



Curriculum Vitae Professor Dr. Ernest M. Wright

Name: Ernest Wright
Born: 8 June 1940
Family Status: married



Academic and Professional Career

1987 - 2000 Chairman, Department of Physiology, University of California, Los Angeles, USA
1979 - 1980 Vice-Chairman, Department of Physiology, University of California, Los Angeles, USA
1978 D.Sc. University of London, UK (Physiology)
1977 Visiting Professor, Queen Elizabeth College, University of London, London, UK
since 1974 Professor of Physiology, University of California, Los Angeles, USA
1974 - 1975 Visiting Professor, Max Planck Institute für Biophysik, Frankfurt / Main, Germany
1973 Visiting Professor, Department of Physiology, Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional de México
1970 - 1974 Associate Professor of Physiology, University of California, Los Angeles, USA
1967 - 1970 Assistant Professor of Physiology, University of California, Los Angeles, USA
1965 - 1966 Research Fellow in Biophysics, Harvard Medical School, Boston, USA
1963 - 1965 Research Assistant, University of Sheffield, England (Professor D.H. Smyth, FRS)
1964 Ph.D. University of Sheffield, UK (Physiology)

1961 B.Sc. University of London, UK (Chemistry & Physiology)

Project coordination, Membership in collaborative research projects (Selection)

since 2006 Advisory Board, Center for Structures of Membrane Proteins, UCSF
2006 NIH National Commission on Digestive Diseases
2002 - 2012 Review Panel, NCCR Structural Biology, Swiss National Science Foundation
2001 - 2011 Advisory Board, Broad Medical Research Program
1999 - 2002 Steering Committee, American Physiological Society
1986 - 1989 Councilor, Society of General Physiologists, Councilor, Gastrointestinal Section
1983 - 1986 Chairman, Physiology Study Section, National Institutes of Health
1982 - 1986 Physiology Study Section, National Institutes of Health

Functions in Scientific Societies and Committees (Selection)

2006 - 2009 Channels, Associate Editor
2006 NIH National Commission on Digestive Diseases
2002 - 2012 Review Panel, NCCR Structural Biology, Swiss National Science Foundation
since 2001 Advisory Board, Broad Medical Research Program
2000 - 2008 Journal of Membrane Biology
1999 - 2002 Councillor, Gastrointestinal Section Steering Committee, American Physiological Society
1996 - 2000 FASEB Journal
1991 - 1992 Current Opinion in Cell Biology Section Editor
1986 - 1989 Pflugers Archiv.--European Journal of Physiology Field Editor
1986 - 1989 Councillor, Society of General Physiologists
1983 - 1986 Chairman, Physiology Study Section, National Institutes of Health
1982 - 1986 Physiology Study Section, National Institutes of Health
1981 - 1985 Molecular Physiology

- 1977 - 1989 J. Membr. Biochem.
- 1977 - 1990 Amer. J. Physiology, Cell Physiology and Gastrointestinal Sections

Honours and Awarded Memberships (Selection)

- since 2006 Member of the German Academy of Science Leopoldina
- 2006 101st UCLA Faculty Researcher Lecturer
- 2006 Honorary Member of the Physiology Society
- 2006 Charles F. Code Memorial Lecturer, Mayo Clinic
- 2005 Fellow of the Royal Society
- 2005 Fellow of the Biophysical Society
- 2005 Plenary Lecturer, 84th Annual Meeting of the German Physiological Society
- since 2004 Distinguished Professor of Physiology
- 2004 Janssen / Am. Gastroenterology Society Award for Sustained Achievement in Digestive Sciences
- 2001 Arnost Kleinzeller Memorial Lecture, University of Pennsylvania, USA
- 2000 Horace W. Davenport Distinguished Lecturer, Experimental Biology 2000, San Diego, USA
- 1999 Pfizer Lecture, University of Michigan, Ann Arbor
- since 1999 Sherman Mellinkoff Distinguished Chair in Medicine
- 1995 Proctor & Gamble Lecture, School of Life Sciences, University of Illinois, Urbana-Champaign
- 1994 Boehringer Mannheim Lecturer, Association of Clinical Biochemists, Brighton, U.K.
- 1993 Distinguished Lecturer, Medical College of Virginia
- 1992 Morton Grossman Lecturer, Leuven, Belgium
- 1990 Imperial Chemical Industries, Physiological Sciences Review Lecture, University of Manchester

1990	G.W. Harris Memorial Lecture, British Physiological Society
since 1989	Who's Who in America
1989	Smith, Kline and French Prize for G.I. Research, American Physiological Society
1989	Walter B. Cannon Lecturer, American Physiological Society
1988	McDowall Lecture in Physiology, King's College London, UK
1987	Citation Classic, Institute for Scientific Information (Diamond & Wright, 1969, cited over 495 times)
1985 - 1992	Senator Jacob K. Javits Neuroscience Investigator Award

Major Scientific Interests

I am a physiologist with a long standing interest in the human biology of sodium glucose cotransporters and in training students, post-doctoral and clinical fellows, and junior faculty. Highlights of our success in research include the cloning of the intestinal and renal transporters, SGLT1 and SGLT2, kinetic modeling of SGLT1, the identification of SGLT1 mutations causing Glucose-Galactose Malabsorption, solving the structure of the bacterial transporter vSGLT in two conformations, and the molecular dynamic simulations of: 1. sodium and sugar exit from vSGLT; and 2. water transport. Following our discovery that SGLT genes are expressed throughout the human body, not just the intestine and kidney, we have entered into a long and productive collaboration with Jorge Barrio to monitor the activity of SGLTs in humans using PET imaging. This has resulted in the development of [F18]-labeled sugar tracers specific for SGLTs and inhibitors for hSGLT2. A patent has just been issued and the first of a series of papers on the functional activity of SGLTs has been just published (Functional activity of SGLTs in the rat brain, Yu et al 2010). A product of our long collaboration with Jorge Barrio has been our ability to develop high affinity, specific inhibitors for hSGLT2 and this enables us to carry out a sophisticated analysis of hSGLT2-drug interactions. I am particularly interested in exploring the function of hSGLT2 from the atomic level all the way up to its functional role in the intact human subjects. The new specific SGLT2 inhibitors only block renal glucose reabsorption *in vivo* by 50% and there is no information about the effects on other organs where SGLT2 is expressed, e.g. heart and brain.. With regard to trainees, many of my former students and post-docs have reached leadership positions in academic medicine both here in abroad