October 19, 2010

Nir Barzilai, M.D. - Curriculum Vitae

Albert Einstein College of Medicine

The Ingeborg and Ira Leon Rennert Chair of Aging Research
Director: Institute for Aging Research,
PI: Einstein's Nathan Shock Center of Excellence in the Biology of Aging
Professor of Medicine and Genetics,
Albert Einstein College of Medicine
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http://www.einstein.yu.edu/aging/researchstudy.aspx obarzilai.htm

CURRENT HOSPITAL AND ACADEMIC APPOINTMENTS

Chair: The Ingeborg and Ira Leon Rennert Chair of Aging Research

Director: Institute for Aging Research, Albert Einstein College of Medicine; Bronx, NY

Director: Animal Physiology Core of the NIH Funded Diabetes Research and Training Center

Professor: Department of Medicine and Molecular Genetics, Albert Einstein College of Medicine

Clinical : Co-Director: Diabetes Clinic; Montefiore Medical Center; Bronx NY, Attending Physician Medicine and Endocrinology: Jacobi Hospital; Weiler Hospital; Albert Einstein College of Medicine, Bronx, NY

PREVIOUS APPOINTMENTS

1993-94 Instructor of Medicine: Division of Endocrinology; Diabetes Research Center; Albert Einstein College of Medicine; Bronx, NY

1994-99 Assistant Professor of Medicine: Divisions of Endocrinology and Geriatrics; Diabetes Research Center; Albert Einstein College of Medicine

2002- 04 Associate Professor of Medicine and Molecular Genetics: Albert Einstein College of Medicine

CERTIFICATION AND LICENSURE

1989 Board Certification Internal Medicine; Israel

1995 Board Certification Internal Medicine; US

1996 Board Eligible Endocrinology and Metabolism; US

EDUCATION

1978-85 Technion, Faculty of Medicine (7 year accelerated MD program)

1979 Summer student: Neoplastic Biochemistry, Department of Pharmacology; Baylor College of Medicine; Houson, TX

1980 Clerkship: Baragwanath Hospital, Department of Pediatrics; Soweto, South Africa.

1980 Clerkship: Charles Johnson Memorial Hospital; Medical Clinics and Community Health projects (the creation of a nutritional village); Kwazulu Homeland, South Africa

1981 Summer student: Glucose Transport Systems, National Institutes of Health (NIDDK); Bethesda, MD

1982-85 Doctoral Research Project: Glucose and Insulin Metabolism in Endocrinopathies: Hyperthyroidism, Cushing's, Obesity, Acanthosis Nigricans. Technion.

1985 M.D. Technion-Israel Institute of Technology; Haifa, Israel.

POSTGRADUATE TRAINING

1984-85 Internships: Rambam Medical Center; Technion; Haifa, Israel
The Royal Free Hospital; London, England

Research: Glucose and Insulin Metabolism in Liver Cirrhosis; Department of Liver Diseases; Royal Free Hospital; London, England

1985-90 Resident Internal Medicine and Geriatrics: Department of Internal Medicine; Hadassah Hospital; Hebrew University; Jerusalem, Israel

Research: Hepatic Glucose Production in Aging; Hadassah Hospital

1987-88 Resident: West Haven VA Hospital; Yale University; New Haven, CT
Elective in Endocrinology

Research: Glucose Metabolism after Mixed Meal, Mechanism of Action of New and Old Oral Hypoglycemic Agents; Division of Diabetes and Metabolism; Yale University

1988-90 Senior Resident and Chief of Metabolic Unit: Hadassah Hospital

1989-90 Instructor of Internal Medicine: Hebrew University

1990-92 Fellow in Endocrinology and Metabolism: New York Hospital and Sloan Kettering Hospital; Cornell University Medical College; New York, NY.

Research: Cloning of a G-Protein Related Receptor from the VIP-Secretin Family; Division of Molecular Medicine; Cornell University Medical College Senior Fellow in Endocrinology and Metabolism: Albert Einstein College of Medicine; Bronx, NY.

1992-94 Research: Metabolic Control of Hepatic Glucose Metabolism; Division of Endocrinology; Albert Einstein College of Medicine

RELATED MEDICAL TRAINING

1974-76 Instructor, Chief Instructor of Medics: Israeli Army School of Military Medicine

1977-85 Chief Medic: Israeli Defense Forces Special Services: (War decorated; Reserve duty), Israel

1979-83 Head of Intensive Care Unit Nursing Team: Rambam Medical Center; Haifa, Israel

1979-84 Chief Medic: Israeli Medical Team to aid Cambodian refugees; Cambodia’s border

1985 Underwater Physiology and Hyperbaric Medicine; Naval course; Israel

1985-90 Physician: Israeli Navy (Reserve Duty)

1987 Israeli Army School of Military Medicine; Captain's Course (graduated first in class)

PROFESSIONAL SOCIETY MEMBERSHIP

The Gerontological Society of America
American Federation of Aging Research
American Diabetes Association
American College of Physicians

HONORS AND AWARDS

1979-85 Medical School Dean's List

1985-86 Fellowship Training Award to the Royal Free Hospital, London, England

1987-88 American Physicians Fellowship, Inc. for Medicine in Israel;
Israel-America Friendship League Fellowship Award; Yale University, CT

1993-94 Juvenile Diabetes Foundation International Fellowship Award

1994-95 Resnick Gerontology Center Award

1994-95 American Federation for Aging Research (AFAR) Award

1994-99 Clinical Investigator Award (NIH)

1995 Distinguished Service Award from the American Diabetes Association

1997-0 Paul Beeson Physician Faculty Scholars in Aging Research Award

1998-03 First Award (R29; NIH)

2000-03 The Ellison Medical Foundation Senior Award

2003 Nathan W. Shock Award Lecture

2007 The Ira and Ingeborg Rennert Chair for Aging Research at Albert Einstein College of Medicine

2008- Glenn Foundation (for aging research) Seed for creative work in biology of aging

2009 Scientific International Achievement Award. Indian Society for the study of Diabetes

2010 Merit Award from the NIH

2010 Irving S. Wright Award of Distinction in Aging Research

PRIMARY RESEARCH INTERESTS

- Biology of Aging: Evaluation of the mechanics of the aging process at the physiological and cellular level in laboratory models. Focus on nutrient sensing pathways implicated in harmful effects of excess nutrients, and effects of caloric restriction on longevity.

- Energy Metabolism in Aging: Pathways regulating insulin action and body fat distribution. Recent focus on hypothalamic pathways.

- Searching for Longevity Genes: Examination the genetic and phenotypic characteristics of surviving into the 11th decade of life in selected of families of genetically homogenous Ashkenazi Jews. Characterization of the biology and out comes associated with longevity genes.

ACTIVE RESEARCH GRANT PARTICIPATION

The Genetic Base for Exceptional Longevity
NIH-P01AG027734 (Barzilai, Program Director) 04/01/07-03/31/12
Role of Genes in Exceptional Longevity in Humans
Core A – Core Leader
Project 2 – Project Leader

The long-term goal of this Program is to identify genes that contribute to exceptional longevity in humans. A gene wide association unbiased approach (GWAS) and candidate gene approach (focus on GH/IGF-1 pathway) will be applied. Additional long term goals are to assess the associations among these genes with age-related diseases and longevity in a newly established population recruited into a prospective longitudinal study.

NIH-AG028872 (Barzilai Co-Investigator Bergman, PI,) 06/01/07-05/31/12
A Systems Methodology for Studying the Biology of Aging Through High through put genetics to identify longevity genes, aging genes, and which of the aging genes are protected by which of the longevity genes.

NIH AG3949 (Co-Investigator, Program Director Lipton, PI) 09/01/04-08/31/10
Einstein Aging Study (EAS)
Genetic Prediction of Cognitive Decline in the EAS Study

Paul Glenn Foundation (Barzilai, PI) 10/08-10/10
Epigenetics and Longevity
Exploratory grants to establish high throughput technology to establish whether epigenetic markers change with aging in animal models and whether centenarians are distinct from younger subjects.

The Metabolic and Biological Determines of Aging
NIH R01 AG18381 (Barzilai, PI) 07/01/10-08/31/15
Dysregulation of Glucose Homeostasis in Aging
The effects of central activation and peripheral blockage of IGF-1 receptor on glucose homeostasis aging and longevity in aging animals (Scored 10, highest percentile).

Merit award- (for the award above) 07/01/10-07/01/20

Leadership in Institutional Core and Training

P30 Nathan Shock Center of Excellence for Biology of Aging. (Barzilai, PI) 07/01/10-06/30/15
Administrative Core (Barzilai, PI)
Healthy Aging Physiology Core (Barzilai, PI)

Einstein's-NSC will enhance and expand the basic biology of aging enterprise already ongoing in the Institute, and establish 3 unique research resource cores: a) Cellular and Tissue Aging Core. b) Healthy Aging Physiology Core. c) Genomics and Epigenomics of Aging Core. It will also facilitate the planning and coordination and provide program enhancement through a lecture series and a yearly retreat. NSC will also provide support and a suitable environment for new investigators including pilot & feasibility awards and a designated-mentor system.

NIH 1T32 AG023475 (Barzilai, PI) 05/01/09-04/30/14
National Research Service Award Institutional
Research Training Grant. Training in Aging Research focused on training PhD's and MD's in the context of 5 Program Projects funded by the NIA at Einstein

Diabetes Research and Training Center
Animal Physiology Core **(Barzilai, Core Director**)
NIH DK20541 (Pessin) 02/01/10-01/31/15

Foster biomedical research in diabetes-related areas to promote the translation of research findings into improved health outcomes, especially in underserved and minority populations.

PREVIOUS GRANT SUPPORT (ENDED WITHIN PAST 6 YEARS)

Dysregulation of Glucose Homeostatis in Aging
R01 AG18381-03 (Barzilai) 09/01/05-08/31/10
The goal of this project is to identify pathways that protect from the deterioration in insulin action and from the changes in body fat distribution. Specifically, IGF-1 in the brain modulates these in a positive way while IGF binding protein 3 regulates these, independently in opposite way. The central pathways will be discovered.

American Federation of Aging Research (Barzilai, CO-PI with Verghese) 10/07-9/09
The Role of Longevity Genes in Frailty
Exploratory grant to establish preliminary data on the genetic basis for mobility, disability and decline in gait velocity. Focuses initially on why some Centenarians are failing and others are quite intact.

National Research Service Award Institutional
NIH 1T32 AG023475 (Barzilai, PI) 05/01/04-04/30/09
Research Training Grant
Training in Aging Research

Excess Nutrients and the Metabolic Syndrome of Aging
PO1 AG021654-01 (Barzilai, Program Director) 1/01/03-12/31/08

The major goal is to implicate nutrient sensing pathways such as the hexosamine biosynthetic pathway (HBP) in the harmful effects induced by excess nutrients. Activation of the HBP leads to insulin resistance, endothelial dysfunction, and induce the expression of fat & endothelial-derived peptides that have roles in thrombosis and inflammation.

PO1 AG021654-01 (Barzilai, Project Leader) 03/01/03-12/31/08

PO1 AG021654-01 (Barzilai, Administrative Core) 03/01/03-12/31/08
Administrative Core Director

NIH R01 AG-18728-02A1 (Shuldiner) 07/15/01-06/30/08
Longevity Genes in Founder Populations
Subcontract from University of Maryland

Development of the Genotypic analysis of longevity in very old populations. No overlap with the present application. If the present application is funded, effort in this R01 will be lowered to 10%.

NIH DK20541 (Fleischer, Rossetti) 02/01/03-01/31/10
Diabetes Research and Training Center
Animal Physiology Core (Barzilai)

PO1 AG03949 (Lipton) 07/01/04 - 06/30/09
The Einstein Aging Study Neurological Decline of Aging

The goal is to determine the prevalence and mechanisms for the decline in cognitive function in population-based study in the Bronx, NY. Dr. Barzilai will provide for the biological and genetic data that will predict cognitive decline.

Ellison Medical Foundation (Barzilai) 01/01/01-12/31/04
Identification of Longevity Genes in Founder Populations

INSTITUTIONAL/CENTER (AECOM) GRANTS

5P60 DK20541 Diabetes Research and Training Center: Investigator

Pyrosequencing Instrument (PSQ HS96): Investigator

1U01 DK48349 Diabetes Prevention Trial: Investigator

General Clinical Research Center/ CTSA

MENTOR ON TRAINING GRANTS

2000-2003	Mentor on K30 Award-Masters in Clinical Investigation
2002-2007	Lead Mentor on a K12 Award- Preparation for Clinical Investigator Award
2003-08	T32 Mentor on National Institute of Aging Training Grant
2001-	Over 50 Summer student in aging for high school and college students
2006-13	T32 PI on National Institute of Aging Training Grant
2006-	AECOM Aging Mentorship Program (Hartford foundation)
2006	Head of the advisory committee and mentor for Medical Scientist Pathway in residency in the Department of Medicine
2006-	Mentor for PhD training in Clinical Sciences

OTHER PROFESSIONAL ACTIVITIES/ACADEMIC ADVISORY

1998	American Diabetes Association Professional Education Workshop (National): Task Force for development of regional post-graduate education initiative
1995	American Diabetes Association (Eastern Region): Chairman of the Scientific Committee
1992	American Diabetes Association (National): Council of Nutritional Sciences and Metabolism.
1999	Advisor for the National Institute of Aging Panel on Exceptional Longevity

2003- Longitudinal Data on Aging Working Group of the National Institute of Aging

2007 Advisor for the Supercentenarains Research foundation

2007 Advisory Board for SIRA (Aging Center) in UCSD.

2006- Advisor to Yale University Pepper Center

2007- Program Advisory Committee of Beeson Career Development Award

2008- Advisor to Wake –Forest University Pepper Center

TEACHING AND OTHER INSTITUTIONAL ACTIVITIES

1993-07 Teaching Obesity in the course on Endocrinology and Metabolism for second year Medical Students

1998-07 Teaching Leptin Pathways in the course on Molecular Foundation of Medicine for first year Medical Students

2000-09 General Clinical Research Center Advisory Board, Albert Einstein College of Medicine

2001 Teaching Aging in the course on Molecular Foundation of Medicine for first year Medical Students

2002 Mentor on Institutional K12

2008-10 Professors Promotion Committee

SYMPOSIA ACTIVITY: ORGANIZING AND MODERATING

American Diabetes Association, NY State Affiliate Meeting (The Harold Rifkin Open Meeting); 'Diabetes in the Elderly'; April 1996; New York, NY

American Diabetes Association, NY State Affiliate Meeting (The Basic Science Friedman Symposium); 'IGF and Glucose Metabolism'; November 1996; New York, NY

Gerontological Society of America; ‘Diabetes in the Elderly: From Theory to Practice-A Multidisciplinary Approach’; November 1996; Washington, DC

American Diabetes Association, NY State Affiliate Meeting (The Harold Rifkin Open Meeting); ‘Can Type II Diabetes Mellitus Be Prevented?’; May 1997; New York, NY

American Diabetes Association, NY State Affiliate Meeting (The Basic Science

Friedman Symposium); 'The Molecular Action of Current and Future Anti-Diabetic Drugs'; November 1997; New York, NY

Gerontological Society of America; 'The Rationale and Means by which Diabetes in Aging may be Prevented'; November 1997; Cincinnati OH; The Gerontologist, 37:89

American Diabetes Association, Eastern Region (The Harold Rifkin Open Meeting); with promotion and publication in Hippocrates Magazine; 'The Role of Fat in Diabetes'; May 1998; New York, NY

Continuing Medical Education Program: 'Diabetes, Insulin Resistance and Obesity-New Molecular Targets for Therapy'; May 1998; Dead Sea, Israel

American Diabetes Association, Eastern Region Affiliate Meeting, (The Basic Science Friedman Symposium); 'Mechanisms involved in the syndrome of insulin resistance'; November 1998; New York, NY

Gerontological Society of America; 'In What Ways is Diabetes in the Elderly Different From That of Middle-age?'; November 1998; Philadelphia, PA

Gerontological Society of America; 'New Insights on the Biology of Longevity'; November 1998; Philadelphia, PA

American Diabetes Association, Eastern Region Affiliate Meeting (The Harold Rifkin Open Meeting); 'The Prevention of Diabetes Macrovascular Disease'; April 1999; New York, NY

American Diabetes Association, Eastern Region Affiliate Meeting (The Basic Science Friedman Symposium); 'The Role of Leptin in Obesity and Diabetes'; November 1999; New York, NY

Gerontological Society of America; 'New Insights on the Treatment of Elderly Diabetic Patients'; November 1999; San Francisco, CA

American Diabetes Association, Eastern Region (The Harold Rifkin Open Meeting); 'Using Outcomes Research to Improve Diabetes Care'; April 2000; New York, NY

American Diabetes Association, Eastern Region Affiliate Meeting, (The Basic Science Friedman Symposium); 'Recent Advances in Diabetes Complications'; October 2000; New York, NY

Gerontological Society of America, 'New Insights on the Patho-Physiology, Diagnosis and Treatment of the Elderly Diabetic Patient'; November 2000; Washington, DC

American Diabetes Association, Eastern Region Affiliate Meeting (The Harold Rifkin

Open Meeting); Insulin Secretion and Action in Type 2 Diabetes: New Approaches and Methods of Treatment'; May 2001; New York, NY

American Diabetes Association, Eastern Region Affiliate Meeting (The Basic Science Friedman Symposium); 'The Biology of Fat and its Impact on Metabolism'; October 2001; New York, NY

Gerontological Society of America; 'New Focus on the Patho-Physiology and Treatment of the Elderly Diabetic Patient'; November 2001; Chicago, IL

American Diabetes Association, Eastern Region Affiliate Meeting (The Basic Science Friedman Symposium); 'The Biology of Impaired Glucose Homeostasis: Lessons from the Past and the Promise of Cure Ahead'; October 2002; New York, NY

Gerontological Society of America; 'Causes and Treatment of the Metabolic Syndrome of Aging'; November 2002; Boston, MA

American Association Eastern Region Affiliate Meeting (The Harold Rifkin Open Meeting); Recent Developments in Childhood and Adolescent Diabetes'; April 2003; New York, NY

American Association Eastern Region Affiliate Meeting (The Harold Rifkin Open Meeting) Recent Developments in Childhood and Adolescent Diabetes.' April 2003, NY, NY

American Diabetes Association, Eastern Region Affiliate Meeting, (The Basic Science Friedman Symposium). '"The Vascular Biology of Diabetes".' October 2003, New York, NY

Gerontological Society of America; 'Excess Nutrients and the 'Metabolic Syndrome of Aging'.' November 2003, San Diego, CA.

Gerontological Society of America Presidential Symposium. 'Early Origins of Age-Related Disease.' November 2003, San Diego. CA.

Gerontological Society of America Presidential Symposium. 'New Insights to the Biology of Aging Muscle and Fat'. November 2003, San Diego. CA.

Chair: Searching for Human Longevity Genes. December 2003. Maagan Israel

American Diabetes Association, Eastern Region Affiliate Meeting, (The Harold Rifkin Open Meeting). '"The Vascular Biology of Diabetes".' April 2004. New York, NY

American Diabetes Association, Eastern Region Affiliate Meeting, (The Basic Science Friedman Symposium). '"Food for Thought: GI Hormones and Neural Regulation of Energy Metabolism".' November 2004. New York, NY.

Gerontological Society of America Presidential Symposium. 'The Paradox of the Insulin Signaling Pathway and Longevity, November 2004, Washington. DC.

Potential Etiological Mechanisms in Achieving Exceptional Longevity, Gerontological Society of America, 'Comparative Longevity: "From Lower Species to Human Centenarians" November 2004, Washington, DC

American Diabetes Association, Eastern Region Affiliate Meeting, (The Harold Rifkin Open Meeting). '"Diabetes in Pregnancy".' April 2005. New York, NY

American Diabetes Association, Eastern Region Affiliate Meeting, (The Basic Science Friedman Symposium). "The Role of Genes and the Environment in Diabetes and Obesity". November 2005. New York, NY.

Co-Organizer of an Einstein/AFAR Mini-symposium on 'Aging, Genome Maintenance and Metabolism'. December 2007. New York Academy of Science, NY

Co-PI on The Keystone Symposium on Metabolic Pathways of Longevity. April 2008. Colorado

Co-PI on The Gordon Conference on Aging. July 2010 Switzerland

Co-Chair of 'Cell' Symposium on Metabolism and Aging. March 2011.Hyannis MA

PI on The Gordon Conference on Aging on Metabolic Pathways of Longevity. March 2012 CA

STUDY SECTIONS (NIH and NATIONAL)

Standing study sections:

American Federation of Aging Research Study Section. 2001-2004.

Aging Systems and Geriatrics (ASG) Study Section (2003-2007)

Beeson K Award study section (NIA) (2006-10)

NIA-Biology Study Section 2008-2012

Others:

Reviewer for the Wellcome Trust; 2001; London, England.

Study section site visits. 2003. NIA. Bethesda, DC.

P01 Review. 2007.

Bi National funds (US-Israel) 2007,08,09.

2009/10 ZRG1 Center for Scientific Review Special Emphasis Panel

Review Leader for PPG: Insulin and IFG-1 Signaling Effects on Mouse Lifespan

ARRA REVISION I (Challenge grants) 2009

P01 Review 2009

P01 Review Chair 8/2010

P01 Review Chair 11/2010

NIH and NATIONAL COMMITTES AND WORKSHOPS PANELS:

Workshop on Centenarians Cell/DNA Bank and Genotyping. The National Institute of Aging. December 1997. Washington, DC.

Workshop on Genetic Epidemiology of Age-Related Survival Outcomes; April 1998; The National Institute of Aging; Washington, DC.

Workshop on Metabolic Regulation and Aging; The National Institute of Aging. May 2000; Galveston, TX.

Centenarian Study Group; May 2000; Santa Monica, CA.

Advisory Panel on Exceptional Longevity (APEL). The National Institute of Aging. July 2000; Washington, DC.

Advisory Panel on Diabetes and Aging. NIA/NIDDK. February 2001. Washington, DC.

Longitudinal Data on Aging (LDA) Working Group; December 2003

Workshop on Adipose Tissue Secretory Function and its Role in Obesity-Associated Co-morbidities; Sponsored by numerous NIH Institutes, Centers and Offices; 2003.

NIA U01-Longevity Consortium (2004-20010)

Advisory Program Committee for The Beeson (K) CDA 2006

NIH Workshop on Systems Biology of Human Aging. 2006. Washington, DC

NIA's CALERIE Exploratory Workshop "Growth Factors; Cell Proliferation, Differentiation, and Turnover; Cell Signaling". 2006. Washington, DC

NIA Workshop “Animal Models of Comorbidities of Aging”. 2007. Washington, DC

NIH Workshop on Systems Biology of Human Aging. 2008. Santa Fe, AZ

Executive Committee and Group Leader in Biology of Aging Program (BAP) Workshop September, 2008. Gaithersburg, MD

Glenn Foundation/NIA Workshop on Systems Biology of Human Aging. 2009. Santa Barbara, CA

Epigenetic Regulation of Aging & Functional Consequences. September 2009. NIA Washington, DC

NATIONAL ADVISORY BOARD

Advisory Board for University of Luisiana Program Project on Aging. 2005.

Report to the National Advisory Council on the National Institute of Aging; NIH; February 2004.

Advisory Board for Yale Pepper Center. 2005.

Advisory Board for the Pepper Center, 2009. Wake Forest, NC

Advisor for the National Institute of Aging Panel on Exceptional Longevity

Longitudinal Data on Aging Working Group of the National Institute of Aging.

Advisor for the Supercentenarains Research foundation 2007

Advisory Board for SIRA (Aging Center) in UCSD. 2007

Advisor to Yale University Pepper Center. 2006

Program Advisory Committee of Beeson Career Development Award. 2007

Advisor to Wake –Forest University Pepper Center. 2008-10.

ADVISORY BOARD/ CONSULTANT (for Pharmaceuticals)

1996-2006	Bristol-Myers –Squibb; City, NJ
1998-2007	Merck; National Diabetes Board
2000-05	Novartis Pharmaceuticals Corporation; East Hanover, NJ
2001-2003	Emisphere; City, NY

2001-2003	Roch; NJ, CA, and Basel, Switzerland
2000-2004	Abbott Laboratories, Abbott Park, Chicago IL
2000-2002	Eli Lilly, IN
2002-2007	Pfizer, CT
2005-present	Oramed Pharmaceuticals- Board member
2008-present	Merck; National US Board

EDITORIAL BOARD (Past and present)

- American Journal of Physiology Endocrinology & Metabolism
- Board of Contributing Editors - SAGE KE (http://sageke.sciencemag.org)
- Diabetes
- Journal of Gerontology-Medical Science
- Guest Editor of Mechanism of Aging and Development (2004 Special Issue)
- Guest editor on J. Gerontology Special issue on metabolism and aging

REVIEWER (Past and present)

- Journal of Clinical Investigation
- Nature
- Nature Medicine
- Journal of Clinical Endocrinology and Metabolism
- Journal of Biological Chemistry
- Diabetes
- International Journal of Obesity
- Aging Cell
- Journal of Endocrinology and Metabolism

POST-DOCTORAL FELLOWS AND MENTORED FACULTY:

1994-96	Suzane Raghavan, MD. Currently Associate Professor, Department of Pediatrics (Endocrinology) at University of Indiana.
1994-97	Swati Banerjee, MD. Currently Associate Professor, Director: Division of Pediatric Endocrinology at University of California, San Francisco.
1997-2002	Patricia Vuguin, MD. Currently Associate Professor, Department of Pediatrics (Endocrinology) and the Diabetes Research and Training Center at Albert Einstein College of Medicine. Recipient of Masters in Clinical Investigation. Awarded K08 (2005-10).

1997-99 Li She, MD, MS. Currently atPfizer Laboratories, Groton, CT.

1997-99 Gaurev Gupta, MD. Currently Associate Professor, Department of Medicine (Geriatrics) at South Western University in Dallas, TX.

1999-01 Ilan Gabriely, MD. Currently Assistant Professor, Department of Medicine at Albert Einstein College of Medicine, Bronx, NY. R01 funded 2007-12.

2001-05 Gil Atzmon, PhD. Currently Assistant Professor, Department of Medicine and Molecular Genetics at the Albert Einstein College of Medicine, Bronx, NY.

2001-05 Rahdika H. Muzmudar, MD. Currently Associate Professor, Department of Pediatrics (Endocrinology) at the Albert Einstein College of Medicine, Bronx, NY. Awarded K08 and R01 (2010-15).

2003-06 Meredith Hawkins, MD. Currently Professor, Department of Medicine (Endocrinology) and the Diabetes Research and Training Center. Mentor, Paul Beeson Physician Faculty Scholars in Aging Research. Funded by several R01.

2005-09 Francine H. Einstein, MD. Currently Assistant Professor, Department of Obstetrics & Gynecology and Women's Health (Maternal-Fetal Medicine). Mentor for the Society for Maternal-Fetal Medicine Career Development Award. R01 funded 2009-2014.

2003-04 Leigh Ettinger, MD. Thesis Advisory Committee and Mentor (K12).

2002- Joe Verghese, MD. Co-Mentor (with R. Lipton), K-Paul Beeson Physician Faculty Scholars in Aging Research. Chief of Division, currently funded by multiple R01's.

2006-08 Sigal Fishman, MD. Visiting Research Associate, currently Assistant Professor from Tel Aviv Sourasky Medical Center Department of Medicine (Gastroenterology). Currently funded by Israeli government foundation and Merck

2006-08 Elina Jerchow, MD. Assistant Professor, Department of Medicine (Allergy/Immunology) at the Albert Einstein College of Medicine, Bronx, NY.

2006- Collette Knight, MD. Assistant Professor, Department of Medicine (Endocrinology) at the Albert Einstein College of Medicine, Bronx, NY. Funded by a K08

2006- Derek Huffman, PhD. Post Doctoral, Department of Medicine (Endocrinology) at the Albert Einstein College of Medicine (T32), Bronx, NY.

2006-10 Reid Thompson, Co-Mentor (with J Greally) Thesis Advisory Committee MD/PhD Student Program at the Albert Einstein College of Medicine, Bronx, NY.

2007- Hye Hoe, Department of OBGYN. Intra-uterine environment and aging (K08 award)

(On Advisory Committee of 10 graduate students)

INVITED SPEAKER (SELECTED FROM 2000)

1. The Patho-Physiology of Body Fat Distribution. The American Society of Hypertension January 2000, Laragh Conference. FL.

2. Regulation of Body Fat Distribution. Keynote Speaker. International Medical-Nutrition 2000, April 2000. Haifa, Israel.

3. Caloric Restriction and the Metabolic Syndrome. FASEB Symposia on Caloric Restriction: Effects on Body Composition, Insulin Signaling and Aging. April 2000. San Diego, CA.

4. The Role and Treatment of Insulin Resistance in Diabetes of Older Adults. The American Geriatric Society. May 2000, Nashville TN.

5. Insulin Resistance with Aging. Medical/Endocrine Grand Rounds. May 2000. UCLA, CA.

6. Pathophysiology of Diabetes in Aging. American Association of Clinical Pharmacology. November 2000. Boston, MA.

7. The Relationship between Fat Tissue and Metabolic Syndrome X. Pediatrics Update Conference. November 2000. Danbury, CT.

8. Visceral Obesity: Evaluation, Risk and Treatment. American Heart Association Symposia on the Cardiovascular Metabolic Syndrome. November 2000. New Orleans, LA.

9. How Does Visceral Fat Affect Systemic Glucose Homeostasis? Frontiers in Diabetes Research. Columbia University College of Physician and Surgeons. November 2000. New York, NY.

10. Genetic Transfer of Longevity and its Biomarkers. Gerontological Society of America. November 2000. Washington, DC.

11. Impaired Insulin Action with Aging. Diabetes & Aging NIDDK/NIA. February 2001. Washington, DC.

12. New insights on the Biology of Longevity. February 2001. Medical Grand Rounds at NY Medical College, Valhalla, NY.

13. Biological Markers for Longevity. April 2001. NIH Workshop: Functional Senescence. Louisville, KY.

14. Building Bridges between Basic and Clinical Research. May 2001. The Annual Paul Beeson Aging Research Meeting. Hutchinson Island, FL.

15. Molecular Physiology of Aging. May 2001. American Geriatric Society Annual Meeting-Basic Science Update. Chicago, IL.

16. Longevity and the Cardiovascular System. May 2001. Grand Rounds for the Department of Cardiovascular Medicine. The Mayo Clinic; Rochester, MN.

17. The Regulation of Body Fat Distribution and Insulin Action with Aging. May 2001. Division of Endocrinology, Diabetes and Metabolism. The Mayo Clinic; Rochester, MN.

18. Insulin Action in Aging. May 2001. The Heinrich-Heine-University; Düsseldorf, Germany.

19. Caloric Restriction and Aging. May 2001. German Diabetes Association. Aachen, Germany.

20. Bridging between Basic and Clinical Research. The Beeson Meeting. June 2001. FL.

21. Building Bridges between Geriatrics & Internal Medicine: Endocrinology and Geriatrics. Geriatric Education Retreat (Hartford Foundation) August 2001. Jasper, Canada.

22. Searching for Longevity Genes in Founder Population. Biology Marine Laboratories and the Ellison Medical Foundation. August 2001. Woods Hole, MA.

23. Pathophysiology of Diabetes in the Elderly. University of Michigan. CME course on Diabetes in the Elderly. September 2001. Ann Arbor, MI.

24. New Insights on the Biology of Longevity. University of Michigan. Institute of Gerontological Research. September 2001. Ann Arbor, MI.

25. Longevity Genes: from Primitive Organisms to Man. Genetics of Longevity across Species. National Institute of Aging and The American Federation of Aging Research. October 2001. Tucson, AZ.

26. Centenarians and their Offspring do not Develop Insulin Resistance. Gerontological Society of America. November 2001. Chicago, IL.

27. Fat vs. Nutrients in Caloric Restricted Animals: A Unifying Hypothesis. Visiting Professor at the Aging Center. University of Texas Health Science Center. December 2001. San

Antonio, TX.

28. National Institute on Aging. Exploratory Projects for Longitudinal Genetic Epidemiologic Studies on Aging. January 2002. San Francisco, CA.

29. Clinical Markers for Human Longevity. International Health Policy Research and Ecole Libre Hautes Etudes. February 2002. The New School. New York, NY.

30. Role of Body Fat Distribution in Obesity-Associated Metabolic Abnormalities. Presidential Lecture Symposium: Translating the Genome-Physiology and Pathophysiology of Obesity. FASEB Meeting. April 2002. New Orleans, LA.

31. New Insights into Longevity. Medical Grand Rounds. Cornell University Medical College. July 2002. New York, NY.

32. Body Fat Distribution and Insulin Action. Nonalcoholic Steatohepatitis Meeting. American Association for the Study of Liver Disease (AASLD). September 2002. Atlanta, GA.

33. Nutrients Sensing and the Metabolic Syndrome of Aging. NIA Co-sponsored Workshop: Current Perspectives on the Mechanism of Caloric Restriction. October 2002. Bandera, TX.

34. Metabolic Syndrome and Longevity. New York University-Adult/Pediatric Endocrine Seminar. November 2002. New York, NY.

35. Does the Brain Lead the Metabolic Decline of Aging? Can Aging be Reversed?: From Basic Science to Clinical Arena. Association for Research in Nervous and Mental Disease. December 2002. New York, NY.

36. Insulin Resistance in Aging. Annual Rocky Mountain Geriatric Conference. March 2003. Breckenridge, CO.

37. New Insights on the Biology of Longevity. Columbia University Grand Rounds. April 2003. New York, NY.

38. New Insights on the Metabolism of Aging and Longevity. Grand Rounds - the NIDDK/NIH. May 2003. Bethesda, MD.

39. Caloric Restriction and Cellular Fuel Sensing. 2003 Pennington Scientific Symposium on Mechanism and Retardation of Aging. May 2003. Baton Rouge, LA.

40. Visceral Fat in the Development of Diabetes. Current Issues Special Session in the American Diabetes Association 63rd Scientific Sessions. June 2003. New Orleans, LA.

41. Nathan W. Shock Award Lecture. First annual Nathan Shock Aging Symposium. September 2003. Towson, MD.

42. Nutrient Sensing and Age-Related Diseases. International Association of Biomedical Gerontology 10th Congress. September 2003. Cambridge, England.

43. Diabetes in Old Age. Scientific Symposium in Diabetology. 50th Anniversary of the Israel Diabetes Association. October 2003. Jerusalem, Israel.

44. The Paradox of Insulin Action and Longevity. NIA-Longevity Consortium. November 2003. Santa Monica, CA.

45. Keynote Speaker: The Voyage to Old Age: Searching for Human Longevity Genes. December 2003. Maagan, Israel.

46. Why did Moses Live to be 120? Soretsky Hospital Grand Rounds. December 2003. Tel Aviv University.Tel Aviv, Israel.

47. New Insights on Longevity. Medical Grand Rounds. Ben Gurion University. December 2003. Beer Sheva, Israel.

48. Insights on Biology of Longevity. Combined Diabetes and Geriatric Centers Grand Rounds. University of Washington. February 2004, Seattle, WA.

49. Visceral vs. Subcutaneous Fat. Integrative Role of Fatty Acids in Metabolic Regulation: Implications for Obesity and Diabetes. American Diabetes Association. April 2004. Newport, RI.

50. Biology of Longevity. Visiting Professor at University of Texas in San Antonio. April 2004. San Antonio, TX.

51. Comparative Longevity: Pathophysiology of Aging in Mammals. 2nd International Conference on Functional Genomics of Aging. April 2004. Crete, Greece.

52. Genetic Insights on Longevity. Beeson Symoposium at the ASG Meeting: Modulating Factors on Longevity. May 2004. Las Vegas, NV.

53. Debate: Does Obesity and Leptin Resistance Really Matter in the Elderly? Endocrinology Aging Interest Group at ENDO 04. June 2004. New Orleans, LA.

54. Aging and Longevity. ENDO 04. June 2004. New Orleans, LA.

55. Why did Methuselah Live to be 969? Visiting Professor LSU. June 2004. New Orleans, LO

56. What Went Wrong on the Road to Longevity? The NIA Summer Institute for Aging Research. July 2004. Wye, MD.

57. Newer Insights on Exceptional Longevity. KMA Annual meeting. September 2004. Louisville, KY.

58. Comparative Longevity: From Lower Species to Human Centenarians. Symposium on Potential Etiological Mechanisms in Achieving Exceptional Longevity. Gerontological Society of America. November 2004. Washington, DC.

59. Human Centenarians. Symposium on the Paradox of Insulin Signaling Pathway and Longevity. Gerontological Society of America. November 2004. Washington, DC.

60. Mechanisms for Exceptional Longevity. Grand Round Department of Epidemiology. Columbia University. December 2004. New York. NY.

61. Grand Rounds, Endocrinology. The Mayo Clinic. January 2005. Rochester, MN.

62. Course in Gerontology. University of St. Louis. January 2005. Washington, DC.

63. Grand Rounds, Dept. of Neurology. University of Pennsylvania. January 2005. Philadelphia, PA.

64. Grand Rounds, Kronos Institute and University of Arizona. February 2005. Phoenix ,AZ.

65. Grand Rounds, Pierce Lab. Yale University. February 2005. New Haven, CT.

65. Keynote speaker at Technion Faculty of Medicine and Rambam Hospital. March 2005. Haifa, Israel.

66. Keynote Speaker: Socidad Argentina de Endocrinologia y Metabolismo. April 2005. Buenos Aires, Argentina.

67. Grand Rounds. Department of Humans Genetics. Mt. Sinai Hospital. April 2005. New York, NY.

68. Grand Rounds, Department of Cardiology. Yale University. February 2005. New Haven, CT.

69. Keynote Speaker: Department of Medicine Annual Retreat. Mt. Sinai Hospital. May 2005. New York, NY.

70. Medical School Rounds. Technion. July 2005, Haifa, Israel.

71. Plenary Session American Society of Human Genetics, October 2005. Salt Lake City, UT

72. Intensive Board Review and Update in Geriatric Medicine CME. September 2005, New York, NY.

73. Friedman Symposium, American Diabetes Association, Eastern Region. November 2005. New York, NY

74. Grand Round Dept of Medicine. January 2006. Springfield, IL.

75. 3rd International Conference on Functional Genomics and Aging. March 2006, Palermo, Italy.

76. The Fisher Visiting Professorship. The 3 UCLA campuses. May 2006. Los Angeles, CA.

77. American Aging Association Meeting. Symposium on the Metabolic Syndrome. June 2006. Boston, MA.

78. XIV International Symposium on "ATHEROSCLEROSIS" June 2006. Rome, Italy.

79. American Diabetes Association Meeting. Longevity and Insulin Signaling Symposium. June 2006. Washington, DC.

80. Ground Round. Institute of Nutrition. University of Alabama Birmingham. September 2006. Birmingham, Alabama.

81. Symposium Guest Speaker: "Nutrient Sensing and the Metabolic Syndrome of Aging". WFUHS Translational Research in Aging Symposium. Simon Island 2006 NC.

82. International GH/IGF meeting. Keynote Address. November 2006. Kobe, Japan.

83. Keynote Speaker 3rd Meeting of the International Chair on Cardiometabolic Risk, December 2006. New York, NY.

84. Grand Round-Endocrine: UCSC. January 2007. San Francisco, CA.

85. Keynote Speaker. Until 100 like 20: Genetics, Long Term Saving, and What Comes in Between. Heads of the Israeli Insurance Company and Banks. January 2007. Herzelia, Israel .

86. Grand Round-Endocrine: University of Chicago. February 2007. Chicago IL.

87. Invited Speaker. “The role of insulin signaling pathway in longevity”. International Pre-Diabetes Symposium. April 2007. Barcelona, Spain.

88. Paul F. Glenn Aging Symposium. Novel Human Longevity Genes. Harvard. May 2007. Boston, MA.

89. Plenary Lecture on a FASEB National Institute of Aging & UAB’s Clinical Nutrition Research Center Symposium on “Body Weight, Adiposity, Energetics & Longevity Conference”. August 2007. San Diego, CA

90. Swedish Royal Academy of Sciences. "BIOLOGY OF AGEING" Symposium. September

2007. Stockholm, Sweden.

91. "Stem Cell and Aging". Stem Cell Summit at Harvard. October 2007. Boston, MA.

92. Keynote Speaker: "Cause and effect relationship between decline in hormones and aging". Danish Endocrine Society to invite you to give a similar seminar at the annual meeting of our Society to be held January 2008. Aarhus, Denmark.

93. Plenary Speaker at the Israeli Gerontological Society. February 2008. Tel Aviv, Israel.

94. The Kroc Family (Founders of McDonalds) visiting professorship at Stanford University School of Medicine. March 2008. CA

95. Plenary Lecture on The Keystone Symposium on Metabolic Pathways of Longevity. April 2008. Copper Mountain, Colorado.

96. Plenary Speaker at the Israeli Endocrinology Society. April 2008. Tel Aviv, Israel.

97. Strategies to Prevent Age-Related Diseases through Human Genetics. The 80th birthday of Dr. Jim Watson: TO WHAT AGE SHOULD WE BE EXPECTED TO WORK?, 2008 The Banbury Center, Cold Spring Harbor Laboratory. NY

98. Plenary Lecture: 10th European Congress of Endocrinology. May 2008. Berlin, Germany.

99. Keynote Speaker: Retreat for the New PI, Institutes of Genetics and of Aging, of the CIHR (Canadian Institutes of Health Research). November 2008. Toronto, Canada.

100. New Insight on the Genetics of Human Longevity, Molecular Seminar, Department of Biology, McGill University. November 2008. QC, Canada.

101. Keynote Speaker: Longevity Consortium Symposium. November 2008. Washington, DC.

102. Longer Life Foundation's Visiting Scholar. Grand Round at Washington University. November 2008. St. Louis, MI.

103. "The Decline in Nutrient Sensing Mechanisms during Mammalian Aging". Gordon Conference on Biology of Aging. February 2009. Venture, CA.

104. "Insulin Resistance in Aging". Keystone Symposia: Complications of Diabetes and Obesity. February 2009. Vancouver, Canada.

105. "IGF Signaling and Aging Humans". Gordon Conference on Insulin-Like Growth Factors in Physiology and Disease. March 2009. Venture, CA.

106. Symposium on Insulin Resistance and Aging. The 3rd International Congress on PREDIABETES and the METABOLIC SYNDROME, April 2009. Nice, France.

107. Grand Round: Central Control of Peripheral Glucose Metabolism. Department of Cellular and Structural Biology. UTHSCSA. April 2009. San Antonio, TX.

108. Invited speaker: new insights on mechanisms of aging. ASBMB 2009 Annual Meeting. April 2009. New Orleans, LO.

109. Grand Round: Genetic Basis for Aging and Longevity. Pennington Biomedical Research Center. April 2009. New Orleans, LO.

110. International Symposium on Diabetes. Regulation of Insulin Action through the hypothalamus. May 2009. Nanjing, China.

111. Aging and Healthy Lifespan Conference. Harvard Medical School. “Novel Pathways for Healthy and Exceptional Longevity in Humans.” October 2009. Harvard, MA.

112. Life Science Summit. Strategy to Develop Drugs to Preserve Cognitive Function with Aging. October 2009. LI, NY.

113. Grand Round: Department of Gerontology. Role of Pituitary in Aging. October 2009. Leiden, Netherlands.

114. Grand Round: Aging Center. Role of Genes in Life Span of Humans. October 2009. Groningen, Netherlands.

115. “Future of Gerontology Research and Life Span”. “Pension, Social Security, Progress in Medicine and Aging (Hosted by MIGDAL Insurance Company). Tel Aviv, Israel. October 2009.

116. Oartion Award: Indian Academy of Diabetes. Longevity Genes. January 2010. Mumbai, India.

117. Grand Round: Time in a Bottle. Department of Cardiology, The Mayo Clinic. February 2010. Rochester, MN.

118. Annual Mayo CTSA Symposium: “New Insights in Genetics of Human’s Longevity”. The Mayo Clinic. February 2010. Rochester, MN.

119. Conference: “The Future of Genomic Medicine: Genomics of Aging”. Scripp Translational Science Institute and The J. Craig Venter Institute. March 2010. San Diego, CA.

120. Medicine Grand Round. University of Washington. April 2010. Seattle, WA.

121. The New Science of Ageing. “The Promise of Human Genetics in Preventing Ageing-

Related Disease". The Royal Society. May 2010. London, UK.

122. Genetics initiative in human's longevity. NIH Symposium on Longevity Assurance Genes. October 2010. NIH Bethesda MD.

PATENT ISSUE

1) PCT/US2004/00876: Biological Markers for Longevity and Diseases, uses thereof; filed 3/20/03.

2) PCT/US2007/526-1: Anti-Hyperglycemic agent Humanin, uses thereof; filed 4/07.

Cofounder of CohBar: Mitochondrial derived proteins for the treatment of age-related diseases.

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3. Cohen P, **Barzilai N**, Barzilai D, Karnieli E. “Correlation between Insulin Clearance and Insulin Responsiveness.” Studies in normal, obese, hyperthyroid, and Cushing's syndrome patients. Metabolism 1986: 35:744-749

4. Cohen P, **Barzilai N,** Bar-Ilan R, Yassin K, Karnieli E. “Lack of Suppression of Secretion by Hyperinsulinemia in a Patient with Insulinoma.” J. Clin. Metab. 1986: 63:1411-1412

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Hepatic Glucose Fluxes and Direct Pathways of Hepatic Glycogen Synthesis in Conscious Mice." Am. J. Physiol. 1995: 269:E1037-E1043

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