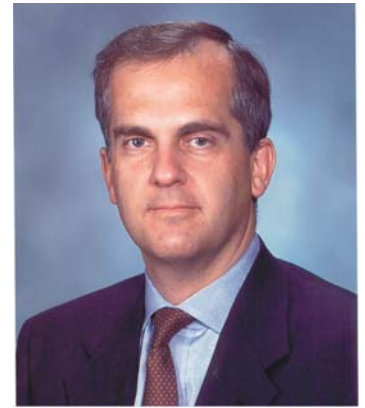


Curriculum Vitae

JULIO M. FERNANDEZ, Ph.D.



Home Address:

448 Riverside Drive, Apt. 31
New York, NY 10027

Office Address:

Department of Biological Sciences
MC 2449
Columbia University
1212 Amsterdam Avenue
New York, NY 10027

Education:

1972-1977

Physics - Licenciata in Physics,
University of Chile, Physics Department

1977-1982

Physiology - Ph.D.- University of California, Los Angeles,
School of Medicine, Department of Physiology

Postgraduate Training and Fellowship Appointments:

1982-1983

Postdoctoral Research Fellow, University of
California, Los Angeles

1983-1986

Postdoctoral Research Fellow, Max Planck Institut
fuer Biophysikalische Chemie., Department of
Membrane Biophysics, Goettingen, Germany

Faculty Appointments:

1987 - 1989

Assistant Professor, Department of Physiology,
School of Medicine, University of Pennsylvania,
Philadelphia, PA 19104

1989 - 2002

Associate Professor, Professor (1994) and Consultant,
Department of Physiology and Biophysics, Mayo Foundation,
Rochester, MN 55905

2002 – Present

Professor, Department of Biological Sciences,
Columbia University, New York, NY 10027

Other Professional Experience:

1994-1995	Co-Founder of Tacora Corporation, Chairman of the Scientific Advisory Committee.
1997-1998	Founder of the Biomedical Engineering Graduate Program at the Mayo Graduate School
1997-2000	Chairman, Department of Physiology and Biophysics, Mayo Foundation, Rochester, MN 55905
2002	Co-Organizer, German-American Frontier of Sciences meeting.
2002-2004	Member of the Technical Advisory Board at VEECO Digital Instruments Corporation
2003-2006	Chairman, NIH BBCB/MSFC Study Section

Grant Awards (current):

07/99 - 6/2008	"Molecular Basis of Titin Elasticity," NIH RO1 HL61228
1/01 - 12/2009	"Micromechanics of the Extracellular Matrix," NIH R01 HL66030

Past:

04/96- 03/2000	"Regulation of Exocytotic Release by Smart Hydrogels," NIH RO1 -GM 46688
09/96 - 08/2000	"Molecular Architecture of an Active Zone of Exocytosis," NIH 5R01 NS 35866
07/87 - 06/98	"Stimulus Secretion Coupling in Mast Cells," NIH R29 (1987-92), RO1 (1992-98)- GM 38857
02/92 - 02/96	"Structure of the Exocytotic Fusion Pore in Mast Cells," NIH R01 GM 46688
07/89- 06/94	"Mechanisms of Secretory Granule Formation and Secretion," Established Investigatorship from the American Heart Association
07/88 - 06/91	"Tomographic Reconstruction of Secretory Granules in Living Cells," The Whitaker Foundation

Awards and Honors:

1977	Graduated with highest distinction
1981	Phi Beta Kappa Award
1981	Grass Foundation Fellowship
1982	American Heart Association Fellowship
1983-1985	Alexander von Humboldt Fellowship
1985-1986	Max-Planck Fellowship
1989-1994	Established Investigator of the American Heart Association
1995	Boehringer Ingelheim Lecture, University of Mainz
1996	Alexander von Humboldt Senior US scientist award
2001	Fellow of the American Heart Association
2002-2005	Council Member of the Biophysical Society
2005	Woodward Lecture, Harvard-MIT Physical Chemistry

Memberships in Professional and Scientific Societies:

Biophysical Society
American Heart Association
American Chemical Society
Alexander von Humboldt Association of America

Peer Review Committees:

1992-1993	National Science Foundation, Cell Biology Panel, member
1994-1996	National Institutes of Health, Cellular Biology Study Section CBY-1, member
2001-2003	Advisory Committee of the Volkswagen Stiftung, Hannover, Germany, member
2003-2006	Chairman, National Institutes of Health, Biophysical Chemistry BBCB/MSFC Study Section.
2004-Present	Burroughs Wellcome Fund advisory committee on Career Awards at the Scientific Interface, member
2006	Reviewer for the German Excellence Initiative of the DFG.

Invited speaker at Meetings and Special Lectures (selected):

November 1-3, 2006	2006 Carolina Biophysics Symposium, University of North Carolina, Chapel Hill, NC.
September 26-29, 2006	CECAM, Theory of single molecule force experiments and stimulations, Lyon, France.
September 22, 2006	"Biomolecular Regulation", Nobel Institute for Chemistry. Royal Swedish Academy of Sciences (KVA), Stockholm, Sweden.

August 14-25, 2006	Asian/Pacific Regional College on “Science at the Nanoscale”, International Centre for Theoretical Physics, Beijing, P.R. China.
July 30-August 6, 2006	ICN+T 2006 International Conference on Nanoscience and Technology, Basel, Switzerland.
June 18-23, 2006	Gordon Conference on Single Molecule Approaches to Biology, New London, NH.
May 13-17, 2006	Biophysical Chemistry Symposium, McGill University, Montreal, QC, Canada.
January 15-20, 2006	Gordon Research Conference (GRC), Ventura, CA.
October 18-19, 2005	I Symposium on Single-Molecule Protein Mechanics at the Cajal Institute, Madrid, Spain.
July 2-7, 2005	FEBS Congress and IUBMB Conference, Budapest, Hungary.
May 28- June 4, 2005	International Centre for Theoretical Physics, Trieste, Italy.
April 21, 2005	“Single Molecules Symposium” at the University of Pennsylvania
April 10-14, 2005	“Physics in Biology Symposium”: A Century after Einstein, Institute of Physics, University of Warwick, England
February 12-16, 2005	"Advances in Single-Molecule and Single-Cell Detection and Manipulation" Biophysical Society 2005 Annual Meeting, Long Beach, CA
February 3, 2005	Woodward Lecture Series in the Chemical Sciences, Harvard-MIT Physical Chemistry, Boston, MA
August 22-26, 2004	Biophysical Chemistry and Novel Imaging of Single Molecules and Single Cells, American Chemical Society, Philadelphia, PA
May 24-28, 2004	Spring College on Science at the Nanoscale. Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy

March 15-19, 2004	Protein Folding Week, Statistical Mechanics of Molecular and Cellular Biological Systems at the Isaac Newton Institute for Mathematical Sciences, Cambridge, England
January 6-9, 2004	International Workshop on Single Molecule Biophysics, National Center for Biological Sciences, Bangalore, India
September 18-19, 2003	NELSI Research Symposium, Leeds University, England
August 11-15, 2003	The Abdus Salam International Center for Theoretical Physics, Trieste, Italy
February 24-28, 2003	Current Issues of Nano-Bio-Science, CeNS Winterschool 2003, Mauterndorf, Austria
February 12-14, 2003	Physical Society of the Republic of China (PSROC) Annual Meeting, Hualien, Taiwan
November 4-7, 2002	6 th Annual Membrane Research Forum, Nagoya, Japan
November 2-4, 2002	Japanese Biophysical Society Symposium, Nagoya, Japan
June 6-8, 2002	Member of the Organizing Committee, German-American Frontiers of Science Symposium (GAFOS). National Academy of Sciences conference center in Irvine, California
May 12-17, 2002	First International Conference and School on Nanoscale and Molecular Mechanics, Maui, Hawaii
April 7-11, 2002	National Meeting and Exposition Program of the American Chemical Society, Orlando, FL
January 5-10, 2002	Mathematics and Molecular Biology VII, PMMB, Santa Fe, NM.
November 19-20, 2001	Opening of the "Zentrum für Multifunktionelle Werkstoffe und Miniaturisierte Funktionseinheiten" at the Max-Planck-Institut für Polymerforschung, Mainz, Germany
September 4-7, 2001	15th Annual Meeting of the Chilean Society for Cell Biology, Valdivia, Chile
July 28-August 1, 2001	15th Symposium of the Protein Society, Philadelphia, PA

June 7-10, 2001	7th Annual German-American Frontiers of Science Symposium Bad-Homburg, Germany
March 5-7, 2001	Second Symposium of the Schwerpunktprogramm, "Physics, Chemistry and Biology with Single Molecules," Kloster Banz, Staffelstein, Germany
January 14-20, 2001	Winter workshop on Single Molecule Biophysics. Aspen Center for Physics, Aspen, CO
December 14-16, 2000	2000 US-Swiss Forum on NanoBioSciences, Princeton University, Princeton, NJ
October 19-21, 2000	Third Triangle Biophysics Symposium, UNC and Duke University, Durham, NC
July 24-26, 2000	Force Transduction in Biology Workshop, National Science Foundation. Washington, DC
July 12-15, 2000	"Micro-Nano-Bio: Common Methods and Mechanisms in Materials and BioSciences" Max Planck Society, Schloss Ringberg , Bavaria, Germany
June 25-26, 2000	"Nanoscience and Nanotechnology: Shaping Biomedical Research," National Institute of Health, Bioengineering Consortium Symposium, Bethesda, MD
June 8-10, 2000	6th Annual German-American Frontiers of Science Symposium, Irvine, CA
April 17-18, 2000	Single Molecule Detection and Manipulation Workshop, National Institute of Health, Bethesda, MD
March 20-24, 2000	The American Physical Society, Minneapolis, MN

Invited Seminars to Universities and Research Institutes (selected):

Princeton University
Massachusetts Institute of Technology
Johns Hopkins Medical School
University of Chicago
Max Planck Institute, Goettingen, Germany
Max Planck Institute, Heidelberg, Germany
University of Frankfurt, Frankfurt, Germany
EMBL, European Molecular Biology Institute
Institute of Zoology, Munich, Germany
Anatomisches Institut der Technischen Universitat, Munich
Boston University
Biochemisches Institut, Universitaet Zurich, Switzerland
Cambridge University, England
University of Illinois, Urbana-Champaign
University of Barcelona, Barcelona, Spain
Ecole Normale Superieure, Paris, France
Ludwig-Maximilians-Universitat Munich, Germany
University of California, Berkeley
University of California, Santa Barbara
University of California, San Diego
University of California, Irvine
University of California, Los Angeles
University of Texas, Galveston
University of Texas, Southwestern Medical Center, Dallas,
Cornell University, Ithaca
Yale University
Stanford University
Harvard University
University of Washington, Seattle
Washington University, St. Louis
University of Virginia, Charlottesville
Vollum Institute
Freie Universitat, Berlin, Germany
Iowa State University, Ames
University of Seville, Spain
University of Minnesota
Baylor School of Medicine, Houston
State University of New York, Stony Brook
State University of New York, Buffalo
Mount Sinai School of Medicine
Columbia University
Scripps Research Institute
University of Wisconsin, Madison
Duke University, Durham
California Institute of Technology, CA

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Taylor, R.E., Fernandez, J.M. and Bezanilla, F. (1981). Squid axon membrane low frequency dielectric properties. In: The Biological Approach to Excitable Membranes. W.J. Adelman, Jr., and D.E. Goldman (Eds.), Plenum, New York, pp. 97-106.

Bezanilla, F., Taylor, R.E. and Fernandez, J.M. (1982). Distribution and kinetics of membrane dielectric polarization. I. Long-term inactivation of gating currents. J. Gen. Physiol. 79:21-40.

Fernandez, J.M., Bezanilla, F. and Taylor, R.E. (1982). Distribution and kinetics of membrane polarization. II. Frequency domain studies of gating currents. J. Gen. Physiol. 79:41-68.

Fernandez, J.M., Bezanilla, F. and Taylor, R.E. (1982). Effect of the chloroform on charge movement in the nerve membrane. Nature 297:150-152.

Fernandez, J.M., Taylor, R.E. and Bezanilla, F. (1983). Induced capacitance in the squid giant axon. Lipophilic ion displacement currents. J. Gen. Physiol. 82:331-346.

Fernandez, J.M., Fox, A. and Krasne, S. (1984). Membrane patches and whole-cell membranes: A comparison of electrical properties in rat clonal pituitary (GH3) cells. J. of Physiol. 356:565-585.

Schroeder, J.I., Hedrich, R. and Fernandez, J.M. (1984). Potassium-selective single channels in guard cell protoplast of *Vicia faba*. Nature 312:361-362.

Fernandez, J.M., Neher, E. and Gomperts, B.D. (1984). Capacitance measurements reveal stepwise fusion events in degranulating mast cells. Nature 312:453-455.

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Neher, E., Fernandez, J.M. and Lindau, M. (1986). The calcium dependence of vesicle exocytosis. In: Molecular Neurobiology in Neurology and Psychiatry Ed., E.R. Kandel, Raven Press, New York, pp. 103-110.

Hedrich, R. Fluegge, U.I. and Fernandez, J.M. (1986). Patch-clamp studies of ion transport in isolated plant vacuoles. FEBS Lett. 3910, 204:228-232.

Lindau, M. and Fernandez, J.M. (1986). A patch-clamp study of histamine secreting cells. J. Gen. Physiol. 88:349-368.

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