# CURRICULUM VITAE

**Christiaan Leeuwenburgh, PhD**

University of Florida

College of Medicine, Department of Aging and Geriatric Research Tel: (352) 273-5735

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2004 Mowry Rd, Gainesville, FL 32611PO Box 100107

**EMPLOYMENT**

| **Institution** | **Position** | **Dates** | **Tenure** |
| --- | --- | --- | --- |
| University of Florida | Co-Director KL2 Program, Clinical Translational Science Institute (CTSI)  | 2021–Present | Non-Tenure-Accruing |
| University of Florida | Co-Director Professional and Career Development; Training Workforce Development (CTSI) | 2015–Present | Non-Tenure-Accruing |
| University of Florida | Vice-Chair of Research, Department of Aging and Geriatric Research and Institute on Aging  | 2015–Present | Non-Tenure-Accruing |
| University of Florida | Professor, College of Medicine, Department of Aging and Geriatric Research | 2007–Present | Tenured |
| University of Florida | Chief, Division of Biology of Aging, Department of Aging and Geriatric Research, Institute on Aging | 2006–Present | Non-Tenure-Accruing |
| University of Florida | Affiliate Faculty and Graduate Faculty Status, Departments of Anatomy and Cell Biology and Biochemistry and Molecular Biology | 2005–Present | Non-Tenure-Accruing |
| University of Florida | Associate Professor, Department of Aging and Geriatric Research, College of Medicine(New Department Created at UF) | 2005–2007 | Tenured |
| University of Florida | Associate Professor, College of Health and Human Performance, Department of Applied Physiology | 2002–2005 | Tenured |
| University of Florida | Faculty Associate Center for Gerontological Studies and the Institute on Aging | 1998–2005 | Non-Tenure-Accruing |
| University of Florida | Director, Biochemistry of Aging Laboratory, College of Health and Human Performance | 1999–2005 | Non-Tenure-Accruing |
| University of Florida | Assistant Professor, Department of Applied Physiology, College of Health and Human Performance | 1998–2005 | Tenure-Accruing |
| Washington University School of Medicine | Adjunct Instructor, Department of Internal Medicine, Washington University School of Medicine. | 1997–1998 | Non-Tenure-Accruing |
| Washington University School of Medicine | Ruth L. Kirschstein National Research Service Award (NRSA) Individual Fellowship. Washington University School of Medicine | 1997–1998 | Non-Tenure-Accruing |
| Washington University School of Medicine | Post-Doctoral Research Associate in Medicine, Department of Internal Medicine, Divisions of Geriatrics and Gerontology and Division of Atherosclerosis, Nutrition and Lipid Research | 1995–1998 | Non-Tenure-Accruing |

**EDUCATION**

1995–1998 Washington University School of Medicine, St. Louis, MO. Department of Internal Medicine, Divisions of Geriatrics and Gerontology, and the Division of Atherosclerosis, Nutrition and Lipid Research

Postdoctoral Fellow in Internal Medicine and Geriatrics and Gerontology; Research Associate in Medicine; Adjunct Instructor.

1993–1995 Honorary Fellow and Predoctoral Fellow, American Heart Association, University of Wisconsin, Madison, WI and University of Illinois, Urbana-Champaign, IL (Primary Mentor moved to UW)

1990–1995 PhD (1995), University of Illinois, Urbana-Champaign, IL

1986–1990 BS (1988) and MS (1990), University of Florida, Gainesville, FL

**HONORS/AWARDS**

2019 University of Florida, Professorship Award

2018 Dr. G. Lombard Kelly Lecturer, Medical College of Georgia, Augusta University.

2017 University of Florida, Professorship Award

2011-2013 University of Florida, Research Foundation Professor

2010 Exemplary Teacher Award, College of Medicine

2004 NIA Nathan W. Shock Lecture Award Winner from the National Institute on Aging

 (Nathan W. Shock was a former scientific director of the NIA and an NIH Scientist Emeritus)

2004–2006 University of Florida, Research Foundation Professor

2000-2002 American Heart Association, Young Investigator Award, FL

1999–2000 Merck Geriatric Cardiology Research Award, Society of Geriatric Cardiology

1997–1998 National Research Service Award, NRSA-NIH, National Institute of Aging

1996 Young Investigator Award, Oxygen Society, Intern. Soc. Free Rad. Res., Miami, FL

1994-1995 Honorary Fellow, University of Wisconsin, Madison, WI

1993–1995 American Heart Association, Pre-doctoral Fellowship, Illinois Affiliate

1993 The Avery Brundage Scholarship Award, University of Illinois, Urbana-Champaign, IL

**GRANT REVIEW**

| **Date** | **Location** | **Work Performed** | **Organization/****Employer** |
| --- | --- | --- | --- |
| 2022 | Mail  | Review Scientific Proposal Competitive Research Programme, Prime Minister Office Singapore | National Research Foundation of Singapore, Singapore |
| 2022 | Video Conference | UF Jacksonville Scholars Program | UF College of Medicine, Jacksonville |
| 2022 | Mail | Austrian Science Fund (FWF); patient oriented clinical research (KLIF) review. | Austrian Science Fund (FWF) |
| 2022 | Mail | UTMB Claude D. Pepper Older Americans Independence Center Scientific Review Committee (Pepper-SRC). | UTMB Claude D. Pepper Older Americans Independence Center |
| 2022 | Mail | Interdisciplinary Research Programme "The Gerontopole Brussels - Centre of expertise for Gerontology at the Vrije Universiteit Brussel" - Central theme: Active & Healthy Ageing. | The Vrije Universiteit Brussel (VUB), Belgium |
| 2021 | Mail  | Johns Hopkins University Research Education Core, Pilot, Development Project Claude D. Pepper Older Americans Independence Center | Johns Hopkins University |
| 2021 | UF | UF Opportunity Funds; UF Division of Sponsored Research  | UF Division of Sponsored Research |
| 2021 | Mail | Claude D. Pepper Older Americans Independence Center, Collaborative Pilots | Wake Forest, National Pepper Coordinator Center  |
| 2021 | Mail | American Federation for Aging Research | AFAR |
| 2021 | Video Conference | UF Jacksonville Scholars Program | UF College of Medicine, Jacksonville |
| 2021 | Mail Review | Grant proposal review Division of Research & Graduate Studies | The United Arab Emirates University, United Arab Emirates  |
| 2020 | Video Conference | NIH Study Section ZRG1 MOSS K (02). NIH applications on topics related to skeletal/cardiac muscle biology and diseases | NIH |
| 2020 | Video Conference | Advisory Board, To discuss nutritional solutions to modulate age-associated cellular decline for Nestlé Health Science Global Medical Affairs | Nestlé Health Science |
| 2020 | Video Conference | Grant reviews for the UF Jacksonville Scholar Program | UF College of Medicine, Jacksonville |
| 2020 | Mail | Grant reviews for the American Federation for Aging Research | AFAR |
| 2020 | Video Conference | Grant reviews for the UF Opportunity Funds; UF-Division of Sponsored Research | UF Division of Sponsored Research |
| 2020 | Mail | Grant reviews for Johns Hopkins University Research Education Core, Pilot, Development Project OAIC | Johns Hopkins University |
| 2020 | Mail  | Application for promotion to the status of Professor in the Department of Clinical Laboratories, College of Applied Medical Sciences. | King Saud University, Riyadh, KSA |
| 2020 | Mail  | Grant proposal review Division of Research & Graduate Studies | The United Arab Emirates University, United Arab Emirates |
| 2019 | Advisory Board, New York | To discuss nutritional solutions to modulate age-associated cellular decline for Nestlé Health Science Global Medical Affairs | Nestlé Health Science |
| 2019 | Mail | Grant reviews for the UF CTSI pilot program | UF CTSI |
| 2019 | Video Conference | Grant reviews for the UF College of Medicine Opportunity Funds | UF College of Medicine  |
| 2018 | Mail | Grant reviews for American Federation for Aging Research | AFAR |
| 2018 | Mail  | Application for promotion to the status of Professor in the Department of Clinical Laboratories, College of Applied Medical Sciences. | King Saud University, Riyadh, KSA |
| 2017 | Mail  | Review for College of Medicine; Mauren Post-doctoral Awards | College of Medicine |
| 2016 | Mail  | Grant reviews for the from the Human Frontier Science Program Organization | Human Frontier Science Program Organization, Strasbourg – FRANCE. |
| 2016 | UF | Grant reviews for the University of Florida Southeast Center for Integrated Metabolomics Pilot and Feasibility Projects (SEICM) | SEICM |
| 2016 | Mail  | Grant reviews for the Michigan Pepper Center Research Education Awards and Pilots | U. Michigan Pepper Center |
| 2016 | Mail  | Grant Reviews Biotechnology and *Biological Sciences* Research Council (*BBSRC*). | BBSRC, Bioscience for the Future, United Kingdom. |
| 2016 | Mail  | Grant Review, Scientific Research, Art and Culture, Environment and Social Welfare. | Fondazione Cariplo, an Italian, private philanthropic organization, Milan, Italy |
| 2015 | Mail  | Grant reviews for Johns Hopkins NIH Pepper Pilot funds review committee | Johns Hopkins University  |
| 2015 | Mail  | Grant reviews for UT Galveston NIH Pepper Pilot funds review committee | UT Galveston |
| 2015 | UF in Person | Grant reviews UF Cancer and Aging Pilot Funds review Committee | UF Cancer center |
|  | Mail | Review of Proposal for the NIA Intramural Program (Biology of Aging). | NIH |
| 2015 | Mail | Grant review University of Florida Southeast Center for Integrated Metabolomics Pilot and Feasibility Projects (SEICM) | SEICM |
| 2014 | GSK symposium on Mitochondria Science, Baltimore | Scientific symposium, to discuss latest on mitochondrial science  | GSK |
| 2014 | Mail  | Review Sir Henry Dale Fellowship, | Wellcome Trust, The Royal Society, England and Wales |
| 2014–2018 | External Advisory Board, Los Angeles, Miami and by Video Conference. | *Ad hoc* member of the external advisory board Program Project Grant (PO1) “Mitochondrial Quality Control in Cardioprotection: Overcoming Comorbidities.” | Roberta A. Gottlieb, MD Cedars-Sinai Heart Institute, Barbra Streisand Women’s Heart Center |
| 2014 | Video Conference | NIH Study Section Aging Systems and Geriatrics [ASG] study section reviews. | NIH |
| 2014 | UF | Grant reviews for the CTSI Clinical Research Pilot Proposals | CTSI |
|  | Video Conference | Grant reviews for the NIH Clinical Trials Review Committee (CLTR) | Clinical Trials Review Committee Office of Scientific Review |
| 2013 | UF | Grant reviews for the Opportunity Review Grant Panel; UF Division of Sponsored Research and College of Medicine | Division of Sponsored Research and College of Medicine |
| 2013 | External Advisory Board, Winston-Salem | *Ad hoc* member of the external advisory board Wake Forest Pepper Center | Wake Forest University |
| 2012 | Mail  | Mail Review, Chemical Sciences of the Netherlands Organization for Scientific Research (NWO) | *Dutch* Research Council (*NWO*), Netherlands |
| 2012 | Mail  | Review for Wittgenstein Award: The Wittgenstein Award is aimed at scientists of any discipline, who are working at Austrian research institutions and who are doing recognized pioneering research | Executive Board of the Austrian Science Fund, Austria |
| 2012 | UF | Grant reviews for College Liberal Arts and Sciences (CLAS) | UF Gerontological Grant Reviews CLAS( |
| 2012 | UF | CTSI Pilot Projects Grant Reviews | CTSI |
| 2012 | Washington DC | NIH SMEP Study section | NIH |
| 2011 | Video Conference | NIH MOSS-C03 Review Special Emphasis Panel | NIH |
| 2011 | Mail | Grant Reviews for American Federation for Aging Research (AFAR) | AFAR |

Grant review prior to 2011. 2010 Netherlands Princes Beatrix Funds, Muscle Diseases, Medical Research Council, United Kingdom, Program Grant Application, The Dunhill Medical Trust, United Kingdom, Grant Application, NIH CMAD Study section, San Francisco, American Federation for Aging Research; 2009;NIH Challenge Grants (Stage I reviewer), Canada Foundation for Innovation (CFI), Netherlands Princess Beatrix Fonds, Muscle Diseases, 2008; ZRG1 CVS-P (02) Center for Scientific Review SEP, Cardiac Metabolism, 2007; ZAT1 SM-07, “National Centers of Excellence for Research on Complementary and Alternative Medicine (CERC)”; 2006, ZAG1 ZIJ-6 NIA Special Emphasis Panel/Scientific Review Group 2006/10, ZAG1 ZIJ-5 NIA Program Project Grants, Special Emphasis Panel/Scientific Review, ZAT1 SM National center for complementary & alternative medicine, American Heart Association, Peer Review Committee (Florida), ZAG1 ZIJ-2 NIA Program Project Grants, Special Emphasis Panel/Scientific Review Group; 2005; ZAG1 ZIJ-5 NIA Program Project Grants, Special Emphasis Panel/Scientific Review Group, ZAG1 ZIJ-2 NIA Special Emphasis Panel/Scientific Review Group, 2004, NIA Special Emphasis Panel/Scientific Review Group, 2003, ZAG1 ZIJ-5 NIA Program Project Grants, Special Emphasis Panel/Scientific Review Group, 2000-2003, American Heart Association, Peer Review Committee (Florida). 2002-2003, Research Committee Society of Geriatric Cardiology

**TEACHING**

I have taught more than 15 different classes at UF since 1998, including very large required classes (Physiology, Applied Physiology, etc) attended by undergraduates as an assistant/associate professor. Below are my most recent classes **since 2011**, mainly attended by graduate students (in Doctor of Philosophy (PhD) and Master of Science (MS) programs) and professional students (Physician Assistant Program).

**Recent Classroom Teaching**

GMS 6893-06ED CTSI

GMS 6421 Advanced Cell Biology

GMS 6063 Mechanisms of Aging

GMS 6622 Mitochondrial Biology in Aging and Disease

GMS 6417 Integrative Physiology of Aging

GMS 7593 Neurobiology of Aging

PAS 5020 Introduction to Medicine II Physician Assistant

**Graduate students**

|  |  |  |  |
| --- | --- | --- | --- |
| **Candidate’s Role** | **Student** | **Major** | **Complete Date** |
| Chair Ph.D | Debapriya Dutta | Medical Sciences | August 2012 |
| Chair Ph.D | Arnold Seo | Medical Sciences | May 2010 |
| Chair Ph.D | Asimina Hiona | Medical Sciences | August 2007 |
| Chair Ph.D | Sharon Judge | Health and Human Performance | May 2004 |
| Chair Ph.D | Tracey Phillips | Health and Human Performance | May 2004 |
| Chair Ph.D | Amie Dirks | Health and Human Performance | May 2002 |
| Chair Master's | Jason Maslow | Exercise and Sport Sciences | December 2003 |
| Chair Master's | Neeharika Choudhry | Exercise and Sport Sciences | August 2003 |
| Chair Master's | Young Jang | Exercise and Sport Sciences | August 2003 |
| Chair Master's | Dore Debartolo | Exercise and Sport Sciences | August 2003 |
| Chair Master's | Natalie Darby | Exercise and Sport Sciences | December 2002 |
| Chair Master's | Raymond Polito | Exercise and Sport Sciences | May 2002 |
| Chair Master's | Debra Orringer | Exercise and Sport Sciences | August 2001 |
| Chair Master's | April Childs | Exercise and Sport Sciences | May 2001 |
| Chair Master's | Darcie Jackson | Exercise and Sport Sciences | December 2000 |
| Chair Master's | Sharon Judge | Exercise and Sport Sciences | May 2000 |
| Chair Master's | Ross Feldman | Exercise and Sport Sciences | December 1999 |
| Chair Master's | Shannon Grady | Exercise and Sport Sciences | August 1999 |
| Member Ph.D | Joann Roberts | Medical Sciences |  |
| Member Ph.D | Gabriel Fernandez Bueno | Medical Sciences | May 2020 |
| Member Ph.D | Jinhee Kim | Nutritional Sciences | August 2018 |
| Member Ph.D | Mi-Jung Kim | Medical Sciences | August 2018 |
| Member Ph.D | Min Kim | Nutritional Sciences | August 2017 |
| Member Ph.D | Karessa White | Communication Sciences & Disorders | August 2017 |
| Member Ph.D | Benjamin Predmore | Zoology | August 2009 |
| Member Ph.D | Joanna Matos | Zoology | May 2007 |
| Member Ph.D | Gary Pierce | Health and Human Performance | August 2005 |
| Member Ph.D | Tossaporn Yimlamai | Health and Human Performance | May 2004 |
| Member Ph.D | Andrew Judge | Health and Human Performance | August 2003 |
| Member Ph.D | Shannon Lennon | Health and Human Performance | May 2003 |
| Member Ph.D | David Edwards | Health and Human Performance | August 2002 |
| Member Ph.D | Thomas Koesterer | Health and Human Performance | December 2000 |
| Member Ph.D | Karyn Hamilton | Health and Human Performance | December 2000 |
| Member Master's | Holly Petty | Food Science & Human Nutrition | December 2000 |
| Member Master's | Ibeth Martinez | Zoology | August 2006 |
| Member Master's | Scott Hamlin | Applied Physiology & Kinesiology | April 2005 |
| Member Master's | Anthony Payne | Exercise and Sport Sciences | December 2002 |
| Member Master's | Cale Jacobs | Exercise and Sport Sciences | May 2000 |
| Member Master's | Wesley Smith | Exercise and Sport Sciences | December 1999 |
| External Ph.D | Mengchen Li | Medical Sciences |  |
| External Ph.D | Andrew Smith | Genetics and Genomics |  |
| External Ph.D | Alexandria Grubbs | Biomedical Engineering |  |
| External Ph.D | Steven Morgan | Chemistry |  |
| External Ph.D | Daniel Denevan | Chemistry |  |
| External Ph.D | Chengcheng Li | Animal Moleculer & Cellular Bio | August 2017 |
| External Ph.D | Linda Nguyen | Health and Human Performance | December 2015 |
| External Ph.D | Timothy Crombie | Zoology | December 2015 |
| External Ph.D | Linda Bean | Medical Sciences | August 2015 |
| External Ph.D | Vinita Chittoor | Medical Sciences | December 2014 |
| External Ph.D | Bei Wright | Medical Sciences | August 2014 |
| External Ph.D | Karienn Montgomery | Medical Sciences | December 2012 |
| External Ph.D | Wei-Hua Lee | Medical Sciences | August 2012 |
| External Ph.D | Natasha Moningka | Medical Sciences | December 2011 |
| External Ph.D | Hye Nam | Nutritional Sciences | December 2010 |
| External Ph.D | Hye Nam | Food Science & Human Nutrition | December 2010 |
| External Ph.D | Karthik Bodhinathan | Medical Sciences | August 2010 |
| External Ph.D | Sara Aldaous | Food Science & Human Nutrition | May 2010 |
| External Ph.D | Kryslaine Lopes | Medical Sciences | August 2008 |
| External Ph.D | Robin Minor | Food Science & Human Nutrition | December 2007 |
| External Ph.D | Holly Petty | Food Science & Human Nutrition | May 2007 |
| External Ph.D | Rola Zeidan | Veterinary Medical Sciences | May 2020 |
| External Ph.D | Ye Zhou | Medical Sciences | May 2019 |
| External Ph.D | Lei Xu | Medical Sciences | May 2018 |
| External PhD | Yang Yang | Pharmacology | Current |
| External PhD | Silvana Sidhom | Medical Sciences | new |
| External PhD | Raela Ridley | Medical Sciences | new |
| External PhD | Mengchen Li | Medical Sciences | December 2021 |

**Post-doctoral students**

1999-2000, Pattie Green, (PhD), Professor, Tacoma College, Seattle, WA

2001-2002, Rajani Shelke (PhD; India), Scientist, Massbiologics, Fall River, MA

2001-2004, Barry Drew, (PhD Chemistry, USA), Senior Scientist, Bristol-Myers Squibb, Boston, MA

2002-2003, Colin Selman (PhD in Zoology; Scotland); Professor, University of Aberdeen, UK

2005-2006, Stephane Servais, PhD, Associate Professor, Universite Francois Rabelais, France

2005-2008, Emanuele Marzetti, MD, PhD, Medical Faculty, University of Rome Sacred Heart

2006-2008, Bhaskar Malayappan, PhD., Sr. Research Scientist, PPD Pharmaceuticals, NC

2007-2008, Silvia Giovannini, MD, Medical Faculty, University of Rome Sacred Heart

2005-2008, Tim Hofer, PhD, Researcher & Regulatory Advisor, Folkehelse instituttet, Norway

2017-2019, Robert Mankowski, PhD, Assistant Professor, Department of Aging and Geriatric Research, UF.

2018-2020, Sunil Saini, PhD, Faculty Jawaharlal Nehru University, School of Biotechnology, New Delhi, India

**Undergraduates Students trained and went to Medical School, Academia or Professional Training.**

Scoma, Christopher B, Adriana Zivkovic, Sheila Chandran, Rizwan Kalani (UF and NW), Michael Pollack (University of Pennsylvania), Michelle Williams (University of Pennsylvania) Renee Claxton, University of Florida Medical School, Katherine Welch, University of Florida Medical School, Nam-Phuong Nguyen, University of Florida Medical School, Jill Goldstein, (Outstanding Female Leadership Award 2000 at the University of Florida), Sarah Adams, University Scholar, (Outstanding Female Leadership Award 2000 at the University of Florida), Rosanna Guerrero, University of Miami Medical School, Manish Patel, University of Miami Medical School, Richard Mattison, Medical School, Norfolk, VA, Sabrina Simcox, Physical Therapy, Washington University School of Medicine, Kie Lee, Pre-Med (Northwestern University, Chicago), Alap A. Shah, Shannon Swant, Physician Assistant, Boston U, Swati Patel, Seema Qaiyumi, Medical School, North Carolina, Hong Vo, Joaquin Antonio Bestard, Kristin Toscano, Sivam Joshi, Duke University Steven Morgan, Reema Patel, Gauthami Balagopal, Medical School Florida International.

**Short-term International Scholars**

2002 and 2003 Ricardo Gredilla, Universidad Complutense, Department of Biology, Madrid, Spain, Mitochondrial DNA damage and oxidant production with age.

2004 Mercedes Prudencio-Alverez, Faculty of Science, University of Extremadura. Badajoz, Spain. Research Fellow at Mayo Clinic Jacksonville, Laboratory of Dr. Petrucelli

2005 Alberto Sanz Montero, Universidad Complutense, Department of Biology, Madrid, Spain, Mitochondrial DNA damage and oxidant production with age.

2006 Miguel Angel Garcia Bereguiain and Alejandro Khalil Samhan-Arias (primary Mentor: Dr. Carlos Gutiérrez-Merino, Professor of Biochemistry and Molecular Biology, Depto. Bioquímica y Biología Molecular, Facultad de Ciencias. Universidad de Extremadura, 06071-Badajoz. Spain).

2007 Alejandro Khalil Samhan-Arias (primary Mentor: Dr. Carlos Gutiérrez-Merino, Professor of Biochemistry and Molecular Biology, Depto. Bioquímica y Biología Molecular, Facultad de Ciencias. Universidad de Extremadura, 06071-Badajoz. Spain).

**2012-2013, France, Docteur Fabien PILLARD / MCU-PH,** Service d'Exploration de la Fonction Respiratoire, et de Médecine du Sport, Hôpital Larrey - 24 chemin de Pouvourville

2012, Brazil, Sueli Lautenschlager, Ph.D., Universidade Estadual de Maringá, Professor, Departamento de Ciências Básicas da Saúde - Parasitologia

2010-2011, South Korea, Dr. Ha, Pusan University, Pusan

2010, Sarah Hempenstall (Primary mentor Dr. Colin Selman) Institute of Biological and Environmental Sciences, University of Aberdeen, Scotland, UK

2009 and 2011. Anna Picca, (Primary mentor Dr. Angela Lezza) Dottorato di Ricerca in Biochimica, Biologia Molecolare e Bioinformatica (Dr. Maria Nicola Gadeleta), Univeristy of Studies of Bari, Bari, Italy

2008 Eva Philipp, PhD, Institute of Clinical Molecular Biology, Dept. of Cell Biology, Kiel, Germany

2005 Evelyn Kouwenhoven, Opleiding Biologie en Medisch, Laboratoriumonderzoek aan Avans Hogeschool, Faculteit Techniek en Natuur, Afdeling Life Science, Breda, Netherlands.

2003; Laurie Lanier; France; Chemical Engineering student, specializing in Biotechnology and in Chemical Engineering Processes in the Department of Chemical Engineering at the University of Applied Sciences in Münster, Germany.

**National and International Collaborations**

Mary M. McDermott, MD, Jeremiah Stamler Professor, Northwestern University, Feinberg School of Medicine, Deputy Editor, JAMA

Stanley Hazen, MD, PhD, Cleveland Clinic, Director, Center for Cardiovascular Diagnostics and Prevention

Ian Holt, PhD, Medical Research Council, Mitochondrial Biology Unit, Cambridge, UK

Hae Young Chung, Ph.D., Dean College of Pharmacy, Pusan National University, Pusan South Korea

Thomas Prolla, PhD, University of Wisconsin-Madison, Departments of Genetics & Medical Genetics

Charlotte Peterson, PhD, University of Kentucky, Center on Aging

Esther Dupont-Versteegden, PhD, University of Kentucky, Center on Aging

Gustavo Barja, PhD, Universidad Complutense, Department of Biology, Madrid, Spain

Angela Lezza, PhD and Nicola Maria Gadaleta, PhD, University of Bari, Bari, Italy

Colin Selman, PhD, Integrative Physiology, School of Biological Sciences, University of Aberdeen

**Patent**

Patent No: US 6,541,265 B2; Date of Patent Apr. 1, 2003. “Method and system to test a substance for inflammatory or oxidant properties”, Inventor: Christiaan Leeuwenburgh. Assignee: University of Florida, Gainesville, FL (US); Application No. 09/852,194; Filed May 9, 2001. <http://apps.rgp.ufl.edu/otl/pdf/marketing/10523.pdf>

**FUNDING**

**ACTIVE**

NIH 1RO1AG068458-01A1 (PI: M.M McDermott) 07/01/21-06/30/26 Co-I

Cocoa flavanols to improve walking performance in PAD: the COCOA-PAD II Trial. $708,737

The proposed Phase III double-blinded, multi-centered randomized trial in 190 participants with PAD, will definitively determine whether 6-months of cocoa flavanols significantly improves 6- minute walk distance at six-month follow-up, compared to placebo.

NIH/NCATs KL2 TR001429 (MPI Guirgis/Leeuwenburgh), (07/01/21-06/30/24) (MPI)

Institutional Career Development Award $2,487,525

The primary goal of the CTSI’s Mentored Career Development (KL2) Program is to educate and train diverse, multidisciplinary Early Stage Investigators (ESI) at the University of Florida Health Science Center (UFHSC), and several affiliated institutions for leadership roles in research translation.

NIH/NIA 2P30AG028740-16 (Contact PI/Project Leader Leeuwenburgh) 07/01/07-03/31/27 PI/PLeader)

The Metabolism and Translational Science Core (RC2) $185,714

The Metabolism and Translational Science Core (RC2), in collaboration with our other UF Claude D. Pepper Older Americans Independence Center OAIC cores, supports biochemical analyses for preclinical, human interventional, or observational clinical studies.

NIH/NIA 2P30AG028740-16 (Contact PI/Project Leader Leeuwenburgh) 07/01/07-03/31/27 PI/PLeader)

The Research Education Core (REC) $185,714

The University of Florida (UF) Older Americans Independence Center (OAIC) Research Education Core (REC) promotes the development of independent investigators in interdisciplinary research on aging related to “promotion of mobility and independence.

NIH 1RM1GM139690 (PD/PI: Moldawer, L.L.; Efron, P.A.; Kladde, M; Morel, L) 05/01/21-04/30/26 Co-I

Dysfunctional Myelopoiesis and Myeloid-Derived Suppressor Cells in Sepsis Pathobiology $8,282,350

Adverse outcomes in surgical sepsis patients are secondary to dysregulated emergency myelopoiesis, and expansion of myeloid-derived suppressor cells. Here we propose to determine the underlying mechanisms behind the increased expansion of these leukocyte populations and the underlying mechanisms that drive inflammation and immune suppression.

AHA SFRN 18SFRN33900136 (Leeuwenburgh Project 1) 4/1/2018-3/31/2023 PI

Calf Muscle Mitochondrial Dysfunction and Impaired Autophagy in Peripheral Artery Disease (PAD).

(SFRN Total $3,709,200 through 2023; Project 1 $385,412).

This project’s overall goal is to identify specific mitochondrial defects associated with skeletal muscle pathophysiologic changes in PAD. Results are expected to identify new potential targets for interventions that may improve functional performance and prevent functional decline in PAD.

NIH/NIA 1T32AG062728-01A1 (Manini-Leeuwenburgh)                                                      05/01/20-04/30/25 co-PI

Translational research training on aging and mobility (TRAM) program $148,766

The overall goal is to develop outstanding independent investigators capable of sustaining productive clinical and translational research careers that help build a translational understanding and interventions that impact mobility in older adults.

NIH/NIHR R01NR016986 (Stechmiller/Lyon) 4/1/2018-6/30/2023 Co-I

Biobehavioral mechanisms underlying symptoms and healing outcomes in older individuals with CVLU $585,881

Our long-term goal is to elucidate the complex biobehavioral mechanisms responsible for symptoms and healing outcomes in older adults with venous leg ulcers (VLUs) for the development of targeted therapies that address both the patient-oriented outcomes and healing outcomes in this growing group of affected individuals.

AHA SFRN 18SFRN33900136 Pilot (Leeuwenburgh) 7/1/2020-6/30/2022 PI

Discovery and validation of miRNAs concurrently in plasma and skeletal muscle in subjects PAD $40,615

NIH R01 AG068458 (McDermott) 4/1/2021-6/30/2026 Co-I

COCOA flavanols to improve walking performance in PAD: the COCOA-PAD II Trial $4,068,135

We will study the effects of cocoa flavanols on calf muscle perfusion, measured by MRI, and calf skeletal muscle characteristics, measured by calf muscle biopsy.

NIH GM RO1133815 (Guirgis) 4/1/2020-3/31/2025 Co-I

The Role and Mechanisms of Lipid and Lipoprotein Dysregulation $495,400

This project will investigate the changes in lipid and lipoprotein function, oxidation, metabolites, and changes in gene expression to further our understanding of dysregulated lipid and lipoprotein metabolism in sepsis.

NIH R01AG057693 (McDermott) 8/1/2018-4/30/2023 Co-I

INTERmittent pneumatic ComprEssion for Disablility rEversal in PAD: the INTERCEDE Study $3,083,190

The measures of the INTERCEDE Trial will facilitate delineation of biologic pathways by which intermittent pneumatic compression may improve functioning in patients with PAD. Identifying biologic mechanisms of these therapies will help identify new therapies, with similar biologic actions, that improve walking performance in people with PAD.

NIH RO1AR072328 (Martin/Smith/Beaver) 7/1/2017-5/31/2022 Co-I

The effect of intermittent hemidiaphragm stimulation during surgery on mitochondrial function, single fiber contractile force and catabolic pathways in humans $1,652,592

In this study, we will determine if intraoperative electrical diaphragm stimulation attenuate early VIDD manifestations in humans.

U24 AR071113 NIH/NIA (Pahor) 12/06/2016-11/30/2022 Co-I

Molecular Transducers of Physical Activity Consortium (MoTrPAC) Consortium Coordinating Center. $20,283,331

The project will promote team science, team leadership, and innovative leadership approaches to provide the overall coordination of MoTrPAC to accomplish the goal of assembling a comprehensive map of the molecular changes that occur in response to physical activity.

NIH 1U01AG055137 (Esser) 12/15/2016-11/30/2022 Co-I PASS (Physical Activity Preclinical Study Sites): Regulation of exercise transducers. $2,279,187

The goal of this University of Florida Molecular Transducers of Physical Activity Preclinical Animal Study Site (UF PASS) is to conduct experiments in animals that will provide tissues/blood (i.e. biospecimens) to the Chemical Analysis Sites for identification of molecular transducers induced by defined models of physical activity from tissues that cannot be obtained from humans as well as to conduct mechanistic studies that can support screening of novel transducers to quickly move the field forward.

NIH 1R33AG056540 (Pahor, Anton) 9/15/17-5/31/22 Co-I

The University of Florida Jacksonville Aging Studies Center (JAXASCENT) $2,958,699

JAX-ASCENT will create an integrative physical and intellectual environment in which trainees at all levels and scientists from diverse disciplines can interact and conduct clinical and behavioral translational research on aging and independence of older adults.

P30 AG028740 (Pahor) 4/01/2007 – 3/31/2022 Co-I

National Institutes of Health/National Institute on Aging $15,018,744

Claude D. Pepper Older Americans Independence Center (OAIC)

The major goals of this program are to assess the mechanisms that lead to sarcopenia and functional decline, and to develop and test interventions for the treatment and prevention of physical disability in older adults.

PI Metabolism and Translational Science Core and the Research Education Core

NIH R01 (McDermott) 12/1/2016-11/30/2021 Co-I

Improve PAD Performance with Metformin: The PERMET Trial $3,624,780

We hypothesize that metformin will improve calf muscle mitochondrial activity, increase endothelial function (thereby improving calf muscle perfusion), and improve skeletal muscle composition. We hypothesize that these therapeutic effects will prevent functional decline and mobility loss in people with PAD.

KL2 TR001429 CTSI KL-2 (Pearson) 8/1/2015-7/31/2021 Program Mentor

National Institutes of Health Clinical and Translational Science Awards Program $3,298,627

The CTSI KL2 Multidisciplinary Scholars Program is a research training and funding opportunity for junior faculty at UF to foster a career in clinical/translational research.

NIH 1UG3 HL141729-01A1 (McDermott)   4/1/2019-3/31/2025 Co-I

PROmote weight loss in obese PAD patients to preVEnt mobility loss: The PROVE Trial. $1,242,184

We hypothesize that our weight loss intervention will improve walking performance by increasing adherence to walking exercise, increasing oxygen uptake (V02max), and by improving calf perfusion, reducing calf adipose tissue, and improving mitochondrial activity and biogenesis.

NIH/NIA R21 AG064282        (Mankowski)  9/01/2019-5/31/2022 Co-I

Nicotinamide riboside as an Enhancer of Exercise Therapy in hypertensive older adults: The NEET Trial $429,957

The ultimate goal of this line of research is to find adjuvant strategies to improve the exercise’s SBP-lowering effects in older adults.

University of Florida Health Cancer Center Pilot Fund (Zhang) 10/20/2021-10/20/2023 Co-I

“Nicotinamide riboside and walking exercise intervention to reduce fatigue in older breast cancer survivors-A pilot trial”  $100,000

his is a pilot study to assess the feasibility of a full-size randomized controlled trial investigating if nicotinamide riboside can increase the anti-fatigue effects of walking exercising in older breast cancer survivors.

**PENDING**

NIH/NIA   (Leeuwenburgh, Anton; score 13; 1%) 12/01/2021-11/30/2026           PI            Functional Decline in Low Functioning Older Adults; Role of iron dysregulation the proposed study, we will examine cross-sectional and longitudinal associations of dysfunctional iron regulation with levels of Mt and physical function.

NIH/NIA (McDermott score 23, 6.0%) R21 AG080426-01, entitled Far Red Light to Improve Functioning in PAD: the LIGHT PAD Trial. The proposal is to conduct a phase II randomized clinical trial (RCT) to test the effects on far red light on muscle blood flow perfusion, regeneration and metabolism.

NIH  (Yoon)     1R01CA230448-01                     4/1/2021-3/31/2025                 Co-I

SAFEWIC- Supportive Acupuncture for Enhancing Weight in Gastrointestinal Cancer Cachexia

The long-term goal is to extend the survival and enhance the quality of life in adults with foregut cancers by testing an acupuncture intervention to decrease weight loss and loss of muscle mass.

NIH R21AG077096 (Zhang) 04/01/2022-03/31/2024

“Nicotinamide riboside and walking exercise intervention to reduce fatigue in older breast cancer survivors”

This is a pilot study to assess the feasibility of a full-size randomized controlled trial investigating if nicotinamide riboside can increase the anti-fatigue effects of walking exercising in older breast cancer survivors.

Total budget: $275,000

Score: 44/Percentile: 47

**TRAINING GRANTS/Current Past**

NIH KL2 TR001429 CTSI KL-2 (Leeuwenburgh/Guirgis) 8/1/2015-7/31/2021 MPI

National Institutes of Health Clinical and Translational Science Awards Program $3,298,627

The CTSI KL2 Multidisciplinary Scholars Program is a research training and funding opportunity for junior faculty at UF to foster a career in clinical/translational research.

NIH/NIA T32 AG062728 (Manini-Leeuwenburgh)  05/01/20-04/30/25 Co-PI

Translational research on aging and mobility (TRAM) program $148,766/y

The overall goal is to develop outstanding independent investigators capable of sustaining productive clinical and translational research careers that help build a translational understanding and interventions that impact mobility in older adults.

NIH 1R33AG056540 (Pahor, Anton) 9/15/17-5/31/22 Co-I

The University of Florida Jacksonville Aging Studies Center (JAXASCENT) $2,958,699

JAX-ASCENT will create an integrative physical and intellectual environment in which trainees (and research education program) at all levels and scientists from diverse disciplines can interact and conduct clinical and behavioral translational research on aging and independence of older adults.

1K01AG048259-01A1 (Cruz-Almeida) (Mentor) 5/15/2015-4/30/2020 Co-Primary Mentor

Title: Neuroimaging age-related changes in pain modulation $831,442

The primary goal for this Career Development Award is to provide the necessary training and mentoring for Dr. Cruz-Almeida to establish an independent neuroscience research program aimed at studying the neurobiological mechanisms underlying abnormal pain modulation in older adults that may account for increased clinical pain in this population.

T32 HD043730 NIH (Vandenborne/Fuller) 6/11/2003-4/30/2021 Mentor/Advisory Board

Training in Rehabilitation and Neuromuscular Plasticity $3,624,422

This training program in rehabilitation and neuromuscular plasticity will provide the interdisciplinary environment that is fundamental to the advancement of rehabilitation research and will prepare trainees for translation research in neuromuscular plasticity.

NIH K23GM115690 (Guirgis) 9/23/2016-8/31/2020 Co-Primary Mentor

The Role of Dysfunctional HDL in Sepsis $699,289

The long-term goal of this research program is to characterize the antecedents and mediators of morbid long-term outcomes in patients with sepsis.

NIH NIAMS K23AR061146 K Vincent (PI) 07/01/2012-06/30/2017 (Primary Mentor)

Comparative Resistance Exercise Effects on Knee Osteoarthritis Pain, Functional Impairment and Cartilage Turnover. $374,933

This study will examine whether there is differential efficacy of two modes of resistance exercise (eccentrically-focused and concentrically-focused) on pain symptoms, physical function and cartilage turnover in older adults with knee osteoarthritis

NIH K23AR062099, (Sibille) 07/01/2012-06/30/2017 (Co-Primary Mentor)

Biological Markers of System Burden in Symptomatic Knee OA: A Prospective Study $472,510

The objectives of the study are to prospectively evaluate associations of pain and functional limitations with a developing measure of system burden in ethnically diverse older adults with and without knee OA and explore the role of various biopsychosocial factors that may be protective or increase vulnerability for pain and functional decline.

NIH T32HL083810 (Wood/Baylis) 9/1/2007-8/31/2017 Mentor

Multidisciplinary training program in hypertension $2,522,919

The goal of this project is to establish a training program for graduate and postdoctoral/clinical fellows in hypertension research at the University of Florida

NIH K01HD052713 (Chmielewski) (Leeuwenburgh 9/30/07-8/31/13 Co-Primary Mentor)

National Institutes of Health $526,835

Muscle Weakness and Post-Traumatic Knee OA

The goal of this Mentored Research Scientist Development award is to gain skills in conducting clinical trials, assessing articular cartilage morphology with magnetic resonance imaging (MRI), and performing biochemical analysis of articular cartilage and inflammatory markers.

NIH K23AT004251 (Anton) 12/1/09 – 11/30/14 Co-Primary Mentor

*Investigations of Botanicals on Food Intake, Satiety, and Weight Loss* $574,814

**The proposed line of research will explore the role that** botanical **compounds have in affecting food intake, gastrointestinal signals, satiety, and weight loss. The central hypothesis is that** botanical **compounds will reduce food intake in humans by stimulating neuroendocrine pathways related to satiety.**

10PRE4310091, AHA Fellowship to Priya Dutta (Leeuwenburgh, Primary Mentor), 07/01/2010-06/30/2012

Mitochondrial Dysfunction and the Role of Autophagy in Cardiomyocytes $43,400

AHA 2060112 AHA Fellowship to Jinze Xu (Leeuwenburgh Primary Mentor) 07/01/2009-06/30/2011

Cardiac mitochondrial iron transport and accumulation and the effects on bioenergetics with age. $100,040

T32 AG000196-20 (P Scarpace) 2007-2012 Mentor

Training in the Neurobiology of Aging $2,799,650

This proposal outlines a comprehensive interdisciplinary program leading to specialized research, education and training in the neurobiology of aging.

AHA Fellowship to Arnold Seo 0615256B (Leeuwenburgh) 07/01/2006-06/30/2008

Cardiac mitochondrial biogenesis and macro-autophagy $21,770/yearly

This study will provide us with a better understanding of the basic biology of mitochondrial biogenesis and turnover and will help us to develop targeted therapeutic interventions aimed at treating heart diseases resulting from an accumulation of dysfunctional mitochondria.

AHA: Fellowship to Tim Hofer 0525346B (Leeuwenburgh) 7/01/05-6/30/2007

Oxidative RNA and DNA damage to heart mitochondrial sub-populations with age and life-long calorie restriction. $96,476. To determine the role of RNA and DNA damage in heart mitochondrial sub-populations with age.

0415166B (Leeuwenburgh) 7/1/04-6/30/06

AHA Fellowship to Asimina Hiona $80,000

The use of p66Shc knockout mice to investigate the mechanisms responsible for cardiomyocyte apoptosis with age. P66Sch is a protein which regulates mitochondrial oxidative stress and it’s role in aging is investigated.

0415187B; American Heart Association (Leeuwenburgh Fellowship for Young Mok Jang) 2004-2006

Sarcoplasmic Reticulum Mediated Apoptosis in Cardiotoxicity induced by Doxorubicin in vitro and in vivo. $80,000

0225194B, American Heart Association (Fellowship for Barry Drew) 2002-2004

Doxorubicin-induced damage to cardiac mitochondrial enzymes $72,000

Goal: Attenuating doxorubicin-induced damage to cardiac mitochondrial enzymes.

0215053B, American Heart Association (Fellowship for Sharon Phaneuf) 2002-2004

Lifelong, voluntary exercise as a strategy to prevent mitochondrial-mediated cardiomyocyte apoptosis with age

Goal: Attenuating apoptosis in the heart with life-long moderate exercise training. $76,000

National Institute of Aging; National Research Service Award (NRSA) (Leeuwenburgh) 1997-1998

NIA/NRSA; 1F32AG05780-01, Molecular Mechanism of Oxidative Stress in Aging $51,000

University of Illinois

Pre-Doctoral Fellowship AHA SS-08, American Heart Association, Illinois Affiliate 1993-1995

Myocardial Ischemia-Reperfusion Injury in vivo (Leeuwenburgh) $24,000

**Prior to 2020.**

NIH R01 DC014437 (Someya) 4/1/2015-3/31/2020 Co-I

Cochlear detoxification system $2,239,816

The overall goal of our research proposal is to provide new basic knowledge of the molecular basis for the cochlear detoxification system and its role in the elimination of foreign chemicals throughout the lifespan.

NIH R01 GM113945 (Efron) 4/1/2015-1/31/2020 Co-I

Hematopoietic stem cell dysfunction in the elderly after severe injury $1,576,905

The overarching hypothesis of this application is that the myelodysplasia associated with aging modifies the emergency myelopoietic response to traumatic injury AND is nuclear factor kappa B (NFkB) dependent. This results in inappropriate differentiation and maturation of myeloid cells, leaving the host susceptible to subsequent infection.

NIH 1R01 HL126117-01 (McDermott) 7/1/2015-6/30/2020 Co-I

TELmisartan plus EXercise to improve function in PAD: The TELEX Study $3,738,470

The primary aims of the TELEX Study are to a) definitively establish whether telmisartan alone improves walking performance in people with PAD compared to placebo and b) determine whether the combination of telmisartan plus supervised exercise improves walking performance more than telmisartan alone and supervised exercise alone, respectively.

NIH U01AG050499 (Pahor) 7/1/2015-6/30/2018 Co-I

ENRGISE- Enabling reduction of low-grade inflammation in seniors $5,515,881

ENRGISE will address critical public health issues regarding mobility disability prevention. We will test the anti-inflammatory effects of widely available and affordable interventions and their impact on mobility in a highly vulnerable population, older adults with elevated levels of inflammation and slow gait speed, at risk of mobility disability.

NIH R21AG050897 (McDermott) 6/15/2016-2/28/2018 Co-I

COCOA to improve walking performance in Peripheral ARter Disease: The COCOA-PAD Study $615,378

The goal of this clinical trial is to test our hypothesis that epicatechin-rich cocoa significantly improves calf skeletal muscle mitochondrial function, increases skeletal muscle mitochondrial biogenesis, increases capillary density, and favorably alters skeletal muscle levels of myostatin and follistatin, thereby improving lower extremity functioning in older people with PAD.

NIH R01 HL122846 (McDermott) 4/1/2015-1/31/2018 Co-I

Low intensity exercise intervention in peripheral artery disease - The LITE Trial $2,990,679

This proposed study will determine whether an alternative exercise intervention that employs remote monitoring by a coach and avoids exercise-related ischemic-pain improves functional performance at 52-week follow-up in people with PAD.

P50 GM111152 NIH (Moore) 9/1/2014-5/31/2019 Co-I

PICS: A New Horizon for Surgical Critical Care $10,747,256

The overall product of this P50 Center is a better understanding of the causes and consequences of CCI in the surgery or trauma ICU patients who experience sepsis. Driven by an innovative observation of PICS, the program will determine the magnitude and clinical implications of this new syndrome, test several mechanistic hypotheses about its cause, and develop potential and novel therapeutic interventions.

Role: PI Core C; Co-I Project 2; Co-PI Project 4

1R01DK099334 NIH (Cohen) 6/25/2014-5/31/2019 Co-I

Obesity and type-2 diabetes: Bariatric surgery effects of brain function $2,663,490

The proposed prospective longitudinal study will examine whether cerebral metabolic and vascular dysfunction, including glucose/insulin disturbances (co-morbid diabetes) underlie obesity-associated cognitive dysfunction, and whether significant weight loss and diabetes remission following bariatric surgery reduces these disturbances.

U01-AG022376 NIH/NIA (Pahor) 9/1/2009-11/30/2018 Co-I

Physical Exercise to Prevent Disability – LIFE Study $83,338,482

The primary aim is to assess the long-term effects of the proposed interventions on the primary outcome of major mobility disability as operationalized by the inability to walk 400m. Biomarkers and Metabolism Core will support the blood draw and future repository.

NIH 1R01DC012552 (Someya) 7/1/2013-6/30/2019 Co-I

Mitochondrial thioredoxin, caloric restriction, and age-related hearing loss $1,859,650

The overall goal of our research proposal is to provide new basic knowledge of the mechanism underlying the efficacy of CR - the most reproducible intervention for increasing lifespan in mammals – to delay the development of AHL in mammals**.**

1 R01 AT007564 (Anton) 4/30/2014-8/31/2018 Co-I

REVIVE - Resveratrol to Enhance Vitality and Vigor in Elders (REVIVE) $1,411,746

The proposed clinical trial will test whether daily supplementation with 1000mg of resveratrol will improve mitochondrial function and physical performance in generally healthy but moderately functioning older men and women. The central hypothesis is that resveratrol treatment will improve mitochondrial function by activating key genes involved in mitochondrial biogenesis and metabolism, and that these biological/cellular changes can enhance physical performance among both low to moderately-functioning older adults.

R01 AG042525 (Tranah/Manini) 7/15/2013-6/30/2018 Co-I

MtDNA variant modifiers of cardiopulmonary responsiveness to physical activity $1,615,097

This project will identify mtDNA variants that predispose older individuals to a high or low cardiopulmonary response to chronic exercise.

R01 DK079879-10 (Kim) 9/22/2014-8/31/2019 Co-I

Autophagy in Liver injury $3,230,225

The goal of this study is to develop novel therapeutic strategies to improve liver function after ischemia/reperfusion injury occurring during liver resection and transplantation surgery.

RO1 DK090115 (Kim-Leeuwenburgh) 4/1/2012-3/31/2017 Co-PI

Mitophagy: A novel target to improve liver function after ischemia/reperfusion injury $1,263,400

The goal is to develop therapeutic strategies to ameliorate the effects of ischemia/reperfusion injury in liver following resection and transplantation surgeries. This will ultimately improve liver function and expedite recovery periods.

R21 AG047510 NIH (McDermott)                                           5/15/2014-4/30/2017                 Co-I

Resveratrol to improve outcomes in older people with PAD (The RESTORE Trial) $532,732

We now propose a pilot study of 36 PAD participants age 65 and older: a double-blind, randomized controlled clinical trial to test our hypotheses that resveratrol significantly improves calf skeletal muscle oxidative metabolism, increases calf skeletal muscle mitochondrial biogenesis, and improves systemic endothelial function, thereby improving lower extremity functioning in older people with PAD.

Osato Research Institute (Anton-Leeuwenburgh) 07/1/2013 – 6/30/2016 Co-I

Efficacy of fermented papaya preparation (FPP) in improving health and physical function in older adults with mild functional limitations. $187,778

This pilot study will evaluate the effects of supplementation with FPP (dosage = 9 grams per day) for one month on markers of systemic inflammation, physical performance, tissue oxygenation, fatigue, and health related quality of life, in generally healthy, older adults (age > 65 years) with elevated levels of systemic inflammation (C-reactive protein levels > 1.0) and moderate functional limitations (Short Physical Performance Battery Score < 10).

UFRF (Sunny) 5/1/2013-4/30/2015 Co-I

Mitochondrial dysfunction in nonalcoholic fatty liver disease (NAFLD): Mechanisms and role of insulin resistance and oxidative stress $90,386

The goal of this research proposal is to utilize an interdisciplinary approach to simultaneously profile several critical mitochondrial networks involved in mitochondrial oxidative fat metabolism, respiration and ATP synthesis and oxidative stress.

1 P30 AG028740-01Pepper Pilot (Efron) 7/1/12-3/31/14 Co-I

Project Title: Emergency myelopoiesis in sepsis and polytrauma and its potential impact on the elderly

The goal of this project is to discover basic mechanisms of sepsis and immune responses in the elderly

1 P30 AG028740-01 Pepper Pilot (Joseph) 7/1/12-3/31/14 Co-I

Project Title: Aging induced pluripotent stem cell (iPSC) study

The goal of this project is establish iPS cells from elderly individuals and to differentiate these cells into muscle cells that will exhibit the mitochondrial phenotype of the donor cells and allow the study of aging muscle in the laboratory setting, fast track drug screening, and the potential use of these cells for regenerative medicine.

1 P30 AG028740-01Pepper Pilot (Tornaletti) 7/1/12-3/31/14 Co-I

Project Title: DNA Repair in the Aging Heart

The goal of this project is to discover basic mechanisms of DNA repair in the aging heart.

Eli Lilly and Company (Martin/Leeuwenburgh) 12/17/2012-6/30/2014 Co-I Identification of biomarkers of diaphragmatic dysfunction in mechanically ventilated patients

RO1 AG17994-10 NIH (Leeuwenburgh) 8/1/2005-6/30/2012

National Institutes of Health/National Institute on Aging $2,892,619

Project Title: Molecular Mechanisms of Oxidative Stress in Aging Muscle

The major goals for this project are to study mitochondrial biology and function and causal effects to bioenergetics failure with age in skeletal muscle.

CTSI (Leeuwenburgh/Martin) 12/1/2009-11/1 2012 Co-PI

Diaphragm Mitochondrial Dysfunction During Prolonged Mechanical Ventilation. $91,738

This pilot study will provide clinically relevant information on the underlying causes for human diaphragm dysfunction after prolonged mechanical ventilation and potential interventions to preserve diaphragm function.

NIA R01AG14979 (Foster) 6/1/2007-5/31/2012 Co-I

National Institutes of Health/National Institute on Aging $2,689,723

Mechanism for Altered Synaptic Function During Aging

The aim of these studies is to investigate the molecular mechanisms of synaptic function during aging and to explore potential interventions.

NIH/NIA (Cummings) 9/30/2009-9/29/2011 Co-I

Study of Energy and Aging (SEA) $855,594

SEA will impact health care by guiding clinicians to the evaluation of potentially treatable causes of mobility disability and fatigue. Ultimately, this work may identify new modifiable targets for interventions to improve mobility and alleviate fatigue in older adults.

American Heart Association (Anton) 7/1/09 – 6/30/11 Co-I

Dose Response Effects of Weight Loss on Systemic and Vascular Inflammation $110,000

The proposed study will utilize the infrastructure of an existing large-scale NIH funded study to evaluate 1) the effects of three doses of lifestyle weight management on changes in markers of inflammation and oxidative stress in healthy, community dwelling, obese rural adults (N=272) over six months, and 2) the association between changes in biomarkers of inflammation and oxidative stress with changes in physical function and traditional CVD risk factors.

1R01-AG024526 NIH/NIA (Carter) 8/1/2005-7/31/2011 Co-I

ACE Inhibition and Physical Performance in Aged Rats $1,250,000

The goal is to assess the effects of inhibition on the rennin-angiotensis system on physical performance, body composition and biological parameters in aged rats. A translational supplement has also been awarded for this grant.

1P30-AG028740-S2 (Manini/Wohlgemuth) 10/1/2009-9/31/2011 Co-I

Mitochondrial function and fatigue in the elderly $150,000

This pilot study will supplement the current OAIC and is geared toward studying fatigue in the elderly and whether mitochondrial dysfunction contributes to the prevalence of fatigue in the elderly

UF CTSI Pilot Grant (Fillingim) 11/16/2009-11/15/2011 Co-I

Effects of OA-Related Pain on Telomere Length and Telomerase Activity $77,876

The goal is to identify biological markers reflecting the deleterious consequences of chronic pain among older adults has the potential to inform future treatment efforts to mitigate the effects of pain in this population.

Merck & Co, Inc (Buford) 2010-2011 Co-I

Role of skeletal muscle blood flow and regeneration in sarcopenia $60,000

Investigate the role of skeletal muscle angiogenesis and perfusion on inflammation, extracellular matrix remodeling and satellite cell number in young and old persons.

Nestle Purina Pet Care Global Resources, Inc. (Leeuwenburgh) 3/15/2009-3/15/2011

DNA/RNA oxidation analysis in blood, urine and tissue $7,375

The Evelyn F. and William L. McKnight Brain Institute (Manini & Anton) 02/01/2008-01/31/2009 Co-I

Resveratrol supplementation to improve memory dysfunction in older adults $100,000

This is a Phase I double-blind placebo controlled trial to determine whether three months of daily resveratrol supplementation alter cognitive performance among non-impaired older adults. We will also explore whether oxidative stress and inflammatory pathways, commonly upregulated in older adults, are altered with resveratrol supplementation.

Institute on Aging (Anton) 7/1/2008-6/30/2010 Co-I

Dose-response effects of weight loss on oxidative stress and inflammation

The study will utilize a large sample of obese, older adults from rural communities to examine: 1) the dose-response relation between weight loss programs of varying intensity on changes in markers of systemic inflammation (i.e., CRP, IL-6, and TNF-alpha), oxidative stress levels (i.e., oxLDL, myloperoxidase), and vascular inflammation (E-selectin, VCAM-1) over six months, and 2) whether weight loss versus changes in physical activity are related to improvements in biomarkers of inflammation and oxidative stress, as well as physical function.

NIH/NIA (Pahor/Manini) 7/1/2008-6/30/2010 Co-I

Pepper Center Supplement - Molecular mechanisms of skeletal muscle loss in HIV-infected older persons

This supplemental study to the Developmental Project within the Claude Pepper Older American Center will investigate the effects of HIV and anti-retroviral agents on muscle mass and function in older patients.

Brooks Rehabilitation Research Endowment (Chmielewski) 4/01/07-2/28/2010 Co-I

Brooks Healthcare System $40,000

Urinary Levels of a Knee Osteoarthritis Biomarker in the Early Period after ACL Reconstruction

The goals of this project are to determine if 1) urinary levels of a knee osteoarthritis biomarker are elevated after ACL reconstruction, and 2) levels of the biomarker are related to self-report of knee function.

NFL Charities (Chmielewski) 7/1/2007-6/30/2010 Co-I

The Effect of Plyometric Exercise Intensity on Function & Articular Cartilage Metabolism after ACL Reconstruction

The goal of this study is to compare the effect of low and high-intensity plyometric exercise on self-report of function and articular cartilage biomarkers in patients with ACL reconstruction. $125,000

Joint Cancer Centers Opportunity Fund (Manini) 05/01/09 – 04/31/10 Co-I

UF/Moffitt cancer centers $93,744

Chemotherapy-induced muscle weakness, fatigue & functional limitation in older breast cancer survivors

The major goal of this project is to determine the feasibility of and explore mechanisms causing long-term muscle weakness and poor quality of life in breast cancer survivors undergoing chemotherapy treatment.

Role: Dual-Principal Investigator (Co-PI: Martine Extermann, MD).

Sharper Contract - Eufortyn Study (Leeuwenburgh) 11/15/2007-11/14/2009 PI

 $51,702

This pilot study is designed to provide the primary data and information on anti-aging aspects of Eufortyn (creatine; Q10) on biochemical and physiological parameters of aging and will be a valuable scientific support for future study plans in which we will choose additional formulations and measurements.

USDA/NRICGP (Kristinsson) 09/01/06-08/31/09 Co-I

Function, characterization and stability of antioxidative hydrolysates and peptides made from proteins isolated from fish processing byproducts.

RO1 AG 21042 (Leeuwenburgh) 8/01/2003-7/31/2009

National Institutes of Health/National Institute on Aging $1,675,560

Apoptosis and life-long caloric restriction

The goal is to determine the signaling transduction pathways of apoptosis with age and the effects of life-prolonging interventions.

The National Institute on Aging: (Aspirin proposal, Leeuwenburgh) 2005-2008

Intervention testing program for compounds to test their ability to extend mean and/or maximum life-span

The major goals of these studies are to investigate short-term and long-term aspirin intervention to prevent inflammation, oxidative stress, disease and to prolong life in rodents. Funding for study provided by the NIA.

LifeGen Technologies (Leeuwenburgh) 12/01/06-115/4/2009 PI

 $44,394

This research project is designed to measure oxidative stress with 8-OH-Dg (DNA) and 8-OH-G (RNA) levels in canines and mice.

RGP Opportunity Fund (M. Perri) 5/1/06-4/30/07 Co-I

 $81,876

Biological Effects of Weight Loss Plus Exercise in Obese Older African-American Women

James and Esther King Program (Segal/Johnson) 7/1/05 – 6/30/07 PI (project 4)

FL Department of Health $73,179

James and Esther King Program

Smoking as a novel risk factor for progression of renal disease

This study will elucidate the mechanisms of renal disease due to smoking.

2RO1 AG17994 NIH (Leeuwenburgh) 08/01/00-7/31/06

Molecular Mechanisms of Oxidative Stress in Aging Muscle $2,892,619

The major goals for this project are to study mitochondrial function, energy production and oxidative stress with age in cardiac and skeletal muscle.

American Heart Association (Florida). 6/1/2000-5/31/2003 PI

Scientist Development Grant AHA 0030334B (Leeuwenburgh) $225,000

Doxorubicin-induced oxidative stress and apoptosis in cardiac myocytes: The role of the mitochondria.

Goals: The major goal of this project is to determine by what in vivo mechanisms doxorubicin effect myocyte apoptosis.

Galileo-IRB 658-2000 (Leeuwenburgh) 2001-2002

$123,750

A Single Center Double Blind Placebo Controlled Study of Nutritional Ingredient Systems in Post-Exercise Muscle Injury to Assess Symptomatic Response and Surrogate Markers of Oxidative Stress and Inflammation

Goals: The major goals for this project are to determine 1) if nutritional supplements attenuate inflammation, cell damage, and oxidative stress in healthy human subjects 2) safety of supplements.

NIA, AG 10485 (Meyer) 8/01/1999-7/31/2004 Co-I

Program Project Grant National Institute of Health $5,217,615

Discovery of novel drugs for Alzheimer’s disease

Co-Investigator Neurochemistry Core (Leeuwenburgh)

Goal: The major goal for this project is to discover novel drugs and drug mechanisms that are of potential efficacy in the treatment of the neurodegeneration associated with Alzheimer’s disease.

Florida Department of Health: Biomedical Research Program (Powers) 2001-2003 Co-I

Exercise and myocardial protection against I-R injury $355,525

Goal: To determine the mechanisms of exercise-induced cardiac protection.

RO1 HL62361 (Powers) 2/1/2001-1/31/2005 Co-I

NIH-National Heart, Lung and Blood Institute $1,268,750

Mechanical ventilation and respiratory muscles

Goal: The major goal for this project is to discover the mechanisms of respiratory fatigue in the diaphragm during mechanical ventilation.

RO1 HL607855 (Powers) 2003-2006 Co-I

NIH - National Heart, Lung and Blood Institute $1,310,990

Exercise, Antioxidants, and I-R Injury

To determine if the exercise-induced protection against I-R-induced calpain activation and oxidative injury is dependent upon an increase in myocardial MnSOD activity and GSH levels and to ascertain if the exercise-induced increase in both myocardial MnSOD activity and myocardial GSH levels are essential for protection against I-R-induced myocardial infarction.

Society of Geriatric Cardiology, Merck Geriatric Cardiology Research Award (Leeuwenburgh) 1999-2000

Myocardial Aging: Mitochondrial Control of Apoptosis? $10,000

Cause for Ventricular Dysfunction and Failure in the Old Heart?

American Heart Association-Florida affiliate (Powers) 1998-2001

Protective strategies against myocardial ischemia-reperfusion injury $109,388

Washington University School of Medicine

NIH-NIA, 1 P60 AG 1362901 Claude Pepper OAIC (Holloszy) 1995-2000

Pilot Project Principal Investigator (Leeuwenburgh)

**SERVICES**

**Administrative Duties: University, College and Departmental**

2005- Chief Division of Biology of Aging

Age-Related Memory Loss Program/MBI-ARML program (bi-Annual Meeting)

Dean’s Executive Meeting (select monthly meetings only)

VP HSC Executive Meeting (select monthly meeting only)

2005- Seminar co-Director (UF-VA Aging Rehabilitation Seminar Series and Department of Aging and Geriatrics Seminar series) (Weekly Fall and Spring)

2013 Conflict of Interest Management Plan Okunieff (Chair, Stephen Sugrue) (Company vs UF staff conflict solution monitoring plan development)

2014 Investigative Clinical Trials Misconduct Committee, DSR.

2014-2015 Organize yearly Institute on Aging Research Day

2010- K-College Round Table CTSI-Pepper Center Scholar’s Meeting (monthly meeting)

2005- Institute on Aging Executive Board meetings (monthly meeting)

2006- Core Leader of the Pepper Center Metabolism and Translational Science Core 2006-current (Monthly Meeting)

2015- HSC and CTSI Director of the Professional Development Programs which includes CTSA-sponsored seminars, roundtable workshops with all KL-2 trainees and research day activities

2015- Vice-Chair of Research Department of Aging and Geriatric Research, Institute on Aging.

**Department Search Committee’s**

Search Committee Muscle Biology Preeminence (Full/Associate/Assistant Professor).

Search Committee Cancer Biology.

Search Committee and Chair Translational Science Position II (Full/Associate/Assistant Professor).

Search Committee Department of Aging and Geriatric Research (Assistant Scientist).

**Board Member**

American Aging Association (AGE) 2005-2010

American Aging Association (AGE) 2013-2018

American Federation for Aging Research (AFAR Florida 2010-2012)

Methuselah Prize Scientific Advisory Board (MPSAB)

“The McKnight Brain Institute CAM Basic Science Funds Board”2005

Wake Forest Pepper Center External Board 2012

American College of Sports Medicine and The American Physiological Society (APS) 1997

Society for Free Radical Biology and Medicine (SFRBM) 1995-2008

International Society for Free Radical Research (ISFRBM) 1995-2008

**Editor**

2019-current Editor-in-Chief Experimental Gerontology

2008-current Executive Deputy Editor Journal of Experimental Gerontology (Editor Musculoskeletal Systems and Exercise, Section Editor) Promoted to Executive Deputy Editor 2013).

2021-2022 Cells, Special Issue Editor “Autophagy Meets Aging”

2012- Associate Editor Journal of Frailty and Aging Section "Biology of Frailty and Aging"

2010-2011 Guest Editor Journal of Aging Research, Mitochondria and Ageing

2005-2006, Guest Editor Antioxidant and Redox Signaling

**Editorial board**

Journal of the American Aging Association (AGE) 2004-

Basic Applied Myology - Advisory Board Editor 2010-

Editorial Board: Aging Reviews 2011-

**Past Journal Referee**

**Aging, Disease and Life Sciences**

 Science

 PNAS Proceeding of The National Academy of Sciences

 FASEB Journal

 FEBS Letters

 Journal of Gerontology

 Experimental Gerontology

 Mechanisms of Aging and Development

 Oncogene

 Life Sciences

**Biochemistry**

 Journal of Biological Chemistry

 Journal of Clinical Investigation

 Archives of Biochemistry and Biophysics

 Biochemica et Biophysica Acta

 Journal of Nutritional Biochemistry

 The International Journal of Biochemistry & Cell Biology

**Free Radical Biology**

 Free Radical Biology and Medicine

 Free Radical Research

 Antioxidants and Redox Signaling

**Physiology and Applied Physiology**

 Journal of Applied Physiology

 American Journal of Physiology

 American Journal of Physiology Cell Physiology

 American Journal of Physiology Endocrinology and Metabolism

 American Journal of Physiology Heart and Circulatory Physiology

 American Journal of Physiology Regulatory, Integrative and Comparative Physiology

 Acta Physiologica Scandinavica

 Canadian Journal of Applied Physiology

 European Journal of Applied Physiology

 Medicine and Science in Sports and Exercise

 Physiology and Behavior

 High Altitude Medicine and Biology

 International Journal of Sports Medicine

 European Respiratory Journal

**PUBLICATIONS**

**Refereed Publications (**[**1-295**](#_ENREF_1)**)**

1. Zhang D, Mobley EM, Manini TM, Leeuwenburgh C, Anton SD, Washington CJ, et al. Frailty and risk of mortality in older cancer survivors and adults without a cancer history: Evidence from the National Health and Nutrition Examination Survey, 1999-2014. *Cancer.* 2022.

2. Zhang D, Leeuwenburgh C, Zhou D, Gong Y, Pahor M, Licht JD, et al. Analysis of Biological Aging and Risks of All-Cause and Cardiovascular Disease-Specific Death in Cancer Survivors. *JAMA Netw Open.* 2022;5(6):e2218183.

3. Saini SK, Singh A, Saini M, Gonzalez-Freire M, Leeuwenburgh C, and Anton SD. Time-Restricted Eating Regimen Differentially Affects Circulatory miRNA Expression in Older Overweight Adults. *Nutrients.* 2022;14(9).

4. Picca A, Guerra F, Calvani R, Romano R, Coelho-Junior HJ, Bucci C, et al. Mitochondrial-derived vesicles in skeletal muscle remodeling and adaptation. *Semin Cell Dev Biol.* 2022.

5. Mankowski RT, Anton SD, Ghita GL, Brumback B, Darden DB, Bihorac A, et al. Older Adults Demonstrate Biomarker Evidence of the Persistent Inflammation, Immunosuppression, and Catabolism Syndrome (PICS) After Sepsis. *J Gerontol A Biol Sci Med Sci.* 2022;77(1):188-96.

6. Efron PA, Darden DB, Li EC, Munley J, Kelly L, Fenner B, et al. Sex Differences Associate with Late Microbiome Alterations after Murine Surgical Sepsis. *J Trauma Acute Care Surg.* 2022.

7. Carraro U, Bittmann F, Ivanova E, Jonsson H, Jr., Kern H, Leeuwenburgh C, et al. Post-meeting report of the 2022 On-site Padua Days on Muscle and Mobility Medicine, March 30 - April 3, 2022, Padua, Italy. *Eur J Transl Myol.* 2022.

8. Anton SD, Mankowski RT, Qiu P, You L, Bensadon BA, Audino EJ, et al. Vitamin D Supplementation Is Associated with a Reduction in Self-Reported Falls among Older Adults with Previous Fall History - Feasibility Study. *J Frailty Aging.* 2022;11(2):224-30.

9. Zeidan RS, Han SM, Leeuwenburgh C, and Xiao R. Iron homeostasis and organismal aging. *Ageing Res Rev.* 2021;72:101510.

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12. Przkora R, Sibille K, Victor S, Meroney M, Leeuwenburgh C, Gardner A, et al. Blood flow restriction exercise to attenuate postoperative loss of function after total knee replacement: a randomized pilot study. *Eur J Transl Myol.* 2021;31(3).

13. Przkora R, Sibille K, Victor S, Meroney M, Leeuwenburgh C, Gardner A, et al. Assessing the feasibility of using the short physical performance battery to measure function in the immediate postoperative period after total knee replacement. *Eur J Transl Myol.* 2021;31(2).

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15. McDermott MM, Tian L, Criqui MH, Ferrucci L, Conte MS, Zhao L, et al. Meaningful change in 6-minute walk in people with peripheral artery disease. *J Vasc Surg.* 2021;73(1):267-76 e1.

16. McDermott MM, Spring B, Tian L, Treat-Jacobson D, Ferrucci L, Lloyd-Jones D, et al. Effect of Low-Intensity vs High-Intensity Home-Based Walking Exercise on Walk Distance in Patients With Peripheral Artery Disease: The LITE Randomized Clinical Trial. *JAMA.* 2021;325(13):1266-76.

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**Books and Book Chapters**:

1. “Molecular and Cellular Biology of Aging”. Calorie Restriction, Xu, Kapahi, Leeuwenburgh. Jones & Bartlett Learning, 2013
2. Redox Signaling and Regulation in Biology and Medicine (2009) Free Radicals in Mammalian Aging. Editor, Claus Jacob. Publisher, Wiley-VCH Verlag, p473-519.
3. Free Radicals in Biology and Medicine (2008). Editors Carlos Gutierrez Merino and Christiaan Leeuwenburgh, Publisher Research Signpost, ISBN 978-81-308-0267-1, 263 pages
4. Dirks and Leeuwenburgh. Pharmacotherapy of Cachexia"; Apoptosis in skeletal muscle cachexia and aging. 2005, p49-69.
5. Pollack, M and C. Leeuwenburgh. Molecular Mechanisms of Oxidative Stress and Aging: Free radicals, aging, antioxidants, and disease. Handbook of Oxidants and Antioxidants in Exercise. p 881-926, C.K. Sen, L. Packer and O. Hanninen, editors. Chapter 30: Elsevier Science, 1999.
6. Ji, L. L. and C. Leeuwenburgh. Glutathione and Exercise. In Pharmacology in Exercise and Sports. p 97-124, (Ed. S. Somani) CRC Press, Boca Raton. Florida, 1996.
7. Leeuwenburgh C., and L. L. Ji. The role of glutathione in preventing oxidative stress during exercise and training. In: Skeletal Muscle Research, pp 69-84. (eds. C.K. Sen & and M. Ataley). University Kuopio Proceedings, 1994.

**PRESENTATIONS AT PROFESSIONAL CONFERENCES**

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| 1. **International**

2022 (March) Padua Days on Muscle and Mobility Medicine, Euganean Hills, Padova, Italy. (Co-Organizers, Invited Speaker, and Session Chair)2022 (July) Costa Rican Association of Dietitians and Nutritionists; Nestle, San Jose, Costa Rica. (Invited).2022 (July) Association of Nutritionists and Dietitians of Guatemala; Nestle, Guatemala City, Guatemala. (Invited)2021 (November) APPTO Annual Congress: Panama Association for the Prevention and Treatment of Obesity, Panama City. (Invited)2021 (June) Padua Days on Muscle and Mobility Medicine, Euganean Hills, Padova, Italy. (Co-Organizers, Invited speaker, and session Chair; Virtual)2020–2019 (COVID limited travel in 2020)2018 (March) Translational Myology in Health and Disease Monte Grotto, Padova, Italy. (Co-Organizers, Invited speaker, and Session Chair)2017 (March) Target Audience Scientist, 2nd Interventions in Aging Conference, Cancun, Mexico. (Invited)2017 (March) Translational Myology in Aging and Neuromuscular Disorders Monte Grotto, Italy. (Co-Organizers, Invited Speaker, and Session Chair)2017 (Oct) European Molecular Biology Organization/EMBO|FEBS Lecture Course on Mitochondria in Life, Death, and Disease, Brindisi, Italy. (Invited)2016 (April) Muscle Decline in Aging and Neuromuscular Disorders: Mechanisms and Countermeasures, Padova, Italy. (Co-Organizers, Invited Speaker, and Session Chair).2015 (Sept) Erasmus University, Research Seminar. Rotterdam, Netherlands. (Invited)2015 (March) Translational Myology in Aging and Neuromuscular Disorders Terme Euganee, Padova, Italy. (Co-Organizers, Invited Speaker, and Session Chair)2014 (Oct) International Society of Geriatric Oncology, SIOG Annual Conference, Lisbon, Portugal. (Invited)2014 (March) International Conference on Frailty and Sarcopenia Research (ICFSR). The International Association of Gerontology and Geriatrics—Global Aging Research Network (IAGG-GARN). Barcelona, Spain. (invited) 2014 (March) 83rd Nestlé Nutrition Institute Workshop, “Frailty: Pathophysiology, Phenotype and Patient Care,” Barcelona, Spain. (Invited)2013 (Nov) 2nd World Congress on Controversies, Debates and Consensus in Bone, Muscle, and Joint Diseases (BMJD), Brussels, Belgium. (Invited)2013 (Sept) Society for Free Radical Research—Europe (SFRR-E) Conference, “The New Era of –omics in Free Radicals in Biology and Medicine,” Athens, Greece. (Invited)2013 (Sept) 7th International Conference, “Tear Film and Ocular Surface: Basic Science and Clinical Relevance,” Taormina, Sicily, Italy. (Invited)2013 (June) 5th International Symposium: “Nutrition, Oxygen Biology, and Medicine; Development and Aging; Nutrition Epigenetics; and Lifestyle and Health Span,” Paris, France. (Invited)2012 (Nov) Milan, REGENERA Society, Dissemination on Predictive Medicine and Prevention Regenerative and Healthy-Aging, Milan, Italy. (Invited)2012 (Oct) German Federation of Sports Medicine (DGSP) 100 Years of German Sports Medicine, Berlin, Germany. (Invited)2012 (July) 5th Tokyo Anti-Aging Academy, Tokyo, Japan. (Invited)2012 (July) Keio University, Tokyo, Japan. (Invited) 2012 (July) 12th Japanese Anti-Aging Medicine Conference, Tokyo, Japan. (Invited)2012 (July) Osato Research Institute¸ Gifu, Japan. (Invited)2011 (Sept) Catholic University of the Sacred Heart, Rome, Italy. (Invited)2011 (Sept) **8th International Conference of** Mitochondrial Physiology and Pathology, Bordeaux, France. (Invited)2011 (July) The 21st International Conference of Korean Society for Gerontology: Interventions of Aging and Age-Related Diseases, Busan, South Korea. (Invited)2010 (June) The 1st International Congress on Controversies in Longevity, Health and Aging (CoLONGY), Barcelona, Spain, June 24-27, 2010.2010 (March) First International Congress on Translational Research in Human Nutrition, Clermont-Ferrand (France) on March 19-20, 2010. ‘Protein-energy metabolism in aging and chronic diseases: Role of nutrition and physical activity.2009 (Dec) Italian Society of Gerontology and Geriatrics (SIGG) National Congress, 2-5 December 2009 (Oct) Congress "Genes, Drugs and Gender" organized by the Foundation Menarini, Sassari, Italy.2009 (June) FEDERA conference, Leiden, Netherlands (Invited Speaker; Seminar and Public Lecture)2009 (June) Mini-Symposium Exercise Therapy in Cancer Patients, Erasmus Medical Center Rotterdam, ‘Muscle weakness in Cancer patients, fact or fiction?’2009 (Apr) Nutrition, Oxygen Biology and Medicine symposium, Paris, France (Invited Speaker)2008 (Dec) Bispebjerg Symposium on Sports Medicine, Skeletal Muscle Atrophy, Copenhagen, Denmark (Invited Speaker)2008 (Nov) Italian Society of Gerontology and Geriatrics (SIGG), Florence, 2008 (Nov) The International Society of Chinese Scholars for Exercise Physiology, Tianjin, China (Invited Speaker)2008 (Nov) Pusan University, College of Pharmacy, Invited Talk, Pusan, S. Korea2008 (June) 6th Northern Light Summer Conference, Canadian Federation of Biological Societies 52nd Scientific conference, Winnipeg, Manitoba, Canada (Invited Speaker)2006 (Oct) Aging and Exercise in the 13th International Conference of Biochemistry of Exercise, Korean Society of Exercise Biochemistry and Exercise Physiology, "Effects of exercise on ageing muscle and other tissue functions and metabolism", Seoul, S. Korea (Invited Speaker)2006 (Oct) The International Society of Chinese Scholars for Exercise Physiology, Tianjin, China (Invited Speaker)2006 (July) European Sports Congress 2006 in Lausanne, Switzerland, “Exercise and Oxidative Stress” (invited Speaker)2006 DANONE ageing workshop, Paris, 4–5 May, 2006 (Invited Speaker and Consultant)2005 (Dec) Mitochondria: from Molecular Insight to Physiology and Pathology. University of Bari, Bari, Italy, (Invited speaker)2004 (July) 14th Qualitative and Quantitative Perspectives of Longevity, Kyungjoo, South Korea, Invited Speaker2004 (July) European Cell Death Organization; Death on the Sea, Crete, Greece (Poster)2004 (Sept) Gordon Conference, Biology of Aging, Aussois, France (Invited Speaker) 2004 (May) XII Meeting of the International Society for Free Radical Research, Buenos Aires, Argentina (Invited Speaker) 2003 (Nov) Free Radicals and Aging, McMaster University, Hamilton, Canada, (Invited Speaker)2003 (Nov) Invited External Reviewer for PhD dissertation defense, Gianni Parise, McMaster University, Hamilton, Canada2003 (Sept) Queens' College, Cambridge University, England, Association of Biomedical Gerontology 10th Congress (Invited Lecture)2003 (Oct) Symposium of the German Society for Sports Medicine, Potsdam, Germany (Invited Lecture)2003 (June) Oxidants and Antioxidants in Biology, Cadiz, Spain, (Invited Lecture)2002 (July) 4th International Congress of Pathophysiology, Budapest, Hungary, (Invited Lecture)2002 (Sept) 9th Biennial Meeting of the Society for Free Radical Research International, Paris, France 2002 (June) Erasmus University, Rotterdam, Netherlands (Invited Lecture)2002 (May) University of Catania, Department of Pharmacology, Sicily, Italy (Invited Lectures)2001 (June) University of Bologna, Department of Biochemistry, Italy (Invited Lecture)2001 (June) University of Bari, Department of Biochemistry, Italy (Invited Seminar)2001 (Oct) International Association of Biomedical Gerontology (9th), Vancouver, Canada (Invited Lecture-1)2001 (Oct) International Association of Biomedical Gerontology (9th), Vancouver, Canada (Invited Lecture-2)2001 (May) 2nd International Conference on Oxidative Stress and Aging, Maui, Hawaii, USA (Poster)2000 (June) Universidad Complutense, Department of Biology, Madrid, Spain, (Invited Seminar)1998 (Sept) International Society for Free Radical Research Sao Paulo, Brazil, 1998 (Poster)1998 (Jan) The University of Stellenbosch Medical School, Stellenbosch, South Africa, (Workshop and Invited External Reviewer for Medical Students) |
| 1. **National**
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2021 (April) American Heart Association, Strategically Focused Research Networks, Chicago, IL. (Chair of Session and Poster)

2020 (April) American Heart Association, Strategically Focused Research Networks, Vanderbilt, TN. (Network Presentation)

2019 (December) NIA, Rodent Care and Use for Aging Research, Baltimore, MD. (Invited)

2019 (February) International Conference on Frailty & Sarcopenia Research. Miami, FL. (Poster)

2019 (July) Florida Geriatric Society, Orlando, FL. (Invited)

2019 (April) American Heart Association, Strategically Focused Research Networks, Lexington, KY. (Network Presentation)

2018 (March) International Conference on Frailty and Sarcopenia Research. Miami, FL. (Poster)

2018 (April) Dr. G. Lombard Kelly Lecturer, Medical College of Georgia, Augusta University, August, GA. (Invited Award Lecture)

2017 (April) RISE Program. School of Medicine, University of Porto Rico, PR. (Invited)

2017 (June) American Aging Association National Meeting, New York, NY. (Poster)

2016 (June) American Aging Association National Meeting, Seattle, WA. (Scientific Board Meeting and Invited Speaker)

2016 (October) Medical University of South Carolina, MUSC, Research Seminar, Charleston, SC.

2016 Nemours Children’ Health Jacksonville, FL. (Invited)

2015 (April) Dept. Environmental & Occupational Health, Robert Stempel College of Public Health and Social Work, Florida International University, Miami, FL. (Invited)

2015 (July) Florida Academy of Nutrition and Dietetics annual symposium, Orlando, FL. (Invited)

2014 (May) Annual American College of Sports Medicine, Orlando, FL. (Poster)

2014 (July) IANA (International Academy on Nutrition and Aging) Albuquerque, NM. (Invited)

2014 (May) ARVO Annual Meeting, Leading Eye and Vision Research, Orlando, FL. (Invited)

2014 (September) ACSM’s Integrative Physiology of Exercise conference, Miami, FL (Invited)

2013 (May) Robert M. Berne Cardiovascular Research Center at the University of Virginia, Cardiovascular Seminar Series, Charlottesville, VA. (Invited)

2013 (May) American Aging Association (AGE) 2013 Meeting "Aging: Prevention, Reversal, Slowing," Baltimore, MD. (Invited)

2012 (May) 41st Annual Meeting of the American Aging Association, Fort Worth, TX. (Invited)

2012 (March) Life Ancillary Study Symposium, Biomarkers Symposium, Washington, DC. (Invited)

2012 (February) Department of Physiology, The Brody School of Medicine at East Carolina University (ECU), Greenville, NC. (Invited)

2011 (October) Johns Hopkins University Seminars on Aging Series, Baltimore, MD. (Invited)

2011(November) The Gerontological Society of America's 64th Annual Scientific Meeting, Boston, MA. (Invited)

2011 (October) University of Southern California (USC) School of Pharmacy and the American Association of Pharmaceutical Scientists (AAPS) Symposium, “Moving Targets,” Los Angeles, CA. (Invited)

2011 (November) Gordon Research Conference on Bioenergetics, Andover, NH. (Invited)

2011 (April) Washington University School of Medicine, Department of Obstetrics and Gynecology, St. Louis, MO. (Invited)

2010 Tulane University, Center for Aging, New Orleans

2010 Department of Pharmacology and Neuroscience, UNT HSC, Fort Worth

2009 Aging Muscle Symposium, San Francisco, CA (Invited Speaker)

2009 American Aging Association Conference, Scottsdale, AZ (Invited Speaker)

2009 ACSM Annual Conference, Seattle, WA (Invited Speaker)

2008 Understanding Aging Conference, Los Angeles, CA (Invited Speaker)

2008 10th Longevity Consortium Symposium, Boulder, CO (Invited Seminar)

2008 Linus Pauling Institute, Oregon, Oregon State University, Corvallis (Invited Speaker)

2007 Cachexia Conference, Tampa FL Presentation title: Mitochondria and Muscle (Invited Speaker)

2007 Intl. College of Geriatric Psychopharmacology, San Diego, CA (Invited Speaker)

2007 GSA National Meeting, San Francisco, CA (Invited Speaker)

2007 ACSM, New Orleans, LA (Invited Speaker)

2007 WORKSHOP NIA unexplained fatigue in the elderly, Bethesda, MO

2007 Nathan Shock Center Conference, Mayan Ranch, San Antonio, TX (Invited Speaker)

2007 Cachexia Conference, Tampa FL (Invited Speaker)

2007 University of Colorado (Invited Seminar)

2007 Longevity Consortium, Santa Fe, New Mexico (Invited Speaker)

2006 6th Annual S. Mouchly Small Muscle Symposium, Amherst, MA (Invited Speaker)

2006 American Aging Association, Boston, Massachusetts (Invited Speaker)

2005 USC, Los Angeles, Distinguished Professor Lecture

2005 Free Radical Biology and Medicine, (Invited Speaker) (USA)

2005 Workshop NIA, Calorie Restriction (Invited Lecture), Baltimore, USA

2004 Gerontological Society of America (Invited Lecture)

2004 Baltimore; Nathan Shock Center Award Lecture at NIA; USA

2004 The Calorie Restriction Society, Charleston, SC (Invited Speaker)

2004 Gerontological Society of America, Washington DC, USA, (Invited Speaker)

2004 American Aging Association (AGE), Public Lecture, St. Petersburg, FL (Invited Speaker)

2004 Organizer and Lecturer, Pre-Symposium American Aging Association (AGE), St. Petersburg, FL

2004 University of Texas at San Antonio, TX (Invited Seminar)

2004 University of Colorado, Boulder, CO (Invited Lecture)

2003 Texas A & M, College Station, TX, (Invited Lecture)

2003 Grand Rounds, Why do we age? Vermont Medical School, Burlington, VT, (Invited Lecture)

2003 Vermont Medical School, Burlington, Vermont, (Invited Seminar Lecture)

2003 The Gerontological Research Center and San Antonio Nathan Shock Aging Center, San Antonio, TX

2003 Gerontological Society of America, San Diego, CA, (Invited Lecture)

2003 Diet and Optimum Health, Linus Pauling Institute, Oxygen Club California Portland (Invited Lecture)

2003 American College of Sports Medicine, San Francisco, (Mini-Symposium)

2002 Kronos, Sarcopenia and Aging, San Diego (Invited lecture)

2002 American College of Sports Medicine, Indianapolis (Mini-Symposium)

2001 American College of Sports Medicine, Baltimore, (Invited Lecture)

2000 Oxygen Society, San Diego, CA

2000 Society of Geriatric Cardiology, Anaheim, CA, (Invited Lecture)

1999 American College of Sports Medicine, Seattle, (Invited Lecture)

1998 American College of Sports Medicine, Orlando, (Poster)

1997 American Aging Association, Philadelphia, (Invited Lecture)

1997 Oxygen Society, San Francisco, (Selected Lecture Presentation)

1996 Oxygen Society, Miami, (Selected Lecture Presentation and Poster)

1996 American Heart Association 69th Scientific Session, New Orleans, (Selected Lecture Presentation 1)

1996 American Heart Association 69th Scientific Session, New Orleans, (Selected Lecture Presentation 2)

1996 Federation of the American Society for Experimental Biological, Washington D.C., (Selected Lecture Presentation)

1995 Federation of the American Society for Experimental Biological, Atlanta (Poster)

**Local/Regional:**

2010 UF Running Medicine Conference, UF Orthopedic and Sports Medicine Institute

2009 Whitney Laboratory for Marine Bioscience, Marineland, FL (Invited Speaker)

2009 University of Florida, Gainesville, FL, Animal Sciences, Invited Seminar speaker.

2006 From Frail to Fit After Fifty, Dept. of Veterans Affairs, GRECC St. Petersburg, Florida (Invited Lecture)

2006 University of Florida, Gainesville, FL, Alumni Association Grand Guard Reunion presentation

2006 University of Florida, Gainesville, FL, “IDH3931 Science for Life Seminar Series –

Fall 2006 Schedule Howard Hughes MI Science For Life seminar course

2006 University of Florida, Gainesville, FL, “Center for Neurobiology of Aging” seminar lecture.

2006 University of Florida, Gainesville, FL, “Medical Residents; house staff noon conference lecture

2006 University of Florida, Gainesville, FL, “Biology of Aging” IDP course, guest lecture.

2006 University of Florida, Gainesville, FL, Guest lecture, Dietician Association

2005 University of Florida, Gainesville, FL, Institute on Aging

2005 University of Florida, Gainesville, FL, IDP Graduate Program Seminar Series

2005 University of Florida, Gainesville, FL, College of Public Health and Health Professions

2004 Tallahassee, Florida State University, Dept. of Nutrition, Food and Exercise Science and Program in Neuroscience, USA.

2004 University of Florida, Gainesville, FL, College of Medicine, Hypertension Center

2004 University of Florida, Gainesville, FL, College of Nursing

2004 University of Florida, Gainesville, FL, Center for Gerontological Studies

2003 University of Florida, Gainesville, FL, College of Health Professions

2003 University of Florida, Gainesville, FL, College of Nursing

2003 University of Florida, Gainesville, FL, College of Veterinary Medicine

2003 University of Florida, Gainesville, FL, Department of Food Science and Human Nutrition

2003 University of Florida, Gainesville, FL, Grant Writing Workshop

2003 University of Florida, Gainesville, FL, Free Radical Biology Meeting

2003 University of Florida, Gainesville, FL, Anesthesiology Residents

2003 University of Florida, Gainesville, FL, Gerontology Students

2002 Washington University, JOH Meeting, Dept. of Internal Medicine, St. Louis, MO, (Invited Seminar)

2002 University of Florida, Gainesville, FL, Alumni Association (Graduation Series)

2002 University of Florida, Gainesville, FL, Alumni Association (Back to School)

2002 University of Florida, Gainesville, FL, Institute on Aging

2001 University of Florida, Gainesville, FL, Center for Exercise Science

2001 University of Florida, Gainesville, FL, Center for Gerontology and Institute on Aging

2001 University of Florida, Gainesville, FL, Free Radical Meeting (Invited Lecture 1)

2001 University of Florida, Gainesville, FL, Free Radical Meeting (Invited Lecture 2)

2001 University of Florida, Gainesville, FL, VA Medical School

2001 University of Florida, Gainesville, FL, Veterinarian Medicine

2001 University of Florida, Gainesville, FL, Department of Nutrition

2000 Cardiopulmonary Rehabilitation Symposium: Status 2000. Orlando, FL, (Invited Lecture)

1999 Southeastern ACSM Regional Conference Meeting, Norfolk, VI. (Invited Lecture)

1999 Cardiopulmonary Rehabilitation Symposium: Status”99”, Orlando, FL, (Invited Lecture)

2000 University of Florida, Gainesville, FL, Geriatric Research Educational Clinical Center

1999 University of Florida, Gainesville, FL, Free Radical Meeting (Invited Lecture)

1998 University of Florida, Gainesville, FL, Department of Pharmaceutics and Pharmacodynamics

1996 Washington University School of Medicine, St. Louis, MO, Mass Spectrometer Resource Center

1995 Washington University, Department of Internal Medicine, St. Louis, MO, (Invited Seminar)