

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
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NAME Tzong-Hae Lee	POSITION TITLE Director Molecular Biology		
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Kaohsiung Medical College, Kaohsiung Republic of Taiwan	BS	1974	Pre-Med
Kaohsiung Medical College, Kaohsiung	MD	1978	Medicine
Univ California, Berkeley CA	PhD	1989	Immunology

NOTE: The Biographical Sketch may not exceed four pages. Items A and B may not exceed two of the four-page limit.

A. Positions and Honors. List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any Federal Government public advisory committee.

1979 - 1981 Medical Officer, ROC Air Force Hospital, Taipei, Taiwan
1982 - 1984 Pediatrician, Lee's Pediatrics Clinic, Keelung, Taiwan
1985 - 1987 Individual research for PhD thesis, Dept Microbiology/ Immunology, Prof. A. Good, UC Berkeley
1985 - 1989 Individual research for PhD thesis, Dept Biomedical Science, Prof. C.H. Tempelis, UC Berkeley
1987 - 1988 Research Assistant, Dept Biomedical Science, Prof. C.H. Tempelis, UC Berkeley
1989 - 1992 Research Associate/Molecular Biologist., Irwin Meml Blood Ctrs, San Francisco CA (IMBC)
1992 - 1996 Senior Research Scientist/Molecular Biologist, IMBC
1996 - 1997 Associate Director, Molecular Biology, IMBC
1998 - present Director, Molecular Biology, Blood Systems Research Institute

B. Peer-reviewed publications (in chronological order). Do not include publications submitted or in preparation.

1. **Lee T-H.** Identification of Immunoregulatory Receptors on Chicken Lymphoblasts by Using Monoclonal Antibodies (Doctoral Dissertation) UC Berkeley, 1989.
2. **Lee T-H, Tempelis CH.** Characterization of a Receptor on Activated Chicken T-cells. *Develop Compar Immunol*, 15:329-339, 1991.
3. Sunzeri FJ, **Lee T-H**, Brownlee RG, Busch MP. Rapid simultaneous detection of multiple retroviral DNA sequences using the polymerase chain reaction and capillary DNA chromatography. *Blood*, 77:879-86, 1991.
4. **Lee T-H**, Sunzeri FJ, Tobler LH, Williams BG, Busch MP. Quantitative assessment of HIV-1 DNA load by coamplification of HIV-1 gag and HLA-DQ-alpha genes. *AIDS*, 5:683-91, 1991.
5. Mayer A, Sunzeri F, **Lee T-H**, Busch MP. Separation and detection of DNA polynucleotides using capillary electrophoresis: application to detection of PCR-amplified HIV and HLA DNA. *Arch Pathol & Lab Med*, 115:1228-34, 1991.
6. **Lee T-H**, El-Amad Z, Reis M, Adams M, Donegan EA, O'Brien TR, Moss AR, Busch MP. Absence of HIV-1 DNA in high-risk seronegative persons using high-input PCR. *AIDS*, 5:1201-7, 1991.
7. Busch MP, Henrard DR, Hewlett IK, Mehaffey WF, Epstein JS, Allain J-P, **Lee T-H**, Mosley JW, and the Transfusion Safety Group. Poor Sensitivity, Specificity, and Reproducibility of Detection of HIV-1 DNA in Serum by Polymerase Chain Reaction. *J AIDS*, 5:872-877, 1992.
8. Busch MP, **Lee T-H**, Heitman J. Allogeneic leukocytes but not therapeutic blood elements induce reactivation and dissemination of latent HIV-1 infection: implications for transfusion support of infected patients. *Blood*, 80:2128-35, 1992.
9. **Lee T-H**, Tempelis C. A possible 110 Kda receptor for interleukin-2 in the chicken. *Devel & Compar Immunol*, 16:463-72, 1992.
10. Tappero JW, Koehler JE, Berger TG, Cockerell CJ, **Lee T-H**, Busch MP, Stites DP, Mole-Boetani J, Reingold AL, LeBot PE. Bacillary Angiomatosis and Bacillary Splenitis in Immunocompetent Adults. *Ann Int Med*, 118:363-365, 1993.
11. Adams M, **Lee T-H**, Busch MP, Heitman J, Marshall GH, Gjerset GF, Mosley JW, and the Transfusion Safety Study. Rapid freezing of whole blood or buffy coat samples for polymerase chain reaction and cell culture analysis: application to detection of human immunodeficiency virus in blood donor and recipient repositories. *Transfusion*, 33:504-8, 1993.

12. Busch MP, **Lee T-H**, Donegan E, Pallavicini M. Use of an inbred mouse model system for studies of allogeneic transfusion-induced immunosuppression. (Comments on Blajchman, BLOOD, and Gianotti, TRANSFUSION) *Blood*, 82:3509-11, 1993.
13. **Lee T-H**, Stromberg RR, Henrard D, Busch MP. Effect of platelet-associated virus on assays of HIV-1 in plasma (comments on Piatak, et al.) *Science*, 262:1585-6, 1993.
14. **Lee T-H**, Sheppard HW, Reis M, Dondero D, Osmond D, Busch MP. Circulating HIV-1 infected cell burden from seroconversion to AIDS: importance of post-seroconversion viral load on disease course. *J AIDS*, 7:381-8, 1994.
15. Sabino EC, Delwart E, **Lee T-H**, Mayer A, Mullins JI, Busch MP. Identification of Low Level Contamination of Blood as Basis for Detection of Human Immunodeficiency Virus (HIV) DNA in anti-HIV-Negative Specimens. *J AIDS*, 7:853-859, 1994.
16. **Lee T-H**, Stromberg RR, Heitman J, Tran K, Busch MP. Quantitation of residual white cells in filtered blood components by polymerase chain reaction amplification of HLA DQ-A DNA. *Transfusion*, 34:986-94, 1994.
17. Goodarzi MO, **Lee T-H**, Pallavicini MG, Donegan EA, Busch MP. Unusual kinetics of leukocyte clearance in transfused mice. *Transfusion*, 35:145-9, 1995.
18. Busch MP, **Lee T-H**. Role of Donor Leukocytes and Leukodepletion in Transfusion-Associated Viral Infections. Chapter 8 in: Clinical Benefits of Leukodepleted Blood Products. Sweeney J, Heaton WA, eds. Pp 97-112. RG. Landes Co., Austin TX, 1995.
19. **Lee T-H**, Donegan EA, Slichter S, Busch MP. Transient increase in circulating donor leukocytes following allogeneic transfusions in immunocompetent recipients compatible with donor cell proliferation. *Blood*, 85:1207-14, 1995.
20. Carrier E, **Lee T-H**, Busch MP, Cowan MJ. Induction of tolerance in nondefective mice after *in utero* transplantation of major histocompatibility complex-mismatched fetal hematopoietic stem cells. *Blood*, 86:4681-90, 1995.
21. Busch MP, Operskalski EA, Mosley JW, **Lee T-H**, et al. for the Transfusion Safety Study Group. Factors influencing HIV-1 transmission by blood transfusion. *J Infect Dis*, 174:26-33, 1996.
22. **Lee T-H**, Sakahara NS, Fiebig EW, et al. Correlation of HIV-1 RNA levels in plasma [sic. S/B serum] and heterosexual transmission of HIV-1 from infected transfusion recipients. *J AIDS Hum Retrovir*, 12:427-8, 1996.
23. Carrier E, **Lee T-H**, Busch MP, Cowan MJ. Recruitment of engrafted donor cells postnatally into the blood with cytokines after in utero transplantation in mice. *Transplantation*, 64:627-33, 1997.
24. **Lee T-H**, Sakahara NS, Fiebig EW, Hirschhorn DF, et al., for the Viral Activation Transfusion Study. Quantitation of white cell subpopulations by polymerase chain reaction using frozen whole-blood samples. *Transfusion*, 38:262-70, 1998.
25. **Lee T-H**, Stromberg RR, Heitman JW, Sawyer L, Hanson CV, Busch MP. Distribution of human immunodeficiency virus type 1 (HIV-1) in blood components: detection and significance of HIV-1 associated with platelets. *Transfusion*, 38:580-8, 1998.
26. Reed W, **Lee T-H**, Vichinsky EP, Lubin BH, Busch MP. Sample suitability for the detection of minor leukocyte populations (microchimerism) by polymerase chain reaction. *Transfusion*, 38:1041-5, 1998.
27. **Lee T-H**, Paglieroni T, Ohto H, Holland PV, Busch MP. Survival of donor leukocyte subpopulations in immunocompetent transfusion recipients: frequent long-term microchimerism in severe trauma patients. *Blood*, 93:3127-39, 1999.
28. Wang-Rodriguez J, Fry E, Fiebig E, **Lee T-H**, Busch M, Mannino F, Lane TA. Immune response to blood transfusion in very-low-birthweight neonates. *Transfusion*, 40:25-34, 2000.
29. Carrier E, Gilpin E, **Lee T-H**, Busch MP, Zanetti M. Microchimerism does not induce tolerance after in utero transplantation and may lead to the development of alloreactivity. *J Lab & Clin Med*, 136:224-35, 2000.
30. Reed W, **Lee T-H**, Trachtenberg E, Vinson M, Busch MP. Detection of microchimerism by PCR Is a function of amplification strategy. *Transfusion*; 41:39-44, 2001.
31. **Lee T-H**, Montalvo L, Chrebtow V, Busch MP. Quantitation of genomic DNA in plasma and serum: higher concentrations of genomic DNA found in serum when compared to plasma. *Transfusion*, 41:276-82, 2001.
32. Donahue J, Gilpin E, **Lee T-H**, et al. Microchimerism does not induce tolerance and sustains immunity after *in utero* transplantation. *Transplantation*, 71:359-68, 2001.
33. **Lee T-H**, Reed W, Mangawang-Montalvo L, Watson J, Busch MP. Donor WBCs can persist and transiently mediate immunologic function in a murine transfusion model: effects of irradiation, storage, and histocompatibility. *Transfusion*, 41:637-42, 2001.
34. Kruskall MS, **Lee T-H**, Assmann SF, Laycock M, Kalish LA, Ledermann M, Busch MP, for the Viral Activation Transfusion Study. Survival of transfused donor white cells in HIV-infected recipients. *Blood*, 98:272-9, 2001.
35. Yomtovian R, Gernsheimer T, Assmann SF, Mohandas K, **Lee T-H**, Kalish LA, Busch MP. Leukocyte reduction in red blood cell concentrates by prestorage filtration: multicenter experience. The Viral Activation Study (VATS). *Transfusion*, 41:1030-6, 2001.
36. Ariga H, Ohto H, Busch MP, Imamura S, Watson R, Sninsky JJ, Reed W, **Lee T-H**. Kinetics of fetal cellular and cell-free DNA in the maternal circulation during and after pregnancy: implications for noninvasive prenatal diagnosis. *Transfusion*, 41:1524-30, 2001.
37. Chou S-H, Chawla A, **Lee T-H**, Zhou Y, Busch M, Balassanian R, Ferrell L, Cowan MJ.. Increased engraftment and GvHD after *in utero* transplantation of MHC-mismatched bone marrow cells and CD80low, CD86(-) dendritic cells in a fetal mouse model. *Transplantation* 72:1768-76, 2001.
38. **Lee T-H**, Wen L, Chrebtow V, Higuchi R, Watson RM, Sninsky JJ, Busch MP. Quantitation of residual white cells in filtered blood components by high throughput, real-time kinetic PCR. *Transfusion*, 42:87-93, 2002.
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41. Asmuth, DM Kalish LA, Laycock ME, Murphy EL, Mohr BA, **Lee T-H**, Gallarda J, Giachetti C, Dollard S, van der Horst C, Grant RM, Busch MP, for the Viral Activation Transfusion Study (VATS) Group. 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*, 43:451-8, 2003.
 42. Pellett PE, Wright DJ, Engels EA..**Lee T-H**, et al., for the Retrovirus Epidemiology Donor Study. Multicenter Comparison of Serologic Assays and Estimation of Human herpesvirus 8 Seroprevalence among US Blood Donors. *Transfusion*, 43:1260-8, 2003.
 43. Murphy EL, Grant RM, Kropp J, Oliviera 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*. 15;33(5):655-6. 2003.
 44. Murphy EL, **Lee TH**, Chafets d,Nass CC, Wang B, Loughlin K, Smith D; HTLV Outcomes Study Investigators. Higher human T lymphotropic virus (HTLV) provirus load is associated with HTLV-I versus HTLV-II, with HTLV-II subtype A versus B, and with male sex and a history of blood transfusion. *J Infect Dis* 1;190(3):504-10. 2004. Epub 2004 Jul 06.
 45. Montalvo L, Walker P, Wen L, Lim W, Reed W, Busch MP, **Lee TH**. Clinical investigation of posttransfusion Kidd blood group typing using a rapid normalized quantitative polymerase chain reaction. *Transfusion*. 44(5):694-702. 2004.
 46. Utter GH, Owings JT, **Lee TH**, Paglieroni T, Reed W, Gosselin R, Holland R, Busch MP. Blood transfusion is associated with donor leukocyte microchimerism in trauma patients. *J Trauma*, 57:702-8, 2004.
 47. **Lee T-H**, 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*, 31:275-82, 2004.
 48. **TH Lee**, Wen L, Montalvo L, Esho B, Reed W, Lowell C, Busch MP. Minimum conditions of MHC compatibility and recipient immune compromise required to establish donor leukocyte persistence in a murine transfusion model. *Transfusion*, Mar 2005, in press.