ASING Spring 2004 VOLUME 14 · ISSUE 1 Tracking the Way We Age

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HOLD THIS DATE ...

Fall Symposium on Life Course Inequality September 23, 2004

Featured Speaker:
Linda Burton, PhD
Human Development and
Family Studies and Sociology,
Penn State University



Center on Aging and the Life Course Spring Symposium Early Origins of Adult Health: Biological Processes

Featured Speaker: Steven Austad, PhD University of Idaho winner of the 2003 GSA Robert W. Kleemeier Award

The biological processes that contribute to human aging and longevity determination are being elucidated by scientists using a variety of cellular and animal model systems. This symposium will offer a biological perspective on the evidence that early life events significantly influence adult health outcome and longevity. This symposium builds on the growing expertise of Purdue University's Center on Aging and the Life Course to apply a life course perspective to stimulate interdisciplinary research on aging.

Steven N. Austad, PhD, is a world-renowned expert on the biology of aging. Dr. Austad is the author of "Why We Age", an insightful treatise that chronicles the scientific progress that has been made to better understand the aging process. The book has been translated into 8 languages. Dr. Austad's research in the fields of evolutionary biology and comparative zoology has generated great enthusiasm that the study of unconventional animal models (e.g., opossums, wild mice, birds) will yield important clues

to the mechanisms of human aging. Dr. Austad serves as science advisor to National Public Radio and his work has been featured in documentaries by the BBC and National Geographic. Because of his encyclopedic knowledge of the profound interspecies differences in the life histories and rate of aging observed across the animal kingdom, Dr. Austad is revered as one of the premier speakers in the field of biogerontology.

Dr. Austad's research lab investigates one of the central mysteries of biology- understanding the cellular and molecular mechanisms that lead to the huge range of longevities. The long-term goal is to understand the aging process sufficiently to design therapies to slow aging in humans. The more immediate goal is to determine mechanisms that regulate differential rates of aging in different animals. His research has adopted a comparative approach, currently assessing differences at the cellular level (particularly in the response to oxidative stress) between species that are exceptionally successful at aging, for instance bats and birds, with species that are demonstrably unsuccessful at aging, such as mice and various marsupials.

A secondary interest is in the rapid evolutionary changes that organisms undergo as they adapt to the laboratory envi-

continued on page 2

ronment after having survived for thousands of generations in the wild. One of these changes is a decrease in longevity, but other changes include muscle weakness, loss of sensory acuity, and an increasing reproductive rate. Since many of these changes mimic changes that occur during aging, understanding the genetic alterations responsible for such changes will lead to understanding about how to minimize, or reverse, such changes.

A reknowned writer, some recent publications of Dr. Austad's include:

a special issue of **Experimental Gerontology** on Slowly-Aging Organisms with C.E. Finch.

Handbook of the Biology of Aging, 5th Edition. E.J. Masoro and S.N. Austad (Eds.) Academic Press. 524 pp.

Austad, S.N. (2001). An experimental paradigm for the study of slowly-aging organisms. *Experimental Gerontology* 36:599-605.

Holmes, D.J., R. Fluckiger, and S.N. Austad (2001). Comparative biology of aging in birds: an update. *Experimental Gerontology* 36:849-883.

Finch, C.E. and S.N. Austad (2001). History and prospects: symposium on organisms with slow aging. *Experimental Gerontology* 36:593-597.

Purdue University and the Center on Aging and the Life Course is delighted to welcome Steven Austad, PhD to our Spring Life Course Symposium on April 2, 2004 at the University Inn.

Spring Symposium offers Interdisciplinary Poster Session

The following research posters will be on display at the Spring Symposium, *Early Origins of Adult Health: Biological Processes* on April 2, 2004.

Comparing the Retirement Savings of the Baby Boomers and Other Cohorts, S.A. DeVaney, Ph.D., and S.T. Chiremba, M.S.

A Comparison of Retirement Planning in Mexico and the USA, S.A. DeVaney, PhD and A. Rodriguez-Flores, MBA.

The Color of Hospitalization over the Life Course, K.F. Ferraro, R.J. Thorpe, G.P. McCabe, A.S. Cameron, J.A. Kelley-Moore.

Reduction in DNA Damage in Brain and Peripheral Blood Lymphocytes of Elderly Dogs Supplemented with Dehydroepiandrosterone (DHEA), S. Shen, L.T. Glickman, C. Oteham, D.M. Cooley, D.J. Waters.

Influence of Sex Hormones on Physiological Stress and Cerebral DNA Damage in Elderly Male Brown-Norway Rats, C.P. Oteham, D.M. Cooley, D.L. Schlittler, S. Shen, K.T. Coffman, T.O. Nevalainen, C.M. Lang, D.J. Waters

Influence of Early Life Events on Adult Bone Sarcoma Risk in Pet Dogs, D.M. Cooley, B.C. Beranek, D.L. Schlittler, N.W. Glickman, L.T. Glickman, D.J. Waters.

Extent of DNA Damage in the Brain of Elderly Rats is Influenced by Castration or Testosterone Supplementation, D.J. Waters, K.T. Coffman, D.M. Cooley, C. Oteham, D.L. Schlittler, S. Shen.

Exceptional Longevity in Pet Dogs is Accompanied by Cancer Resistance and Delayed Onset of Other Major Diseases, D.M. Cooley, D.L. Schlittler, L.T. Glickman, M. Hayek, D.J. Waters.

Antagonistic Pleiotropy: The Testis Contributes to the Accumulation of DNA Damage in the Aging Mammalian Brain, S. Shen, C. Oteham, D.M. Cooley, L.T. Glickman, D.J. Waters.

Relationship Between Toenail Concentration of Selenium and the Level of Genotoxic Stress Within the Aging Prostrate, S. Shen, D.M. Cooley, D.G. Bostwick, J. Qian, G.F. Combs Jr, L.T. Glickman, C. Oteham, D. Schlittler, J.S. Morris, D.J. Waters.

Making Sense of Sex and Supplements: Differences in the
Anticarcinogenic Effects of Selenium
in Men and Women, E.C. Chiang, D.J.
Waters, D.M. Cooley, J.S. Morris.

The Selenium and Vitamin E Cancer Prevention Trial (SELECT), I. Savikhin, G. Hyner, D.J. Waters.

Aging Exchange

Aging Exchange is a publication of the Center on Aging and the Life Course at Purdue University.

Director

Kenneth F. Ferraro, Ph.D.

Associate Directors
Gerald C. Hyner, Ph.D.
David J. Waters, DVM, Ph.D.

Project Coordinator Margaret A. Favorite

Secretary Marilyn McCammack

Student Web Designer Aaron Whitpan

Visit our website at: http://www.purdue.edu/aging

CALC Researchers want you!

MARRIAGE & FAMILY STUDY

If you are engaged to be married, you may qualify to participate in an important study of family relationships!



We want to learn more about the effect of marriage on relationships with other family members. To learn more about this study:

- Call us at 496-6427 and leave a message.
- Email Dr. Karen Fingerman at marriagefamily@purdue.edu.

This research is being conducted by Dr. Karen Fingerman, Associate Professor of Child Development and Family Studies, Purdue University and has been approved by the Internal Review Board (IRB) at Purdue University.

People who are eligible and participate will be paid as thanks for their time.

SUBJECTS NEEDED FOR TWO-HOUR STUDIES

PAYING \$30-40

The Speech Physiology Laboratory in Heavilon Hall at Purdue University is looking for subjects to participate in studies on speech production. The subjects will be asked to read a passage and talk while respiratory and lip and jaw movement is examined.

I

To participate, you must meet the following criteria:

Age 65-91 years
Living independently
Average height and weight
Normal speech, language,
voice, articulation, and hearing

No history of respiratory problems or asthma

No history of head, neck, or chest surgery

No history of neurological disease

No smoking in the last 5 years No voice, singing, or speaking training

Have a General North American dialect

П

To participate, you must meet the following criteria:

Neurologic diagnosis of idiopathic Parkinson's disease

Speech or voice difficulties due to the Parkinson's disease

Average height and weight Normal language and hearing No history of respiratory problems or asthma

No history of head, neck, or chest surgery

No smoking in the last 5 years No voice, singing, or speaking training, except speech therapy

Have a General North American dialect

If you are interested, contact Jessica Huber at (765) 494-6488 for more information.

The Cognitive Aging and Memory Lab (CAMEL)

in the Department of Psychological Sciences, Purdue University, is seeking volunteers to participate in a research study on how memory changes over the lifespan. If you are over 60 years old, in good health, and are a native speaker of American English, you may be eligible to participate. Your anonymity is guaranteed.

There are three parts to each 1-hour experiment:

- A brief, free vision/hearing screening
- A brief questionnaire about your age and health
- A memory test that lasts approximately 30 minutes

For more information: Call: 765-494-7898 Email: camel@psych.purdue.edu

Visit: http://camel.psych.purdue.edu

All studies are conducted under the direction of Professor Ian Neath, (765) 494-7898, Department of Psychological Sciences, Purdue University. All studies have been approved by the Purdue University Committee on the Use of Human Subjects in Research.

Anderson, James G., Ph.D., Professor of Sociology

Baird, Carol L., D.N.S., Assistant Professor of Nursing

Barnes, Sandra L., Ph.D., Assistant Professor of Sociology

Beck, Alan M., Sc.D., Dorothy N. McAllister Professor of Animal Ecology

Campbell, Wayne W., Ph.D., Associate Professor of Foods and Nutrition

Christian, John A., D.V.M, Ph.D., Associate Professor of Clinical Pathology

Cicirelli, Victor G., Ph.D., Professor of Development/Aging Psychology

DeVaney, Sharon A., Ph.D., Associate Professor of Consumer and Family Economics

Edwards, Nancy E., Ph.D., Associate Professor of Nursing

Elliott, Stephen, Ph.D., Assistant Professor of Industrial Technology

Ferraro, Kenneth F., Ph.D., Professor of Sociology

Fingerman, Karen L., Ph.D., Associate Professor of Child Development and Family Studies, *Berner Hanley University Scholar*

Fleet, James C., Ph.D., Associate Professor of Foods and Nutrition

Flynn, Michael G., Ph.D., Associate Professor of Health and Kinesiology

Friedman, Alan M., Ph.D., Associate Professor of Biological Sciences

Glickman, Lawrence T., V.M.D., Dr.PH, Professor of Epidemiology and Environmental Health

Hannon, Kevin M., Ph.D., Associate Professor of Basic Medical Sciences

HogenEsch, Harm, D.V.M., Ph.D., Professor and Head of Veterinary Pathobiology

Faculty Associates Purdue University Center

Huber, Jessica E., Ph.D., Assistant Professor of Audiology and Speech Sciences

Hyner, Gerald, C., Ph.D., Professor of Health Promotion

Kreisle, Regina A., Ph.D., M.D., Associate Professor of Veterinary Pathobiology

Lehto, Xinran Y., Ph.D., Assistant Professor of Hospitality and Tourism Management

Lloyd, Lyle L., Ph.D., Professor of Education and Audiology and Speech Sciences

Long, Janie K., Ph.D., Assistant Professor of Child Development and Family Studies

Lyle, Roseann M., Ph.D., Professor of Health/Foods and Nutrition

MacDermid, Shelley M., Ph.D., Professor of Child Development and Family Studies

McCabe, George P., Ph.D., Professor of Statistics

McGlothlin, James D., M.P.H., Ph.D., C.P.E., Associate Professor of Health Sciences

Morgan, Melanie, Ph.D., Assistant Professor of Communication

Morré, Dorothy M., Ph.D., Professor of Foods and Nutrition

Morrison, Harry, Ph.D., Professor of Chemistry

Murray, Michael D., Pharm. D., M.P.H., Bucke Professor of Clinical Pharmacy

Neath, Ian, Ph.D., Professor of Psychological Sciences

Novak, Robert E., Ph.D., Clinical Professor and Director of Clinical Education in Audiology and ASHA Program Director for the Department of Audiology and Speech Sciences

Owens, Timothy J., Ph.D., Associate Professor of Sociology

Perrucci, Carolyn C., Ph.D., Professor of Sociology

Pick, David F., Ph.D., Professor of Psychology, Calumet Campus, Hammond, IN

Proctor, Robert W., Ph.D., Professor of Psychological Sciences

Rajagopalan, Priya, Ph.D., Visiting Assistant Professor of Economics

Rietdyk, Shirley, Ph.D., Assistant Professor of Health and Kinesiology

Ringel, Robert L., Ph.D., Professor of Audiology and Speech Sciences

Roy, Kevin M., Ph.D., Assistant Professor of Child Development and Family Studies

Sands, Laura P., Ph.D., Associate Professor of Nursing

Sowinski, Kevin M., Pharm.D., Associate Professor of Pharmacy Practice

Surprenant, Aimeé M., Ph.D., Associate Professor of Psychological Sciences

Templin, Thomas J., Ph.D., Head of the Department of Health and Kinesiology;

Walcott-McQuigg, Jacqueline A., Ph.D., Associate Professor of Nursing

Waters, David J., DVM, Ph.D., Professor of Veterinary Clinical Sciences

Weaver, Connie M., Ph.D., Distinguished Professor and Head of the Department of Foods and Nutrition

Zelaznik, Howard N., Ph.D., Professor of Health and Kinesiology

Graduate Students on Aging and the Life Course

Rachael Anderson, Psychological Sciences

John Apolzan, Foods and Nutrition

Kathryn Bojczyk, Child Development and Family Studies

Pei-Chun Chen, Sociology and Anthropology

Chan-Ching Chiang, Veterinary Clinical Sciences

Krista Clark, Sociology and Anthropology

Dawn Cooley, Veterinary Clinical Sciences

Don Crohan, Educational Studies **Keren Dimah**, Health and Kinesiology

Margaret Favorite, Child Development and Family Studies

Jennifer Felker, Health and Kinesiology

Jie Hong, Foods and Nutrition **Angela Henderson**, Sociology and Anthropology

Kimberly Hurley, Health and Kinesiology

Heidi Iglay, Foods and Nutrition **Shalon Irving**, Sociology and Anthropology

Lakshmi Josyula, Health and Kinesiology

Yunqing Li, Sociology and Anthropology

Brian McFarlin, Health and Kinesiology

Steven McKenzie, Health and Kinesiology

Michelle Miller, Child Development and Family Studies

Tariqah Nurridin, Sociology and Anthropology

Tetyana Pylypiv, Sociology and Anthropology

Stacy Presley, Consumer Sciences and Retailing

Dan Ritchie, Health and Kinesiology

Jori Sechrist, Sociology and Anthropology

Minjung Seo, Health and Kinesiology

John Spruill, Audiology and Speech Sciences

Sean Stickney, Health and Kinesiology

April Stull, Foods and Nutrition Chung-Ya Tang, Child Development and Family Studies

Roland Thorpe, Veterinary Pathobiology

Kyle Timmerman, Exercise Physiology

Oliver Wendt, Educational Studies

Tim Wright, Health and Kinesiology

Staff

Margaret Favorite, Project Coordinator

Marilyn McCammack, Secretary Betty Krejci, Director of Development

Margaret Tittle, Director of Development

Lynn Fellowships

The Gerontology Program, the educational component of the interdisciplinary Center on Aging and the Life Course, was allocated four Lynn Fellowships by the Graduate School for the current academic year. Faculty Associates of the Center competed for the fellowships, a recruiting tool for the very best incoming PhD applicants. The Graduate School provides a stipend for the student's first year, with support for the remaining three years from the home department.

The current Lynn Fellows in the Gerontology Program are:

•Rachael Anderson Psychological Sciences Robert Proctor, Advisor

•John Apolzan
Foods & Nutrition
Wayne Campbell, Advisor

•Dan Ritchie
Health & Kinesiology
Roseann Lyle, Advisor

•Timothy Wright Health & Kinesiology Gerald Hyner, Advisor

The Graduate School has allocated funds for two Lynn Fellowships for the Gerontology Program for 2004-05. These were awarded to incoming students of Sharon DeVaney, Consumer Sciences and Retailing and Ken Ferraro, Sociology.

Faculty Support to Write an Extramural Grant Application in Aging

Nancy Edwards, Associate Professor in the School of Nursing, has been awarded the 2004 Center on Aging and the Life Course grant: Faculty Support to Write an Extramural Grant Application in Aging.

Her proposed study, Improving Weight, Nutritional Status and Health with Environmental Enrichment, will examine the value of animal-assisted therapy (AAT), specifically fish aquariums and the improvement of nutritional status in individuals with dementia. The study is a collaboration between Purdue University Schools of Nursing, Veterinary Medicine, and Consumer and Family Science. Objectives of the proposal are to evaluate AAT-induced changes in food intake and nutritional status in individuals with dementia and to determine the impact of changes in nutritional status and intake on changes in quality of life, independence with activities of daily living and patient behaviors and weight maintenance.

The study will use a time series design incorporating a nonequivalent control group approach and will collect data from two hundred participants in long-term care facilities with dementia units.

Congratulations to Dr. Edwards on this interdisciplinary proposal!

Research Support Grants

The Center on Aging and the Life Course awarded four grants to support the research of its Faculty Associates in March. The competitive grants are for a maximum of \$1,000 and can be used to support a variety of research expenses, including the support of a graduate assistant or travel. 2004 awards were made to:

Michael G. Flynn, PhD, Health and Kinesiology

Influence of cholesterol lowering (statin) drugs on monocyte markers of inflammation

John O. Greene, PhD, Communication

Creative Facility in Older Adults

Kevin Hannon, PhD, Basic Medical Sciences

Disuse Atrophy Publications

Xinran Lehto, PhD, Hospitality and Tourism Management Web Use as a Leisure Pastime and Older People's Subjective Well-being

Valuable Resources

Old Age: "Our Future Selves"

How do we get students to identify with older people as "our future selves?" How do we encourage them to imagine what old age might be like on a personal basis? One effective means is for students to estimate their own life expectancy based on family longevity, health habits, and so on. To conduct this exercise you can use the web-based Life Expectancy Calculator developed by Thomas Perls, MPH, MD (www.livingto100.com/quiz.htm).

Another valuable Life Expectancy Calculator is available at (www.nmfn.com/tn/learnctr—lifeevents—longevity).

For guidance on how to use such calculators in the classroom, look at the article by Mary Altpeter, PhD, and Victor W. Marshall, PhD, "Making Aging 'Real' for Undergraduates." This article appeared in Volume 29 (pp.739-756) of *Educational Gerontology* (2003). The authors explain that their article "shared the responses of students to an experiential, web-based exercise 'Calculating Your Life Expectancy' that was assigned to 'situate' students in the aging process. Our findings demonstrate that this exercise is an excellent transformational learning tool to stimulate student thinking and discussion of their own aging."

Teaching Gerontology E-Newsletter

There's a free monthly e-newsletter, "Teaching Gerontology," that provides information about educational resources and pedagogical methods in gerontology. For a sample copy or a subscription, send an e-mail message to teachgero@yahoo.com.

Written by Harry R. Moody, PhD, Resource Briefs, AGHExchange, 2004, vol. 27, number 3. Reprinted by permission.

Recent Grants and Fellowships

James Anderson, Sociology and Anthropology, and S.R. Byrn, from Indiana University, September 30, 2003 through September 29, 2004, "Rural HIV/AIDS Prevention and Education," \$55,000

Wayne Campbell, Foods and Nutrition, B.A. Craig, and James Fleet, Foods and Nutrition, from Cooperative State Research Service, September 1, 2003 through August 31, 2005, "Dietary Protein Intake and Muscle Gene Expression," \$275,000

Kenneth Ferraro, Sociology and Anthropology, from PHS-NIH National Institute on Aging, March 1, 2004 through February 28, 2005, "Interdisciplinary Research on Life Course Inequality," \$108,000

James Fleet, Foods and Nutrition, and B.A. Craig, from PHS-NIH National Institute Diabetes, Kidney Disease, September 30, 2003 through September 29, 2004, "Calcium Absorption in Caco-2 Cells: Molecular Mechanism," \$200,000

Michael Flynn, Health and Kinesiology, from Gatorade Sport Science Institute, April 1, 2002 through March 31, 2004, "The Relationship Between Carbohydrate Status and Immune System Function During Early and Late Recovery from Exercise," \$300

Lawrence Glickman and Alan Beck, Veterinary Pathobiology, from Kenneth Scott Charitable Trust, June 1, 1997 through September 1, 2004, "Training Veterinarians to be Leaders in Companion Animal Welfare, Applied Ethics, and Public Policy," \$771

Dorothy Morré, Foods and Nutrition, from California Table Grape Commission, April 15, 2003 through April 15, 2004, "The Protective Effect of Standardized Grape Preparation Against Cancer," \$25,000 Dorothy Morré, Foods and Nutrition, from Hill's Pet Nutrition, Inc., November 1, 2003 through October 31, 2004, "Pet Food Shelf Life and Stability Study," \$10,000

Michael Murray, Pharmacy Practice, from Indiana University, September 1, 2000 through August 31, 2004, "Clinical Pharmacology of Loop Diuretics," \$39,122

Fred Regnier, Chemistry, from University of Texas at San Antonio, September 15, 2003 through August 31, 2004, "Role of Oxidative Damage to Specific Molecules in Aging, "\$75,000

Fred Regnier, Chemistry, from University of Texas Health Science Center at San Antonio, October 29, 2003 through October 31, 2004, "Ellison Foundation Senior Scholar Award in Aging," \$112,500

A.E. Rundell, T.J. Webster, and Harm HogenEsch, Veterinary Pathobiology, from Air Force Research Laboratory, June 13, 2001 through June 12, 2004, "Optimizing the Immune-Surface Characteristics for Biosensors and Filters through Modeling and Experiments," \$32,846

Laura Sands, Nursing, from Institute on Aging, October 1, 2002 through August 31, 2004, "Evaluating Outcomes of Adult Day Services," \$10,000

Roger Seehafer and Gerald Hyner, Health and Kinesiology, from Indiana State Department of Health, June 1, 2003 through December 20, 2003, "Greater Lafayette Survey of Exercise Related Patterns and Needs of Older Adults," \$18,710

Aimeé Surprenant and Ian Neath, Psychological Sciences, from PHS-NIH National Institute on Aging, September 30, 2003 through August 31, 2004, "Modeling the Effects of Aging on Memory," \$221,040 D. Teegarden, B.A. Craig, and Roseann Lyle, Health and Kinesiology, from University of Tennessee, July 1, 2002 through December 1, 2003, "Role of Dairy Products in Weight Loss: a Multi-Center Trial, \$237,653

David Waters, Veterinary Clinical Sciences, and Gerald Hyner, Health and Kinesiology, from Kinley Trust, November 23, 2003 through November 22, 2004, "Dietary Supplement Use Behavior in Elderly Men: Motivational Factors and Biological Consequences of Self-Medicating with the Anticancer Trace Mineral Selenium," \$20,000

Connie Weaver, Foods and Nutrition, David Waters, Veterinary Clinical Sciences, and Wayne Campbell, Foods and Nutrition, from National Institutes of Health, August 1, 2003 through July 31, 2004, "Botanical Center for Age-Related Diseases 1 P50 AT00477 Research Supplements for Underrepresented Minorities," \$125,000

New Faculty Associates

Welcome to these new faculty associates of the Center on Aging and the Life Course: **Xinran Y. Lehto, PhD.**, Assistant Professor of Hospitality and Tourism Management, **Ian neath, PhD.**, Professor of Psychological Sciences.

We look forward to a long and fruitful association as we continue to investigate and learn about various aspects of aging.



Aging Exchange

Fall 2004 Gerontology Courses

Primary Content				
CDFS 565 SOC 609D	Multidisciplinary Perspectives on Aging Aging and the Life Course	3 cr 3 cr	TTh 3:00 - 4:15 T 6:00 - 8:50	Fingerman Suitor
D 1 . 10 .				
Related Conto		3 cr	TTh 4·30 - 5:45	Llovd
AUS 540 BIOL 559	Augmentative and Alternative Communication Endocrinology	3 cr 3 cr	TTh 4:30 - 5:45 TTh 1:30-2:45	Lloyd Anderson