Therapeutic Intervention in the Aging Process  
Chair: Randy Strong, PhD, University of Texas Health Science Center at San Antonio

FRIDAY, JUNE 1, 2007
7:00 am Pre-conference Registration
Henry B. Gonzalez Convention Center Mission Room 103 B
8:00 am Pre-conference Welcome and Opening Remarks –
Chair: Randy Strong, PhD, University of Texas Health Science Center at San Antonio

8:05 am – 9:35 am SESSION I
IDENTIFICATION OF THERAPEUTIC TARGETS

8:05 am Richard Weindruch, PhD, University of Wisconsin-Madison
USE OF GENE ARRAYS TO IDENTIFY THERAPEUTIC TARGETS

8:35 am Brian Kennedy, PhD, University of Washington
CONSERVED EUKARYOTIC PATHWAYS REGULATING LONGEVITY

9:05 am Arlan Richardson, PhD, University of Texas Health Science Center at San Antonio
A CRITICAL EVALUATION OF ANTI-OXIDANT DEFENSE SYSTEMS AS TARGETS FOR ANTI-AGING INTERVENTION

9:35 am - 10:00 am BREAK

10:00 am – 11:30 am SESSION II
SCREENING FOR POTENTIAL THERAPEUTIC COMPOUNDS

10:00 am Gordon Lithgow, PhD, Buck Institute
STRESS RESPONSE MIMETICS AND AGING

10:30 am Kerry Kornfeld, PhD, Washington University St Louis
IDENTIFICATION AND ANALYSIS OF ANTICONVULSANT DRUGS THAT EXTEND C. ELEGANS LONGEVITY

11:00 am Sige Zou, PhD, National Institute on Aging
A LARGE-SCALE SCREEN SYSTEM FOR PROLONGEVITY INTERVENTIONS USING THE MEXICAN FRUIT FLY ANASTREPHA LUDENS

11:30 am – 1:00 pm BREAK (on your own)

1:00 pm – 2:30 pm SESSION III
TESTING INTERVENTIONS IN RODENT MODELS

1:00 pm Nancy Nadon, PhD, National Institute on Aging
THE NATIONAL INSTITUTE ON AGING INTERVENTIONS TESTING PROGRAM
Friday, June 1, 2007 continued

1:30 pm Richard Miller, MD, PhD, University of Michigan
   NATIONAL INSTITUTE ON AGING INTERVENTION TESTING PROGRAM:
   INITIAL RESULTS

2:00 pm Rafael deCabo, PhD, National Institute on Aging
   LIFESPAN EXTENSION BY RESVERATROL

2:30 pm – 3:00 pm Break

3:00 pm – 4:30 pm SESSION IV
   CLINICAL RESEARCH: CHALLENGES AND OPPORTUNITIES

3:00 pm Steve Smith, MD, Pennington Biomedical Research Center
   THE CALERIE STUDY: CALORIE RESTRICTION IN HUMANS - OPPORTUNITIES
   FOR RESEARCH

3:30 pm Robert Floyd, PhD, Oklahoma Medical Research Foundation
   WHAT HAVE NITRONES TAUGHT US ABOUT AGING AND AGE-RELATED
   DISEASES?

4:00 pm Peter DiStefano, PhD, Elixir Pharmaceuticals
   GENETIC OR PHARMACOLOGIC BLOCKADE OF GHRELIN RECEPTOR
   SIGNALING IMPROVES GLUCOSE HOMEOSTASIS.

4:30 pm Pre-conference adjourns

6:00 pm – 7:30 pm
   AGE Conference Registration
   at MARRIOTT PLAZA SAN ANTONIO

6:00 pm – 7:30 pm
   WELCOME RECEPTION
   at MARRIOTT PLAZA SAN ANTONIO
CURRENT DIRECTIONS IN STUDYING MECHANISMS OF AGING
Chair: Holly Van Remmen, PhD, FAAA
University of Texas Health Science Center at San Antonio

7:00 am AGE Conference Registration
Continental Breakfast

8:00 am AGE Conference Sessions Begin

8:00 am – 8:10 am Welcome and Opening Remarks
Holly Van Remmen, PhD, FAAA, President, American Aging Association

8:10 am – 9:40 am
SESSION 1: USING INVERTEBRATE MODELS AS A DISCOVERY TOOL FOR GENES AND PROCESSES THAT DETERMINE LIFE SPAN AND AGING RATES
Chair: Pamela Larsen, PhD, University of Texas Health Science Center San Antonio

8:10 am Siu Sylvia Lee, PhD, Cornell University
1. SYSTEMATIC ANALYSIS OF GENETIC DETERMINANTS OF LONGEVITY IN C. ELEGANS

8:40 am Andrew Dillin, PhD, Salk Institute for Biological Studies
2. THE GENETICS OF SURVIVAL

9:10 am John Phillips, PhD, University of Guelph
3. PROBING THE ROLE OF REACTIVE OXYGEN IN AGING: RESPONSE OF DROSOPHILA ROS MUTANTS TO HYPOXIA AND DR

9:40 am – 10:15 am BREAK

SESSION 2: PROBING THE ROLE OF IGF-1 IN AGING
Chairs: Martin Adamo, PhD, University of Texas Health Science Center at San Antonio and Andrzej Bartke, PhD, FAAA, University of Southern Illinois

10:15 am William Sonntag, PhD, Wake Forest University
4. AGING IN THE GROWTH HORMONE, IGF-1: NOVEL INSIGHTS FROM AN INVESTIGATION OF THE HIPPOCAMPAL PROTEOME

10:45 am Makoto Kuro-o, PhD, University of Texas Southwestern Medical Center at Dallas

5. SUPPRESSION OF AGING IN MICE BY THE HORMONE KLOTHO

11:15 am Chris Sell, PhD, Drexel University College of Medicine

6. AGING IN IGF-1 HYPOMORPHIC MICE

11:45 am Martin Adamo, PhD, University of Texas Health Science Center at San Antonio

7. STUDYING THE ROLE OF IGF-1 IN AGING USING MICE DEFICIENT IN LIVER IGF-1 (LID MICE)

Saturday, June 2, 2007 continued

12:15 pm – 1:30 pm LUNCH BREAK (on your own)

1:30 PM- 2:45 PM Special Event: Debate

IS AGING PROGRAMMED?

Moderated by Steve Austad, PhD, University of Texas Health Science Center at San Antonio
Panelists: Daniel Promislow, PhD, Department of Genetics, University of Georgia and Valter Longo, PhD, University of Southern California

2:45 pm – 3:15 PM LUNCH BREAK

3:15 PM – 5:00 PM – DUAL SESSIONS

SUBMITTED PAPER SESSION - Chair, Thomas Johnson, PhD, University of Colorado
Nicolai Award
Young Jang, University of Texas Health Science Center at San Antonio

3:15 pm 8. MITOCHONDRIAL DYSFUNCTION LEADS TO AGE DEPENDENT LOSS OF MUSCLE MASS VIA APOPTOTIC MYONUCLEAR DELETION AND PROTEOLYSIS IN MICE LACKING SOD1 (CuZnSOD)

Vera Gorbunova, PhD, University of Rochester

3:30 pm 9. TELOMERASE ACTIVITY AND TUMOR SUPPRESSION: FROM MICE TO BEAVERS

Nicolai Award
David Hammers, The University of Texas at Austin

3:45 pm 10. AGE-RELATED CHANGES IN INSULIN-LIKE GROWTH FACTOR-I IN ISCHEMIA/ REPERFUSION INJURED SKELETAL MUSCLE

Glenn Award
Andrej Podlutsky, PhD, University of Texas Health Science Center at San Antonio

4:00 pm 11. COMPARATIVE BIOLOGY OF DNA REPAIR

Nicolai Award
Adam Bachstetter, University of South Florida

4:15 pm 12. HUMAN UMBILICAL CORD BLOOD CELLS INCREASE IN VIVO PROLIFERATION OF ENDOGENOUS HIPPOCAMPAL PROGENITOR CELLS OF AGED
RATS

Glenn Award
Sang-Kyu Park, PhD, University of Colorado at Boulder

4:30 pm 13. IDENTIFICATION OF DOWNSTREAM TARGET GENES OF SKN-1-DEPENDENT OXIDATIVE STRESS RESPONSE

Chris Heward, PhD, Kronos Science Laboratory

4:45 pm 14. A MULTI-PARAMETER BIOMARKER SET FOR OXIDATIVE STRESS ASSESSMENT IN HUMAN SAMPLES

DUAL SESSION

TRANS-ATLANTIC AWARENESS AND COLLABORATION SYMPOSIUM ON AGING RESEARCH Chairs: Anne McArdle, PhD, University of Liverpool and Norman Wolf, DVM, PhD, FAAA, University of Washington

Richard Faragher, PhD, University of Brighton, UK

3:15 pm 15. SENESCENT CELLS CAUSE AGEING AND WERNER’S SYNDROME: DEFINITELY MAYBE

Saturday, June 2, 2007 continued

Janet Lord, PhD, University of Birmingham, UK

3:30 pm 16. STRESS RESPONSES, NEUTROPHILS AND AGING

Stephany Biello, PhD, University of Glasgow, UK

3:45 pm 17. IT’S ABOUT TIME: AGEING AND THE CIRCADIAN CLOCK

Mark Yeoman, PhD, University of Brighton, UK

4:00 pm 18. SYNAPSE SPECIFIC CHANGES IN SEROTONIN SIGNALLING CONTRIBUTE TO AGE-RELATED CHANGES IN THE FEEDING BEHAVIOUR OF THE POND SNAIL, LYMNAEA.

Mike Sherratt, PhD, University of Manchester, UK

4:15 pm 19. MOLECULAR STRUCTURE AND FUNCTION IN AGEING ELASTIC FIBRES

João Passos, PhD, Newcastle University, UK

4:30 pm 20. OXYGEN FREE RADICALS IN SENESCENCE, ARE THEY SIGNAL TRANSDUCERS?

Malcolm Jackson, PhD, Liverpool University, UK

4:45 pm 21. TRANS-ATLANTIC STUDIES OF ROS AND SKELETAL MUSCLE AGEING

6:30 PM – 8:30 PM AGE Board of Directors Dinner Meeting

6:30 PM Student Session and Data Blitz
Student Social

Sunday, June 3, 2007
7:00 am AGE Conference Registration
Continental Breakfast

8:15 am – 9:45 am
SESSION 3: NUTRIENT SENSING
Chairs: Walter Ward, PhD, and David Sharp, PhD University of Texas Health Science Center at San Antonio

8:15 am Jim Jefferson, PhD, Pennsylvania State University
22. mTOR MEDIATED TRANSLATIONAL CONTROL OF EXPRESSION OF THE ε- SUBUNIT OF EUKARYOTIC INITIATION FACTOR 2B (EIF2B)

8:45 am George Thomas, PhD, University of Cincinnati
23. THE ROLE OF THE NUTRIENT INPUT IN TSC1/2-RHEB MEDIATED mTOR SIGNALING

9:15 pm Pere Puigserver, PhD, University of Washington
24. NUTRIENT CONTROL OF GLUCOSE HOMEOSTASIS THROUGH THE PGC-1 PATHWAY

9:45 am – 10:15 am BREAK

Sunday, June 3, 2007 continued

10:15 am – 12:20 pm DUAL SESSIONS
NATHAN SHOCK CENTER SYMPOSIUM –
Chair: Arlan Richardson, PhD, University of Texas Health Science Center at San Antonio
David G. Nicholls, PhD, Buck Institute for Age Research
10:15 am 25. CALCIUM OVERLOAD, ATP INSUFFICIENCY AND OXIDATIVE STRESS: THREE ASPECTS OF MITOCHONDRIAL DYSFUNCTION
James D. Lechleiter, PhD, University of Texas Health Science Center at San Antonio
10:40 am 26. ENHANCED ASTROCYTE MITOCHONDRIAL METABOLISM DURING AGING
Richard Miller, MD, PhD, University of Michigan
11:05 am 27. CELL STRESS AND AGING: STUDIES OF MUTANT MICE AND LONG-LIVED RODENTS
11:30 am Rong Yuan, MD, PhD, The Jackson Laboratory
28. MOUSE MODELS FOR SPONTANEOUS CHANGES WITH AGE AND HAPLOTYPE ANALYSES
11:55 am Warren C. Ladiges, PhD, University of Washington
29. SUCCESSFUL GENERATION OF TRANSGENIC MOUSE MODELS FOR AGING RESEARCH.

10:15 am – 12:20 pm DUAL SESSIONS
SUBMITTED PAPERS FROM ABSTRACTS – Chair: Julie Mattison, PhD, National Institute on Aging

David E. Harrison, PhD, The Jackson Laboratory
10:15 am 30. EFFECTS OF DIET RESTRICTION AND THE LITTLE MUTATION ON HEMATOPOIETIC STEM CELL AGING AND THE RISK OF CANCER
Nicolai Award
Dudley W. Lamming, Harvard Medical School
10:40 am 31. CALORIE RESTRICTION AND TOR SIGNALING CONVERGE ON SIRTUIN-MEDIATED LIFESPAN EXTENSION IN SACCHAROMYCES CEREVISIAE.
Nicolai Award
Michael Bonkowski, Southern Illinois University
11:05 am 32. CALORIE RESTRICTION AND INSULIN RECEPTOR ACTIVATION IN LIVER AND MUSCLE FROM NORMAL AND GROWTH HORMONE RECEPTOR KNOCKOUT MICE
Yuji Ikeno, PhD, University of Texas Health Science Center at San Antonio
11:30 am 33. Cu/ZnSOD TRANSGENIC RATS: A NEW ANIMAL MODEL FOR OXIDATIVE STRESS THEORY OF AGING?
Robert Shmookler Reis, PhD, University of Arkansas for Medical Sciences
11:55 am 34. TEN-FOLD EXTENSION OF C. ELEGANS LONGEVITY BY MUTATIONS THAT ALSO CONFER PROTECTION AGAINST OXIDATIVE AND ELECTROPHILIC STRESSES, BUT NOT HYPERTHERMIC STRESS

12:20 PM – 1:45 PM LUNCH B R E A K (on your own)

Sunday, June 3, 2007 continued
1:45 pm – 3:15 pm
SESSION 4: COMPARATIVE BIOLOGY OF AGING
Chair: Rochelle Buffenstein, PhD, City College of New York

1:45 pm Rochelle Buffenstein, PhD, City College of New York
35. HOLES IN THE OXIDATIVE STRESS THEORY OF AGING: ROS RESISTANCE AND RODENTS WITH DISPARATE LONGEVITY

2:15 pm Debbie Kristan, PhD, California State University
36. CHRONIC CALORIC RESTRICTION INCREASES SUSCEPTIBILITY OF LABORATORY MICE TO INTESTINAL NEMATOMODE INFECTION

2:45 pm A. J. (Tony) Hulbert, PhD, Metabolic Research Centre, University of Wollongong
37. MEMBRANE LIPIDS AND AGING

3:15 pm – 3:45 pm Break

3:45 PM – 5:05 PM – DUAL SESSION Chair: Mark Smith, PhD, Case Western Reserve University SUBMITTED PAPERS FROM ABSTRACTS

3:45 pm Piper Treuting, PhD, University of Washington
38. REDUCTION OF NEOPLASIA IN OLD MICE OVEREXPRESSING MITOCHONDRIAL-TARGETED CATALASE.
3:45 pm Isao Shimokawa, MD, PhD, Nagasaki University Graduate School of Biomedical Sciences

40. FOXO1 IS NOT INVOLVED IN THE CALORIE RESTRICTION-SPECIFIC RESPONSE TO OXIDATIVE STRESS IN MICE LIVER

Glenn Award
4:45 pm Huiyun Liang, PhD, University of Texas Health Science Center at San Antonio

41. ANTI-AGING EFFECTS OF PGC-1 ALPHA OVEREXPRESSION

3:45 PM – 5:05 PM – DUAL SESSION Chair: James Nelson, University of Texas Health Science Center at San Antonio SUBMITTED PAPERS FROM ABSTRACTS – Chair: Mark Smith, PhD, Case Western Reserve University

Sandeep Sagar, MD, PhD, Mayo Clinic
3:45 pm 42. THE ADULT CARDIOPROTECTIVE STRESS RESPONSE CAN BE CONVERTED TO THE AGED PHENOTYPE BY KATP CHANNEL BLOCKADE

Nicolai Award
Chen-Yu Liao, University of Texas Health Science Center at San Antonio
4:05 pm 43. STRAIN VARIATION IN THE RESPONSE OF FAT MASS TO CALORIC RESTRICTION

Sunday, June 3, 2007 continued

4:25 pm Janko Nikolich-Zugich, MD, PhD, Oregon Health and Science University 44. HOW PERSISTENT VIRUSES DRIVE IMMUNE SENESCENCE AND WHAT CAN WE DO ABOUT IT

4:45 pm Gregory Brewer, PhD, Southern Illinois University
45. AGE-RELATED TOXICITY OF β-AMYLOID ASSOCIATED WITH INCREASED ROS, P-ERK AND P-CREB IN PRIMARY HIPPOCAMPAL NEURONS: REVERSAL BY BLUEBERRY EXTRACT

5:15 -5:45 PM
AGE Business Meeting – Open to all Members

6:00 PM – 8:00 PM
COCKTAIL RECEPTION AND POSTER PRESENTATION

Competition for Glenn Award and Nicolai Prize
Monday, June 4, 2007

7:30 am Continental Breakfast

8:30 am – 10:30 am
SESSION 5: GENETICS OF AGING: HOW AGING AND LONGEVITY ARE CONTROLLED BY GENES
Chair: Yousin Suh, PhD, University of Texas Health Science Center at San Antonio

8:30 am Charles Cantor, PhD, Sequenom, Inc.
46. SEARCH FOR AGING AND LONGEVITY GENES

9:00 am Nir Barzilai, MD, Albert Einstein College of Medicine, New York
47. FUNCTIONAL GENOMICS APPROACHES FOR IDENTIFICATION OF HUMAN LONGEVITY GENES

9:30 am Calogero Caruso, MD, University of Palermo, Italy
48. GENETICS OF INFLAMMATION IN AGE-RELATED DISEASES AND LONGEVITY

10:00 am Brad Rikke, PhD, University of Colorado
49. MAPPING GENES SPECIFYING THE ANTI-AGING ACTIONS OF CALORIE RESTRICTION USING QTL APPROACHES

10:30 am – 10:50 am Break

10:50 am – 12:20 pm
SESSION 6 – STEM CELLS AND AGING
Chair: Peter Hornsby, PhD, University of Texas Health Science Center at San Antonio

10:50 am Johnny Huard, PhD, Children’s Hospital and the University of Pittsburgh
50. MUSCLE DERIVED STEM CELLS

11:20 pm Sean J. Morrison PhD, University of Michigan
51. STEM CELL SELF-RENEWAL, CANCER CELL PROLIFERATION, AND AGING

11:50 am Charles E. Murry, MD, PhD, Center for Cardiovascular Biology, University of Washington
52. APPLICATIONS OF HUMAN EMBRYONIC STEM CELLS FOR CARDIAC REPAIR

12:20 PM – 2:00 PM
American Aging Association Awards Luncheon.
All meeting registrants invited.

Poster Awards
Paul E. Glenn Award
Walter R. Nicolai Award

Distinguished Achievement Award
Edward J. Masoro, PhD,
University of Texas Health Science Center at San Antonio

2:15 PM
Denham Harman Award Lecture for 2007:
SEEING CLEARLY BY MAINTAINING
PROTEOLYTIC EDITING AND EATING RIGHT

Allen Taylor, PhD
Jean Mayer USDA Human Nutrition Research Center on Aging
at Tufts University

3:15 pm CONFERENCE ADJOURNS