



Celebrating 25 Years of
UNIVERSITY
DISTINGUISHED
PROFESSORS



Colorado State University



Colorado State University
University Distinguished Professors

Name	Year awarded	Department
C Wayne McIlwraith	2009	Clinical Sciences
Ian M. Orme	2009	Microbiology, Immunology and Pathology
Diana H. Wall	2009	Biology
Jan E. Leach	2007	Bioagricultural Sciences and Pest Management
Karolin Luger	2007	Biochemistry and Molecular Biology
Jorge G. Rocca	2007	Electrical and Computer Engineering
John N. Sofos	2007	Animal Sciences
Graeme L. Stephens ☞	2005	Atmospheric Science
Louis S. Hegedus ☞	2004	Chemistry
Stephen J. Withrow	2004	Clinical Sciences
Robert M. Williams	2002	Chemistry
Barry J. Beaty	2001	Microbiology
Anne G. Fisher ☞	2001	Occupational Therapy
Bernard E. Rollin	2001	Philosophy

Name	Year awarded	Department
John A. Wiens ☞	1999	Biology
Patrick J. Brennan	1997	Microbiology
Edward A. Hoover	1994	Pathology
Thomas H. Vonder Haar	1994	Atmospheric Science
George E. Seidel Jr.	1993	Physiology
Gary C. Smith ☞	1993	Animal Sciences
Holmes Rolston, III ☞	1992	Philosophy
Takumi Tsuchiya †	1991	Agronomy
Willard L. Lindsay †	1989	Agronomy
Marshall Fixman ☞	1987	Chemistry
Gordon D. Niswender ☞	1987	Physiology
Stanley A. Schumm †	1987	Earth Resources
Jack E. Cermak ☞	1986	Civil Engineering
Mortimer M. Elkind †	1986	Radiology and Radiation Biology
Howard E. Evans †	1986	Zoology and Entomology
Albert I. Meyers †	1986	Chemistry
John K. Stille †	1986	Chemistry

☞ Professor Emeritus/Emerita
 † Deceased

“The highest academic recognition awarded by the University, the title of University Distinguished Professor, is bestowed upon a very small number of full professors at any one time on the basis of outstanding scholarship and achievement. Professors receiving this title hold the distinction for their duration of their association with Colorado State University. To obtain this rank, faculty members are nominated through an extensive review process and must be approved by the current University Distinguished Professors. Colorado State’s current president approves new selections and secures endorsement from the Board of Governors of the Colorado State University System.”

History and Background

by Thomas H. Vonder Haar and Gordon D. Niswender

The original intent of the University Distinguished Professor (UDP) Program was to recognize individuals who were in the top one percent of the faculty. Since there were approximately 1,200 faculty, it was decided that there would be 12 University Distinguished Professors appointed.

In 1986, the University instituted the UDP Program to recognize those among its faculty whose accomplishments had achieved national and international recognition. Nominations were solicited from the faculty and evaluated by a nationally-selected committee of academicians from outside of Colorado State University. Provost Al Linck and Graduate School Dean, Dean Jaros, developed much of the planning and procedures for the establishment of CSU’s University Distinguished Professor Program which was also reviewed and approved by the CSU Council of Deans.

On the 26th of August 1986, President Philip Austin bestowed the title of University Distinguished Professor upon five individuals. This initial group included Professor Jack Cermak (Civil Engineering), Mortimer Elkind (Radiology and Radiation Biology), Howard Evans (Zoology and Entomology), Albert Meyers (Chemistry), and John Stille (Chemistry). In early 1987, Professors Marshall Fixman (Chemistry) and Stanley Schumm (Earth Resources) were also named University Distinguished Professors. In 1987, the incumbent University Distinguished Professors assumed responsibility for evaluation and selection of additional University Distinguished Professors and the following is a chronological listing of the additions and deletions to this group during the first 25 years.

- 1987 Professor Gordon Niswender (Physiology) named University Distinguished Professor
- 1989 Professor Willard Lindsay (Agronomy) named University Distinguished Professor
- 1989 Professor John Stille passes away
- 1991 Professor Takumi Tsuchiya (Agronomy) named University Distinguished Professor
- 1992 Professor Holmes Rolston (Philosophy) named University Distinguished Professor
- 1992 Professor Takumi Tsuchiya passes away
- 1993 Professors George Seidel (Physiology) and Gary Smith (Animal Sciences) named University Distinguished Professors
- 1994 Professors Edward Hoover (Pathology) and Thomas Vonder Haar (Atmospheric Science) named University Distinguished Professors
- 1996 Professor Willard Lindsay retires – Emeritus status
- 1997 Professor Patrick Brennan (Microbiology) named University Distinguished Professor
- 1998 Professor Stanley Schumm retires – Emeritus status
- 1999 Professor John Wiens (Biology) named University Distinguished Professor
- 2000 Professors Jack Cermak, Mortimer Elkind, Marshall Fixman and Albert Meyers retire – Emeritus status

- 2001 Professors Barry Beaty (Microbiology), Anne Fisher (Occupational Therapy), and Bernard Rollin (Philosophy) named University Distinguished Professors
- 2001 Professor Mortimer Elkind passes away
- 2002 Professor Robert Williams (Chemistry) named University Distinguished Professor
- 2002 Professor John Wiens leaves the University
- 2002 Professor Howard Evans passes away
- 2003 Professor Anne Fisher leaves the University
- 2004 Professors Louis Hegedus (Chemistry) and Stephen Withrow (Clinical Sciences) named University Distinguished Professors
- 2004 Professor Gordon Niswender retires – Emeritus status
- 2005 Professor Graeme Stephens (Atmospheric Science) named University Distinguished Professor
- 2006 Professor Louis Hegedus retires – Emeritus status
- 2007 Professor Albert Meyers passes away
- 2007 Professors Jan Leach (Bioagricultural Sciences and Pest Management), Karolin Luger (Biochemistry and Molecular Biology), Jorge Rocca (Electrical and Computer Engineering), and John Sofos (Animal Sciences) named University Distinguished Professors
- 2008 Professor Holmes Rolston retires – Emeritus status
- 2009 Professors Wayne McIlwraith (Clinical Sciences), Ian Orme (Microbiology, Immunology and Pathology), and Diana Wall (Biology) named University Distinguished Professors
- 2010 Professor Willard Lindsay passes away
- 2010 Professor Gary Smith retires – Emeritus status
- 2010 Professor Graeme Stephens retires – Emeritus status
- 2011 Professor Stanley Schumm passes away

Since its inception in 1986, 31 faculty from seven colleges have received the honor of being named a University Distinguished Professor.

Agricultural Sciences (Lindsay, Tsuchiya, Smith, Sofos, Leach)
 Applied Human Sciences (Fisher)
 Engineering (Cermak, Stephens, Vonder Haar, Rocca)
 Liberal Arts (Rollin, Rolston)
 Natural Resources (Schumm)
 Natural Sciences (Meyers, Stille, Fixman, Wiens, Evans, Williams, Hegedus, Wall, Luger)
 Veterinary Medicine and Biomedical Sciences (Elkind, Niswender, Seidel, Brennan, Hoover, Beaty, Withrow, Orme, McIlwraith)

Now, with the Colorado State University University Distinguished Professor Program in its 25th year, the 15 active University Distinguished Professors and some of the Emeriti professors continue to serve the University as leaders, teachers, advisors, and mentors.

Congratulations to the following University Distinguished Professors who have received the honor of being inducted into the National Academy of Sciences: Barry Beaty, Howard Evans, Marshall Fixman, Albert Meyers, and George Seidel Jr.; and into the National Academy of Engineering: Jack Cermak and Thomas Vonder Haar.

www.provost.colostate.edu/index.asp?url=Academics/distinguished_faculty

Chairpersons and Principal Support Staff

Tom Vonder Haar with help from Holli Knutson and Joanne DiVico
 George Seidel Jr. with help from Sallie Varner
 Gordon Niswender with help from Sallie Varner
 Mortimer Elkind

Also with staff from the Office of the Provost
 *A special thanks to Tom Vonder Haar, Holli Knutson, Ian Orme, and Jenny Harding for all of their hard work in putting this publication together.



C. Wayne McIlwraith

2009 Clinical Sciences

B.V.Sc (Massey University, New Zealand), M.S., Ph.D. (Purdue University)

Dr. Wayne McIlwraith is University Distinguished Professor, Barbara Cox Anthony University Endowed Chair in Orthopaedics, and director of the Orthopaedic Research Center. He is a Diplomate in the American College of Veterinary Surgeons (ACVS), as well as the American College of Veterinary Sports Medicine and Rehabilitation (ACVSMR). He is a past-president of ACVS, the American Association of Equine Practitioners (AAEP), and the Veterinary Orthopaedic Society (VOS). Dr. McIlwraith is recognized internationally as a leading equine

orthopaedic surgeon as well as a researcher in joint problems (arthritis) of horses and humans. He pioneered the use of arthroscopic surgery in the horse. Research focuses include novel arthritis treatments (including gene therapy and stem cell therapies), new methods of cartilage repair, and early diagnosis of pre-arthritis and pre-fracture disease using novel imaging and fluid biomarkers. Dr. McIlwraith also directs the Musculoskeletal Research Program, which is a CSU Program of Research and Scholarly Excellence.



Ian M. Orme

2009 Microbiology, Immunology, and Pathology

Ph.D. (University of London, UK)

Dr. Ian M. Orme co-founded the Mycobacteria Research Laboratories at CSU and is internationally recognized for his development of animal models that are used to understand the host immune response to tuberculosis and ways to treat it with drugs and vaccines. He is currently focusing on Multi-Drug Resistant TB and ways to treat it, including the development of post-exposure vaccines, a field that also has biodefense implications. His recent work has emphasized the extremely high virulence of new strains of TB now emerging,

particularly in Africa, and the difficulties current vaccines may have in overcoming them. His research has also identified additional new complications, including the tendency of the immune response to respond to these new TB strains by generating cells that can interfere with the protective process. Collectively, these issues are of fundamental importance in combating one of the world's most serious diseases.

Dr. Orme is a Fellow of the American Academy of Microbiology.



Diana H. Wall

2009 Biology

B.A., Ph.D. (University of Kentucky)

Dr. Diana Wall's research explores how invertebrate diversity contributes to healthy soils and the global effects of human activities on soil biodiversity and ecosystems. Her research in the Antarctic Dry Valleys follows the response of soil organisms and ecosystem processes to environmental change. In Africa she examines biodiversity in fertile and/or degraded soils. For her research contributions in 2005, Wall Valley, Antarctica, was designated and in 2009, a new soil mite species was named. She holds an Honorary Doctorate from Utrecht University, the Netherlands; she is an Aldo Leopold Leadership Fellow, a Fellow of the American Association for

the Advancement of Science, and Fellow of the Society of Nematologists. Diana was President of Ecological Society of America; the American Institute of Biological Sciences; the Intersociety Consortium for Plant Protection; Association of Ecosystem Research Centers; the Society of Nematologists; and Chair, Council of Scientific Society Presidents.

She is currently director, School of Global Environmental Sustainability, and was director of Natural Resource Ecology Laboratory and associate research dean in the Warner College of Natural Resources at CSU.



Jan E. Leach

2007 Bioagricultural Sciences and Pest Management

B.S., M.S. (University of Nebraska), Ph.D. (University of Wisconsin)

One of the most intriguing challenges for plant biologists is to understand how plants interact with microbial pathogens to result in resistance or disease. Dr. Jan Leach's research has tackled this challenge from both the plant and pathogen sides by integrating physiological, molecular, genomic, and genetic approaches performed in the laboratory and field. Her goals are to identify sources of long-lasting, broad-spectrum disease resistance (effective against diverse pathogens), allowing for the development of ecologically sustainable forms

of plant disease control. In recent years, she has begun using her experience to uncover the genetic basis of other complex traits in rice, such as those contributing to biomass and benefiting human health. Leach is an adjunct scientist at the International Rice Research Institute (Philippines). She is a Fellow of the American Phytopathological Society, the American Association for the Advancement of Science, and the American Academy of Microbiology. Leach was also a University Distinguished Professor at Kansas State University.



Karolin Luger

2007 Biochemistry and Molecular Biology

Ph.D. (University of Basel, Switzerland)

Dr. Karolin Luger received a B.S. in Microbiology and an M.S. in Biochemistry from the University of Innsbruck in Austria. She received a Ph.D. (summa cum laude) in Biochemistry from the University of Basel in Switzerland. Luger is one of 300 Investigators for the Howard Hughes Medical Institute. She has won the Monfort Professor Award and is a Searle Scholar. She serves as a member of the Keystone Meetings Scientific Advisory Board, and a member of the National Advisory General Medical Sciences Council and the advisory board for the NIH Protein Structure Initiative.

Luger studies chromatin structure and dynamics using a wide range of techniques, such as X-ray scattering, fluorescence spectroscopy, atomic force microscopy, analytical ultracentrifugation, and molecular biology. She is engaged in numerous collaborations, and, together with two other Investigators in the Department of Biochemistry and Molecular Biology, is a principal investigator on a collaborative program project grant to investigate histone Chaperones and Acetyltransferases in Chromatin Transitions.



Jorge G. Rocca

2007 Electrical and Computer Engineering

B.S. (Universidad de Rosario, Argentina), Ph.D. (Colorado State University)

Dr. Jorge Rocca's research concerns the physics and development of X-ray lasers, the application of coherent ultrashort wavelength light, and the study of dense plasmas. He is internationally recognized for leading contributions to the development of compact soft X-ray lasers and their application to scientific and technological problems. His research group demonstrated the first high power tabletop soft X-ray laser and since then used these new light sources in numerous applications. These include ultra-high resolution imaging, nanometer-scale material characterization and patterning,

and dense plasma diagnostics. He serves as Director of the National Science Foundation Engineering Research Center for Extreme Ultraviolet Science and Technology. Professor Rocca is Fellow of the American Physical Society, the Optical Society of America, and the Institute of Electrical and Electronic Engineers, which also elected him Distinguished Lecturer. He received the 2011 Arthur L. Schawlow Prize in Laser Science from the American Physical Society. Early in his career he was a National Science Foundation Presidential Young Investigator.



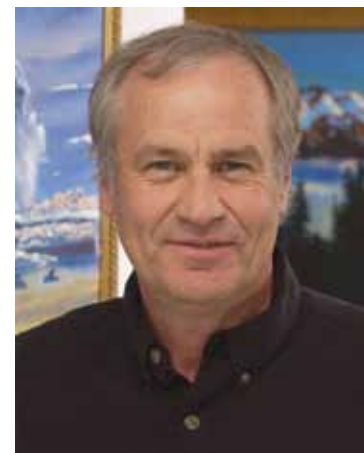
John N. Sofos

2007 Animal Sciences

B.S. (Aristotle University of Thessaloniki, Greece), M.S., Ph.D. (University of Minnesota)

Dr. John Sofos is internationally recognized for his scientific contributions in microbial food safety enhancement. Notable research contributions are associated with control of escherichia coli O157:H7, Salmonella, and Listeria in meat and other foods. He has served on numerous committees and panels including the National Academy of Sciences Standing Committee for the Review of Food Safety and Defense Risk Assessments, Analyses and Data, the National Advisory Committee on Microbiological Criteria for Foods, the Panel on Biological Hazards of the European

Food Safety Authority, as a scientific advisor to the Denver District of the Food and Drug Administration, and is a Scientific Editor for the *Journal of Food Protection*. He is Fellow of the American Academy of Microbiology, Institute of Food Technologists, American Society of Animal Science, International Association for Food Protection, and American Meat Science Association, and has received numerous awards including the United States Department of Agriculture Secretary's Honor Award for Superior Service.



Graeme L. Stephens

2005 Atmospheric Science

B.S., Ph.D. (University of Melbourne, Australia)

Dr. Graeme Stephens is a Distinguished Professor Emeritus. He is also the Director of the Center for Climate Sciences at Jet Propulsion Laboratories and is the principal investigator on NASA's CloudSat Mission. Dr. Stephens' research covers remote sensing of the atmosphere by spaceborne platforms and understanding hydrological processes in the climate system. Dr. Stephens began his career when he completed his B.S. from the University of Melbourne in 1973 and his Ph.D. in 1977.

He was appointed to the CSIRO Division of Atmospheric Research in 1977 as a research scientist and a senior research scientist in 1982. From 1979 to 1980, Dr. Stephens served as a post-doctoral research student at CSU. He joined the faculty as an associate professor in 1984, was promoted to full professor in 1991, and a University Distinguished Professor in 2005. He was also director of the Cooperative Institute for Research in the Atmosphere (CIRA) from 2008-2010.



Louis S. Hegedus

2004 Chemistry

B.S. (The Pennsylvania State University), Ph.D. (Harvard University)

Dr. Louis Hegedus, a John K. Stille Chair of Chemistry and a faculty member at Colorado State for more than 30 years, has made international contributions to organic and organometallic chemistry research, focusing on building a foundation of basic science research in the field that provides a springboard to future discoveries in new chemical reactions.

His research has centered on basic scientific discoveries in useful chemical

reactions in organometallic chemistry that are a catalyst for further research by private and public organizations. For many years, his work has focused on synthesis of chemicals that, for example, create a foundation for the development of antibiotics and antiviral compounds and help to form the methodology that creates various compounds for new medicines, as well as new developments in the production of petroleum products and plastics.



Stephen J. Withrow

2004 Clinical Sciences

D.V.M. (University of Minnesota)

Dr. Withrow is Professor of Surgical Oncology and associate director of the Animal Cancer Center at Colorado State University. He is a Diplomate of the American College of Veterinary Surgeons and the American College of Veterinary Internal Medicine (oncology).

He has received numerous teaching, service, and research awards, and is the author of more than 250 scientific articles and one textbook. His research interest includes multimodality treatment of cancer in animals as a model for humans with cancer.

Dr. Withrow is the only veterinarian admitted as a member of the Musculoskeletal Tumor Society. He has gained international status and acclaim for cancer research.

Under his leadership the Animal Cancer Center at Colorado State University is the largest center of its kind in the world and has trained more veterinary surgical, medical, and radiation oncologists than any other veterinary institution.



Robert M. Williams

2002 Chemistry

B.A. (Syracuse University), Ph.D. (Massachusetts Institute of Technology)

Dr. Robert M. Williams' research results from the interplay of synthetic organic chemistry, microbiology, biochemistry, and molecular biology. Research interests have included the total synthesis of natural products, the asymmetric synthesis of amino acids and peptide isosteres, studies on anti-tumor drug-DNA interactions, design and synthesis of antibiotics and DNA-cleaving molecules, combinatorial phage libraries and biosynthetic pathways. Professor Williams has developed technology for the asymmetric synthesis of

α-amino acids and peptide isosteres that have been commercialized by Aldrich Chemical Co. and he has written a monograph on this subject.

He has received several honors and awards including the NIH Research Career Development Award; the Eli Lilly Young Investigator Award; Fellow of the Alfred P. Sloan Foundation; the Merck Academic Development Award; the Japanese Society for the Promotion of Science Fellowship; the Arthur C. Cope Scholar Award; and the ACS Ernest Guenther Award in the Chemistry of Natural Products.



Barry Beaty

2001 Microbiology

B.S., M.S., Ph.D. (University of Wisconsin)

Dr. Barry Beaty is professor of virology and the founder of, and a leading researcher at, the Colorado State University Arthropod-Borne Infectious Disease Laboratory. His research involves the epidemiology, evolution, prevention, diagnosis, and control of mosquito and rodent-borne virus diseases, including

dengue and dengue hemorrhagic fever, yellow fever, LaCrosse and West Nile encephalitis, and Sin Nombre hantavirus pulmonary syndrome. Dr. Beaty is a member of the National Academy of Sciences and a Fellow of the American Academy of Microbiology.



Anne G. Fisher

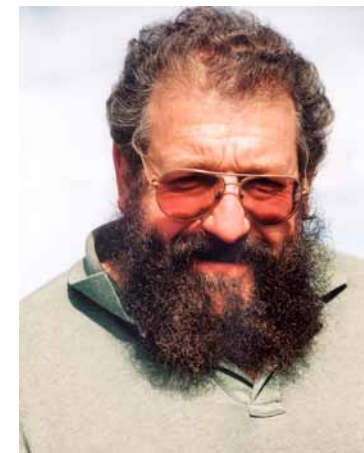
2001 Occupational Therapy

As a researcher, teacher, adviser, and consultant in occupational therapy, Dr. Anne G. Fisher has achieved national and international prominence and has distinguished herself as a scholar in the field. Her work focuses on two areas: the development, expansion, and refinement of major existing occupational therapy theories in addition to developing original theories, and the development of an international, cross-cultural assessment of rehabilitation based on her own innovative measurement systems.

Fisher, the first woman named as a University Distinguished Professor, developed the

Occupational Therapy Intervention Process Model in response to international needs for effectively measuring rehabilitation efforts. The OTIMP, a new model being taught in occupational therapy curricula throughout the world, helps clients from three to more than 100 years of age perform daily activities safely and independently.

She is the first occupational therapist to obtain major, continuous funding – over \$1.5 million since 1993 – from the prestigious and highly competitive National Institutes of Health/ National Institutes on Aging.



Bernard E. Rollin

2001 Philosophy

B.A. (City College of New York), Ph.D. (Columbia University)

Dr. Bernard E. Rollin is University Distinguished Professor, professor of Philosophy, professor of Biomedical Sciences, professor of Animal Sciences, and University bioethicist at Colorado State University. He was a major architect of the 1985 U.S. Federal laws protecting laboratory animals. Rollin is the author of 17 books, including *Natural and Conventional Meaning*, *Animal Rights and Human Morality* and *The Unheeded Cry: Animal Consciousness, Animal Pain and Scientific Change*, *Farm Animal Welfare*, *The Frankenstein Syndrome*, *Science and Ethics*, *Veterinary Medical Ethics: Theory*

and *Cases* (which has been translated into Spanish and Japanese), *Complementary and Alternative Veterinary Medicine Considered* (with David Ramey), *The Well-Being of Farm Animals: Challenges and Solutions* (with John Benson), and more than 600 articles. He has edited a two-volume work, *The Experimental Animal in Biomedical Research*, and recently published his memoirs, *Putting the Horse Before Descartes*. He is one of the leading scholars in animal ethics and animal consciousness and has lectured more than 1,500 times all over the world in 28 countries.



John A. Wiens

1999 Biology

B.S. (University of Oklahoma, Norman), M.S. and Ph.D. (University of Wisconsin, Madison)

Dr. John A. Wiens' interests lie primarily in how ecological systems vary in time and space. Much of his earlier work dealt with the structure of bird communities and focused on understanding what factors produced that structure and how environmental variations affected the linkages between processes and patterns. His active interest in bird communities involved studies of the effects of the Exxon Valdez oil spill on marine-oriented birds in Prince William Sound in Alaska.

Wiens was the first-ever Visiting Research Scientist for the Commonwealth Scientific and

Industrial Research Organization (CSIRO) Division of Wildlife and Ecology in Darwin in 1996. He received the Distinguished Landscape Ecologist Award from the International Association for Landscape Ecology in 1996; and in 1995 he won the Faculty Graduate Teaching Award from the College of Natural Sciences at Colorado State.

John left academia in 2002 to join The Nature Conservancy as lead scientist with the challenge of translating classroom teaching and academic research into conservation practice in the real world.



Patrick J. Brennan

1997 Microbiology

B.Sc., M.Sc. (National University of Ireland), M.A., Ph.D. (Trinity College, Dublin, Ireland)

Dr. Patrick Joseph Brennan was born and educated in Ireland. He completed his Ph.D. studies at Trinity College, Dublin, and post-doctoral at the University of California, Berkeley. Subsequently, Dr. Brennan was Lecturer at Trinity College Dublin and University College Dublin. Dr. Brennan returned to the U.S. in 1975, to a position at National Jewish Hospital/University of Colorado Medical Center. At National Jewish he established the structural basis of the serotypic differences among members of the *Mycobacterium avium* complex, leading to a long series of definitive publications and funding from the National Institutes of Health for more

than 30 years. In 1980, he joined the Department of Microbiology, Colorado State University. There, he has led research teams in conducting some of the most fundamental research on the nature of the tuberculosis and leprosy organisms. In the mid-1980s he founded, in conjunction with Dr. Ian Orme, the Mycobacteria Research Laboratories. Dr. Brennan has authored more than 300 peer-reviewed publications and has attracted over \$20 million in research funds. Dr. Brennan is still very active in teaching and research, particularly at national and international levels, promoting and evaluating research in TB and leprosy.



Edward Hoover

1994 Pathology

B.S., D.V.M. (University of Illinois), M.S., Ph.D. (The Ohio State University)

Dr. Edward Hoover is University Distinguished Professor and Head of the Department of Microbiology, Immunology, and Pathology in the College of Veterinary Medicine and Biomedical Sciences, Colorado State University. For more than 30 years his research has focused on transmission and vaccine development for infectious diseases of animals, including the feline and simian leukemia and immunodeficiency viruses. His laboratory developed the first effective vaccine against

feline leukemia virus (FeLV) infection, which is licensed by CSU and used to protect cats from leukemia worldwide. His recent work has elucidated how the prion infection chronic wasting disease (CWD) is transmitted in deer and elk in Colorado and now 18 other states. Dr. Hoover is the recipient of multiple research awards, has served as major professor for 26 Ph.D.s, and has held several administrative leadership positions.



Thomas H. Vonder Haar

1994 Atmospheric Science

B.S. (St. Louis University), M.S., Ph.D. (University of Wisconsin)

Dr. Thomas H. Vonder Haar studies the Earth's atmosphere using observations from weather satellites. He investigates the fundamental components of the energy and water cycles in the climate system and seeks to understand the life cycle of cloud systems and severe storms. Professor Vonder Haar is principal investigator for the DoD Center for Geosciences/Atmospheric Research at Colorado State University, now in its 25th year. The Center involves four Colleges and eight Departments to

analyze new instruments, algorithms, and data sets to obtain weather and climate information related to improving understanding and forecasting the Earth's environment. With his students and collaborators, Vonder Haar has also served on numerous NASA Science Mission Teams. He is the Founding Director Emeritus of the Cooperative Institute for Research in the Atmosphere at CSU and was elected to the National Academy of Engineering in 2003.



George E. Seidel Jr.

1993 Physiology

B.S. (The Pennsylvania State University), M.S., Ph.D. (Cornell University)

Dr. George Seidel is a reproductive physiologist. His main animal models have been cattle and horses. Studies have included metabolism of embryos, their bisection to produce identical twins, cloning by nuclear transplantation, and cryopreservation of both oocytes and embryos. Regulation of genes during development is another area of interest. A huge research effort has resulted in practical procedures for sexing sperm for applications such as producing female calves from the best dairy cows. A constant stream of experiments

concerns optimizing procedures such as superovulation, embryo transfer, and regulation of female reproductive cycles. His most recent studies involve crossing bison and cattle to study genes expressed from only one parent. Teaching and mentoring students has always been a high priority; in recent years the majority of the graduate and postdoctoral students have gone on to head human infertility clinics. Dr. Seidel is a member of the National Academy of Sciences.



Gary C. Smith

1993 Animal Sciences

B.S. (California State University, Fresno), M.S. (Washington State University), Ph.D. (Texas A&M University)

Dr. Gary C. Smith has won both the Distinguished Research Award and the Distinguished Teaching Award from the American Society of Animal Science and from the American Meat Science Association. In 1993, he was named a University Distinguished Professor by Colorado State University and a Fellow-In-Teaching by the American Society of Animal Science. Smith's research interests include carcass evaluation and grading; composition, quality, and palatability of red

meat; red meat safety; and packaging and retailing of red meat. He has published 334 full-length articles in refereed scientific journals and more than 675 other contributions such as proceedings, technical reports, etc. His groups have worked on minimizing residues and pesticides; reducing contamination and improving microbiological safety of animals, carcasses, and cuts; and improving the quality of meat products by identifying, developing, and implementing science and technology.



Holmes Rolston, III

1992 Philosophy

B.S. (Davidson College), Ph.D. (University of Edinburgh)

Dr. Holmes Rolston, III, has written most recently: *Three Big Bangs: Matter-Energy, Life, Mind, Genes, Genesis and God, Philosophy Gone Wild, Environmental Ethics, Science and Religion: A Critical Survey, and Conserving Natural Value*. He gave the Gifford Lectures, University of Edinburgh, 1997-1998. Rolston was laureate for the 2003 Templeton Prize in Religion, awarded by Prince Philip in Buckingham Palace. He has spoken as distinguished lecturer on seven continents and is featured in the Joy

A. Palmer edition, *Fifty Key Thinkers on the Environment, 2000*. He is past and founding president of the International Society for Environmental Ethics, a founding editor of the journal *Environmental Ethics* and a founding member of the International Society for Science and Religion. His intellectual biography, *Saving Creation: Nature and Faith in the Life of Holmes Rolston, III*, was written by Christopher J. Preston.



Takumi Tsuchiya †

1991 Agronomy

Dr. Takumi “Tak” Tsuchiya is recognized for his outstanding contributions to plant genetics and cytogenetics through basic scientific research, graduate education, and professional service. He came to Colorado State University in 1968 to conduct research on barley genetics and cytogenetics and to manage the World Genetics Stock Center, a position previously held by Dr. David “Scotty” Robertson. During his 43-year career Tak established an international

reputation working with barley, triticale, sugar beet, and other plant species. He contributed significantly to the education of primarily graduate students. His unique way of teaching his courses, by use of original scientific papers, and by his dedication to educating and training students, resulted in highly active and productive Ph.D. and M.S. students. In 1991, Dr. Tsuchiya was promoted to the rank of University Distinguished Professor.



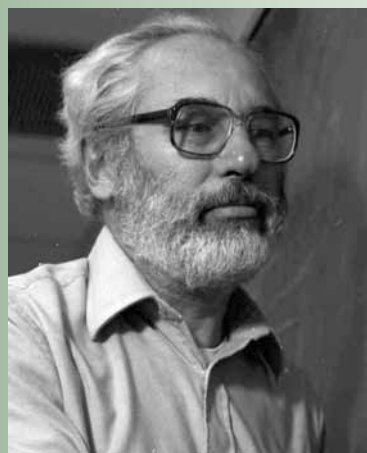
Willard L. Lindsay †

1989 Agronomy

B.S., M.S. (Utah State University), Ph.D. (Cornell University)

Dr. Willard Lindsay began his career at Colorado State University in 1960 and taught soil fertility and researched micronutrient deficiencies in Colorado soils. The major thrust of his career was to provide stimulating instruction to graduate students and to participate with them in scholarly research. He served as major professor for 30 Ph.D. graduates (the largest number in agronomy department history), and 11 M.S. graduates.

Dr. Lindsay made classic contributions in many areas of soil chemistry, one of which was development of the DTPA micronutrient soil test, which became a world standard. Dr. Lindsay’s most significant contribution was the textbook *Chemical Equilibria in Soil*. This book has been used in many universities around the world. In 1989, he was promoted to the rank of University Distinguished Professor.



Marshall Fixman ⚡

1987 Chemistry

B.S. (Washington University in St. Louis), Ph.D. (Massachusetts Institute of Technology)

Dr. Marshall Fixman is an American physical chemist, University Distinguished Professor Emeritus at Colorado State University, and a member of the U.S. National Academy of Sciences.

Professor Fixman earned his undergraduate degree in 1950 from Washington University in St. Louis and his Ph.D. from the Massachusetts Institute of Technology in 1954. For his research – theoretical and computational studies of the physical chemistry of polymers –

Fixman was elected to the National Academy of Sciences in 1973.

Fixman held an endowed professorship at Yale University but moved to Colorado State in 1979 with his wife, Branka Ladanyi, who also joined CSU’s chemistry faculty. He is an associate editor of the *Journal of Chemical Physics*, and received the American Chemical Society’s Awards in pure chemistry (1964) and polymer chemistry (1991).



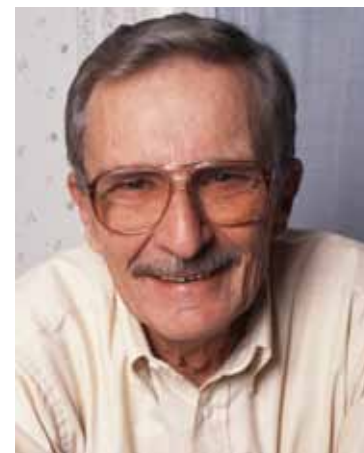
Gordon D. Niswender ⚡

1987 Physiology

B.S. (University of Wyoming), M.S. (University of Nebraska), Ph.D. (University of Illinois)

Dr. Gordon Niswender has been internationally recognized as a leader in the field of reproductive biology for four decades. In 1972, Dr. Niswender was recruited to CSU as an associate professor, was promoted to professor in 1974, and named a University Distinguished Professor in 1987. Dr. Niswender has authored more than 200 peer-reviewed scientific papers and 40 chapters in books concerning reproductive biology. He has been the major professor for 25 graduate students and advisor for 32 postdoctoral

fellows. He has been principal investigator for 18 extramurally funded grants from USDA, NIH, and FDA; five grants from industry; and co-investigator on an additional nine grants. He holds five U.S. patents. Dr. Niswender has received numerous national and international awards from the American Society of Animal Science, the Endocrine Society, and Society for the Study of Reproduction, UK Society for Fertility, and the International Symposium for Ruminant Reproduction.



Stanley A. Schumm †

1987 Earth Resources

B.A. (Uppsala College), Ph.D. (Columbia University)

Following service in the Navy during World War II, Dr. Stanley A. Schumm received his B.A. in Geology at Uppsala College in N.J., and later his Ph.D. in Geomorphology at Columbia University. Dr. Schumm was an internationally acclaimed geomorphologist whose seminal research into earth surface processes included a 55-year long career, first at the U.S. Geological Survey and then at Colorado State University. He received awards from the U.S. National

Academy of Sciences, American Geophysical Union, Geological Society of America, British Geomorphological Research Group, and the Japanese Geomorphological Union. His accomplishments as a dedicated teacher were recognized with the Outstanding Educator of America Award and the Durrel Award at Colorado State University. For 30 years, his research program attracted graduate students from across the U.S. and internationally.



Jack E. Cermak ⚡

1986 Civil Engineering

B.S., M.S. (Colorado State University), Ph.D. (Cornell University)

As a professor at Colorado State University in 1952, Dr. Jack E. Cermak founded the Wind Engineering and Fluid Mechanics graduate program and pioneered the design and use of the turbulent boundary-layer wind tunnel. For his work, he received a NATO Postdoctoral Fellowship to Cambridge University in 1961 and was elected to the National Academy of Engineering in 1973.

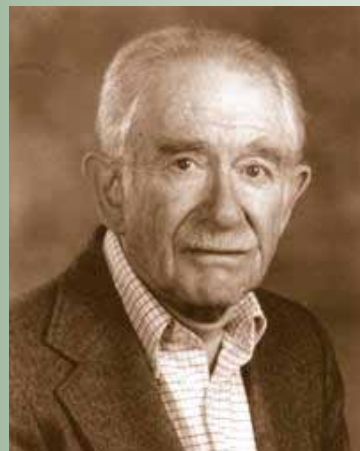
One of his early notable projects was the wind tunnel testing of the World Trade Center Twin Towers in New York City during their design phase in 1963-1964.

Dr. Cermak has authored hundreds of technical papers and articles, including the

seminal 1974 Freeman Scholar Lecture, “Applications of Fluid Mechanics to Wind Engineering,” which has been translated into 14 languages.

In 1986, CSU named Dr. Cermak a Distinguished Professor; and in 2002, the American Society of Civil Engineers (ASCE) established the Jack E. Cermak Medal to be awarded annually for outstanding contributions in wind engineering.

Through his teaching, publications, presentations, and consultations, Dr. Cermak has created a lasting impression on the field of engineering and has guided and inspired many of the world’s engineering leaders.



Mortimer M. Elkind †
1986 Radiology and Radiation Biology

Dr. Mortimer M. Elkind made significant scientific contributions in radiation therapy of cancer over the course of his 45-year career. Elkind worked to describe the response of normal and malignant cells to ionizing radiation. Their findings led to a better understanding of how to adjust radiation exposures for maximum effect on tumors with minimum harm to normal tissue. Elkind's research helped initiate the scientific basis for current radiation therapy, which is administered to about one-third of all cancer patients worldwide. His contribution was

so significant that the process by which cells repair radiation damage is commonly known as Elkind Repair.

Professor Elkind received many distinguished national and international awards throughout his career, including the E.O. Lawrence Award from the U.S. Atomic Energy Commission in 1967 and the Charles F. Kettering Prize from the General Motors Cancer Research Foundation in 1989. Elkind also served as a member on the board of directors of the National Coalition for Cancer Research.



Howard E. Evans †
1986 Zoology and Entomology
 Ph.D. (Cornell University)

Dr. Howard E. Evans was one of the twentieth century's leading entomologists and insect natural historians. He was also, in his spare time, a talented writer of popular books and articles on natural history and conservation.

Immediately after college graduation Howard worked at the Connecticut Agricultural Experiment Station in New Haven and then went to Cornell, where he completed a master's thesis on spider wasps (Pompilidae). Then, in December of 1941, he learned of the attack on Pearl Harbor. Howard asked his draft board to

move his name to the top of the list. He spent four years in the Army.

Following his service in the Army, he joined the faculty of Kansas State University in Manhattan, Kansas, as assistant professor of entomology. Howard came to Colorado State University in 1973 and retired from his position in 1986.

He completed five books and many scientific articles after his retirement. He also continued to do fieldwork and taxonomic research on collections throughout the rest of his life.



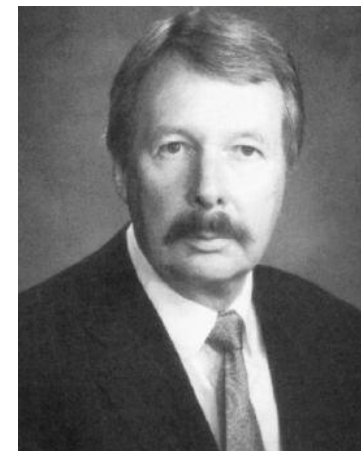
Albert Meyers †
1986 Chemistry
 B.S. (Aristotle University of Thessaloniki, Greece), M.S., Ph.D. (University of Minnesota)

Dr. Albert Meyers joined Colorado State in 1972 as professor in the Department of Chemistry. In 1986, he was named a University Distinguished Professor and held the John K. Stille endowed chair from 1993 to 2002. He became a professor emeritus in 2002.

Professor Meyers was elected a Fellow in the National Academy of Sciences in 1994. He was well known as a world leader in synthetic organic chemistry and was one of the first organic chemists in the world to duplicate nature's ability to create mirror images of chemicals at

the molecular level. Later in his career, Meyers' research focused on designing new methods of creating molecular architecture that might aid in fighting diseases.

Beyond his work in the laboratory, Meyers was well known as a dedicated mentor and educator. In his time at Colorado State, he directed Ph.D. theses of more than 80 students and directed postdoctoral research for more than 200 Ph.D. students. He mentored hundreds of graduate students and taught thousands.



John K. Stille †
1986 Chemistry
 B.S., M.S. (University of Arizona), Ph.D. (University of Illinois)

In 1977, Dr. John K. Stille joined the faculty at Colorado State University. In 1986 he was appointed University Distinguished Professor, one of five such appointments at Colorado State at that time. Professor Stille had been a visiting professor at the Royal Institute in Stockholm (1969) and the University of California at Santa Cruz (1980). During his career, he directed 94 Ph.D. students and 97 postdoctoral fellows. He consulted for E. I. du Pont de Nemours & Co., Textile Fibers Department, and was also

a consultant for Syntex (USA) Inc. He won numerous awards, including the William H. Rauscher Memorial Lecturer (1974), the Gossett Lecturer (1979), the Case Centennial Scholar (1980), the ACS Award in Polymer Chemistry (1982), the 1989 American Chemical Society Colorado Section Award, and the Arthur C. Cope Scholars Award (1989). He served as a frequent advisor to NASA, authored more than 270 publications, wrote two books, and contributed chapters to several books.



