

CALORIE RESTRICTION

Chair: Richard Weindruch, PhD
University of Wisconsin-Madison

FRIDAY, JUNE 2, 2006

- 7:00 am Pre-conference Registration
at Jean Mayer USDA-HNRCA at Tufts University
Continental Breakfast
- 8:00 am Pre-conference Welcome and Opening Remarks –
Chair: Richard Weindruch, PhD, University of Wisconsin-Madison
- 8:05 am – 10:05 am
MODEL ORGANISMS
- 8:05 am **SIR2 Genes and Calorie Restriction**
Leonard P. Guarente, PhD, MIT
- 8:35 am **A Biochemical/Genetic Pathway for the Life Span Extending Effects of Calorie Restriction in the Fly**
Stephen L. Helfand, MD, University of Connecticut Health Center
- 9:05 am **Dietary Restriction and Gene Expression in *C. elegans***
David Gems, PhD, University College London, UK
- 9:35 am **Calorie Restriction in Yeast and Worms: Public or Private Mechanisms**
Matt Kaeberlein, PhD, University of Washington
- 10:05 am - 10:20 am **B R E A K**
- 10:20 am – 11:20 am
RODENTS
- 10:20 am **Effects of Lifelong Exercise and (8%) Caloric Restriction on Free Radical Biology**
Christiaan Leeuwenburgh, PhD, University of Florida
- 10:50 am **Metabolic Regulators in Calorie Restriction: Linking Cell Survival and Organismal Longevity**
Rozalyn M. Anderson, PhD, University of Wisconsin-Madison
- 11:20 am – 12:30 pm **LUNCH BREAK**
- 12:30 pm – 2:00 pm
NON-HUMAN PRIMATES
- 12:30 pm **The University of Wisconsin Dietary Restriction and Aging Study**
Ricki Colman, PhD, Wisconsin Primate Research Center
- 1:00 pm **The NIA Study of Dietary Restriction and Aging**
Donald K. Ingram, PhD, FAAA
National Institutes of Health/National Institute on Aging

- 1:30 pm **Delay of T-Cell Senescence by Caloric Restriction in Aged Long-Lived Non-Human Primates**
Janko Nikolich-Zugich, MD, PhD, Oregon National Primate Research Center
- 2:00 pm - 2:15pm **B R E A K**
- 2:15 pm – 3:45 pm
HUMAN PRIMATES
- 2:15 pm **Long-Term Adaptations to CR**
John Holloszy, MD, Washington University School of Medicine
- 2:45 pm **Feasibility of Long-Term Caloric Restriction in Humans**
Susan B. Roberts, PhD, Jean Mayer USDA-HNRCA at Tufts University
- 3:15 pm **Effect of Calorie Restriction on Energy Metabolism with Emphasis on Mitochondrial Biogenesis**
Eric Ravussin, PhD, Pennington Biomedical Research Center
- 3:45 pm **PANEL DISCUSSION:**
IS CALORIE RESTRICTION THE ONLY WAY TO INCREASE HEALTH SPAN?
Moderator: James Joseph, PhD, FAAA, Jean Mayer USDA-HNRCA at Tufts University
Panelists: Eric Ravussin, PhD, Pennington Biomedical Research Center
 Stephen R. Spindler, PhD, University of California - Riverside
- 5:00 pm **Pre-conference adjourns**
- 5:00 pm – 7:00 pm **AGE Conference Registration**
at COURTYARD MARRIOTT TREMONT
- 5:00 pm – 7:00 pm **The American Aging Association’s Annual**
Board of Directors’ Dinner Meeting
at COURTYARD MARRIOTT TREMONT
- 7:00 pm – 9:00 pm **WELCOME RECEPTION**
at COURTYARD MARRIOTT TREMONT

INTERVENTIONS IN AGING AND AGE-RELATED DISEASES: THE PRESENT AND THE FUTURE

Chair: Simin Nikbin Meydani, DVM, PhD, FAAA
Jean Mayer USDA-HNRCA at Tufts University

7:00 am AGE Conference Registration
Continental Breakfast

8:15 am **AGE Conference Sessions Begin**

8:15 am – 8:30 am **Welcome and Opening Remarks**
Simin Nikbin Meydani, DVM, PhD, FAAA, President, American Aging Association

8:30 am – 10:15 am

SESSION 1: CURRENT ADVANCES IN UNDERSTANDING THE BASIC BIOLOGY OF AGING

Chair: Raj Sohal, PhD, FAAA, University of Southern California

- 8:30 am Siegfried Hekimi, PhD, McGill University, Canada
1. **From Post-Mitotic Invertebrates to Long-Lived Mice and Age-Dependent Diseases**
- 9:05 am Toren Finkel, MD, PhD, NHLBI
2. **Oxidants as Signaling Molecules**
- 9:40 am Raj Sohal, PhD, University of Southern California
3. **Mitochondria, Oxidative Stress and Aging**

10:15 am – 10:30 am **B R E A K**

10:30 am – 12:30 pm

SESSION 2: SARCOPENIA: CAUSE, EFFECT AND TREATMENT

Chair: William J. Evans, PhD, University of Arkansas for Medical Sciences

- 10:30 am Geoff Goldspink, PhD, Royal Free and University College Medical School, London
4. **Molecular Mechanisms in Relation to Sarcopenia**
- 11:00 am Shalender Bhasin, MD, Boston University School of Medicine
5. **Hormonal and Pharmacological Treatment**
- 11:30 am William J. Evans, PhD, University of Arkansas for Medical Sciences
6. **Nutritional and Exercise Interventions**
- 12:00 pm (N)* Benedetta Bartali, Cornell University
7. **Effect of Protein Intake on Change in Muscle Strength in Older Persons: Does Inflammation Matter?**

* (N) Denotes Pre-doctoral Candidate for Nicolai Award

Saturday, June 3, 2006 continued

12:15 pm Roger Farrar, PhD, University of Texas at Austin
8. Tourniquet-Induced Ischemia/Reperfusion Damage in Aging Skeletal Muscle

12:30 pm – 2:00 pm Lunch Provided
LUNCH and AGE Sponsored Debate
9. Amyloid-Beta and Alzheimer's Disease: Center Ring or Side Show?
Moderator: Don Ingram, PhD, NIH/ NIA
Panelists: Benjamin Wolozin, MD, PhD, Boston University School of Medicine
Mark A. Smith, PhD, FAAA, Case Western Reserve University

2:00 pm – 3:30 pm
SESSION 3: OSTEOPOROSIS: MECHANISMS, PREVENTION AND TREATMENTS
Chair: Connie Weaver, PhD, Purdue University

2:00 pm Robert Klein, MD, Oregon Health & Science University
10. Osteoporosis: In Search of an Underlying Mechanism

2:30 pm Connie Weaver, PhD, Purdue University
11. Osteoporosis: Life Choices for Prevention

3:00 pm Dennis Black, PhD, University of California, San Francisco
12. Osteoporosis: Treatments but No Cure

3:30 pm – 5:30 pm
**Poster Presentation and Wine and Cheese Reception
Competition for Nicolai Prize and Glenn Award**

6:00 pm **DINNER CRUISE (reservation required)**
Bus departs 6 PM from Tufts University

Sunday, June 4, 2006

7:00 am AGE Conference Registration
Continental Breakfast

8:15 am – 10:15 am
SESSION 4: INTERVENTION IN AGING AND AGE-RELATED SKIN DISEASES
Chair: Barbara Gilchrist, MD, Boston University School of Medicine

8:15 am Mina Yaar, MD, Boston University School of Medicine
13. The Role of Telomere-based Signaling in Skin Aging/Photoaging

8:45 am Sewon Kang, MD, University of Michigan School of Medicine
14. The Role of Retinoids in Preventing and Treating Skin Aging Changes

9:15 am Peter Elias, MD, University of California, San Francisco
15. Mechanisms and Consequences of Age-Associated Changes in the Skin Barrier

9:45 am – 10:00 am **B R E A K**

10:00 am – 12:30 pm

SESSION 5: IMMUNITY AND INFECTION

Chair: Laura Haynes, PhD, Trudeau Institute

10:00 am Jorg Goronzy, MD, Emory University
16. Age and the Adaptive Immune System

10:30 am Laura Haynes, PhD, Trudeau Institute
17. The Effect of Age on the Cognate Function of CD4 T-Cells

11:00 am Janet McElhaney, MD, University of Connecticut Health Center
18. Influenza Vaccination: T-Cell Responses Translate to Health Outcomes in Older Adults

11:30 am (N)* Melissa Marko, Tufts University
19. Vitamin E (E) Supplementation Reverses the Age Associated Decline in Phosphorylation of the Adaptor Protein LAT in CD4+ T Cells of Old Mice

11:45 am Janko Nikolich-Zugich, MD, PhD, Oregon Health & Science University
20. Regulation of T-Cell Responses to Acute and Chronic Viruses in Old Rodents

12:00 pm – 2:00 pm *at COURTYARD MARRIOTT TREMONT*
Annual Awards Luncheon

Distinguished Achievement Award
Harman Research Award
Hayflick Award
Journalism Awards
Nicolai and Glenn Awards

Keynote speaker: Britton Chance, PhD, University of Pennsylvania

21. The Impact of NIR and NMR Spectroscopy on Non-Invasive Medicine

2:00 pm – 4:00 pm

**SESSION 6: TRANS-ATLANTIC AWARENESS AND COLLABORATION
SYMPOSIUM ON AGING RESEARCH**

Chairs: Richard Faragher, PhD University of Brighton, UK and

Norman S. Wolf, DVM, PhD, FAAA, University of Washington

2:00 pm Sian Henson, PhD, Imperial College, UK
22. The Modification of IL-7 and the Reversal of Thymic Atrophy in Aged Mice

*(N) Denotes Pre-doctoral Candidate for Nicolai Award

Sunday, June 4, 2006 continued

- 2:20 pm Anne McArdle, PhD, University of Liverpool, UK
23. Functional Effect of Failure of Adaptive Responses in Skeletal Muscle during Aging
- 2:40 pm Ian Kill, PhD, Brunel University, UK
24. Reconstruction of Young and Aged Dermis in Culture
- 3:00 pm Robert Saunders, PhD, Open University, UK
25. Analyzing the Relationship Between Oxidative Stress and Aging in *Drosophila*
- 3:20 pm Rodger Smith, PhD, Royal Veterinary College, UK
26. Understanding Soft Tissue Aging – The Effect of Cyclical Loading
- 3:40 pm Bernie Conway, PhD, Strathclyde University, UK
27. Inclusive Design Tool Based on Psychological and Biomechanical Functional Performance
- 4:00 pm – 4:15 pm *B R E A K*
- 4:15 pm – 5:15 pm **DENHAM HARMAN AWARD LECTURE**
Philip W. Landfield, PhD, University of Kentucky College of Medicine
Evolving Perspectives on Brain Aging
- 5:15 pm **AGE Conference Sessions Adjourn for the Day**
- 5:15 pm – 6:15 pm **Business Meeting of the American Aging Association**
Open to All Members
- 6:30 pm **Student Sessions –**
Chair: Rafael de Cabo, PhD
Data Blitz
Round Table
Discussion on perspectives on careers in aging research
Student Social Event

Monday, June 5, 2006

- 7:00 am AGE Conference Registration
Continental Breakfast
- 8:15 am – 10:15 am
SESSION 7: METABOLIC SYNDROME AND AGING
Chairs: Mohsen Meydani, DVM, PhD and Jose Ordovas, PhD,
Jean Mayer USDA - HNRCA at Tufts University
- 8:15 am Nir Barzilai, MD, Albert Einstein Medical School
28. Adipocytes, Inflammation and the Metabolic Syndrome in Aging
- 8:45 am Tamara Harris, MD, National Institute on Aging
29. Obesity, Regional Body Fat Distribution, and the Metabolic Syndrome in Older Men and Women
- 9:15 am Jose Ordovas, PhD, Jean Mayer USDA - HNRCA at Tufts University
30. Intervention in Metabolic Syndrome of Aging

9:45 am Laura Bordone, PhD, Massachusetts Institute of Technology
31. **SIRT1 Regulates Insulin Secretion by Repressing UCP2 in Pancreatic Beta-Cells**

10:00 am Dayong Wu, MD, PhD, Jean Mayer USDA-HNRCA at Tufts University
32. **Aging Up-Regulates Expression of Inflammatory Mediators in Mouse Adipose Tissue**

10:15 am – 10:30 am **B R E A K**

10:30 am **HAYFLICK AWARD LECTURE**
Kenichi Kitani, MD, PhD, FAAA, National Institute for Longevity Sciences
What Really Declines With Age?

11:15 am – 12:30 pm

SESSION 8: CALCIUM MEDIATED SIGNAL TRANSDUCTION IN BRAIN AGING

Chair: James Joseph, PhD, FAAA, Jean Mayer USDA-HNRCA at Tufts University

11:15 am James Joseph, PhD, FAAA, Jean Mayer USDA-HNRCA at Tufts University
33. **The Duality of Signaling Effects Induced by Dietary Interventions in Oxidative Stress or Learning Paradigms**

11:40 am Paul J. Colombo, PhD, Tulane University
34. **Relationships Among Signaling Proteins, Age, and Memory**

12:05 pm Mark Smith, PhD, Case Western Reserve University
35. **Therapeutic Targets in Alzheimer's Disease: Signal Transduction Mechanisms**

12:30 pm – 2:15 pm **LUNCH PROVIDED**
Lunch and Trans-Atlantic Collaboration on Aging Workshop
Moderated by Simin Meydani, DVM, PhD,
Norman Wolf, DVM, PhD, and Richard Faragher, PhD

2:15 pm – 4:15 pm **Public and Media Session:**
The New Age of Aging
Chair: Miriam E. Nelson, PhD, Jean Mayer USDA-HNRCA at Tufts University
Simin Nikbin Meydani, DVM, PhD, Jean Mayer USDA-HNRCA at Tufts University

2:15 pm **Strong Women and Men Live Well: an Update on Physical Activity and Aging**
Miriam E. Nelson, PhD, Jean Mayer USDA-HNRCA at Tufts University

2:55 pm **Nutritional Requirements for Healthy Aging**
Irwin Rosenberg, MD, Jean Mayer USDA-HNRCA at Tufts University

3:35 pm **Positive Emotions and Aging**
James Goodwin, MD, University of Texas Medical Branch

4:15 pm **C O N F E R E N C E A D J O U R N S**