Ellen L. Berg

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SUMMARY

Senior scientific leader in drug discovery and translational biology with record of solving problems for a broad range of programs including target-based and phenotypic drug discovery programs. Background includes the discovery and development of anti-inflammatory therapeutics, discovery program management, primary cell-based assay development and screening. Research interests and expertise in phenotypic drug discovery, systems biology and predictive methods for human efficacy and safety outcomes.

PROFESSIONAL EXPERIENCE

Scientific Director, BioSeek, a division of DiscoveRx Corp, South San Francisco, CA, November 2012-present

- Responsible for scientific research, operations and personnel, for the BioMAP® primary human cell-based assay platform, overall scientific direction; member of DiscoveRx management team; responsible for intellectual property filings, government grants and contracts
- Responsible for execution of company's collaborative projects with over 45 pharmaceutical and biotechnology companies and the government involving the use of BioMAP® systems platform for compound profiling, lead discovery and optimization, mechanism of action, and clinical indication selection for small molecules and biologics, from early stage to marketed drugs

General Manager, Chief Scientific Officer, BioSeek LLC, a wholly owned subsidiary of Asterand, Inc., South San Francisco, CA, 2010-2012

- Responsible for business unit's operations and personnel, financial performance, overall scientific direction; member of executive team; responsible for intellectual property filings, government grants and contracts
- Key Accomplishments: Collaborative projects with 19 pharmacuetical and biotech companies; Government contract award of $46.7M

Chief Scientific Officer, BioSeek Inc., South San Francisco, CA, 2000-2010

- Company co-founder and developer of platform drug discovery technology, BioMAP® systems; responsible for research operations and personnel; member of executive team; participant in business development, corporate and venture financing efforts; responsible for intellectual property filings, government grants and contracts
- As CSO, led the company's drug discovery programs involving the use of BioMAP® systems for phenotypic drug discovery, involving screening, lead optimization, and in vivo proof-of-concept studies
- Key Accomplishments: assisting the company in raising $29M in venture and corporate funding, publication of 9 peer-reviewed publications and 3 issued US patents, and achieving government grants and contracts funding awards totaling >$13.5M

Staff Scientist / Senior Scientist, Research Department, Protein Design Labs, Inc., Fremont, CA, 1993-1999

- Initiated and played a key role in the development of two humanized antibody therapeutics in the inflammatory disease area; as a member of project teams, interacted with FDA and contributed to IND filings
- Led an active research group focused on identification and validation of novel targets for chronic inflammatory diseases; research interests include vascular responses to inflammation and disease
- Key Accomplishments: 2 issued patents, 23 publications in peer-reviewed journals, numerous invited talks and published abstracts

Research Technician, Battelle Northwest Laboratories, Toxicology Department, Richland, WA, 1981-1982

- Toxicology studies on rodents in radiation biology, electromagnetic fields, and cancer research

EDUCATION

Postdoctoral fellow, Stanford University Medical School, Department of Pathology, Stanford, CA, 1987-1993

- Research on the identification and biochemical characterization of vascular and leukocyte cell adhesion receptors and ligands in mice and humans
- Identification of cutaneous lymphocyte antigen as the receptor for recruitment of inflammatory lymphocytes into chronically inflamed human skin; the peripheral lymph node addressin as a sialic acid-containing carbohydrate ligand for L-selectin, the homing receptor for lymphocytes into peripheral lymph nodes
- Accomplishments: awarded 2 postdoctoral fellowships (American Cancer Society and Leukemia Society of America; 22 peer-reviewed publications (including Cell, Science, and Nature) and 4 patent / intellectual property filings

PhD, Northwestern Univ., Department of Biochemistry, Molecular Biology, and Cell Biology, Evanston, IL, 1987.

- Research on the mechanisms of B cell antigen presentation and helper T cell responses utilizing cellular immunology and protein biochemistry tools
- Research led to 10 publications

BS Chemistry, BS Biology, Pacific Lutheran University, Tacoma, WA, 1981

HONORS, AWARDS, GRANTS AND CONTRACTS

2012	EPA contract for ToxCast program, EP-D-12-047 ($46,770,000)
2007	EPA contract for ToxCast program, EP-W-07-039 ($12,799,000)
2003	SBIR Phase II grant from the NIAID, R44AI048255 ($750,000)
2001	SBIR Phase I grant from the NIAID, R43 AI48255 ($100,000)
1990-1993	Special Fellow of the Leukemia Society of America
1987-1990	Postdoctoral Fellow, American Cancer Society
1987	Postdoctoral Fellow, Cancer Biology Program, Stanford University
1983-1986	National Research Services Award
1977	National Merit Scholar

PROFESSIONAL ORGANIZATIONS

American Association of Immunologists
American Chemical Society
FASEB (Federation of American Societies for Experimental Biology)
Inflammation Research Association
Society for Laboratory Automation and Screening
Society of Toxicology

PATENTS AND PUBLICATIONS

16 issued US patents and invention disclosures
70 publications in peer reviewed journals

PATENTS / INVENTIONS

1. Rosler, E., E.J. Kunkel, S.Privat, J. Melrose, M. Fischer, E.L. Berg, “Biological Dataset Profiling of Asthma and Atopy” US Patent number 8,019, 551. Date of patent: Sept 13, 2011.
2. Berg, E.L., E.C. Butcher, J. Melrose, I. Plavec. “Function homology screening” US Patent number 7,912,651. Date of patent: March 22, 2011.
3. Berg, E.L., E.C. Butcher, J. Melrose, I. Plavec, “Patient Classification” US Patent number 7,908,089. Date of patent: Mar 15, 2011.
4. Plavec, I., E.L. Berg and E. Butcher, “BioMAP Analysis” US Patent number 7,266,458. Date of patent: Sept 4, 2007.
5. E.L. Berg, E.C. Butcher, J. Melrose and I. Plavec. “Patient Classification” US Patent number 6,763,307. Date of patent: July 13, 2004.
6. E.L. Berg, J. Melrose and E.C. Butcher. BioMAP characterization of biologically active agents. US Patent number 6,656,695. Date of patent: Dec. 2, 2003
7. J. Magnani, E.C. Butcher, and E. Berg. Methods and compositions for the inhibition of cancer metastasis mediated by endothelial adhesion molecules. US Patent Number 6,465,434. Date: Oct. 15, 2002.
8. J. Magnani, E.C. Butcher, and E. Berg. Methods and compositions for endothelial binding. US Patent Number 6,391,857. Date: May 21, 2002.
9. J. Magnani, E.C. Butcher, and E. Berg. Leukocyte homing modulation US Patent Number 6,387,884. Date: May 14, 2002.
10. E.L. Berg. Cross-reacting monoclonal antibodies specific for E-selectin and P-selectin. US Patent number 6,210,670. Date: April 3, 2001.
11. E.L. Berg, E.C. Butcher, J. Melrose and I. Plavec. “Function Homology Screening” International Application No. PCT/US01/07190, Filed 06 March 2001.
12. J. Magnani, E.C. Butcher, and E. Berg. Methods for the inhibition of cancer metastasis mediated by endothelial adhesion molecules. US Patent Number 6,121,233. Date: September 19, 2000.
13. E.C. Butcher, M. Jutila, and E. Berg. MJ7/18 Anti-Mouse Endoglin (CD105). Stanford Docket S95-044.
14. L. Picker, E. Butcher, E. Berg and A. Duijvestijn. Skin-associated lymphocytes and markers (HECA 452). Stanford Docket S90-088.
15. E. L. Berg. Cross-reacting monoclonal antibodies specific for E- and P-selectin. US Patent number 5,622,701. Date of patent: April 22, 1997.
16. E.C. Butcher, P.R. Streeter, and E.L. Berg. Methods of control leukocyte extravasation. US Patent number 5,538,724. Date of patent: July 23, 1996.

ABSTRACTS AND INVITED TALKS

1. Lakey, E.K., S.K. Pierce and E. Margoliash. (1984) Functioning pigeon cytochrome c responsive T cell hybridomas. Federation Proc. 43, Abstract #1027.
2. Lakey, E.K., S.K. Pierce and E. Margoliash. (1985) Cytochrome c specific T cell recognition of peptide fragments. Federation Proc. 44, Abstract #5274.
3. Casten, L., E.K. Lakey, E. Margoliash and S.K. Pierce. (1985) Small resting antigen specific B cells process and present cytochrome c to T cells. Federation Proc. 44, Abstract #5244.
4. Lakey, E.K., S.K. Pierce and E. Margoliash. (1986) The isolation of a peptide binding protein and its role in antigen presentation. Federation Proc. 45, Abstract #4033.
5. Lakey, E.K., S.K. Pierce and E. Margoliash. (1986) T cell activation is blocked by the presence of peptides related to the antigenic determinant on the antigen presenting cell surface. Proceedings from the Sixth International Congress of Immunology, Abstract #2.45.18.
6. Berg, E.L., P.R. Streeter and E.C. Butcher. (1988) Isolation and characterization of endothelial cell antigens. FASEB J., Abstract #4548.
7. Berg, E.L. Lymphocyte Homing Receptors and Vascular Addressins. Presented at the FASEB Immunopharmacology Conference, Saxton's River, Vermont, July 17-22, 1988.
8. Streeter, P.R., E.L. Berg, B.T.N.Rousse, R.F. Bargatze and E.C. Butcher. (1988) Vascular addressins in lymphocyte homing to lymphoid and non-lymphoid tissues. FASEB J., Abstract #2150.
9. Berg, E.L. Homing Receptors and Vascular Addressins in Leukocyte Trafficking. Presented at the Keystone Symposium on Glycobiology, Frisco, Colorado, January 14-20, 1989.
10. Berg, E.L., M.A. Jutila and E.C. Butcher. (1989) Novel endothelial cell activation antigens and leukocyte extravasation into sites of acute inflammation. FASEB J., Abstract #1283.

11. Jutila, M.A., E.L. Berg, E.P. Amento and E.C. Butcher. (1989) Effect of systemic cytokine administration on leukocyte/endothelial cell interactions during inflammation. FASEB J., Abstract #540.
12. Berg, E.L. A Human Lymphocyte Homing Receptor is related to Cartilage Proteoglycan and Link Protein. Presented at the Fourth Gordon Research Conference on Proteoglycans, Proctor Academy, Andover, New Hampshire, June 25-29, 1990.
13. Berg, E.L. Lymphocyte Homing Receptors and Vascular Addressins. Fourteenth annual meeting of the Society for Complex Carbohydrates, San Diego, CA, October 10-13, 1990.
14. Berg, E.L., P.R. Streeter and E.C. Butcher. (1990). Vascular addressins: tissue selective endothelial cell recognition/adhesion molecules for circulating lymphocytes. UCLA Symposium on Molecular Basis of Cellular Adhesion. Jan. 20-26, 1990, Steamboat Springs, CO.
15. Berg, E.L. Lymphocyte Homing Receptors and Vascular Addressins. Presented at the Gordon Research Conference on Cell Contact and Adhesion. Proctor Academy, Andover, NH, July 1-5, 1991.
16. Berg, E.L., T. Yoshino, R.A. Warnock, L.S. Rott and E.C. Butcher. (1992) Cutaneous lymphocyte associated antigen is a memory T cell ligand for ELAM-1. FASEB J., 6:A1892, Abstract #5531.
17. R.A. Warnock, E.L. Berg, L.S. Rott and E.C. Butcher. (1992) Differential leukocyte-selectin interactions. FASEB J. 6:A1142, Abstract #1193.
18. E.L. Berg, J. Goldberg, D.P. Andrew and E.C. Butcher. (1993). Complexity of carbohydrate structures associated with the peripheral lymph node addressin. Keystone Symposium on carbohydrate ligands and their protein receptors: biological function and molecular interaction. January 24-31, 1993, Keystone, Colorado.
19. Berg, E.L. Lymphocyte Trafficking and HEVs. Invited talk presented at the Keystone Symposium on Complex Carbohydrates in Biology and Medicine, Frisco, CO, March 23, 1994.
20. Berg, E.L. Selectins and Their Ligands in Inflammation. Invited talk presented at the IBC Third Annual Conference on Cell Adhesion Molecules, San Francisco, CA, May 19, 1994.
21. Simon, S.I., P. Gopanlan, Y. Tsang, E. Berg, S. Neelamegham, and C.W. Smith. Synergy between L-selectin signaling and chemotactic activation of neutrophil adhesion. Abstract presented at the American Society of Biology and Molecular Biology annual meeting, San Francisco, CA, December 1996.
22. Gopalan, P.K., C.W. Smith, H. Lu, E.Berg, L.V. McIntire, and S.I. Simon. L-selectin cross-linking signals CD18-integrin-dependent firm adhesion under conditions of flow. Abstract presented at the American Society of Biology and Molecular Biology annual meeting, San Francisco, CA, December, 1996.
23. H-P. Haring, M. Tagaya, B.R. Copeland, P. Akamine, E.L. Berg, G.J. del Zoppo. E-selectin appears during experimental focal ischemia/reperfusion (I/R). Abstract presented at the 21st International Joint Conference on Stroke and Cerebral Circulation. Jan 25-27, 1996.
24. Berg, E.L. Novel Monoclonal Antibody Anti-Inflammatory Drug Candidate Blocks E- and P-selectin. Invited talk presented at DNAX Research Institute, Department of Immunobiology, May 12, 1997.
25. Berg, E.L. Selectin Ligands. Invited talk presented at the Fourth International Symposium on Molecular Mechanisms in Leukocyte Traffic, Ringberg Castle, Germany, September 8, 1997.
26. Berg, E.L. Control Mechanisms of Leukocyte Recruitment. Invited talk presented at Genentech, Inc., Department of Immunology. November 21, 1997.
27. Berg, E.L., and J. Melrose. Down-regulation of E-selectin by IFN-γ. Abstract presented at the Keystone Conference on Inflammation and Atherosclerosis, Keystone Colorado, Jan. 20-26, 1997.
28. Berg, E.L., X-Y. He, J. Melrose, S. Simon, M. Vasquex, C. Queen, and M.S. Co. Humanized antibody, HuEP5C7.γ2, blocks both E- and P-selectin-mediated adhesion. Abstract presented at the Keystone Conference on Molecular Mechanisms of Leukocyte Trafficking, Lake Tahoe, CA, March 23, 1998.
29. Berg, E.L. Mechanisms of Lymphocyte Recruitment in Chronic Inflammatory Diseases. Invited talk presented at the University of Turku, Turku, Finland, May 12, 1999.
30. R.O. Ehrhardt, K. Hong, A. Chu, B.R. Ludviksson, and E.L. Berg. 1999. IL-12, but not IFN-gamma, plays a crucial role in the pathogenesis of murine psoriasis-like skin disorder. FASEB J. 13:A665.
31. Berg, E.L., J. Melrose and N. Tsurushita. 1999. Control of leukocyte recruitment by interferon gamma. FASEB J. 13:A1135.
32. Berg, E.L., J. Melrose, J. Ember, T.E. Hugli, and G.J. del Zoppo. Inhibition of leukocyte-endothelial cell interactions by cigarette smoke condensate. Abstract presented at the XVIIth Congress of the International Society on Thrombosis and Haemostasis, Washington D.C., August 14-21, 1999.
33. Berg, E.L. High throughput primary human cell-based disease models for accelerating drug discovery. Invited talk presented at the IBC Conference on Systems Biology, September 16, 2003, London UK.
34. Berg, E.L. Biofunctional Multiplexed Activity Profiling in Primary Human Cells (BioMAP): A Systems Biology Approach for Drug Discovery. Invited talk presented at IBC Conference on Systems Biology for Drug Discovery and Development, October 30, 2003, Boston MA.

35. Berg, E.L., I. Plavec, and E.C. Butcher. High throughput primary human cell-based disease models for drug discovery. Keystone Symposia on New Advances in Drug Discovery, Park City UT, January 7, 2003.
36. Berg, E.L. A New Paradigm for Productive Drug Discovery. Invited talk presented at BIO 2004, session on Systems Biology: The Need, the Challenge, the Promise, June 7, 2004, San Francisco, CA
37. Berg, E.L. An Integrative Biology Approach for Analysis of Drug Action in Models of Human Vascular Inflammation, presented at University of Michigan, Department of Pharmaceutical Engineering, October 26, 2004, Ann Arbor, MI.
38. Berg, E.L. High Throughput Human Biology for Improved Drug Discovery. Invited talk presented at the Third International Drug Discovery and Development Summit, December 1, 2004, San Diego, CA.
39. Berg, E.L., E.J. Kunkel, I. Plavec, V. Hytopoulos, and EC Butcher. Complex primary human cell based assays for the discovery and development of novel therapeutics for vascular inflammation. 12th International Conference of the Inflammation Research Association, October 3-7, 2004.
40. Berg, E.L. Pleiotropic Effects of Statins on Vascular Protective and Inflammatory Pathways: Analysis of Drug Mechanisms in Models of Human Vascular Inflammation. Invited talk presented at the New York Academy of Sciences meeting on "Statins: Not Just Lipid Lowering Any More?", March 29, 2005, New York, NY.
41. Berg, E.L. Biological Complexity and Drug Discovery: A Practical Systems Biology Approach. Invited talk presented at the Foundations of Systems Biology Engineering 2005, August 7, 2005, Santa Barbara, CA.
42. Berg, E.L. Biological Complexity and Drug Discovery: A Practical Systems Biology Approach. Invited talk presented at the New York Academy of Sciences meeting on Disease Target Validation and Compound Evaluation Using Pathway Analysis Approaches, Feb 28, 2006, New York, NY.
43. Berg, E.L. Human cell systems for drug discovery: characterization of inflammatory pathway mechanisms. Invited talk presented at the Inflammation Research Association 14th Annual Conference, October 16, 2006, Cambridge, MD.
44. Berg, E.L. Human Cell Systems for Innovative Drug Discovery. Invited talk presented at GTCbio Modern Drug Discovery & Development Summit, December 4, 2006, Philadelphia, PA.
45. Berg, E.L. Human Cell Systems as a Broad-based Platform for Drug Discovery. No More Black-Box. Invited talk presented at the Society for Biomolecular Sciences 13th Annual Conference, April 17, 2007, Montreal, Canada.
46. Berg, E.L. Complex Human Cell Systems for Understanding Toxicity Mechanisms. Invited talk presented at the International Science Forum on Computational Toxicology, May 23, 2007, Durham, NC.
47. Berg, E.L. Primary Human Cell Systems for Drug Discovery: No More Black Box. Invited talk presented at the SBS Symposium on Back to Pharamcology: Stem Cells & Primary Cells in Drug Discovery, November 8, 2007, Anaheim, CA.
48. Berg, E.L. Human Cell Systems Biology: A Practical Approach for Drug Discovery. Invited talk presented at Cambridge Healthtech Institute's 9th Annual Conference on Beyond Genome Tools to Therapy: Applying Systems Biology, June 11, 2008, San Francisco, CA.
49. Berg, E.L. BioMAP Primary Human Cell-Based Systems for Drug Discovery. Invited talk presented at the IBC conference on Assays & Cellular Targets 2008, September 26, 2008, San Diego, CA.
50. Berg, E.L. Primary Human Cell Systems Analysis of Drug Mechanisms. Presented at the SBS 15th Annual Conference & Exhibition, April 28, 2009, Lille, France.
51. Berg, E.L. Methods and approaches for defining mechanism signatures from human primary cell-based disease models. Abstract presented at the Environmental Protection Agency's ToxCast Data Analysis Summit, May 14-15, 2009, Research Triangle Park, NC.
52. Berg, E.L. Defining Chemical Target and Pathway Toxicity Mechanisms with Primary Human Cell Systems. Invited talk presented at the eChemInfo Conference, Oct 15, 2009, Bryn Mawr, PA.
53. Berg, E.L., A. Maloney, A. O'Mahony and M. Polokoff. Characterization of TNFα Antagonists by BioMAP Profiling in Primary Human Cell Systems. 16th International Inflammation Research Association Conference, Sept 28, 2010, Chantilly, VA
54. A.O'Mahony, S. Privat, M. Polokoff, J. Melrose, D. Nguyen, L. Alajoki, I. Plavec and E. L. Berg. BioMAP® Systems Integrate Human Biology and Drug Discovery To Enable The Development of Safer and More Effective Anti-inflammatory Therapies. World Congress on Inflammation, June 25-29, 2011, Paris, France.
55. Privat, S., A. Melton, J. Melrose, L. Alajoki, I. Plavec, E. L. Berg and A. O'Mahony. Establishment of Normal and Patient-derived Cell Based BioMAP® Systems To Support The Development Safer and Effective Therapies for Rheumatoid Arthritis, presented at the Keystone Symposium on Rheumatoid Arthritis: Molecular and Clinical Insights, January 19 - 24, 2012, Santa Fe, NM.
56. Melton, A., J Melrose, L Alajoki, S Privat, D Nguyen, M Polokoff, I Plavec, E Berg, A O'Mahony. Primary Human BioMAP® Systems Reveal Biological Features of IL-17 Isoforms Relevant To Autoimmune Disease,

presented at the Keystone Symposium on Th17 Cells in Health and Disease, February 5 - 10, 2012, Keystone, CO.

57. Wang, A., E.L. Berg, M. Polokoff, J. Yang; D. Reif, N. Kleinstreuer, S. Marinakos, A.R. Badireddy, S. Gangwal, C. Matson, M. Wiesner, and K. Houck. Nanomaterial (NM) bioactivity profiling by ToxCast high-throughput screening (HTS). Society of Toxicology Annual Meeting, March 12, 2012, San Francisco, CA.
58. N.C. Kleinstreuer, K. Houck, R. Judson, D. Reif, P. Kothiya, M. Martin, T. Knudsen, A. Richard, M. Polokoff, J. Yang, E.L. Berg, R. Kavlock, and D. Dix. Biological profiling of the ToxCast Phase II Chemical Library in Primary Human Cell CoCulture Systems. Society of Toxicology Annual Meeting, March 12, 2012, San Francisco, CA.
59. Berg, E.L., Novel Chemoproteomics (KinobeadsTM) and Phenotypic (BioMAP®) Discovery Platforms for the Development of Novel and Safer Kinase Inhibitors for Inflammatory Diseases, presented at the Inflammation Research Association 17th International Conference, September 10, 2012, Bolton Landing, NY.
60. Berg, E.L., M.A. Polokoff, A.O'Mahony, J. Melrose, D. Nguyen and J. Yang. Phenotypic Approaches Defining Toxicity Mechanisms. Abstract presented at the Society of Laboratory and Automation Screening annual meeting, January 15, 2013, Orlando, FL.
61. Wang, A., E.L. Berg, M. Polokoff, J. Yang, A. El-Badawy, D. Reif, N. Kleinstreuer, S. Marinakos, A. R. Badireddy, S. Gavett, D. Rotroff, S. Gangwal, J. Rabinowitz, C. Matson, T. Tolavmat, M. Weisner, and K. Houck. Ranking and profiling nanomaterial (NM) bioactivity by ToxCast high-throughput screening (HTS). Abstract presented at the Society of Toxicology 52nd annual meeting, March 13, 2013, San Antonio, TX.
62. Berg, E.L., M.A. Polokoff, A.O'Mahony, J. Melrose, and D. Nguyen. Toxicity Mechanisms of Anti-inflammatory Kinase Inhibitors. Abstract presented at the Society of Toxicology 52nd annual meeting, March 13, 2013, San Antonio, TX.
63. Berg, E.L. The BioMAP® Platform of Primary Human Cell Systems for Phenotypic Drug Discovery and Development – Lessons Learned. Presentation at the CHI Fast Congress on Phenotypic Drug Discovery, Cambridge MA, October 28, 2013.
64. Tan, S-L., A.O. Mahony, E.L. Berg, K. Ganeshalingam, and E.H. Choy. Primary Human Cell BioMAP® Profiling of Methotrexate, Tocilizumab, Adalimumab, and Tofacitinib Reveals Different Mechanisms of Action With Distinct Phenotypic Signatures. Abstract #1866 presented at the American College of Rheumatology Annual Meeting, October 26-30, 2013, San Diego, CA.
65. Shah, F., Berg, E., Polokoff, M., Yang, J., and Greene, N. Understanding Mechanisms of Drug-Induced Liver Injury Using Primary Human Cell and Co-culture Systems. Abstract presented at the Society of Toxicology 53nd annual meeting, March 26, 2014, Phoenix AZ.
66. Berg, E., Yang, J., Polokoff, M. Predictive Models for Mechanism-of-Action Classification of Chemicals Using Phenotypic Data. Abstract presented at the Society of Toxicology 53nd annual meeting, March 27, 2014, Phoenix AZ.
67. Houck, K., Kleinstreuer, N., Yang, J., Berg, E., Knudson, T., Richard, A., Martin, M., Reif, M., Judson, R., Polokoff, M. Predicting Toxic and Therapeutic Mechanisms of the ToxCast Chemical Library by Phenotypic Screening. Abstract presented at the Society of Toxicology 53nd annual meeting, March 27, 2014, Phoenix AZ.
68. Wetmore, BA, Berg, EL, Polokoff MA, Thomas RS, and Anderson ME. In Vitro Bioactivity in ToxCast Assays for Fruit and Vegetable Extracts. Abstract presented at the Society of Toxicology 53nd annual meeting, March 27, 2014, Phoenix AZ.

PUBLICATIONS

1. Casten, L.A., E.K. Lakey, M.L. Jelachich, E. Margoliash and S.K.Pierce. (1985) Anti-immunoglobulin augments the B-cell antigen presentation function independently of internalization of receptor-antigen complex. Proc. Natl. Acad. Sci. USA 82, 5890-5894.
2. Jelachich, M.L., E.K. Lakey, L. Casten and S.K. Pierce. (1986) Antigen presentation is a function of all B cell subpopulations separated on the basis of size. Eur. J. Immunol. 16, 411-416.
3. Lakey, E.K., E. Margoliash, F.W. Fitch and S.K. Pierce. (1986) Role of L3T4 and Ia in the heteroclitic response of T cells to cytochrome c. J. Immunol. 136, 3933-3938.
4. Lakey, E.K., E. Margoliash and S.K. Pierce. (1986) Peptides related to the antigenic determinant block T cell recognition of the native protein as processed by antigen presenting cells. Eur. J. Immunol. 16, 721-727.

5. Lakey, E.K., E. Margoliash, F.W. Fitch and S.K. Pierce. (1986) Role of L3T4 and Ia in the heteroclitic response of T cells to cytochrome c. J. Immunol. 136, 3933-3938.
6. Lakey, E.K., L.A. Casten, M.S. Anderson, L.A. Smolenski, J.A. Smith, E. Margoliash and S.K. Pierce. (1987) T cell activation by processed antigen is equally blocked by I-E and I-A-restricted immunodominant peptides. Eur. J. Immunol. 17, 1605-1609.
7. Lakey, E.K., L.A. Casten, W.L. Niebling, E. Margoliash and S.K. Pierce. (1988) Time dependence of B cell processing and presentation of peptide and native protein antigens. J. Immunol. 140, 3309-3314.
8. Lakey, E.K., E. Margoliash and S.K. Pierce. (1987) "A hypothetical role for antigen processing in self-non-self discrimination of globular proteins." In Immunogenicity of Protein Antigens: Repetoire and Regulation, Volume II. (E.E. Sercarz and J.A. Berzofsky, eds.), CRC Uniscience Books, CRC Press, Boca Raton, Florida, p. 27-33.
9. Margoliash, E., E.K. Lakey, L.A. Casten and S.K. Pierce. (1987) Could the requirement for antigen processing ensure self-non-self discrimination? In the Proceedings from the Tenth International Convocation on Immunology, Longman Group, Ltd., Essex, England.
10. Lakey, E.K., J.A. Smith, E. Margoliash and S.K. Pierce. (1987) A peptide binding protein which plays a role in antigen presentation. Adv. Exp. Med. Biol. 225:161-164.
11. Jalkanen, S., P. Streeter, E. Lakey, R. Bargatze, and E.C. Butcher. (1988) Lymphocyte and endothelial cell recognition elements that control lymphocyte traffic to mucosa-associated lymphatic tissues. Monogr. Allergy 24, 144-149.
12. Jalkanen, S.T., R.F. Bargatze, M. Jalkanen, D. Lewinsohn, P.R. Streeter, E. Lakey and E.C. Butcher. (1988) Lymphocyte migration molecules. Adv. Exp. Med. Biol., 237, 21-29.
13. Streeter, P.R., E.L. Berg, B.T.N. Rouse, R.F. Bargatze and E.C. Butcher. (1988) A tissue-specific endothelial cell molecule involved in lymphocyte homing. Nature 331, 41-46.
14. Jutila, M.A., F.R.M. Kroese, K.L. Jutila, A.M. Stall, S. Fiering, L.A. Herzenberg, E.L. Berg and E.C. Butcher. (1988) LY-6C is a monocyte/macrophage and endothelial cell differentiation antigen regulated by interferon-gamma. Eur. J. Immunol. 18, 1819-1826.
15. Nakache, M., E.L. Berg, P.R. Streeter and E.C. Butcher. (1989) The mucosal vascular addressin is a tissue-specific endothelial cell adhesion molecule for circulating lymphocytes. Nature 337, 179-181.
16. Berg, E.L., L.A. Goldstein, M.A. Jutila, M. Nakache, L.J. Picker, P.R. Streeter, N.W. Wu, D. Zhou and E.C. Butcher. (1989) Homing receptors and vascular addressins: cell adhesion molecules that direct lymphocyte traffic. Imm. Rev. 108, 5-18.
17. Jutila, M.A., E.L. Berg, T.K. Kishimoto, L.J. Picker, R.F. Bargatze, D.K. Bishop, C.G. Orosz, N.W. Wu and E.C. Butcher. (1989) Inflammation- induced endothelial cell adhesion to lymphocytes, neutrophils, and monocytes. Transplantation 48, 727-731.
18. Jutila, M.A., L. Rott, E.L. Berg and E.C. Butcher. (1989) Function and regulation of the neutrophil MEL-14 antigen in vivo: comparison with LFA-1 and MAC-1. J. Immunol. 143, 3318-24.
19. Kishimoto, T.K., M.A. Jutila, E.L. Berg and E.C. Butcher. (1989) Neutrophil Mac-1 and MEL-14 adhesion proteins inversely regulated by chemotactic factors. Science 245, 1238-1241.
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