UNIVERSITY OF KENTUCKY COLLEGE OF MEDICINE CURRICULUM VITAE

**NAME:** Philip W. Landfield, Ph.D.

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**EDUCATION:**

1967 University of California, Berkeley

B.A.

1972 University of California, Irvine

Ph.D. Sch. Biol. Sci. [Psychobiology]

**POSTDOCTORAL TRAINING:**

1972-1974 Postdoctoral Fellow [NIH Fellowship] Neurobiology Program

School of Medicine

University of North Carolina

Chapel Hill, North Carolina

**ACADEMIC EMPLOYMENT:**

Academic Positions:

1974-1978 Assistant Research Professor Department of Psychobiology University of California

Irvine, California

1979-1982 Assistant Professor

Department of Physiology and Pharmacology

Wake Forest University School of Medicine

Winston-Salem, North Carolina

1982-1987 Associate Professor

Department of Physiology and Pharmacology

Wake Forest University School of Medicine

Winston-Salem, North Carolina

1987-1991 Professor

Department of Physiology and Pharmacology Wake Forest University School of Medicine Winston-Salem, North Carolina

1991-2012 Professor and Chair

Department of Molecular and Biomedical Pharmacology

University of Kentucky College of Medicine

Lexington, Kentucky

2012- Professor

Department of Molecular and Biomedical Pharmacology

University of Kentucky College of Medicine

Lexington, Kentucky

Teaching Experience:

Research techniques in electrophysiology (for graduate students); undergraduate core course in psychobiology; Psychobiology undergraduate labs; advanced seminar in psychobiology (Univ. California, Irvine).

Co-director, undergraduate research participation program (Univ. California, Irvine) Medical student lectures in neurophysiology and neuropharmacology; neuroscience

lectures to neurology residents; medical student conferences (endocrinology and

neurophysiology); medical student lab in neurobiology; seminar for graduate and medical students; lectures in gerontology. (Bowman Gray Sch. Med., Wake Forest Univ.)

Associate Topic Chairman, Gerontology/Geriatrics Course, medical curriculum (Bowman

Gray Sch. Med., Wake Forest Univ.)

Ph.D. dissertation advisor for nine students; Ph.D. thesis committee member for numerous other students

Co-chair, RWJ Medical Curriculum Revision, Disease and Treatment Segment (Univ. Kentucky)

Participation in the development and administration of several new department courses and initiatives; curriculum revisions.

Administrative Experience:

Program Director, Undergraduate Research Participation Program, Wake Forest

University, 1979.

Graduate Studies Program Director, Department of Physiology and Pharmacology, WFU School of Medicine, 1984-1987.

Executive Steering Committee, Program Project “Stress and Aging,” 1984-1987, WFU School of Medicine.

Gerontology-Geriatrics Topic Chair, Medical Curriculum, WFU School of Medicine. Associate Director for Basic Sciences, J. Paul Sticht Center on Aging, Bowman Gray

School of Medicine, Wake Forest Univ. 1987-1991.

Principal Investigator, Program Project Grant “Ca2+ Regulation in Brain Aging and

Alzheimer's Disease”, University of Kentucky, 1993-2010.

Chair, Department of Molecular and Biomedical Pharmacology, University of Kentucky

College of Medicine, 1991-2012

**RESEARCH INTERESTS:**

Neurobiology/electrophysiology of brain aging, Alzheimer‟s disease, and memory

Role of stress hormones/steroids in regulating aging and neuropathology

Genome-wide regulation of hippocampal gene expression and relationships to function

Pharmacological and gene therapeutic interventions in aging-related decline

**GRANTS:**

**As Principal Investigator:**

**Current:**

**Hippocampal Electrophysiology and Myelinogenesis in Healthy Cognitive Aging**

1R01AG034605 (Landfield, PI, 5 Co-investigators) 09/01/09 – 08/31/15

NIH/NIA $2,993,890

The goals of this project are to test the novel hypothesis that the increased myelinogenesis we have seen in the hippocampus during rodent aging is a major factor in cognitive decline

**Hippocampal Synaptic Structure - Physiology During Aging**

5R37 AG004542-21 (Landfield, P.I., 3 Co-Investigators) 03/01/11-02/28/16

NIA Merit Award $2,044,148 (1st 5 yr-period)

The major goals of this project are to investigate the mechanisms underlying altered Ca2+ regulation and impaired neuronal function or neuronal vulnerability with aging. Advanced molecular and viral gene therapy technologies are used concomitantly with gene microarrays, Ca2+ imaging and electrophysiology in hippocampus.

**Pending:**

**Hippocampal Electrophysiology and Myelinogenesis in Healthy Cognitive Aging (Renewal)**

5R01AG034605 (Landfield, Co-PI, 5 Co-investigators) 04/01/2015 – 03/31/2020

NIH/NIA $4,550,000

The goals of this project are to test the novel hypothesis that the increased myelinogenesis we have seen in the hippocampus during rodent aging is a major factor in cognitive decline

**Recent Grants:**

**Program Project Grant: Calcium Regulation in Brain Aging and Alzheimer’s Disease**

5P01 AG010836-15 11/1/04-10/30/10 No-Cost Extension

(Landfield, P.I. of the PPG, 9 Investigators, 6 Projects/Cores)

NIA $1,486,166 (Current Year); $7,541,729 (Total PPG) The primary goals of the PI‟s component of this PPG are to test whether steroid hormones modulate

major sources of Ca2+, and whether changes with age in Ca2+ regulation are similar to those in

models of Alzheimer‟s disease. The effects of steroids, energy metabolism and of long-term

modulation of multiple brain pathways on Ca2+ regulation and on gene expression/regulation and

physiological function in brain cells are studied to determine underlying mechanisms of aging/AD- related decline.

**Novel Methods for Single Neuron Gene/Function Studies**

AG018228 (Landfield, P.I., 3 Co-Investigators) 9/30/99-6/30/02

NIA/NINDS $286,144 (last year); $866,471 (total)

The major goals of this project were to develop novel methods for measuring gene expression in single physiologically characterized neurons. This project was based on a method we developed in “zipper”

brain slices (so called for their tendency to slowly dissociate along cell body layers) that allows the extraction and molecular analysis of largely intact brain neurons containing their full complements of mRNA. The quantification of single cell mRNA content (Chen et al, 2000; Blalock et al, 2001) appears to provide a valuable approach to determining which of thousands of expressed genes in a microarray analysis are closely related to function.

**Multiuser Affymetrix Gene Chip System**

(1S10 RR15833-01)

(Landfield, P.I.; 10 major users) 4/1/01-3/31/02 Total Project Amount: $214,546

The Affymetrix Gene Chip System purchased with this award is the centerpiece of the Gene Microarray

Core Facility established in the College of Medicine for use by all University faculty.

**Competitive Administrative Supplement to Advance DNA Array Technology in Ongoing Projects**

(Added to AG018228)

(Landfield, P.I.) 9/1/00-6/30/01 Total Project Amount: $99,224

NIH NIA

This Administrative Supplement was awarded competitively to introduce gene chip technology into funded projects, and supported two major studies.

**Electrophysiological, Behavioral and Genetic Indicators of Cognitive Performance Deficits Associated with Sleep-Deprivation in Nonhuman Primates: Assessment and Prevention** (Landfield, P.I. of Component 3)

DARPA 3/1/04-01/31/07 Total Component 3 Amount: $1,141,783

**As Sponsor:**

**Role of Calcineurin in Calcium Channel Regulation During Aging**

1F32AG05903 (NRSA) (Landfield, Sponsor; Christopher Norris, PI Trainee) 9/1/00-8/31/03

NIA Postdoctoral Fellow Salary Support Amount: $37,516/year

The major objectives of this project were to utilize advanced zipper slice single cell technology and confocal laser scanning microscopy to analyze the role of age-related changes in neuronal calcineurin expression in regulating Ca channels during brain aging.

**RESEARCH MENTORING**

Major Ph.D. Advisor:

Primary advisor for 9 Ph.D. Students mentored through Ph.D. degree, eight of whom are in research/academics (one vice president of research, seven faculty or research scientist level).

Member of dozens of PhD dissertation committees

Postdoctoral mentor:

More than 12 Ph.D.s mentored or co-directed at the Postdoctoral/Research Associate/Research

Faculty level.

Currently serving as co-mentor for Dr. Adam Backstedder on his K99 transitional award

**INTELLECTUAL PROPERTY/PATENTS:**

Issued:

“Method of Protecting Against Neuron Loss”

(Patent No: 5,939,407; issued August 17, 1999)

Inventor: Philip W. Landfield

Patent Owner: University of Kentucky

“A Method for Analyzing Molecular Expression or Function in an Intact Single Cell”

(U.S. Patent Application No. 60/157,849; Filed July 27, 2000; Provisional filed: August 13, 1999)

Inventors: Philip Landfield, Olivier Thibault, Eric Blalock, Kuey-Chu Chen, Patrick Kaminker

Patent Owner: University of Kentucky (Abandoned)`

“Method for Storing and Retrieving Sequential Information”

(U.S. Patent Application No. 60/187,171; Filed: March 2, 2000; Provisional filed: July 30, 1999)

Inventors: Philip Landfield and Olivier Thibault

Patent Owner: University of Kentucky

“Neural Network Model for Instruments that Store and Retrieve Sequential Information”

(U.S. Patent No. 7,643,354, issued January 05, 2010)

Inventors: Philip Landfield and Olivier Thibault

Patent Owner: University of Kentucky

“Gene Expression Profile Biomarkers and Therapeutic Targets for Brain Aging and Age-related

Cognitive Impairment”

(U.S. Patent #7,739,056; awarded 6/15/10)

Inventors: Philip Landfield, Eric Blalock, Kuey-Chu Chen, Tom Foster

Patent Owner: University of Kentucky

Pending:

Nov. 18, 2011-Provisional patent filed: “A METHOD FOR DIAGNOSING AND TREATING ALZHEIMER‟S DISEASE (AD) USING MOLECULES THAT STABILIZE INTRACELLULAR CALCIUM (Ca2+) RELEASE”

**PROFESSIONAL ACTIVITIES:**

Society Memberships:

American Association for Advancement of Science (Fellow, 2009) Association for Medical School Pharmacology Chairs

Society for Neuroscience

The Gerontological Society of America (Fellow of the Biological Sciences Section) American Society for Pharmacology and Experimental Therapeutics

National Advisory Panels:

1978-1980 Member

Subcommittee on the Rat as a Model for Aging Studies

Committee on Animal Models of Aging National Academy of Sciences Washington, D.C.

1978-1980 Chair

Subcommittee on Interspecies Comparisons of Brain Aging

Committee on Animal Models of Aging

National Academy of Sciences

Washington, D.C.

1980 Member

Panel on Dehydroepiandrosterone, Dietary Restriction and Aging

National Institute on Aging

Bethesda, Maryland

1980 Member

Advisory Conference on Biological Mechanisms of Aging

National Institute of Aging

Bethesda, Maryland

1981 Member

Committee on Research Priorities and Resources

National Institute on Aging

Bethesda, Maryland

1983 Member

Advisory Panel on Current Research and Future Directions in

Development and Plasticity National Institute of Mental Health Bethesda, Maryland

1983 Member

Advisory Panel on the Evaluation of Rodent Strains for Use as Animal

Models

National Institute on Aging

Bethesda, Maryland

1986 Member

Advisory Panel on Long-Term Drug Abuse Studies

National Institute of Drug Abuse

1989 Member

Advisory Panel on a National Geriatric Research Agenda

Institute of Medicine, National Academy of Sciences

1991 Member

Advisory Panel on Neurotoxicity and Drugs of Abuse

National Institute on Drug Abuse

1995 Participant, Advisory Conference on Italian-American Aging Research

Cooperation, Ft. Lauderdale, Florida, Nov., 1995

1996 External Advisor

FDA Committee on Dietary Control and Restriction

1996 Participant: NIA Sponsored Conference on German-American Research Cooperation in Alzheimer's Disease, Washington, D.C., Nov., 1996

1996 NIA Advisory Conference on future research in Endocrinology of

Aging; NIH, Bethesda, MD, Nov., 1996

1999 NIEHS Advisory Conference on Ca2+ Channels as Targets of

Toxicants, Research Triangle, NC, Dec. 1999

2000 EPA Scientific Advisory Panel on Herbicides, Arlington, VA, July 2000

2006 NIA Workshop on Molecular and Cellular Biology of Cognitive Aging, Potomac, MD, January

2007 NIA Workshop on Animal Models of Comorbidities in Aging, Rockville, MD, September

NIA Cognitive Aging Summit, Washington, DC, October

2008 NIA ApoE Workshop, Bethesda, MD, August

NIH Workshop on Stress, Aging, the Brain and the Body, Bethesda, MD, September

Grant Reviewing:

ongoing NIH Program Project site visit teams (1979-ongoing)

ongoing Ad hoc reviewer, VA projects in aging

1986 Ad hoc reviewer, Canadian Research Council grants on aging ongoing Reviewer, American Federation of Aging Research

ongoing Ad hoc Study Section reviewer, Alzheimer Center Grants, NIA

ongoing Ad hoc reviews: Special emphasis panels and Study Sections: CSR, NIA, NINDS, NIDA, NIMH, NSF

Medical School Committees and Service: At Wake Forest:

1979-1991 Program Director, Reynold Campus

Undergraduate Research Participation in Physiology and

Pharmacology

1979-1982 Clinical Research Practices Committee

1983-1985 Medical Student Promotions Committee

1983 Task Force on University - Industry Relations

1984 Internal Advisory Panel, Stroke Center

1984-1987 Executive Committee, Program Project “Stress and Aging”

1984-1987 Graduate Studies Committee

1984-1987 Graduate Student Program Director, Physiology and Pharmacology

1985-1991 Standing or Ad Hoc Committees on Electron Microscope Facilities

1986-1991 Neurosciences Curriculum and Nominating Committees

1987-1991 Geriatrics/Gerontology Teaching Advisory Committee

1987-1991 Sticht Center on Aging Advisory Committee

1987-1991 Alzheimer's Review Committee

1988-1991 Associate Director for Basic Sciences

J. Paul Sticht Center on Aging

1989 Ad hoc Committee on Graduate Student Stipends

1989-1991 Appointments and Promotion Committee

At the University of Kentucky College of Medicine:

1991- Basic Science Chairs

1991-1992 Curriculum Revision Task Force, Co-Chair: Disease and Treatment

Block

1991-1994 Biomedical Sciences Panel of the Graduate Council Committee on

Fellowships and Traineeships

1992 Pediatrics Chair Search and Evaluation Committee

1993-1994 Task Force on Academic Tracks and Developments

1993 Six Year Review, Aging Center

1993-1995 Research Directors Committee

1995 Search Committee, Director of Tobacco and Health

1995-1998 Intellectual Properties Committee

1997-2000 Conflict of Interest Committee

2000 Vice President/Vice Chancellor‟s Research Building Committee

2000 CPE Committee on Biotech/Biomedical Strategy

2000 Chancellor’s Animal Cost Task Force

2001 Chair, Gene Microarray Advisory Committee

2003 Co-chair, salary equity committee

2004 Chair, Six Year Review, Biochemistry

2007 Tenure Clock Review Committee

2008-9 Sanders-Brown Center on Aging Director, Search Committee

**AWARDS, LECTURES, SPEECHES, EXHIBITS:**

Scientific Awards:

1990 First “Nathan W. Shock Awardee”, Gerontology Research Center, NIA

1997 MERIT Award, National Institute on Aging (1997-2009)

2006 American Aging Association, Denham Harman Research Award and Lecture

2009 American Association for the Advancement of Science – Elected to rank of AAAS Fellow

2011 MERIT Award, National Institute on Aging (2011-2021)

Symposium Organization:

P. Landfield, P.I., New York Academy of Sciences Symposium on “Brain Corticosteroid

Receptors”

March, 1994, Arlington, VA

Co-Organizers: Drs. E.R. DeKloet and E. Azmitia

Invited Presentations at National/International Symposia:

Second Tarbox Symposium on Parkinson‟s Disease: Aging and Neuroendocrine Relationships; Lubbock, Texas (Texas Tech), February 1978.

XI International Congress of Gerontology, Neurobiology Symposium; Tokyo, Japan, August

1978.

Symposium on the “Psychobiology of Aging;” Luxembourg, May 1979. Conference on Biological Mechanisms of Aging; NIH, Bethesda, MD, June 1980.

Symposium on Brain-Endocrine Interactions; Brain Research Institute, Rochester, NY, September 1980.

Gordon Conference on the Biology of Aging (Presentation: Hippocampal Neurophysiology and

Aging); Ventura, CA, February 1982.

Special Lecture, Cologne Symposium on Aging and the Brain; Cologne, Germany, November

1982.

Symposium on the Pathology of Major Age-Related Diseases: Current Status and Research

Frontiers; NIH, Bethesda, MD, April 1983.

Conference on Development and Plasticity; National Institute of Mental Health, Rockville, MD, June 1983.

Symposium on Treatment Strategies in Alzheimer‟s Disease; Bermuda, April 1985. Symposium on the Aging Brain; Gainesville, FL, March 1986.

Mini-Symposium on Plasticity and Recovery of Function in the Adult Nervous System; Durham, NC, May 1986.

Symposium on Neuropeptides and Brain Function; Utrecht, The Netherlands, May 1986. Technical Review Meeting on Neural Adaptation in Response to Intrinsic and Extrinsic Factors:

Role in Drug Abuse, National Institute of Drug Abuse; Rockville, MD, September 1986. Symposium on Biomarkers of Aging; Chicago, IL, November 1986.

Symposium on Animal Models of Age-Related Memory Dysfunction; Baltimore, MD, September

1987.

Gordon Conference on the Biology of Aging; Ventura, California, February 1988.

Miles Laboratories Conference on Ca Channel Blockers, Rye, New York, March 1988. Bayer Centennial Symposium on Calcium Channels, Stresa, Italy, May 1988. Symposium on Senile Dementia and Aging, Seefeld, Austria, September 1988.

NYAS/NIA-Sponsored Symposium on Calcium, Membranes, Aging, and Alzheimer‟s Disease,

Irvine, California, October 1988.

Gerontological Society Symposium on Neuroendocrinological Determinants of Aging and

Longevity, San Francisco, California, November 1988.

Symposium on Calcium Channel Blockers: CNS Effects. Cologne, Germany, April, 1989. Presentation to the New York Academy of Sciences, New York, September, 1989.

Conference on Pharmacological Modulation of Calcium Channels, Miles Inc., Scottsdale, Arizona, March, 1990.

Conference on Comparative Aspects of Age-Induced Plasticity in the Nervous System. University of Kentucky, School of Medicine and Center on Aging, Lexington, Kentucky, April,

1990.

First “Nathan W. Shock Memorial Lecturer” of the Gerontology Research Center, NIA, Baltimore, Maryland, June, 1990: The Role of Glucocorticoids in Brain Aging and Alzheimer's Disease: An Integrative Physiological Hypothesis.

Symposium on Aging, Second International Congress of Neuroendocrinology, Bordeaux, France, June, 1990.

Technical Review Meeting on Neurotoxicity of Drugs of Abuse, National Institute of Drug Abuse, Bethesda, MD, May, 1991.

Symposium on Biochemical Engrams of Memory, Verona, Italy, August, 1991.

Neuroendocrinology and Aging: Perspectives and Prospectives Meeting, National Institute of

Health, Airlie, Virginia, October, 1991.

Workshop on Calcium Rationale; Cologne, Germany; December, 1991

Symposium entitled “Ca2+ Antagonists in the CNS”, Santa Fe, NM, April, 1992. Biomarkers Meeting, Arlington, VA, May, 1992.

Bayer Satellite Symposium on “Calcium Homeostasis and Brain Function”, Nice France; June,

1992.

Symposium on “Neurobiology of Learning and Memory: Age Related Deficits”, Utrecht, Netherlands, August, 1992.

Special Lecture: “Calcium and Aging of the Brain”, Italian Society for Geriatrics and Gerontology, Milan, Italy, November 1992.

Keystone Symposium, “Molecular Biology of Aging”, Lake Tahoe City, CA, March, 1993. Symposium on “Neuroprotection in Neurodegeneration”, Wurzburg, Germany, April 1993.

NYAS/NIA Symposium “Calcium Hypothesis of Aging and Dementia”, Bethesda, MD, December,

1993.

Co-organizer and presenter: NYAS Symposium “Brain Corticosteroid Receptors: Studies on the

Mechanism, Function and Neurotoxicity of Corticosteroid Action”, Arlington, VA March 2-5, 1994.

3rd International Conference on Central Nervous System Slice Preparations, “Calcium currents at the whole cell and single channel level in young and aged rat hippocampal slice neurons”.

Louisville, KY, June 6-10, 1994.

Symposium, 47th Annual Meeting of The Gerontological Society of America: “Cost-Benefit

Analysis of a Hormone-Laden Lifespan. Glucocorticoid Acceleration of Brain Aging”. Atlanta,

GA, November 21, 1994.

Third Suncoast Workshop on the Neurobiology of Aging. “Hormonal modulation of neuronal calcium homeostasis in brain aging”. Amelia Island, Florida, April 12-15, 1995.

Biomarkers Meeting. Presentation: “Biomarkers of Brain Aging”. Washington, D.C., June 13-

15, 1995.

77th Annual Meeting of the Endocrine Society. Presentation: “Glucocorticoid-induced change in hippocampal Ca2+ channels”. Washington, D.C, June 15-16, 1995.

Symposium: “The current status of the calcium hypothesis of brain aging and Alzheimer's disease”. Heidelberg, Germany, October 23-25, 1995.

Biomarkers Research Conference. Presentation: “Non-Invasive Biomarkers of Brain Aging”, Granby, Colorado, June 6-9, 1996.

International Workshop on “Calcium in the regulation of the nervous function: From Exocytosis to LTP”, Verona, Italy, October 16-22, 1996.

Symposium: “Neurobiolgy of Ageing”, Trinity College, Dublin, March, 1997.

Biology of Aging Meeting. Presentation: “Long-Term Perspectives”, Franconia, N.H. June 1-4,

1997.

Symposium: “Human Cognition and How it Fails”. Presentation: “Neurobiology of Memory

Impairment with Aging”. Banbury Center, Cold Springs Harbor, N.Y. December 7-10, 1997.

McGaugh Festschrift: “Neuroscience of Memory Formation and Consolidation”, University of

California, Irvine, November 5-7, 1998.

Winter Conference on Neural Plasticity. Symposium: “Learning in the Aging Brain”. St. Lucia,

Caribbean, February 20-27, 1999.

2nd Congress Federation of European Physiological Societies; Symposium: “Role of Calcium in

Aging”. Prague, Czech Republic, June 26-July 4, 1999.

University of Kentucky National Symposium on Neurobiology of Aging, October 8-9, 1999. NIEHS, Research Triangle Park, North Carolina. Symposium and Advisory Panel: “Calcium

Channels as Targets of Toxicants.” December 5-9, 1999.

Spring Hippocampal Research Conference, Grand Cayman Islands, BWI. Symposium: “Age- Associated Alterations in Hippocampal Function”, April 23-30, 2000.

Wye College, Kent, UK, Symposium: “Calcium as a Molecule for Cellular Integration”, July 20-

24, 2000.

Yale University School of Medicine, Symposium: “Cognition Enhancers, Anti-Alzheimer and

Neuroprotective Drugs”, October 12-13, 2000.

The Tenth Adler Foundation Symposium on Alzheimer‟s Disease: “Early Cellular and Synaptic

Abnormalities in AD.” Salk Institute, San Diego, CA January 29-31, 2001.

The British Neuroscience Association 16th National Meeting, Symposium: “Neuronal Ageing -

Cellular and Systemic Advances”. Harrogate, England, April 8-11, 2001.

Gordon Research Conference on the Biology of Aging, Oxford, England, July 22-27, 2001. British Physiological Soc. Symposium on Calcium: “Neuronal calcium homeostasis and ageing”,

Liverpool, England, July 8-9, 2002.

Soc. Neuroscience Symposium: “Aging-related cognitive decline”, Orlando, FL, November 2002.

Gordon Research Conference on Aging, Ventura, CA, July 2003.

University of North Texas Health Science Center at Fort Worth, Seminar: “Harnessing the Power

of Gene Microarrays for the Study of Brain Aging and Alzheimer‟s Disease”. May 20, 2005.

ISN/ESN 20th Biennial meeting, Innsbruck, Austria. “Correlating Microarray Data with

Functional/Behavioral Markers Reveals New Clues to Alzheimer‟s Disease and Brain Aging”.

August 21-26, 2005.

American Aging Association, Denham Harman Research Award and Lecture, Boston, MA, June 2006.

Exploring the Links Between Obesity and Alzheimer's Disease, Neuroscience and

Neuropsychology of Aging Program at the NIA, Bethesda, MD, June 2006.

Department of Physiology and Pharmacology, Oregon Health and Science University, Portland, OR, November 2006.

NIA Workshop on Animal Models of Comorbidities in Aging, Rockville, MD, September 2007

NIA Cognitive Aging Summit, Washington, DC, October 2007

NIA ApoE meeting, Bethesda, MD, August 2008

NIH meeting, Stress, Aging, the Brain and the Body, Bethesda, MD, September 2008

NIH Workshop “An Integrated Epigenetics-Genetics Approach to AD”, June 6-8, 2010, Bethesda, MD

Cognitive Aging Summit, October 4-5, 2010, Washington, DC, “Mechanisms of Age-related

Cognitive Change/Targets Intervention: Inflammatory, Oxidative and Metabolic Processes,

Discussant Presentation”

Cognitive Aging Research Annual Investigators Meeting, October 6, 2010, Bethesda, MD

“Neural Mechanisms of Age-related Cognitive Change - Molecular and Cellular Approaches”

Cognitive Aging Research Annual Investigators Meeting, October 11-12, 2011, Bethesda, MD

“Neural Mechanisms of Age-related Cognitive Change - Molecular and Cellular Approaches”

Society for Neuroscience, Sunday October 14, 2012, New Orleans, LA, Minisymposia ““The Role of Epigenetic Mechanisms in the Development and Maintenance of Human Cognition” “Epigenetic Dysregulation in Hippocampal Aging”.

Cognitive Aging Research Annual Investigators Meeting, August, 2013, Bethesda, MD

“Neural Mechanisms of Age-related Cognitive Change - Molecular and Cellular Approaches”

Cognitive Aging Research Annual Investigators Meeting, August, 2014, Bethesda, MD

“Neural Mechanisms of Age-related Cognitive Change - Molecular and Cellular Approaches”

**BIBLIOGRAPHY:**

Edited Books:

Landfield PW, Deadwyler SA, (Eds.). Long-Term Potentiation: From Biophysics to Behavior. New York: Liss, 1988. (Neurology and Neurobiology; v.35)

De Kloet ER, Azmitia E, Landfield PW (Eds). Brain Corticosteroid Receptors: Studies on the Mechanism, Function and Neurotoxicity of Corticosteroid Action. Vol 746, The New York Academy of Sciences, New York, 1994

Chapters in Books:

Landfield PW. Synchronous EEG rhythms: Their nature and their possible functions in memory, information transmission and behavior. In: Gispen WH, ed. Molecular and functional neurobiology. Amsterdam: Elsevier, 1976:389-424.

Landfield PW. Neurobiological changes in hippocampus of aging rats: Quantitative correlations with behavioral deficits and with endocrine mechanisms. In: Orimo H, Shimada K, Iriki M, Maeda D, eds. Recent advances in gerontology. New York: Elsevier, 1979:495-498.

Landfield PW. Correlative studies of brain neurophysiology and behavior during aging. In: Stein D, ed. Psychobiology of aging: problems and perspectives. New York: Elsevier North- Holland, 1980:227-251.

Landfield PW. Adrenocortical hypotheses of brain and somatic aging. In: R. Schimke, ed. Biological mechanisms in aging; Conference Proceedings. Bethesda, MD: US Dept. of Health and Human Services, 1981:658-672. (NIH Publication No. 81-2194).

Adelman RC, Anver MR, Elias MF, Landfield PW, Masoro EJ, Meites J, Roberts J, Goldberg PB. Brain aging in rats. In: Mammalian models for research on aging. Washington, DC: National Academy Press, 1981:95-107.

Landfield PW, Baker HJ, Bowden DM, Cohen D, Rodman PS, Severson J, Wisniewski HM. Senile dementia of the Alzheimer type, Parkinson's disease and depression. In: Mammalian models for research on aging. Washington, DC: National Academy Press, 1981:308-321.

Landfield PW. Measurement of brain aging: conceptual issues and neurobiological indices. In: Adelman R, Roth G, eds. Endocrine and neuroendocrine mechanisms of aging. Boca Raton, FL.: CRC Press, 1982:183-207.

Landfield PW. Mechanisms of altered neural function during aging. In: Gispen WH, Traber J, eds. Aging of the brain. Amsterdam: Elsevier, 1983:51-71.

Landfield PW, Pitler TA, Applegate MD. Nerve cell and synaptic decline in brain aging: implications for animal models and for an hypothesis of Alzheimer's disease. In: Scarpelli DG, Migaki G, eds. Comparative pathobiology of major age-related diseases: current status and research frontiers. New York: Liss, 1984:333-355.

Finch CE, Landfield PW. Neuroendocrine and autonomic functions in aging mammals. In: Finch CE, Schneider EL, eds. Handbook of the biology of aging, 2nd ed. New York: Van Nostrand Reinhold, 1985:567-594.

Landfield PW, Pitler TA, Applegate MD. The aged hippocampus: a model system for studies on mechanisms of behavioral plasticity and brain aging. In: Isaacson RL, Pribram KH, eds. The hippocampus. New York: Plenum, 1986: vol. 3:323-367.

Landfield PW. Preventive approaches to normal brain aging and Alzheimer's disease. In:

Crook T, Bartus R, Ferris S, Gershon S, eds. Treatment development strategies for Alzheimer's disease. Madison, CT: Mark Powley Associates, 1986:221-243.

Landfield PW. Delta-9-tetrahydrocannabinol-dependent alterations in brain structure. In: Friedman DP, Clouet DH, eds. The role of neuroplasticity in the response to drugs. Rockville, MD: US Dept of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Adm, National Institute of Drug Abuse, 1987;143-157. (NIDA Research Monograph; 78)

Landfield PW, Applegate MD, Pitler TA, Kerr DS. Presynaptic mechanisms in hippocampal short- and long-term potentiation: relevance to brain aging. In: Landfield PW, Deadwyler SA, eds. Long-term potentiation: from biophysics to behavior. New York: Liss, 1988:377-408.

Landfield PW. Increased calcium currents in rat hippocampal neurons during aging. In: Morad M, et al, eds. The calcium channel: structure, function and implications. Berlin: Springer- Verlag, 1988:465-477.

Landfield PW. Calcium homeostasis, brain aging and Alzheimers' disease. In: Bergener M, Reisberg B, eds. Diagnosis and treatment of senile dementia. Berlin, Heidelberg: Springer- Verlag, 1989:277-287.

Landfield PW, Campbell LW, Hao S-Y, Kerr DS. Aging-related increases in voltage-sensitive, inactivating calcium currents in rat hippocampus: implication for mechanisms of brain aging and

Alzheimer's disease. In: Khachaturian ZS, Cotman CW, Pettegrew JW, eds. Calcium, membranes, aging, and Alzheimer's disease. Ann NY Acad Sci, 1989; Vol. 568:95-105.

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