ABBREVIATED CURRICULUM VITAE

Bruce Alan Beutler, M.D.

PRESENT POSITION

Regental Professor and Director, Center for the Genetics of Host Defense
Raymond and Ellen Willie Distinguished Chair in Cancer Research
in honor of Laverne and Raymond Willie, Sr.
UT Southwestern Medical Center
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Dallas, TX 75390-8505
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PAST POSITIONS

Chairman	Department of Genetics (2007 - 2011) The Scripps Research Institute, La Jolla, CA
Professor	Department of Immunology and Microbial Sciences (2000 - 2011) The Scripps Research Institute, La Jolla, CA
Professor	Department of Internal Medicine (1996 - 2000) UT Southwestern Medical Center, Dallas, TX
Associate Investigator	The Howard Hughes Medical Institute (1991 - 2000) Dallas, TX
Associate Professor	Department of Internal Medicine (1990 - 1996) UT Southwestern Medical Center, Dallas, TX
Assistant Professor	Department of Internal Medicine (1986 - 1990) UT Southwestern Medical Center, Dallas, TX
Assistant Investigator	The Howard Hughes Medical Institute (1986 - 1991) Dallas, TX
Assistant Professor	Associate Physician The Rockefeller University (1985 - 1986) New York, NY
Associate Physician	The Rockefeller University Hospital (1984 - 1986) New York, NY
Fellow	The Rockefeller University (1983 - 1985) New York, NY

Resident	Department of Neurology (1982 - 1983) UT Southwestern Medical Center, Dallas, TX
Intern	Department of Medicine (1981 - 1982) UT Southwestern Medical Center, Dallas, TX

EDUCATION

Medical School: University of Chicago, M.D., 1981
Undergraduate: University of California, San Diego (Revelle College), B.A., 1976

AWARDS

2013 Rabbi Shai Shacknai Memorial Prize in Immunology and Cancer Research
2013 Korsmeyer Award
2012 Drexel Medicine Prize in Immunology
2011 Nobel Prize in Physiology or Medicine
2011 Shaw Prize, PRC
2010 University of Chicago, Professional Achievement Citation
2009 Will Rogers Institute Annual Prize for Scientific Research
2009 Albany Medical Center Prize in Medicine and Biomedical Research
2008 Frederik B. Bang Award (The Stanley Watson Foundation, USA)
2007 Balzan Prize (International Balzan Foundation, Italy and Switzerland)
2006 Gran Prix Charles-Léopold Mayer (Académie des Sciences, France)
2006 William B. Coley Award (Cancer Research Institute, USA)
2004 Robert Koch Prize (Robert Koch Stiftung, Germany)
1994 Young Investigator Award (American Federation for Clinical Research, USA)
1993 Alexander von Humboldt Prize, Germany

OTHER HONORS

2013 Elected Member, American Academy of Arts & Sciences
2013 Honorary Professor, Peking University.
2012 Honorary Professor, Trinity College, Dublin, Ireland
2012 Member, German Academy of Sciences (Leopoldina)
2012 Officier de la Legion D'Honneur, France
2009 Elected Associate Member, EMBO
2009 Honorary Doctoral Degree, Xiamen University, PRC
2008 "Citation Laureate," Thomson Reuters, CA
2008 Elected Member, the National Academy of Sciences, US
2008 Elected Member, the Institute of Medicine of the National Academies, USA
2007-2016 Recipient of NIH/NIGMS MERIT Award, US
2007 Dr. Med. Honoris Causa, Technical University of Munich, DE
2001 "Highly Cited" researcher, Institute for Scientific Information, US
2001 Elected Member, Association of American Physicians, US
1990 Elected Member, American Society for Clinical Investigation, US

EDITORIAL APPOINTMENTS (Past and Present)

Honorary Academic Advisory Board, *Peer J*
Editorial Board, *Journal of Biological Chemistry*
Editorial Board, *Journal of Innate Immunity*
Advisory Editor, *Journal of Experimental Medicine*
Consulting Editor, *Journal of Clinical Investigation*
Editorial Board, *Microbes and Infection*
Editorial Board, *Journal of Endotoxin Research*
Editorial Board, *Mammalian Genome Editorial Board*
Highlights Consulting Editor, *Nature Reviews Immunology*
(Also a frequent reviewer for *Nature*, *Nature Immunology*, *Nature Medicine*, *Science*, *Cell*, *Immunity*, and other journals)

CONSULTING APPOINTMENTS (Past and Present)

Sino-French Hoffman Institute, Guangzhou Medical University, Scientific Advisory Board
Innovation Center for Cellular Stress and Homeostasis Research, Alliance of Xiamen University – Zhejiang University – University of Science & Technology of China, Scientific Advisor
Sound Pharma, Advisor
AstraZeneca, Consultant
Sanford-Burnham Medical Research Institute, Scientific Advisory Board Member
aTyr Pharma, Inc., Consultant
Centocor Research and Development, Consultant
Pfizer Global Research and Development, Therapeutic Area Scientific Advisory Panels
Phenomix Corporation, Scientific Advisory Board Member
EluSys, Inc., Scientific Advisory Board Member
Cellegy, Inc., Scientific Advisory Board Member
De Novo, Inc., Consultant
Cell Therapeutics, Inc., Scientific Advisory Board Member
Sanofi-Elf Biorecherche, Consultant
Bristol Myers-Squibb, Consultant
Exelixis, Consultant
Pfizer Inc., Consultant
Lilly Inc., Consultant

PROFESSIONAL ASSOCIATIONS

Associate Member, EMBO
Member, The National Academy of Sciences, USA
Member, The Institute of Medicine, USA
Member, International Mammalian Genome Society
Member, American Society of Human Genetics
Founding Member and Councillor, Society of Innate Immunity
Charter Member and Councillor, International Endotoxin and Innate Immunity Society
President, 5th International Congress on TNF & Related Cytokines (1992 - 1994)

PRESENT RESEARCH INTERESTS

The role of cytokines in the inflammatory response, the molecular genetics of innate immune reactions, and the phenotype-driven analysis of immunity.

PATENTS

U.S. Patent number: 5,447,851
Issue Date: September 5, 1995
Title: DNA Encoding a Chimeric Polypeptide Comprising the Extracellular Domain of TNF Receptor Fused to IgG, Vectors, and Host Cells
This patent covers the invention of recombinant TNF inhibitor proteins made by fusing IgG to the ectodomain of the TNF receptor, the enabling principle of the clinically effective TNF inhibitor Enbrel (Etanercept): a drug that is highly effective in the treatment of rheumatoid arthritis, Crohn's disease, ankylosing spondylitis, and psoriasis.

U.S. Patent number: 5,616,688
Issue Date: April 1, 1997
Title: Macrophage-Derived Inflammatory Mediator (MIP-1α and β)
This patent covers the discovery of MIP-1α and MIP-1β, key inflammatory chemokines identified as LPS-inducible proteins during the isolation of TNF.

U.S. Patent number: 5,770,402
Issue Date: June 23, 1998
Title: DNA Encoding Macrophage Inflammatory Protein-1γ
This patent covers the discovery of MIP-1γ.

U.S. Patent number: 7,029,861
Issue Date: April 18, 2006
Filing Date: Sept 15, 1998
Title: LPS-Response Gene compositions and Methods
This patent covers the discovery of the function of the mammalian Toll-like receptors as microbial sensors and the utility of this discovery in the design of drugs that inhibit LPS signaling.

SELECTED PUBLICATIONS (selected from over 350 publications)

B. Beutler, D. Greenwald, J.D. Hulmes, M. Chang, Y.C. Pan, J. Mathison, R. Ulevitch and A. Cerami. Identity of tumour necrosis factor and the macrophage-secreted factor cachectin. ***Nature*** 316:552-554, (1985).

B. Beutler, I.W. Milsark and A. Cerami. Passive immunization against cachectin/tumor necrosis factor (TNF) protects mice from the lethal effect of endotoxin. ***Science*** 229:869-871, (1985).

J. Han, T. Brown and **B. Beutler**. Endotoxin-responsive mRNA sequences control cachectin/TNF biosynthesis at the translational level. ***Journal of Experimental Medicine*** 171:465-475, (1990).

K. Peppel, D. Crawford and **B. Beutler**. A tumor necrosis factor (TNF) receptor-IgG heavy chain chimeric protein as a bivalent antagonist of TNF activity. ***Journal of Experimental Medicine*** 174:1483-1489, (1991).

A. Poltorak, X. He, I. Smirnova, M.-Y. Liu, C. Van Huffel, X. Du, D. Birdwell, E. Alejos, M. Silva, C. Galanos, M. Freudenberg, P. Ricciardi-Castagnoli, B. Layton, and **B. Beutler**. Defective LPS signaling in C3H/HeJ and C57BL/10ScCr mice: Mutations in the *TLR4* gene. ***Science*** 282: 2085-2088, (1998).

A. Poltorak, P. Ricciardi-Castagnoli, S. Citterio and **B. Beutler**. Physical contact between LPS and TLR4 revealed by genetic complementation. ***Proceedings of the National Academy of Sciences of the United States of America*** 97:2163-2167, (2000).

K. Hoebe, X. Du, P. Georgel, E.M. Janssen, K. Tabeta, S.O. Kim, J. Goode, P. Lin, N. Mann, S. Mudd, K. Crozat, S. Sovath, J. Han and **B. Beutler.** Identification of Lps2 as a key transducer of MyD88-independent TIR signalling. ***Nature*** 424:743-748, (2003).

K. Hoebe, P. Georgel, S. Rutschmann, X. Du, S. Mudd, K. Crozat, S. Sovath, L. Shamel, T. Hartung, U. Zähringer and **B. Beutler**. CD36 is a sensor of diacylglycerides. ***Nature*** 433***:***523-527, (2005).

K. Tabeta, K. Hoebe, E.M Janssen, X. Du, P. Georgel, K. Crozat, S. Mudd, N. Mann, S. Sovath, J. Goode, L. Shamel, A.A. Herskovits, D.A. Portnoy, M. Cooke, L.M. Tarantino, T. Wiltshire, B.E. Steinberg, S. Grinstein and **B. Beutler**. The Unc93b1 mutation 3d disrupts exogenous antigen presentation signaling via Toll-like receptors 3, 7 and 9. ***Nature Immunology*** 7:156-164, (2006).

M. Berger, P. Krebs, K. Crozat, X. Li, B.A. Croker, O.M. Siggs, D. Popkin, X. Du, B.R. Lawson, A.N. Theofilopoulos, Y. Xia, K. Khovananth, E.M.Y. Moresco, T. Satoh, O. Takeuchi, S. Akira and **B. Beutler**. A Slfn2 mutation causes lymphoid and myeloid immunodeficiency due to loss of immune cell quiescence. ***Nature Immunology*** 11:335-43, (2010).

A.L. Blasius, A.E. Dubin, M.J. Petrus, B.K. Lim, A. Narezkina, J.R. Criado, D.N. Wills, Y. Xia, E.M. Moresco, C. Ehlers, K.U. Knowlton, A. Patapoutian, and **B. Beulter**. Hypermorhic mutation of the voltage-gated sodium channel encoding gene Scn10a causes a dramatic stimulus-dependent neurobehavioral phenotype. ***Proceedings of the National Academy of Sciences of the United States of America*** 108:19413-19418, (2011).

O.M. Siggs, X. Li, Y. Xia, **B. Beutler**. ZBTB1 is a determinant of lymphoid development. ***Journal of Experimental Medicine*** 209:19-27, (2012).