L. Murphy

Blood Systems Foundation

International Transfusion Safety Grant

January 2006-December 2006, Annual Direct Costs: \$75,150

International Transfusion Safety

PI: E.L. Murphy

TEACHING

Formal Classes

Section Leader, Immunology, Infection and International Health (I³), Medical Student Core Curriculum, UCSF (**15 hours per year**)

Teach a section of 14-15 second year medical students in this required course, including five hours of class, plus preparation time, grading of exams and assignments.

Faculty and student Evaluations: George Rutherford, M.D.
(2003-2004)

Post-Graduate and Other Classes

Course Director, Training in International Transfusion Safety Research, San Francisco long course (**50 hours per year**)

This training program brings MD's and PhD's from blood centers in developing countries for 6 week summer course of intensive training in epidemiology and laboratory methods relevant to transfusion safety. 5 hours per week x 6 weeks, plus preparation and administration time.

Faculty and student Evaluations: Michael P. Busch, MD, PhD

Course Director, Training in International Transfusion Safety Research, Overseas short course (**160 hours per year**)

Intensive two-week overseas version of our existing long course (see above) trains about one dozen MD's and PhD's working in transfusion medicine in developing countries.

Research teaching (100 hours per year)

Post-Doctoral Researchers, graduate students, medical students, or medical residents work in Dr. Murphy's epidemiology laboratory either during the summer months or during elective time to accomplish a specific research project, and in so doing, learn epidemiologic or laboratory techniques in a one-on-one situation with frequent interaction with Dr. Murphy. This has included supervision of Master's and Doctoral thesis research. Average of 2 hours teaching per week on annual basis.

Post-Doctoral

Researchers: Hui Liu, Ph.D. (1998 - 2000)
UCSF Dept of Laboratory Medicine
Jennie Orland, M.D. (2002 - 2003)
UCSF Dept of Medicine Clinical Research Fellow

Brian Custer, Ph.D. (2003 - 2004)
Blood Systems Research Institute

Dorothy Nguyen, M.D. (2003-2004)
UCSF Transfusion Medicine Fellow

Graduate/Undergrad

Students: Lauren Pierik, B.S., M.P.H. (summer 1990)
U.C. Berkeley Public Health Graduate Student

Irene Kelley, B.S. (summer 1991)
University of St. Louis Medical Student

Lucy Modahl, B.A. (1992-present)
U.C. Berkeley Public Health Graduate Student, now USC Medical Student

Tebib Gebretsadik, B.A. (1992-1993)
U.C. Berkeley Public Health Graduate Student

Oren Harary, B.S. (summer 1993)
Univ. Michigan Public Health Graduate Student

Neena Murgai, Ph.D. (1993-1994)
U.C. Berkeley Public Health Graduate Student

Katy Young, B.S., M.P.H. (spring and fall 1994, summer 1995)
U.C. Berkeley Public Health Graduate Student

Stephen Bryzman, P.A., M.P.H. (1993-present)
U.C. Berkeley Public Health Graduate Student (former, now in private practice)

Renaud Mahieux, Ph.D. (1995 - present)
Doctoral student at Institut Pasteur, and now Post-Doc at NIH

Paul Leung, B.S. (1999 - 2001)
U.C. Berkeley Public Health Graduate Student

Brian Custer (2001 - 2003)
Univ. Washington School of Pharmacy Doctoral Student

Jadyn Damon (summer 2002)
U.C. Berkeley Pre-Med student

Philippe Mauclere, Ph.D. (thesis committee December 2002)

University of Paris

Katie Wymore (summer 2003)
U.C. Berkeley Public Health Graduate Student

Erin Madden (summer 2004)
U.C. Berkeley Public Health Graduate Student

Nicholas Kwaan (summer 2005)
U.C. Berkeley Public Health Graduate Student

Megan Rice (summer 2006)
U. C. Berkeley Public Health Graduate Student

Residents: Mina Sun, M.D. (fall 1990 - 1992)
Department of Laboratory Medicine resident

Sabine Plaincoulaine, M.D. (during 1995-96 sabbatical)
University of Paris Preventive Medicine Residency

Steven Miller, M.D., Ph.D. (2005-2006)
Chief Resident, Laboratory Medicine (mentor on roadmap grant application)

Professional
Trainees:

Nemora Barcellos, MD (1994-1995)
Dept. of Public Health, Porto Allegre, Brazil
UC Berkeley International AIDS Training Grant

Adriano Oliveira, MD (2000)
Univ. Federal de Bahia, Salvador, Brazil
UC Berkeley International AIDS Training Grant

Claudia Barreto, Ph.D. (2002)
Univ. of Sao Paulo Blood Bank, Sao Paulo, Brasil

Gousia Jikky, MD, and
Minnie Chaturvedi, MD (2002)
Rotary TTK Blood Bank, Bangalore, India

Thelma Goncalvez (2003)
University of Sao Paulo Blood Bank, Sao Paulo, Brazil

Leopoldo Valiente-Banuet (2004)
Centro Nationale de Transfusion Sanguinea, Mexico City, Mexico

Training in Clinical Research – International Transfusion Safety, overseas short course:

Sao Paulo, May 2004
Alfredo Mendrone, Brazil
Cesar de Almeida Neto, Brazil
Marcia Zago Novaretti, Brazil
Youko Nukui, Brazil
Luciana Sampaio, Brazil
Cecilia Gamba, Argentina
Mirta Cristina Remesar, Argentina
Glenda Mendoza Arriaga, Honduras
Leda Parham Aceituno, Honduras

Buenos Aires, September 2005
Silvana Carneiro Leao, Brazil
Walter Kleine, Brazil
Fernando Basques, Brazil
Akie Cancho Rios, Peru
Sebastian Oknaian, Argentina
Marina Khoury, Argentina
Roxana Martinitto, Argentina
Silvina Kuperman, Argentina
Andre Mangano, Argentina
Andrea Puppo, Argentina
Carolina Berini, Argentina
Mirna Biglione, Argentina
Lisset Pavon, Honduras

SUMMARY OF TEACHING DUTIES

2004-2005:	325 total teaching hours during past academic year 225 hours course work 100 hours informal teaching
2005-2006:	325 total teaching hours during current academic year 225 hours course work 100 hours informal teaching
2006-2007:	325 total teaching hours estimated for next academic year 225 hours course work 100 hours informal teaching

SERVICE

University Service

Departmental Service

Co-organizer, Transfusion Research Program Weekly Seminar, 1989 - 1991.
Department of Laboratory Medicine ad hoc Committee for the appointment of Janice Joy Kim, 1989.
Chairman's Advisory Committee, Department of Laboratory Medicine 1991 - 1992.
Annual Retreat Planning Committee, Department of Laboratory Medicine, 1991-1994.
Academic Promotion Planning Committee, Dept. of Laboratory Medicine, 1992-1993.
Continuing Medical Education Committee, Dept. Of Epidemiology and Biostatistics, 1996-2001.
Academic Promotions Committee, Dept. of Laboratory Medicine, 1996-**present**.
Chairman's Advisory Committee, Department of Laboratory Medicine, 1998-2006.
UCSF-Blood Systems Research Institute Affiliation working group, 2001-**present**.

School, Campus and System-Wide Service

Co-Chairman and Organizer, Workshop on the Polymerase Chain Reaction Assay sponsored by the UCSF Center for AIDS Research., November 1988.
UCSF Center for AIDS Research, Executive Committee, 1988 - 1991.
Chemical Safety Committee, University of California, San Francisco, Jan 1989 - Feb 1994.
UCSF Committee on Human Research, March 1994 - August 1995
San Francisco General Hospital GCRC Advisory Committee, Sept 2000 - May 2002
UCSF Committee on Human Research, September 2002 - **present**
International Health Interest Group, 2003-**present**
UCSF Committee on Research, Sept 2004-**present**
UCSF Multicenter Study Committee, 2004 - 2005

Government Service

Invited Panel Member, Food and Drug Administration Workshop on Serologic Testing for HTLV-I in Blood and Plasma Establishments, Bethesda, MD, 15 September 1988.
FDA Blood Products Advisory Committee, Invited expert, March 25, 1993.
Ad Hoc Study Section Member, National Institute of Drug Abuse, 1997-present.
NIH General Clinical Research Centers Site Visit, Tulane University, Nov 17-18, 1998
NIAID International Collaborations for Infectious Disease Research Study Section, March 3-4, 1999
Ad Hoc NIH study section member, Nov 16, 2000
NIDA study section, July 19, 2001
NIAID study section, Nov 15, 2001
NIAID ICORHTA-AIDS study section June 24, 2002
NIAID Study Section, April 28, 2003

Other Public Service

Northern California AIDS Epidemiology Consortium, 1988 - 1992.
Ad Hoc Grant Reviewer, Australian National Health and Medical Research Council, 1993-present.
Ad Hoc Advisor, Committee on Medical School Curriculum, Tottori University, Japan 1997
UCSF Representative, Sister Cities Mission of San Francisco Mayor Willie Brown to Paris, France, November 1996
Consultant to community physicians and the public on HTLV-I and -II serologic diagnosis and health problems via Internet and telephone, average 2-3 per month
Expert Witness, HTLV infection, June 2003
Organizing Committee, Sanofi UCSF-Paris Conference, 2006

Advisory Boards

Blood Systems Laboratory Medical Advisory Board 2002-**present**
Blood Systems Medical Director weekly conference calls 2001-**present**
NCI Viral Epidemiology Branch External Advisory Board 2002-2005
Blood Centers of the Pacific Medical and Scientific Advisory Board 2001-**present**

Service to Professional Societies

Advisory Board, International Retrovirology Association, 1997 - **present**
President-elect, International Retrovirology Association, 2001 - 2003
President, International Retrovirology Association, 2003-2005

Service to Professional Publications

Journal of Acquired Immune Deficiency Syndromes (Editorial Board)
Transfusion
Journal of Infectious Diseases
Sexually Transmitted Diseases
AIDS Research & Human Retroviruses
Transfusion Medicine
AIDS

PUBLICATIONS

1. Charpy JP, **Murphy EL**, and Lemaire C. Performances psychometriques apres compressions rapides a 300 meters. Revue de Medecine Subaquatique et Hyperbare 1976; 59:192.
2. Lemaire C and **Murphy EL**. Longitudinal study of performance after deep compressions with heliox and He-N₂-O₂. Undersea Biomedical Research 1976; 3(3):205.
3. Lemaire C and **Murphy EL**. Heart rate and core temperature as indicators of heat stress during deep underwater activity. Aviation, Space, and Environmental Medicine 1977; 48(2):146.
4. Lemaire C, **Murphy EL**, Gourret P, and Monod H. Quantifying fatigue in working divers. Aviation, Space, and Environmental Medicine 1978; 49(10):1160.
5. Jackson R, Greene C, Thomas J, **Murphy EL**, and Kaldor J. An epidemiological comparison of patterns of DBCP drinking water contamination with mortality rates from selected cancers in Fresno County, California 1970-1979. California Department of Health Services, Epidemiological Studies Section, Berkeley, CA, 1981.
6. **Murphy EL**, DeCeulaer K, Williams W, Clark JW, Saxinger C, Gibbs WN, and Blattner WA. Lack of relation between HTLV-I infection and systemic lupus erythematosus in Jamaica. J Acq Immun Defic Syndr Hum Retrovirol 1988; 1(1):18-22.
7. **Murphy EL** and Blattner WA. HTLV-I-associated leukemia: A model for chronic retroviral disease. Ann Neurol 1988; 23(Suppl): S174-S180.
8. Levine PH, Jaffe E, Manns A, **Murphy EL**, Clark J, and Blattner WA. Human T-cell lymphotropic virus type I and adult T-cell leukemia/lymphoma outside of Japan and the Caribbean Basin. Yale J Biol and Med 1988; 61:215-222.
9. Agius G, Biggar RJ, Alexander SS, Waters DJ, Drummond JE, **Murphy EL**, Weiss SH, Levine PH, and Blattner WA. Human T-cell lymphotropic virus type I antibody patterns: evidence of difference by geographic area and risk group. J Infect Dis 1988; 158(6):1235-1244.
10. **Murphy EL**, Gibbs WN, Figueroa JP, Bain B, and LaGranade L, Cranston B, and Blattner WA. Human immunodeficiency virus and human T-lymphotropic virus type I infection among homosexual and bisexual men in Kingston, Jamaica. J Acq Immun Defic Syndr Hum Retrovirol 1988; 1(2):143-149.
11. Levine PH, Blattner WA, Clark JW, Tarone R, Maloney E, **Murphy EL**, Gallo RC, Robert-Guroff M, and Saxinger WC. HTLV-I geographic distribution and identification of a new high-risk population. Int J Cancer 1988; 42(1):7-12.

12. Alvord WG, Drummond JE, Arthur LO, Biggar RJ, Goedert JJ, Levine PH, **Murphy EL**, Weiss SH, and Blattner WA. A method for predicting individual HIV infection status in the absence of clinical information. AIDS Research and Human Retroviruses, 1988; 4(4):295-304.
13. **Murphy EL**, Hanchard B, Figueroa JP, Gibbs WN, Goedert JJ, and Blattner WA. Modelling the risk of adult T-cell leukemia/lymphoma in persons infected with human T-lymphotropic virus type I. Int J Cancer 1989; 43:250-3.
14. Neva F, **Murphy EL**, Gam A, Hanchard B, Figueroa JP, and Blattner WA. Antibodies to strongyloides stercoralis in healthy Jamaican carriers of HTLV-I. (Letter) N Engl J Med 1989; 320(4):252-253.
15. **Murphy EL**, Calisher CH, Figueroa JP, Gibbs WN, and Blattner WA. HTLV-I infection and arthropod vectors. (Letter) N Engl J Med 1989; 320(17):1146.
16. **Murphy EL**, Figueroa JP, Gibbs WN, Brathwaite A, Holding-Cobham M, Cranston B, Hanchard B, and Blattner WA. Sexual transmission of human T-lymphotropic virus type I. Ann Intern Med 1989; 111(7):555-60.
17. Kramer A, Jacobson S, Reuben JF, **Murphy EL**, Wiktor SZ, Cranston B, Figueroa JP, Hanchard B, McFarlin D, and Blattner WA. Spontaneous lymphocyte proliferation in symptom-free HTLV-I positive Jamaicans. (Letter) Lancet 1989; 2:923-4.
18. Wiktor SZ, Alexander SS, Shaw GM, Weiss SH, **Murphy EL**, Wilks RJ, Shorty VJ, Hanchard B, and Blattner WA. Distinguishing between HTLV-I and HTLV-II by Western blot. (Letter) Lancet 1990; 335(8704):1533.
19. Tendler CL, Greenberg SJ, Blattner WA, Manns A, **Murphy EL**, Fleisher T, Hanchard B, Morgan O, Burton JD, Nelson DL. Transactivation of interleukin 2 and its receptor induces immune activation in human T-cell lymphotropic virus type I-associated myelopathy: pathogenic implications and a rationale for immunotherapy. PNAS 1990; 87(13):5218-22.
20. Beilke MA, **Murphy EL**. The human T-cell leukemia virus types 1 and 2 (HTLV-1 and 2). In Volberding P, Palefsky J (eds.) Viral and Immunological Malignancies Atlanta, American Cancer Society (in press)., Fleisher T, Hanchard B, Morgan O, Burton JD, Nelson DL. Transactivation of interleukin 2 and its receptor induces immune activation in human T-cell lymphotropic virus type I-associated myelopathy: pathogenic implications and a rationale for immunotherapy. PNAS 1990; 87(13):5218-22.
21. Lipka JJ, Bui K, Reyes GR, Moeckli R, Wiktor SZ, Blattner WA, **Murphy EL**, Shaw GM, Hanson CV, Sninsky JJ, and Fountoulakis SKH. Determination of a unique and immunodominant epitope of human T-cell lymphotropic virus type I. J Infect Dis 1990; 162:353-357.

22. Chen YMA, Lee TH, Wiktor SZ, Shaw GM, **Murphy EL**, Blattner WA, and Essex M. Type-specific antigens for serological discrimination of HTLV-I and II infection. Lancet 1990; 336:1153-55.
23. Sheppard HW, Ascher MS, Busch MP, Sohmer PR, Stanley M, Luce MC, Chimera JA, Madej R, Rodgers GC, Lynch C, Khayam-Bashi H, **Murphy EL**, Eble B, Bradford WZ, Royce RA, and Winkelstein W. A multicenter proficiency trial of gene amplification (PCR) for the detection of HIV-1. J Acq Immun Defic Syndr Hum Retrovirol 1991; 4:277-83.
24. Manns A, **Murphy EL**, Wilks RJ, Haynes G, Figueroa JP, Hanchard B, Palker TJ, Blattner WA. Early antibody profile during HTLV-I seroconversion. Lancet 1991; 337(8734):181-2.
25. Manns A, **Murphy EL**, Wilks R, Haynes G, Figueroa JP, Hanchard B, Barnett M, Drummond J, Waters D, Cerney M, Seals JR, Alexander SS, Lee H, Blattner WA. Detection of early HTLV-I antibody patterns during seroconversion among transfusion recipients. Blood 1991; 77:1-10.
26. Combs CA, **Murphy EL**, and Laros RK. Factors associated with hemorrhage in cesarean deliveries. Obstet Gynecol 1991;77(1):77-82.
27. Combs CA, **Murphy EL**, and Laros RK. Factors associated with hemorrhage with vaginal birth. Obstet Gynecol 1991; 77(1):69-76.
28. **Murphy EL**, Figueroa JP, Gibbs WN, Holding-Cobham M, Cranston B, Malley K, Bodner AJ, Alexander SS, Blattner WA. Human T-lymphotropic virus type I (HTLV-I) seroprevalence in Jamaica: I. Demographic determinants. Am J Epidemiol 1991; 133(11):1114-24.
29. Maloney EM, **Murphy EL**, Figueroa JP, Gibbs WN, Cranston B, Hanchard B, Holding-Cobham M, Malley K, Blattner WA. Human T-lymphotropic virus type I (HTLV-II) seroprevalence in Jamaica: II. Geographic and ecologic determinants. Am J Epidemiol 1991; 133(11):1125-34.
30. Busch MP, Eble BE, Khayam-Bashi H, **Murphy EL**, Heilbron D, Kwok S, Sninsky J, Perkins HA, and Vyas GN. Evaluation of contemporary screened blood donors for HIV-I infection. N Engl J Med 1991; 325:1-5.
31. Feigal E, **Murphy EL**, Vranizan K, Bacchetti P, Chaisson R, Drummond J, Blattner WA, McGrath M, Greenspan J, Moss A. HTLV-I/II in intravenous drug users in San Francisco: Risk factors associated with seropositivity. J Infect Dis 1991; 164(1):36-42.
32. Pate EJ, Wiktor SZ, Shaw GM, Champegnie E, **Murphy EL**, Blattner WA. Lack of viral latency of human T-cell lymphotropic virus type I (letter). N Engl J Med 1991; 325(4):284.

33. Robinson RD, **Murphy EL**, Wilks RJ, Neva FA, Terry SI, Hanchard B, Figueroa JP, Blattner WA. Gastrointestinal parasitic infection in healthy Jamaican carriers of HTLV-I. J Trop Med Hygiene 1991; 94:411-5.
34. Babu PG, Saraswathi NK, John TJ, Ishida T, Imai J, Varney K, **Murphy EL**. Sexual transmission of HTLV infection in southern India (letter).J Acq Immun Defic Syndr Human Retrovirol 1992; 5(3):317.
35. Manns A, Wilks RJ, **Murphy EL**, Haynes G, Figueroa JP, Barnett M, Hanchard B, Blattner WA. A prospective study of transfusion transmission of HTLV-I and risk factors associated with seroconversion. Int J Cancer 1992; 51:886-91.
36. Combs CA, **Murphy EL**, Laros RK. Cost/benefit analysis of autologous blood donation in obstetrics. Obstet Gynecol 1992; 80(4):621-5.
37. **Murphy EL**, Varney KF, Miyasaki NT, Moore RJ, Umekubo JI, Watanbe AN, Khayam-Bashi H. HTLV-I seroprevalence among Japanese-American patients in San Francisco. West J Med 1993; 158:480-3.
38. Eble BE, Busch MP, Guiltinan A, Khayam-Bashi H, Vyas GN, **Murphy EL**. Determination of human T-lymphotropic virus type by PCR and correlation with risk factors in northern California blood donors. J Infect Dis 1993; 167:954-7.
39. Centers For Disease Control and Prevention and U.S.P.H.S. Working Group. Guidelines for counseling persons infected with human T-lymphotropic virus type I (HTLV-I) and type II (HTLV-II). Ann Intern Med 1993; 118:448-54.
40. **Murphy EL**, Engstrom JW, Miller K, Sacher RA, Busch MP, Hollingsworth CG. HTLV-II associated myelopathy in a 43 year old woman (letter). Lancet 1993; 341:757-8.
41. **Murphy EL**. HTLV-II-related disease. Lancet 1993; 341:888.
42. Wiktor SZ, Pate EJ, **Murphy EL**, Palker TJ, Champegne E, Ramlal A, Cranston B, Hanchard B, Blattner WA. Mother-to-child transmission of human T-cell lymphotropic virus type-I (HTLV-I) in Jamaica: association with antibodies to envelope glycoprotein (gp46) epitopes. J Acq Immun Defic Syndr Human Retrovirol 1993; 6:1162-7.
43. Busch MP, **Murphy EL**, Nemo G. More on HTLV tax and mycosis fungoides (letter). N Engl J Med 1993; 329:2035-6.
44. Sun M, Chao K, Modahl LE, Leoung G, Khayam-Bashi H, Ng VL, **Murphy EL**. Seroprevalence of human T-lymphotropic virus (HTLV), hepatitis C virus (HCV) and

- human immunodeficiency virus (HIV) in Asian American potential bone marrow donors. Transfusion 1994; 34:344-8.
45. Vyas GN, Yang G, **Murphy EL**. Transfusion-related transmissible diseases: detection by polymerase chain reaction-amplified genes of the microbial agents. Transfusion Med Rev 1994; 8:253-66.
46. Kramer A, Maloney EM, Morgan OSC, Rodgers-Johnson P, Manns A, **Murphy EL**, Larsen S, Cranston B, Murphy J, Benichou J, Blattner WA. Risk factors and cofactors for HAM/TSP in Jamaica. Am J Epidemiol 1995;142:1212-20.
47. Zuck TF, Thomson RA, Schreiber GB, Gilcher RO, Kleinman SH, **Murphy EL**, Ownby HE, Williams AE, Busch MP, Smith JW, Nemo GJ, Hollingsworth CG, and the REDS Study Group. The retrovirus epidemiology donor study (REDS): rationale and methods. Transfusion 1995;35:944-51.
48. Agranoff D, Varney K, Khayam-Bashi H, **Murphy EL**. Seroprevalence of HTLV-I and HTLV-II among emergency room and clinic patients in San Francisco. West J Med 1996; 164:481-5.
49. **Murphy EL**. The clinical epidemiology of human T-lymphotropic virus type II (HTLV-II). J Acq Immun Defic Syndr Hum Retrovir 1996;13(suppl):S215-9.
50. **Murphy EL**, Bryzman S, Williams AE, Co Chien H, Schreiber GB, Ownby HE, Gilcher RO, Kleinman SH, Matijas L, Thomson RA, Nemo GJ. Demographic determinants of hepatitis C virus (HCV) seroprevalence in United States Blood Donors. JAMA 1996;275:995-1000.
51. **Murphy EL**, Wilks RJ, Hanchard B, Cranston B, Figueroa JP, Gibbs WN, Murphy J, Blattner WA. A case-control study of risk factors for seropositivity to human T-lymphotropic virus type I (HTLV-I) in Jamaica. Int J Epidemiol 1996;25:1083-9.
52. **Murphy EL**, Wilks RJ, Morgan OS, Hanchard B, Cranston B, Figueroa JP, Gibbs WN, Murphy J, Blattner WA. Health effects of human T-lymphotropic virus type I (HTLV-I) in a Jamaican cohort. Int J Epidemiol 1996;25:1090-7.
53. Kaplan J, Khabbaz RF, **Murphy EL**, Hermansen S, Roberts C, Lal R, Heneine W, Wright D, Matijas L, Rudolph D, Switzer WM, Kleinman S, Busch M, Schreiber GB, and the Retrovirus Epidemiology Donor Study Group. Male-to-female transmission of human T-lymphotropic virus types I and II: association with viral load. J Acq Immun Defic Syndr Hum Retrovirol 1996;12:193-201.

54. **Murphy EL**, Fridey J, Smith JW, Engstrom J, Sacher RA, Miller K, Armstrong K, Gibble J, Stevens J, Thomson R, Hansma D, Kaplan J, Khabbaz R, Nemo G, and the REDS investigators . HTLV-associated myelopathy in a cohort of HTLV-I and HTLV-II infected blood donors. Neurology 1997;48:315-320.
55. Schreiber GB, **Murphy EL**, Horton JA, Wright DJ, Garfein R, Co Chien H, Nass CC for the NHLBI Retrovirus Epidemiology Donor Study Group. Risk factors for human T-cell lymphotropic virus types I and II (HTLV-I and -II) in blood donors: The Retrovirus Epidemiology Donor Study. J Acq Immun Defic Syndr Hum Retrovirol 1997;14:263-271.
56. **Murphy EL**, Glynn S, Fridey J, Sacher RA, Smith J, Wright DJ, Newman B, Gibble JW, Ameti D, Nass C, Schreiber GB, Nemo G for the REDS study group. Increased prevalence of infectious diseases and other adverse outcomes in human T lymphotropic virus types I- and II-infected blood donors. Retrovirus Epidemiology Donor Study (REDS) Study Group. J Infect Dis 1997;176:1468-75.
57. Modahl LA, Young K, Varney K, Khayam-Bashi H, **Murphy EL**. Are HTLV-II-seropositive injection drug users at increased risk for bacterial pneumonia, abscess and lymphadenopathy? J Acq Immun Defic Syndr Hum Retrovirol 1997; 16:169-75.
58. **Murphy EL**, Mahieux R, de The G, Tekaiia F, Ameti D, Horton J, Gessain A. Molecular epidemiology of HTLV-II among United States blood donors and intravenous drug users: an age-cohort for HTLV-II RFLP type a0. Virology 1998;242:425-34.
59. **Murphy EL**, Glynn S, Watanabe K, Fridey J, Smith J, Sacher R, Wright D, Schreiber G, Luban N and the REDS investigators. Laboratory test differences associated with human T-lymphotropic virus types I and II (HTLV-I and -II) infection. J Acq Immun Defic Syndr Hum Retrovirol 1998;17:332-8.
60. Plancoulaine S, Buigues RP, **Murphy EL**, Van Beveren M, Pouliquen JF, Joubert M, Remy F, Tuppin P, Tortevoeye P, de The G, Moreau JP, Gessain A. Demographic and familial characteristics of HTLV-I infection among an isolated, highly endemic population of African origin in French Guiana. Int J Cancer 1998;76:331-6.
61. Guiltinan AM, **Murphy EL**, Nass CC, Horton JA, McEntire RL for the NHLBI Retrovirus Epidemiology Donor Study (REDS). Psychological distress in blood donors notified of HTLV-I and -II infection. Transfusion 1998;38:1056-62.
62. **Murphy EL**, Busch MP, Tong M, Cornett P, Vyas GN. A prospective study of the risk of transfusion-acquired viral infections. Transfusion Med 1998;8:173-8.
63. Biglione M, Vidan O, Mahieux R, de Colombo M, de los Angeles de Basualdo M, Bonnet M, Pankow G, De Efron MA, Zorrilla A, Tekaiia F, **Murphy E**, de The G, Gessain A. Seroepidemiological and molecular studies of human T cell lymphotropic

- virus type II, subtype b, in isolated groups of Mataco and Toba Indians of northern Argentina. AIDS Res Hum Retrovir 1999;15:407-17.
64. Sacher RA, Luban NLC, Friend S, Ameti D, Watanabe K, Schreiber GB and **Murphy EL**. Low prevalence of flower cells in U.S. blood donors infected with human T-lymphotropic virus types I and II (HTLV-I and -II). Brit J Hematol 1999;105:758-63.
 65. **Murphy EL**, Glynn SA, Fridey J, Smith JW, Sacher RA, Nass CC, Ownby HE, Wright DJ, Nemo GJ. Increased incidence of infectious diseases and neurologic abnormalities during prospective follow-up of HTLV-II and -I infected blood donors. Arch Intern Med 1999;159:1485-91.
 66. **Murphy EL**, Bryzman S, Williams AE. Risk factors for hepatitis C infection (letter). N Engl J Med 1999;341:2093.
 67. Liu H, Shah M, Stramer SL, Chen W, Weiblen BJ, **Murphy EL**. Sensitivity and specificity of HTLV-I and -II polymerase chain reaction and several serologic assays in screening a high prevalence HTLV-II population. Transfusion 1999;39:1185-93.
 68. **Murphy EL**, Watanabe K, Nass CC, Ownby H, Williams A, Nemo G. Evidence among blood donors for a 30-year old epidemic of HTLV-II infection in the United States. J Infect Dis 1999;180:1777-83.
 69. Ureta-Vidal A, Angelin-Duclos C, Tortevoeye P, **Murphy E**, Lepere JF, Buigues RP, Jolly N, Joubert M, Carles G, Pouliquen JF, de The G, Moreau JP, Gessain A. Mother-to-child transmission of human T-cell-leukemia/lymphoma virus type I: implication of high antiviral antibody titer and high proviral load in carrier mothers. Int J Cancer 1999;82:832-6.
 70. **Murphy EL**, Bryzman SM, Glynn SA, et al. Risk factors for hepatitis C virus infection in United States blood donors. Hepatology 2000;31:756-62.
 71. Busch MP, Switzer WM, **Murphy EL**, Thomson R, Heneine W. Absence of evidence of infection with divergent simian T-lymphotropic viruses in US blood donors with seroindeterminate human T-lymphotropic virus results. Transfusion 2000;40:443-9.
 72. Glynn SA, **Murphy EL**, Wright DJ, Sacher RA, Fridey J, Schreiber GB. Laboratory abnormalities in human T lymphotropic virus (HTLV) -I and -II seropositive former blood donors: a prospective analysis. Arch Pathol Lab Med 2000;124:550-5.
 73. Mahieux R, Horal P, Mauclere P, Mercereau-Puijalon O, Guillotte M, Meertens L, **Murphy E**, Gessain A. Human T-cell lymphotropic virus type-1 gag indeterminate Western-blot patterns in Central Africa: relationship to plasmodium falciparum infection. J Clin Microbiol 2000;38:4049-57.

74. Liu H, Leung P, Glynn S, **Murphy EL**. Human T-lymphotropic virus type II (HTLV-II) RFLP subtypes A0 and B4/B5 are associated with different demographic and geographic characteristics in the United States. Virology 2001;279:90-96.
75. Wu Y, Glynn SA, Schreiber GB, Wright DJ, Lo A, **Murphy EL**, Kleinman SH, Garratty G. First-time blood donors: demographic trends. Transfusion 2001;41:360-4.
76. **Murphy EL**, Assmann SF, Collier AC, Flanigan TP, Kumar PN, Wallach FR, Krubel S. Determinants of antimicrobial prophylaxis use and treatment for wasting among patients with advanced HIV disease in the United States, 1995 to 1998. Clin Infect Dis 2001;32:116-23.
77. **Murphy EL**, DeVita D, Liu H, Vittinghoff E, Leung P, Ciccarone DH, Edlin BR. Risk factors for skin and soft tissue abscess among injection drug users: A case control study. Clin Infect Dis 2001;33:35-40.
78. Ciccarone D, Bamberger JD, Kral A, Edlin BR, Hobart CJ, **Murphy EL**, Bourgois P, Moon A. Soft tissue infections among injection drug users - San Francisco, California, 1996-2000. MMWR 2001;50:381-4.
78. Collier AC, Kalish LA, Busch MP, Gernsheimer T, Assmann SF, Lane TA, Asmuth DM, Lederman MM, **Murphy EL**, Kumar P, Kelley M, Flanigan TP, McMahon DK, Sacks HS, Kennedy MS, Holland PV. Leukocyte-reduced red blood cell transfusions in patients with anemia and human immunodeficiency virus infection. The Viral Activation Transfusion Study: a randomized controlled trial. JAMA 2001;285:1592-1601.
79. **Murphy EL**, DeVita D, Liu H, Vittinghoff E, Leung P, Ciccarone DH, Edlin BR. Risk factors for skin and soft-tissue abscesses among injection drug users: a case-control study. Clin Infect Dis 2001;33:35-40.
80. Para MF, Kalish LA, Collier AC, **Murphy EL**, Drew WL. Correlates of change in cytomegalovirus viremia in patients with advanced human immunodeficiency virus (HIV) infection requiring transfusion. J Infect Dis 2001;183:1673-7.
81. **Murphy EL**, Collier AC, Kalish LA, Assmann SF, Para MF, Flanigan TP, Kumar PN, Mintz L, Wallach FR, Nemo GJ. Highly active antiretroviral therapy (HAART) decreases mortality and morbidity in patients with advanced HIV disease. Ann Intern Med 2001;135:17-26.
82. **Murphy EL**, Wu Y, Ownby HE, et al. Delayed hypersensitivity skin testing to mumps and candida albicans antigens is normal in middle-aged HTLV-I and -II-infected U.S. cohorts. AIDS Res Hum Retroviruses 2001;17:1273-7.
83. Schreiber GB, Glynn SA, Damesyn MA, Wright DJ, Tu Y, Dodd RY, **Murphy EL**. Lapsed donors: an untapped resource. Transfusion 2003;43:17-24.

84. Asmuth DM, Kalish LA, Laycock ME, **Murphy EL**, Mohr BA, Lee TH, Gallarda J, Giachetti C, Dollard SC, van der Horst CM, Grant RM, Busch MP. Absence of hepatitis B and C virus, human T-cell leukemia virus I/II, and human herpes virus-8 activation following allogeneic red blood cell transfusion in patients with advanced HIV-1 infection. Transfusion 2003;43:451-8.
85. Glynn SA, Busch MP, Schreiber GB, **Murphy EL**, Wright DJ, Tu Y, Kleinman SH. Effect of a national disaster on blood supply and safety. JAMA 2003;289:2246-53.
86. Wang B, Schreiber GB, Glynn SA, Nass CC, Smith JW, Higgins MJ, Hutching ST, Wright DJ, McEntire R, **Murphy EL**. Prevalence of transfusion-transmissible viral infections in first-time U.S. blood donors by donation site. Transfusion 2003;43:705-12.
87. **Murphy EL**, Ownby HE, Smith JW, Garratty G, Hutching ST, Wu Y, Ameti DI. Pulmonary function testing in HTLV-I and HTLV-II infected humans: a cohort study. BMC Pulmonary Med 2003;3:1-8.
88. **Murphy EL**, Grant RM, Kropp J, Oliveira A, Lee TH, Busch MP. Increased human T-lymphotropic virus type II proviral load following highly active retroviral therapy in HIV-coinfected patients. J Acquir Immune Defic Syndr 2003;33:655-6.
89. Orland JR, Engstrom J, Fridey J, Sacher RA, Smith JW, Nass C, Garratty G, Newman B, Smith D, Wang B, Loughlin K, **Murphy EL**. Prevalence and clinical features of HTLV neurologic disease in the HTLV Outcomes Study. Neurology 2003;61:1588-94.
90. **Murphy EL**. Prevention of transfusion-transmitted HIV infection in high and low income countries. Indian J Hematol & Blood Trans 2003;21:62-65.
91. **Murphy EL**, Wang B, Sacher RA, Fridey J, Smith J, Nass C, Newman B, Ownby H, Garratty G, Hutching S, Schreiber GB. Respiratory and urinary tract infections, arthritis, and asthma associated with HTLV-II and HTLV-I infection. Emerg Infect Dis 2004;10:109-116.
92. **Murphy EL**, Connor D, McEvoy P, Hirschler N, Busch MP, Roberts P, Nguyen K-A, Reich P. Estimating blood donor loss due to the vCJD travel deferral. Transfusion 2004;44(5):645-50.
93. Orland JR, Wang B, Wright DJ, Nass CC, Garratty G, Smith JW, Newman B, Smith DM, **Murphy EL**. Increased mortality associated with HTLV-II infection in blood donors: a prospective cohort study. Retrovirology 2004;1:4.
94. Roucoux DF, **Murphy EL**. The Epidemiology and Disease Outcomes of Human T-Lymphotropic Virus Type II. AIDS Rev 2004;6(3):144-54.

95. **Murphy EL**, Lee TH, Chafets D, Nass CC, Wang B, Loughlin K, Smith D. Higher HTLV proviral is associated with HTLV-I vs. HTLV-II, HTLV-II subtype A versus B, and with male sex and a history of blood transfusion. J Infect Dis 2004;190:504-10.
96. Lee TH, Chafets DM, Busch MP, **Murphy EL**. Quantitation of HTLV-I and II proviral load using real-time quantitative PCR with SYBR Green chemistry. J Clin Virol 2004;31:275-82.
97. Custer B, Johnson ES, Sullivan SD, Hazlet TK, Ramsey SD, Hirschler NV, Murphy EL, Busch MP. Quantifying losses to the donated blood supply due to donor deferral and miscollection. Transfusion 2004;44:1417-26.
98. Wang B, Higgins MJ, Kleinman S, Schreiber GB, **Murphy EL**, Glynn SA, Wright DJ, Nass CC, Chang D, Busch MP. Comparison of demographic and donation profiles and transfusion-transmissible disease markers and risk rates in previously transfused and non-transfused blood donors. Transfusion 2004;44(8):1243-51.
99. Custer B, Tomasulo PA, Murphy EL, Caglioti S, Harpool D, McEvoy P, Busch MP. Triggers for switching from minipool testing by nucleic acid technology to individual-donation nucleic acid testing for West Nile virus: analysis of 2003 data to inform 2004 decision making. Transfusion 2004;44:1547-54.
100. Roucoux DF, Murphy EL. The epidemiology and disease outcomes of human T-lymphotropic virus type II. AIDS Rev 2004;6:144-54.
101. Sanchez AM, Schreiber GB, Nass CC, Glynn S, Kessler D, Hirschler N, Fridey J, Bethel J, **Murphy EL**, Busch MP. The impact of male-to-male sexual experience on risk profiles of blood donors. Transfusion 2005;45:404-413.
102. Jarvis G, Janoff EN, Cheng H, DeVita D, Fasching C, McCulloch CE, **Murphy EL**. Human T lymphotropic virus type II infection and humoral responses to pneumococcal polysaccharide and tetanus toxoid vaccines. J Infect Dis 2005;191:1239-44.
103. Wang B, Schreiber GB, Glynn S, Kleinman S, Wright D, **Murphy EL**, Busch MP. Does prevalence of transfusion-transmissible viral infection reflect corresponding incidence in United States blood donors? Transfusion 2005;45:1089-96.
104. Kleinman SH, Glynn SA, Higgins M, Triulzi D, Smith J, Nass CC, Garratty G, **Murphy EL**, LeParc GF, Schreiber G, King M, Chamberland M, Nemo G. The RADAR repository: a resource for studies of infectious agents and their transmissibility by transfusion. Transfusion 2005;45:1073-83.
105. Roucoux DH, Wang B, Smith D, Nass CC, Smith J, Hutching S T, Newman B, Lee T-H, Chafets D, **Murphy EL**. A prospective study of sexual transmission of human T lymphotropic virus (HTLV-I and HTLV-II). J Infect Dis 2005;191:1490-7.

106. Custer B, Johnson ES, Sullivan SD, Hazlet TK, Ramsey SD, **Murphy EL**, Busch MP. Community Blood Supply Model: Development of a New Model to Assess the Safety, Sufficiency, and Cost of the Blood Supply. Med Decis Making 2005;25(5):571-582.
107. Proietti FA, Carneiro-Proietti ABF, Catalan-Soares BC, **Murphy EL**. Global epidemiology of HTLV-I infection and associated diseases. Oncogene 2005;24:6058-68.
108. Gabet AS, Moules V, Sibon D, Nass CC, Mortreux F, Mauclore P, Gessain A, **Murphy EL**, Wattel E. Endemic versus epidemic viral spreads display distinct patterns of HTLV-2b replication. Virology 2006;345:13-21.
109. Busch MP, Glynn SA, Stramer SL, Orland J, **Murphy EL**, Wright DJ, Kleinman S. Correlates of hepatitis C virus (HCV) RNA negativity among HCV seropositive blood donors. Transfusion 2006;46:469-75.
110. Goncalvez TT, Sabino EC, **Murphy EL**, Chen S, Chamone DAF, McFarland W. HIV test-seeking motivation in blood donors, Sao Paulo, Brazil. Vox Sang 2006;90:170-6.
111. Barcellos NT, **Murphy EL**, Fuchs SC. HTLV I/II infection: prevalence and risk factors in individuals testing for HIV in counseling centers from southern Brazil. Sex Trans Dis 2006;33:302-6.
112. Carneiro-Proietti AB, Catalan-Soares BC, Castro-Costa CM, **Murphy EL**, Sabino EC, Hisada M, Galvao-Castro B, Alcantara LC, Remondegui C, Verdonck K, Proietti FA. HTLV in the Americas: challenges and perspectives. Rev Panam Salud Publica 2006;19:44-53.
113. Reich P, Roberts P, Laabs N, Chinn A, McEvoy P, Hirschler N, **Murphy EL**. A randomized trial of blood donor recruitment strategies. Transfusion 46:1090-96.
114. Glynn SA, Schreiber GB, **Murphy EL**, Kessler D, Higgins M, Wright D, Mathew S, Tu S, King M, Smith JW. Factors influencing the decision to donate: a racial/ethnic comparison. Transfusion 2006;46:9.
115. Kwaan N, Lee TH, Chafets DM, Nass C, Newman B, Smith J, Garratty G, **Murphy EL**. Long-term variation in HTLV-I and HTLV-II proviral load and association with clinical data. J Infect Dis (in press).

BOOK CHAPTERS, EDITORIALS, etc.

1. **Murphy EL.** Epidemiologic aspects of HTLV-I infection. In Chuang C-Y (ed.) Proceedings of the Symposium, Human Retroviruses and AIDS. Taipei, Taiwan, 1989:29-37.
2. **Murphy EL.** The epidemiology of HTLV-I: modes of transmission and their relation to patterns of seroprevalence. In Blattner WA (ed.) Human Retrovirology: HTLV. New York: Raven Press, 1990:295-305.
3. Pierik LT, **Murphy EL.** The clinical significance of HTLV-I and HTLV-II infection in the AIDS epidemic. In Volberding P and Jacobson M (eds.) AIDS Clinical Review. New York: Marcel Dekker, 1991:39-57.
4. **Murphy EL.** Epidemiologic insights into viral carcinogenesis: the HTLV-I model. In Dammacco F (ed.) Proceedings of the VI IMMUNOINCONTRI: "Advances in Tumor Immunology and Allergic Disorders" Milano: Edi.Ermes, 1992:21-38.
5. Gebretsadik T, **Murphy EL.** Counseling and medical evaluation of HTLV-I- and HTLV-II-infected patients. In Volberding P and Jacobson M (eds.) AIDS Clinical Review. New York: Marcel Dekker, 1993/1994:19-41.
6. Beilke MA, **Murphy EL.** The human T-cell leukemia virus types 1 and 2 (HTLV-1 and 2). In Volberding P, Palefsky J (eds.) Viral and Immunological Malignancies Hamilton, Ontario:BC Decker Inc., 2006:326-358.. Counseling and medical evaluation of HTLV-I and -II infected patients. In Volberding P and Jacobson M (eds.) AIDS Clinical Review. New York: Marcel Dekker, 1993:19-41.
7. **Murphy EL,** Khayam-Bashi H. Detection of HIV infection by polymerase chain reaction. In Cohen PT, Sande MA, Volberding PA (eds.) The AIDS Knowledge Base. Second Edition. Boston:Little Brown, 1994:2.5.1-2.5.15.
8. Fiebig EW, **Murphy EL,** Busch MP. Retroviral Infection. Chapter 39. In Hillyer CD, Silberstein LE, Ness PM, Anderson KC (eds.) Blood Banking and Transfusion Medicine. Basic Principles and Practice. Philadelphia:Churchill Livingstone / Elsevier, 2003:447-464.
9. **Murphy EL,** Jacobson S, Franchini G, Taylor GP, Hanchard B, Morgan O, Lairmore M. International Retrovirology Association brings together scientists and clinicians to bridge discoveries about human T-lymphotropic viruses from the laboratory to clinical trials. Retrovirology 2005;2(1):22.
10. Beilke MA, **Murphy EL.** The human T-cell leukemia virus types 1 and 2 (HTLV-1 and 2). In Volberding P, Palefsky J (eds.) Viral and Immunological Malignancies Hamilton, Ontario:BC Decker Inc., 2006:326-358.

CURRENT RESEARCH INTERESTS

Epidemiology of human T-lymphotropic virus types I and II (HTLV-I and -II), epidemiology of transfusion transmitted viruses and of blood donors and donations, and research and training in international transfusion safety.

1. **Epidemiology, Virology and Pathophysiology of HTLV-I and -II infection.** The approach to this research is a multicenter (5 U.S. cities) cohort study of almost 550 HTLV-I and -II infected blood donors and 800 age-, sex- and race-matched controls. Dr. Murphy is Principal Investigator of a multicenter R01 grant from NHLBI for ongoing follow-up of this cohort. The cohort, established in 1990-1992, has completed 14 years of biennial follow-up on over 70 percent of those enrolled. Major findings have included the attribution of myelopathy to HTLV-II, a human retrovirus highly prevalent among U.S. injection drug users for which health outcomes were previously unknown (Ref 56, 89). In addition, a significantly increased frequency of infectious diseases (pneumonia, acute bronchitis, urinary tract infection) has been demonstrated (Refs 56, 65,91). Risk factors for HTLV-I and -II infection (Ref 55), as well as the efficiency of sexual transmission (Ref 53, 102), have been described using the cohort. Finally, psychological stress (Ref 61) and minor clinical laboratory abnormalities were shown in the HTLV-I and -II subjects (Refs 59, 64, 72).

Recent investigations have focused on studies of HTLV-I and -II proviral load (Refs 95, 96, 112), clonality of HTLV integration (105), and a prospective study of mortality (Ref 93).

2. **Transfusion safety research and epidemiology of blood donation.** Since 1989, Dr. Murphy has been the P.I. of the San Francisco site of the multicenter NHLBI Retrovirus Epidemiology in Donors Study (REDS) study, whose purpose is to monitor and reduce infectious disease (HIV, HTLV, HBV and HCV and other agents) risks in blood donors. This study includes a large computer database with data on millions of blood donations which can be used for studies of infectious disease prevalence and incidence (for HTLV see Ref 68, for HCV see Ref 50). REDS also includes several large specimen repositories, including a linked donor-recipient serum and cell repository currently in progress. Finally, REDS has conducted several large questionnaire surveys of blood donors to address infectious disease risk factors and donation attitudes and behavior (Refs 75, 83, 97, 98). We have recently competed for, and have been awarded, a 5-year NHLBI contract for a new version of REDS, termed REDS-2.

However efforts to increase blood safety have, in part, caused a decline in blood supply. A new area of research is the epidemiology of blood donation, namely understanding donor-specific variation in donation frequency and the demographic and motivational factors associated with high donation frequency. In 2001, Dr. Murphy's epidemiology laboratory moved off-campus to Blood Systems Research Institute (BSRI), with new funding from the Blood Systems Foundation. Recent publications have included studies of lapsed donors (Ref 83), donation in response to a disaster (Ref 85), risks associated with donation site (Ref 86), risks from donors who themselves have been transfused (Ref

94) and risks from donors admitting male to male sex (Ref 98). Finally, we estimated the impact of deferrals for travel to the UK and Europe that were recently implemented to prevent blood-borne variant Creutzfeld Jacob disease (Ref 92) and used a randomized trial design to test donor recruitment strategies (Ref 111).

3. **International Transfusion Safety.** A new NHLBI Mid-Career Investigator Award (K24) and a Blood Systems Foundation grant have funded a new area of research and training in international transfusion safety. Many of the research approaches that we have used in improving blood safety in the USA may have proportionately greater impact in middle- and low-income countries where baseline rates of blood-borne infections are much higher. To accomplish this aim, we have initiated collaborations with scientists in Brazil, Argentina, Honduras, Mexico and India. To date, several research trainees from South America and India have participated in summer courses at UCSF and BSRI, and larger groups have been trained in 2-week versions of the same course given by Drs. Murphy and McFarland in several Latin America countries. (see Teaching section). Each trainee develops a small research project which is then carried out at their local blood center, in consultation with Dr. Murphy. This new area of research and training has already yielded links to the World Health Organization (WHO) and the Pan American Health Organization (PAHO), several publications (Ref 90, 107, 108), and we have just submitted two extramural grant applications (UCOP system-wide grant on Mexican immigrants and NIH Fogarty training grant) to fund these training activities.

SIGNIFICANT RECENT PUBLICATIONS

91. Murphy EL, Wang B, Sacher RA, Frider J, Smith J, Nass C, Newman B, Ownby H, Garratty G, Hutching S, Schreiber GB. Respiratory and urinary tract infections, arthritis, and asthma associated with HTLV-II and HTLV-I infection. Emerg Infect Dis 2004;10:109-116.

Author's Contribution: Using data from my prospective study of HTLV-I and -II infected humans, analyzed the incidence of several health outcomes and discovered a higher incidence of pulmonary, urinary tract and inflammatory conditions. PI of the multicenter cohort study, developed hypothesis, analysis plan and wrote the manuscript.

93. Orland JR, Wang B, Wright DJ, Nass CC, Garratty G, Smith JW, Newman B, Smith DM, Murphy EL. Increased mortality associated with HTLV-II infection in blood donors: a prospective cohort study. Retrovirology 2004;1:4.

Author's Contribution: In the same prospective cohort study of HTLV-I and -II, analyzed mortality after 8.6 years of follow-up, and discovered significantly increased mortality in HTLV-II subjects compared to seronegative blood donors. Together with my Post-Doc J. Orland, conceived the study design based upon my cohort study, supervised the data analysis, and wrote the manuscript together with Dr. Orland.

95. Murphy EL, Lee TH, Chafets D, Nass CC, Wang B, Loughlin K, Smith D. Higher HTLV proviral is associated with HTLV-I vs. HTLV-II, HTLV-II subtype A versus B, and with male sex and a history of blood transfusion. J Infect Dis 2004;190:504-10.
112. Kwaan N, Lee TH, Chafets DM, Nass C, Newman B, Smith J, Garratty G, **Murphy EL**. Long-term variation in HTLV-I and HTLV-II proviral load and association with clinical data. J Infect Dis (in press).

Author's Contribution: Using an HTLV-I and -II proviral load assay developed by Drs. Lee and Chafets, studied proviral loads from my HTLV cohort subjects and correlated the results with other epidemiologic data. Conceived the study design, did the data analysis and wrote the manuscript. Drs. Lee and Chafets did the proviral load assays on samples from the cohort.

105. Gabet AS, Moules V, Sibon D, Nass CC, Mortreux F, Mauclore P, Gessain A, **Murphy EL**, Wattel E. Endemic versus epidemic viral spreads display distinct patterns of HTLV-2b replication. Virology 2006;345:13-21.

Author's Contribution: This collaboration between Dr. Wattel's and any labs compared proviral load and clonality of HTLV-II integration into lymphocytes, and showed higher VL and clonality in pygmies compared to U.S. blood donors with the same viral strain. Formulated hypotheses with Dr. Wattel, selected subjects and samples from my cohort, edited the MS.

111. **Murphy EL**, Reich P, Roberts P, Laabs N, Chinn A, McEvoy P, Hirschler N. A randomized trial of blood donor recruitment strategies. Transfusion 2006;46:1090-96.

Author's Contribution: This study used the clinical trial design to compare various blood donor recruitment strategies, providing research evidence in this field otherwise driven by anecdotal reports. Conceived and designed the study, supervised data collection, did the analysis and wrote the MS. Also see editorial published in the same issue.