

## **Robert H. Keller, MD, MS, FACP, AAHIVS**

### **Education and Training:**

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| 1966      | Bachelor of Arts in Biology<br>Master of Science in Biology<br>Fordham University, Bronx, New York |
| 1970      | Doctor of Medicine (MD) with honors<br>Temple University, Philadelphia, Pennsylvania               |
| 1970-1974 | Internship, Resident and Senior Resident<br>University of Rochester, Rochester, New York           |
| 1974-1976 | Fellow and Senior Fellow<br>Department of Immunology<br>Mayo Clinic, Rochester, Minnesota          |
| 1976      | Master of Science in Immunology<br>Mayo Graduate School of Medicine<br>Rochester, Minnesota        |

### **Professional and Faculty Positions:**

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| 2001 - | Founder, Chairman, CEO & CSO<br>Phoenix BioSciences which has developed a new first in class and first in man<br>viral-host interaction inhibitor for HIV / AIDS |
| 1999-  | Founder, Chairmain,CEO and Director of Research<br>Vitimmune, Inc<br>Hollywood, Florida  |
| 1998-  | Voluntary Adjunct Professor<br>Miller School of Medicine, University of Miami<br>Miami, Florida  |
| 1996-  | Chairman and CEO<br>Immune Balance Technologies<br>Hollywood, Florida  |

1994-	Director of Medicine & Research Biodoron Medical Center Hollywood, Florida
1994-1995	Consultant in Immunology and Hematology Health Professionals, Inc and Center for Special Immunology
1992-1995	Director Immune Reconstitution Program Center for Special Immunology
1992-1995	Medical Director Center for Special Immunology Miami Beach, Florida
1987-1996	President and Medical Director The Wilson Bode Center Fort Lauderdale, Florida
1986-1987	Associate Director of Research and Development Coulter Immunology Coulter Electronics, Inc., Hialeah, Florida
1982-1986	Medical Director Wilson Bode Center for Hematology and Immunology Research Milwaukee, Wisconsin
1982-1986	Clinical Professor Department of Health Sciences (Hematology, Immunology, Flow Cytometry) University of Wisconsin Milwaukee, Wisconsin
1982-1986	Associate Professor Departments of Medicine and Biophysics (Allergy and Immunology, Flow Cytometry) Medical College of Wisconsin Milwaukee, Wisconsin
1982-1986	Clinical Investigator and Staff Physician

Zablocki VAMC  
Milwaukee, Wisconsin

- 1980-1982      Director of Immunology  
Midwest Children's Cancer Center (Immunology, Flow Cytometry,  
Transplantation)  
Chief of Immunology  
Milwaukee Children's Hospital  
Milwaukee, Wisconsin
- 1980-1982      Associate Professor  
Department of Pediatrics (Hematology/Oncology, Immunology)  
Medical College of Wisconsin  
Milwaukee, Wisconsin
- 1979-1982      Clinical Associate Professor  
Department of Health Sciences (Hematology, Immunology,  
Flow Cytometry)  
University of Wisconsin  
Milwaukee, Wisconsin
- 1978-1980      Research Associate and Staff Physician  
Research Service  
Zablocki VAMC  
Milwaukee, Wisconsin
- 1977-1980      Assistant Professor  
Department of Medicine (Hematology/Oncology)  
Medical College of Wisconsin  
Milwaukee, Wisconsin
- 1977              Assistant Professor  
Department of Immunology  
Mayo Medical School  
Rochester, Minnesota
- 1974-1977      Fellow and Senior Research Fellow in Immunology  
Mayo Clinic Foundation  
Mayo Graduate School of Medicine  
Rochester, Minnesota

### **Hospital Staff Appointments:**

1976-1977	Mayo Clinic, Rochester, Minnesota
1977-1986	Zablocki VAMC, Milwaukee, Wisconsin
1977-1986	Milwaukee County Medical Complex, Milwaukee, Wisconsin
1992-1997	Mount Sinai Medical Center, Miami Beach, Florida
1992-1999	Cleveland Clinic Hospital, Fort Lauderdale, Florida
1992-1999	Miami Heart Institute, Miami Beach, Florida
1997-1999	Palmetto General Hospital, Hialeah, Florida
1992-	Broward General Medical Center, Fort Lauderdale, Florida
1997-	Hollywood Medical Center, Hollywood, Florida
1997-	South Shore Hospital, Miami Beach, Florida
1997-	Memorial Medical Center, Hollywood, Florida

### **Fellowships and Awards:**

1967-1969	Health Professions Scholarship Temple University School of Medicine
1974-1975	Mayo Foundation Research Fellowship Mayo Graduate School of Medicine
1975-1978	National Arthritis Foundation Fellowship
1978-1981	VA Career Development Award, Research Associate
1983-1986	VA Career Development Award, Clinical Investigator

### **Grant Support During Academic Tenure**

1978-1980	Alpha-fetoprotein Immunoregulation in a Model of Murine Lymphoma Veterans Administration Research Principal Investigator	\$210,000
1981-1986	Immunoregulatory Dysfunction in Non-Hodgkin's Lymphoma NIH, NCI Principal Investigator	\$430,000
1982-1986	Immunologic Studies of Environmental	

	Lung Disease NIH (NIAID) Co-Principal Investigator	\$525,000
1983-1986	VA Career Development Award Clinical Investigator	\$240,000
1984-1986	Clinical Applications of Laser Flow Cytometry Principal Investigator NIH (RR Shared Equipment Program)	\$105,609
1984-1987	Immunoregulatory Dysfunction Principal Investigator VA	\$245,000
1985-1986	Monoclonal Antibodies in the Detection of Cervical Carcinoma Co-Principal Investigator Hillman Foundation	\$85,000
1986-1987	Isoprinosine Modulation of the Immuno- regulatory Imbalances in AIDS and ARC Principal Investigator of FDA IND Newport Foundation	\$125,000

**Honors:**

1970	Alpha Omega Alpha Temple University, School of Medicine
1970	Medical Degree with honors Temple University, School of Medicine
1979	Superior Performance Award in Research Veterans Administration
1980-	Fellow, American College of Physicians
1991-	Who's Who in Science and Technology
1994-	Who's Who in the World

- 1996- Who's Who in Medicine and Science
- 1998 HIV Medical Professional of the Year  
PWAC, Broward County, Florida
- 1999 Humanitarian of the Year  
National Hemophilia Foundation
- 2001- 2000 Outstanding Scientists of the 21<sup>st</sup> Century
- 2002 - 1000 Great Americans of the 21<sup>st</sup> Century
- 2003 - America's Top Physicians in Internal Medicine, Immunology and Hematology
- 2004 - Elected to Board of Governors  
Academy of HIV Medicine of the State of Florida
- 2004 – 2006 AMA Physicians Recognition Award
- 2005 - Greatest Scholars of the Twenty First Century

**Invited Lectureships:**

- 1977 Second Fogarty International Conference on  
Neonatal Liver Disease  
Baltimore, Maryland
- 1977 International Conference on the Diagnosis and  
Prevention of Neural Tube Defects  
Los Angeles, California
- 1977 Second International Conference on Diagnostic Immunology  
Heniker, New Hampshire
- 1979 Radioimmunochemical Detection of Cancer  
Albuquerque, New Mexico
- 1980 Visiting Professor of Hematology  
University of Mississippi  
Jackson, Mississippi

- 1981            Visiting Professor of Hematology  
University of California  
Irvine, California
- 1981            Third International Conference on Diagnostic  
Immunology, Section Chair
- 1982            Visiting Professor of Pathology  
University of Texas Medical Branch  
Galveston, Texas
- 1983            Visiting Professor of Medicine  
Wilfred Hall Air Force Research Center  
Galveston, Texas
- 1984            Visiting Professor Max Plank Institute for Biochemie  
Munich, Germany
- 2005            Visiting Professor of Immunology and Pharmacology  
Peking Union Medical School (University of Beijing)  
Beijing, China

**Editorial Boards:**

Diagnostic Immunology 1986-1990  
Journal of Leukocyte Biology 1984-1986  
Chronicle Interventions in Aging 2005 -

**Reviewer:**

Journal of Immunology 1990-Present  
Chronicle Interventions in Aging 2005 -

**Consultantships:**

Coulter Epics  
Coulter Immunology  
Corning Scientific  
National Aeronautics and Space Administration (NASA)  
Abbott HIV Advisory Board  
Baxter Advisory Board for Hemophilia  
Baxter Advisory Board for Hemophilia Inhibitor Patients  
Scientific Advisory Board, Virxsys, 2004 –

Scientific Advisory Board, Powermedica, 2004 –  
Consultant in Cancer Therapy, PRSS-J, Toyko, 2005 –  
Medical Advisory Council, American Federation of Hemophilia, 2002 -

**Certifications:**

National Board of Medical Examiners, 1971 and 1990  
American Board of Internal Medicine, 1974 -  
American Academy of HIV Medicine, 2001 -

**Current Medical Licensure:**

New York	#112195
Wisconsin	#19121
Florida	#58991

**Certification:**

ACLS	1990 -
ATLS	1990 -

**Professional Societies:**

Alpha Omega Alpha  
American Association for the Advancement of Science  
American Association of Immunologists  
American College of Physicians  
American Federation of Clinical Research  
American Society of Clinical Pathology  
American Society of Hematology  
International Society of Hematology  
International Society of Hematopathology  
International Immunocompromised Host Society  
International Society of Analytical Cytology  
Clinical Cytometry Society  
New York Academy of Sciences  
Clinical Immunology Society  
National Organization for Rare Disorders



### **Teaching Experience:**

- 1980      Survey in Basic and Clinical Immunology  
              Department of Medicine  
              Medical College of Wisconsin
  
- 1983      Principles of Laser Flow Cytometry  
              Department of Health Sciences  
              University of Wisconsin
  
- 1981        Special Topics in Immunology  
              Immunoregulation in Cancer  
              Department of Biology  
              Marquette University
  
- 1986      Co-Director Flow Cytometry Program  
              University of Wisconsin  
              Introduction to Flow Cytometric Analysis  
              Principles of Image and Laser Cytometry  
              Hybridomas and Monoclonal Antibodies  
              Laboratory Evaluation of Immunoregulation  
              Clinical Immunophenotyping and DNA Analysis  
              Advanced Cytometry  
              Advanced Cytometric Techniques

### **Invited Professional Lectures:**

- 1979-      Dr. Keller has been the invited speaker at more than 2000 state, regional,  
              national, and international, medical and scientific seminars and workshops in the fields  
              of:

- AIDS and Immunoregulation
- Clinical Immunology
- Chronic Fatigue Syndrome and Fibromyalgia
- Autoimmune Disease and Control of Aberrant Immune Response
- Nutrition and the Immune Response
- Hormones and the Immune Response
- Hepatitis C
- Hemophilia

## Protecting the Immune System Before, During, and After Cancer

### Therapy

- 2000 Host of *Today's Health*, WAXY 790 and Web streamed at Vitimmune.com and RobKellermd.org
- 2005 Host of Voice America Web Based Interactive Radio Show, The Path to Wellness and Youth

### Committee Service:

Veterans Administration:	1985-1986 Research and Development Committee Clement J. Zablocki VAMC 1986-1989 VA Oncology Merit Review Board
International Society for Analytical Cytology:	1984-1986 Research and Development Committee: Controls & Standard
University of Wisconsin:	1983-1986 Flow Cytometry Evaluation Committee, Co Chair
National Institutes of Health:	1983-1986 NIH Immunology Special Study Section
Medical College of Wisconsin:	1980-1982 Faculty Welfare Committee 1980-1982 Animal Care Committee 1982-1986 Flow Cytometry Protocol Committee, Chair
Cancer Committee for Hollywood Medical Center	1992-
Committee of Ten Thousand:	1998- Medical Advisory Board
National Hemophilia Federation:	1996- Medical Advisory Committee
National Hemophilia Foundation-Florida Chapter:	1994- Medical Advisory Committee
Mount Sinai Medical Center	1994-1997 Cancer Committee
Hollywood Medical Center	2001- Cancer Committee
Board of Governors American Academy HIV Med (FL) 2003 –	
ProAssurance Malpractice Underwriting Committee	2005-
AAHIVM Standards of Practice Committee	2005-

### Statement of Research Interest:

- 1) HIV: Dissection of the immune perturbations associated with HIV infection including therapy with experimental immunomodulatory agents.
- 2) Dissection of the immune perturbations associated with hemophiliac complications and therapeutic intervention using experimental immunoregulatory agents.

- 3) Creation and utilization of unique `designer` monoclonal antibodies for the diagnosis, monitoring, imaging and therapy of human hematologic and solid tumor malignancies.
- 4) Immune response and immunoregulation: dissection of the basic human immune response and the roles of cytokines and other regulatory molecules and the demonstration and characterization of aberrant responses in neoplastic and immunologic disease.

**Patents Issued:**

- 1) R.H. Keller and Dr. X. Wen: Allerg-ease (2000)
- 2) R.H. Keller, D.W. Kirchenbaum: ALL-Immune (2002)
- 3) R.H. Keller, PBS 119 a novel treatment for chronic viral infections (2004)
- 4) R.H. Keller, A Paradigm Shift in Treating Neurodegenerative Diseases Including Alzheimers and Parkinsons.

**Provisional Patents:**

- 1) R.H. Keller and W.M. Reiter: Treatment of late stage HIV-1 infection with haplo-matched peripheral blood mononuclear cells.
- 2) ALL-Slender, a natural weight loss formula
- 3) Cognitall, a natural formula to improve short term memory

**Books:**

1. Keller, R.H. The Role of Immunology and Hormones in Combating Disease and Aging (in preparation).

**Book Chapters:**

- 1) Keller, R.H. and Tomasi, T.B.: **Alpha-fetoprotein: A Potential Regulator of Immune Function.** In Diseases of the Liver and Biliary Tract. Javitts, N.NIH, Bethesda, Maryland, pp. 119-134, 1977.

- 2) Keller, R.H., Calvinico, N.J., Fink, J.N., and Stevens, J.O.: **Immunobiologic Aspects of Primate Hypersensitivity Pneumonitis.** In Environmental Toxicology. Dungworth, D.L. (ed), Academic Press, New York, pp.383-395, 1981.
- 3) Keller, R.H., Blake, D.G., Lyman, S. and Siebenlist, R.: **The Immunobiology of Human Non-Hodgkin's' Lymphomas.** In Clinical Cellular Immunology. Luderer, A. (ed). Humana Press, New York, pp. 213-246, 1982.
- 4) Patrick, C.W., Keller, R.H., and Horan, P.K.: **Flow Cytometry, Cell Sorting and Hybridomas.** American Society Clinical Pathology Press. St. Louis, MO, pp. 1-182, 1982.
- 5) Patrick, C.W., Parker, J., Keller, R.H., and Horan, P.K.: **The Clinical Utility of Monoclonal Antibodies and Immunophenotyping.** In Flow Cytometry and Cell Sorting in Hematologic Disease. American Society of American Pathologists Press. Chicago, IL pp. 1-191.
- 6) Calvinico, N.J., Fink, J.N., and Keller, R.H.: **Hypersensitivity Pneumonitis.** In The Immunology of the Lung. Bienenstock, J. (ed), Academic Press, New York pp 365-366, 1984.
- 7) Keller, R.H., Milson, T.J., Janicek, K.M., Patrick, L.C., Sohnle, P., and Patrick, C.W.: **Clinical Utilization of the Technicon H-6000 Flow Cytochemical Flow System in Allergy Testing.** In Proceedings of the 4<sup>th</sup> International Technicon Hematology Colloquium. Simson, E. (ed) Academic Press, New York, pp 179-188, 1984.
- 8) Patrick, C.W., Horan, P.K, and Keller, R.H.: **Immunophenotypic and Functional Analysis Using Laser Flow Cytometry: Clinical Utility.** American Society of Clinical Pathology Press, Chicago, IL, 1985, pp. 1-168.
- 9) Patrick, C.W. and Keller, R.H.: **Lymphocytes: Biochemistry, Physiology, Function, and Morphology.** In Principles of Hematology: Clinical and Laboratory Practice. R.L. Bick, (ed) C.V. Mosby, St. Louis, MO in press.
- 10) Patrick, C.W. and Keller, R.H.: **The Emerging Role of Laser Flow Cytometry and Monoclonal Antibodies in Clinical Medicine.** In: Principles of Hematology: Clinical Laboratory Practice. R.L. Bick (ed) C.V. Mosby, St. Louis, MO, in press.
- 11) Keller, R.H. and Patrick, C.W.: **Characterization of the Human Myeloid Series by Monoclonal Antibodies.** In Monoclonal Antibodies in Laboratory Medicine. Swartz, M. (ed) Academic Press, New York, in press.

- 12) Patrick, C.W., McFadden, P.W., and Keller, R.H.: **Immunophenotypic Analysis of Human Bone Marrow Employing Monoclonal Antibodies and Laser Flow Cytometry.** In Proceedings of the Second International Conference on Technological Advances in Laboratory Hematology. Howen, B. (ed), Academic Press, 1985.
- 13) Keller, R.H., Janicek, K.M., and Patrick, C.W.: **The Clinical Significance of Laser Flow Cytometry DNA Analysis.** In Proceedings of the Second International Conference on Technological Advances in Laboratory Hematology. Howen, B. (ed) Academic Press, New York, 1985.
- 14) Keller, R.H., Van Riel, F., Maislis, J., Lane, J.T., Reiter, W.M., Klimas, N.G, Fletcher, M.A.: **Association of Histocompatibility Class II Antigens wit the Chronic Fatigue Immune Dysfunction Syndrome.** In Clinical Infectious Disease. University of Chicago, Chicago, IL, 1994:18 (Supp 1): S154-6.
- 15) **Antioxidants and the skin, A Paradigm for aging.**  
R.H. Keller and E. Arrayove (in press) 2004

#### **Original Research Contributions and Invited Reviews:**

- 1) Keller, R.H. and Tomasi, T.B.: **Alpha-fetoprotein, E-Rosette Formation and Tumor Cell Growth.** N Engl J Med 293(24): 1265-1266, 1975.
- 2) Tomasi, T.B., Dattwyler, R., Murgita, R. and Keller, R.H.: **Immunosuppression by Alpha-fetoprotein.** Trans Am Assoc Phys. 88:293-298, 1976.
- 3) Geubel, A.P., Keller, R.H., Summerskill, W.H.J., Dickson, E.R., Tomasi, T.B. and Shorter, R.G.: **Lymphocyte Cytotoxicity and Inhibition Studied with Autologous Liver Cells: Observation in Chronic Acute Liver Disease and the Primary Biliary Cirrhosis Syndrome.** Gasterenterol. 71:450-459, 1976.
- 4) Keller, R.H. and Clavanico, N.J., and Tomasi, T.B.: **Immunosuppressive Properties of AFP: Role of Estrogens.** In Onco Developmental Gene Expression. Fichman, W.H. and Sell, S. (eds) Academic Press, New York, p.278, 1976.
- 5) Keller, R.H. and Tomasi, T.B.: **Synthesis of Alpha-fetoprotein by Murine Lymphoid Cells in Allogenic Reactions.** J Exp Med 143:1120, 1976.
- 6) Banks, P., Keller, R.H., Li, V.Y. and White, E.B.: **Malignant Lymphomas of Plasmablastic Identity: A Neoplasm with Both “Immunoblastic” and Plasma Cell Features.** Am J Med 64:609-610, 1978.

- 7) Keller, R.H., Atwater, J.S., Martin, R.S. and Tomasi, T.B.: **Ataxia Telangiectasia, Immunosuppression and AFP: Is There a Relationship?** In Prevention of Neural Tube Defects. Crandall, B. (ed) Academic Press, New York, pp.27-40, 1978.
- 8) Guirgis, H.A., Lynch, H.T., Keller, R.H., Tomasi, T.B., Vandervoorde, J., Brodsky, F., Lynch, J., Rankin, L. and Malony, K.: **Carcinoembryonic Antigen (CEA) and Alpha-fetoprotein (AFP) in Cancer-Prone Families: Communicable Implications.** In Proceeding of the Third Annual Symposium on the Detection and Prevention of Cancer. Part I (2), 1987.
- 9) Keller, R.H., Dattwyler, R.J., Harrison, E. and Tomasi, T.B.: **Alpha-fetoprotein in Human Lymphoproliferative Disease.** J Lab Clin Immunol, 2:93-98, 1979.
- 10) Kaplan, H.J., Meredith, T.A., Aeberg, T.M. and Keller, R.H.: **Intraocular Reticulum Cell Sarcoma (Histiocytic Lymphoma) in Richter's Syndrome: A Neoplasm of the Immune System.** Arch Ophthal 98:707-710, 1980.
- 11) Keller, R.H., Blake, B.G., Lyman, S. and Siebenlist, R.: **Immunoregulatory Abnormalities in Chronic Lymphocytic Leukemia.** J Lab Clin Immunol 6:201-208, 1981.
- 12) Choi, H. and Keller, R.H.: **Co-existence of Chronic Lymphocytic Leukemia and Hodgkin's Disease.** Cancer 48:48-55, 1981.
- 13) Kaplan, H.J., Aeberg, T.M. and Keller, R.H.: **Etiology of Recurrent Clinical Uveitis.** Ber Dtsch Ophthal Ges 78:159, 1981.
- 14) Kaplan, H.J. and Keller, R.H.: **Recurrent Clinical Uveitis: Cell Surface Markers on Vitreous Lymphocytes.** Arch Ophthal 100:585-592, 1982
- 15) Keller, R.H., Fink, J.N., Lyman, S. and Pederson, G.: **Suppressor Cells in Asymptomatic Pigeon Breeders.** J Clin Immunol 2:46-51, 1982.
- 16) Milson, T.J., Grief, D. and Keller, R.H.: **The Variable Effect of Cryopreservation on Peripheral Blood Mononuclear Populations.** J Clin Lab Immunol 7:205-218, 1982.
- 17) Keller, R.H., Calvanico, N.J. and Stevens, J.O.: **Hypersensitivity Pneumonitis In Non-human Primates.** In Studies on the Relationship of Immunoregulation and Disease Activity. J Immunol 128:116-123, 1982.

- 18) Keller, R.H.: **Alpha-fetoprotein: Biologic and Clinical Potential.** In Tumor Imaging: The Radioimmunochemical Detection of Cancer. Burchiel, S. and Rhodes, B. (eds) Mason Publishing, New York, pp. 179-188, 1982.
- 19) Patrick, C.W. and Keller, R.H.: **New Techniques in the Diagnosis of Hematopoietic Malignancies: Monoclonal Antibodies, Flow Cytometry and Cell Sorting.** Am Soc Clin Pathol Sp Topic Series 20(3)106-109, 1982.
- 20) Keller, R.H., Libnoch, J.A., Patrick, C.W., Blake, D.G., Choi, H. and Hanson, R.D.: **Fc Gamma Bearing T Cells in Non-Hodgkin's Lymphomas.** Diag Immunol 1:27-32, 1983.
- 21) Keller, R.H., Feldman, E. and Libnoch, J.A.: **Immunoregulatory Abnormalities in the Kindred of Waldenström's Macroglobulinemia Patients.** Am J Hematol 14:15-22, 1983.
- 22) Keller, R.H. and Calvanico, N.J.: **Suppressor Macro-molecules.** Crit Rev Immunol 5(2): 149-199, 1984.
- 23) Fudenberg, H.H., Wilson, G.B., Keller, R.H., Metcalf, J.F., Pauling, E.E., Stuart, E.J. and Floyd, E.: **Clinical Application of the Leukocyte Migration Inhibition Assay: New Methods for Determining Transfer Factor Potency and for Prediction of Clinical Response.** In Proceedings of the IV International Conference on Transfer Factor. Academic Press, New York, pp. 293-310, 1984.
- 24) Patrick, C.W. and Keller, R.H.: **A Simple Device for the Collection of Cells Sorted by Flow Cytometry: Preservation of Integrity and Viability.** Cytometry 5(3):308-311, 1984.
- 25) Keller, R.H., Milson, T.J., Janicek, K.M. and Patrick, C.W.: **Monoclonal Antibodies: Clinical Utility and the Misunderstood Epitope.** Lab Med 15(12):785-802, 1984.
- 26) Keller, R.H., Swartz, S.J., Leven, S., Bar Sella, S. and Fink, J.N.: **Immunoregulation in Hypersensitivity Pneumonitis: Phenotypic and Functional Studies of Bronchoalveolar Lavage Lymphocytes.** Am Rev Res Dis 130:766-771, 1984.
- 27) Patrick, C.W., Swartz, S.J., Harrison, K.A. and Keller, R.H.: **Collection and Preparation of Hemopoietic Cells for Cell Marker Analysis.** Lab Med 15(10): 659-665, 1984.
- 28) Patrick, C.W., Milson, T.J., McFadden, P.W. and Keller, R.H.: **Flow**

**Cytometry and Cell Sorting.** Lab Med 15(11):740-745, 1984.

- 29) Wilson, G.B., Fudenberg, H.H. and Keller, R.H.: **Guidelines for Immunotherapy of Antigen Specific Defects with Transfer Factor.** J Clin Lab Immunol 13:51-58, 1984.
- 30) Baumann, M.A., Libnoch, J.A., Patrick, C.W., Choi, H. and Keller, R.H.: **Prolonged Survival in Richter's Syndrome with Subsequent Re-emergence of Chronic Lymphocytic Leukemia: A Case Report Including Serial Cell Surface Phenotype Analysis.** Am J Hematol 20:67-72, 1985.
- 31) Marti, G.E., Patrick, C.W., Muirhead, K., Magruder, L., Vail, M., Schuette, W., Keller, R.H., Horan, P.K. and Gralnick, H.R.: **Normal Blood Density Gradient Lymphocyte Subset Analysis: In an Inter-Laboratory Flow Cytometric Comparison of 85 Normal Adults.** Am J Hematol 20:41-52, 1985.
- 32) Milson, T.J., Patrick, C.W., Sohnle, P.G., Patrick, L.C. and Keller, R.H.: **Flow Cytochemical Analysis of Atopic Reactions.** Diag Immunol 3:182-186, 1986.
- 33) Milson, T.J., Patrick, C.W., Torke, N.J. and Keller, R.H.: **Holding Media for Cell Surface Phenotyping Analysis.** J Immunol Methods 87:155-159, 1986.
- 34) Baumann, M.A., Milson, T.J., Patrick, C.W., Libnoch, J.A. and Keller, R.H.: **Immunoregulatory Abnormalities in Myelodysplastic Disorders.** Am K Hematol 22:79-86, 1986.
- 35) Hansen, R.M, Lerner, N., Abrams, R.A., Patrick, C.W., Malik, M.I. and Keller, R.H.: **Chronic Lymphocytic Leukemia with Pure Red Cell Aplasia: Laboratory Demonstration of Persistent Leukemia in Spite of Apparent Complete Clinical Remission.** Am J Hematol 22:79-86, 1986.
- 36) Baumann, M.A., Keller, R.H., McFadden, P.W., Libnoch, J.A. and Patrick, C.W.: **Myeloid Cell Surface Phenotype in Myelodysplasia: Evidence for Abnormal Persistence of an Early Myeloid Differentiation Antigen.** Am J Hematol 23:22-26, 1986.
- 37) Baumann, M.A., Milson, T.J., Patrick, C.W., Libnoch, J.A. and Keller, R.H.: **Correlation of Numbers of Natural Killer Cells with Clinical Course in Large Cell Lymphoma.** Cancer 57:2309-2312, 1986.
- 38) Patrick, C.W., Ash, R., Libnoch, J.A. and Keller, R.H.: **Clinical Cytometry and Immunophenotyping: I. Flow Cytometric Analysis of Normal Peripheral Blood and Bone Marrow.** Path Immunopathol Res 6:64-76, 1987.



- 39) Patrick, C.W., Libnoch, J.A., Kallas, G.A. and Keller, R.H.: **Sequential Immunophenotypic Studies in Chronic Lymphocytic Leukemia: UCLA Molecular Biology Symposium.** Chronic Lymphocytic Leukemia: Recent Progress-Future Directions. R. Gale and K. Rai (eds) Alan R. Liss, New York, 59, 1987.
- 40) Keller, R.H., Libnoch, J.A., Kallas, G.A., and Patrick, C.W.: **Sequential Evaluation of T Cell Subsets in B-CLL. UCLA Molecular Biology Symposium: Chronic Lymphocytic Leukemia: Recent Progress-Future Directions.** R. Gale and K. Rai (eds) Alan R. Liss, New York, 59, 1987.
- 41) Fudenberg, H.H, Whitten, H.D., Galbraith, G.M.P., Goust, J.M., Patrick, C.W. and Keller, R.H.: **Deficiency of ‘Interactive’ T Cells in Individuals with Recurrent Infection: Effect of DLE-TF Therapy.** Am J Med. In Press, 1994.
- 42) Keller, R.H., Van Reil, F., Maislis, J., Lane, J.T., Reiter, W.M., Klimas, N.G. and Fletcher, M.A.: **Association of Histocompatibility Class II Antigens with the Chronic Fatigue Immune Dysfunction Syndrome.** In Clin Inf Disease 18(Supp 1): S154-156, 1994.

#### **Papers Submitted, In review and/or Revision**

- 1) Patrick, C.W. and Keller, R.H.: **A Comparative Study of Anticoagulants in Cell Surface Marker Phenotyping and Functional Analysis.** Am J Clin Pathol.
- 2) Keller, R.H., Milson, T.J. and Patrick, C.W.: **Sequential Immunoregulatory Phenotypic and Functional Changes During Viral Illness: A Comparison of Rhinoviral Infection and Acquire Immunodeficiency Syndrome.** Lancet (in Revision).
- 3) Keller, R.H., Choi, H., Libnoch, J.A. and Patrick, C.W.: **A Natural Murine Model of Non-Hodgkin’s Lymphoma.** J Immunol (in revision).
- 4) Choi, H., Libnoch, J.A., Aimargo, U., Heckman, M. and Keller, R.H.: **Castelman’s Tumor: Well Differentiated Lymphocytic Lymphoma and Large Cell Lymphoma in a Single Patient.** Human Pathol (in revision).
- 5) Keller R.H., Wen K., and Kirchenbaum G. ALL-ergese a TCM blend of standardized herbs for the treatment of allergies. (in revision)
- 6) Adult Growth Hormone Deficiency: A Correlate of Immune Overactivity (in preparation)

- 7) All Immune: A Safe Effective Method of Improving Lymphocytes Glutathione Levels in Multiple Diseases Associated with Immune Stress.

**ABSTRACTS:** Asterisks (\*) denote those papers selected for presentation at national or international meetings.

- 1)\* Keller, R.H., Dattwyler, R.J., Harrison, E. and Tomasi, T.B.: **Alpha-fetoprotein in Human Lymphoproliferative Disease.** Blood 46(4):1035, 1975.
- 2)\* Guebel, A.P., Keller, R.H., Summerskill, W.H.J., Tomasi, T.B. and Shorter, R.G.: **Cytotoxicity of Autologous and Normal Lymphocytes Against Isolated Liver Cells in Patients with Primary Biliary Cirrhosis.** Gastroenterol 68:104, 1975.
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