UTMB Pepper OAIC Annual Directory

Section I. Description of Center

The UTMB Claude D. Pepper Older Americans Independence Center (OAIC) has been continuously funded since 2000. From the very beginning, we have nurtured a multidisciplinary translational research culture to fulfill our mission, which is to improve physical function and independence in older adults. Central to this mission has been the career development and training of the next generation of leaders in geriatric research. Our scientific focus has evolved over the years from a narrow interest in the mechanisms of sarcopenia to the translation of our findings in much needed patient-centered interventions to improve physical function and independence. This evolution derives not only from the natural progression of our research from basic discoveries to healthy humans and from healthy humans to patients, but also from a deliberate effort of the OAIC leadership to promote and support collaborations between scientists in muscle aging and investigators in population health and outcomes research on aging and rehabilitation. This second line of research has always been present from the beginning of our OAIC, but was conducted in parallel with muscle research. The intersection of these two lines has accelerated the development of new research foci. An example is the rapid development of patient-centered outcomes research in the elderly, which culminated with the funding of a large infrastructure grant and, more recently, with our participation in the trans-Pepper patient-centered multicenter clinical trial on fall prevention.

Our current theme is to "*Identify pathways of physical function loss and gain and develop targeted interventions to improve functional recovery from illness in older adults*".

Our general hypothesis is that aging induces mild but significant biological and metabolic changes that — in combination with patient factors – progressively lead to functional loss and predispose to potentially catastrophic declines in physical function during bouts of acute illness and hospitalization. Once hospitalized, variations in hospital and post-hospital care will significantly determine whether geriatric patients will recover physical function after their illnesses. Thus, we hypothesize that interventions involving rehabilitation, nutritional supplementation, pharmacologic anabolic treatments, as well as changes in decision making and healthcare delivery can prevent the age- and disease-induced functional loss and improve functional recovery from illness in older adults.

The specific aims of the UTMB OAIC are as follows:

1. Stimulate the growth of additional multidisciplinary translational research to improve physical function and functional recovery from illness in older adults by:
    a. Funding pilot project research to generate preliminary data in promising new areas of investigation
    b. Funding developmental projects to develop innovative technologies
2. Train future leaders in geriatric research on the mechanisms, prevention and treatment of functional loss and recovery in older adults
3. Recruit established investigators with expertise relevant to muscle function and functional recovery in older adults into interdisciplinary translational research related to the OAIC focus.
4. Provide core support and add value to funded translational research on functional loss and recovery in older adults.
5. Foster collaborations between UTMB investigators and investigators at other OAICs and other institutions on studies of physical function and functional recovery in older adults.

These specific aims will be accomplished through the Leadership/Administrative Core (LAC), as well as the activities of our Research Education Center program (REC), the Pilot/Exploratory Studies Core (PESC) and the three highly productive Resource Cores (RC) that encompass the major areas of our multidisciplinary translational research model: Clinical Research RC1, Metabolism and Biology RC2, and Biostatistics and Data Management RC3.

Section II. Research, Resources and Activities

A. Cores

UTMB's OAIC has 6 cores:

1) Leadership/Administrative Core (LAC)
2) Research Education Core (REC)
3) Pilot/Exploratory Studies Core (PESC)
4) Clinical Research Resource Core (RC1)
5) Metabolism & Biology Resource Core (MBRC2)
6) Biostatistics & Data Management Resource Core (BDMRC3)

LAC: The overall goal of the Leadership/Administrative Core (LAC) is to provide the administrative infrastructure and leadership to support the activities and growth of the entire UTMB OAIC, and fulfill our mission, which is to stimulate translation of the research findings to improve physical function and independence in older adults.

The LAC specific aims are:

1. Provide overall leadership and direction for all activities of the UTMB OAIC. We will:
   a. Evaluate new opportunities for research and collaborations at the local, national and international level with support from our Internal Advisory Committee (IAC) and External Advisory Committee (EAC);
   b. Attract new investigators by providing training opportunities, as well as pilot and developmental projects;
   c. Coordinate and integrate Core functions, promoting scientific coherence, access to Core resources and expertise, and new utilization of Core resources;
   d. Coordinate and leverage OAIC Cores with other institutional resources;
   e. Foster collaborations between UTMB OAIC investigators and Cores with other OAICs and institutions.
2. Administer the UTMB OAIC program. This includes:
   a. Monitor all fiscal matters;
   b. Track and evaluate Core utilization, productivity, quality and efficiency (timeliness), with re-allocation of resources among cores as appropriate;
   c. Assure compliance with university and governmental policies regarding human subjects, animal care, and the responsible conduct of research;
   d. Organize research and administrative meetings, including the Scientific Review Panel (SRP) meetings for selection of pilot/developmental projects and scholars;
   e. Organize participation of UTMB investigators at the annual OAIC national scientific meeting.
3. Communicate with the NIA and the community. We will:
   a. Prepare all administrative documents;

b. Maintain open communication with the scientific community, and healthcare professionals, older adults and caregivers to translate our research findings to the geriatric population;
c. Maintain and expand the UTMB OAIC website.

REC: The goal of the REC is to increase the number of rigorously trained, extramurally competitive, and scientifically competent scholars who will conduct translational investigations in aging, lead multidisciplinary research teams, and eventually mentor the next generation of investigators in aging research.

To achieve this goal, the REC will address the following objectives:

Objective 1: Identify, recruit and select qualified scholars who are beginning their academic/scientific careers in aging and demonstrate the potential for multidisciplinary translational research.

Objective 2: Create *Individualized Career Development Plans* for each scholar that identify a lead mentor and mentoring team with defined roles, and document expected milestones of research progress including publications, presentations, and submission of grant proposals, and training in the scientific integrity and the responsible conduct of aging related research.

Objective 3: Develop and implement a high quality program of education and training activities integrated with mentoring experiences that provide REC scholars with the skills necessary to establish productive scientific careers.

Current REC Scholars:

CHRISTOPHER FRY, PHD
Mentor: Blake Rasmussen, PhD

Research Project Description: The loss of skeletal muscle strength and function (sarcopenia) is accompanied by deleterious changes in muscle quality, with increased accumulation of connective tissue. With advancing age, an overproduction of muscle extracellular matrix (ECM - connective tissue) can negatively impact the plasticity and function of muscle. Concomitant with the decline in lean tissue, a decline in skeletal muscle stem cell, or satellite cell, number and activity occurs. While we have recently demonstrated that the lifelong genetic depletion of satellite cells does not promote the onset of sarcopenia, increased accumulation of muscle connective tissue occurred in older animals. Fibrogenic/adipogenic progenitor (FAP) cells are key contributors to connective tissue biosynthesis, giving rise to pro-fibrotic cells that overproduce ECM. Our hypothesis is that the reduction in satellite cells with age results in dysregulation of FAP activity leading to the accumulation of ECM in aging muscle. Specifically, we hypothesize that reduced paracrine activity of aged satellite cells directs the functional phenotype FAPs to promote a fibrogenic differentiation program.

https://utmb.influuent.utsystem.edu/en/persons/christopher-fry-2

ADDIE MIDDLETON, PHD, DPT, PT
Mentor: Kenneth J. Ottenbacher, PhD, OTR

Research Project Description: Older adults are at increased risk of functional decline, especially following a hospitalization. One of the primary goals of post-acute care is to improve functional independence. My research focuses on outcomes following post-acute care in older adults. I recently completed a project examining the degree to which patients' discharge self-care, mobility, and cognitive functional status were associated with the risk of an unplanned rehospitalization over the 30 days following discharge from post-acute care. A nationally representative sample of older adults (100% Medicare data) was used to address the study objective. Findings indicated that even after controlling for sociodemographic and other clinical factors, self-care, mobility, and cognition remained significant predictors of 30-day unplanned rehospitalization. The manuscript reporting study findings has been revised and resubmitted to the Journal of General Internal Medicine. This project set the foundation for the project I am currently working on examining the long-term outcomes associated with rehospitalizations among older adults. The primary objective of the study is to determine the association between 30-day unplanned rehospitalizations after post-acute care and the following six-month outcomes: 1) number of hospital admissions, 2) days in a non-acute rehabilitation setting, and 3) mortality.

https://utmb.influuent.utsystem.edu/en/persons/joyce-middleton-2

MONIQUE PAPPADIS, PHD, MED
Mentor: James Goodwin, MD

Research Project Description: Dr. Pappadis' project involves conducting qualitative analyses of interviews regarding post-stroke experiences of cognitive, communication and emotional deficits among community-dwelling older adults with stroke. This work is to identify specific needs of this population for rehabilitation to improve their recovery post stroke.

https://utmb.influuent.utsystem.edu/en/persons/monique-pappadis

PESC: The goal of the Pilot/Exploratory Studies Core is to stimulate new research addressing the issues of functional loss and gain and promoting functional recovery from serious illness in the elderly. We target early stage investigators, and also investigators well established in other areas who can turn their expertise to studies consistent with the OAIC theme. The PESC funds one or two-year pilot grants with budgets of up to $50,000 per year, and also small exploratory projects with budgets of up to $10,000.

We employ our assets and partner with other institutional resources to accomplish the following specific aims:

1. Solicit and select the most meritorious research proposals for PESC funding.
2. Identify opportunities for co-sponsorship of PESC studies.
3. Provide PESC investigators with access to resources from other OAIC cores and institutional research facilities/centers.
4. Monitor the progress of PESC studies.
5. Ensure regulatory compliance, safety and protection of human subjects enrolled in PESC studies.
6. Provide assistance and mentorship to develop PESC studies into independently funded grant applications.

Currently Funded Pilot Studies:

Year 16 (09/01/15-08/31/16)			
E. Lichar Dillon	Internal Medicine - Endocrinology	Cycled Testosterone Therapy to Improve Physical Function in Frail Nursing Home Residents	$25,000
Steven Fisher, PhD, PT	Physical Therapy	Fall Risk Reduction in the Elderly Through the Physical Therapy Management of Incontinence	$10,000 ($2^{nd}$ year)
Christopher Fry, PhD (REC Scholar)	Nutrition & Metabolism	Satellite Cell Regulation in Fibrogenic/ Adipogenic Progenitor Cell Activity in the Development of Skeletal Muscle Fibrosis during Aging	$10,000
Lynne Hughes, PhD, PT	Physical Therapy	Feasibility of a Post-Hospitalization PT Intervention in Patients with Pneumonia	$20,000
Sara Nowakowski, PhD	Obstetrics & Gynecology	Effects of Inactivity and Rehabilitation on Sleep in Bedridden Older Adults	$20,000

CRRC1: The Clinical Research Resource Core (CRRC1) will continue to function as the primary UTMB-OAIC resource for subject recruitment, tracking and retention activities, and for training of our Scholars in clinical research. The core supports research studies, on: 1) the biological mechanisms underlying functional loss and recovery; 2) physical function and disability in healthy and frail community-dwelling older adults, and in patients admitted to the hospital*;* and 3) studies in patient-centered outcomes research (PCOR) on recovery from illness.

The Specific Aims of the CR-RC1 are:

1. Recruit, track and retain older adults for scholar projects, external projects, developmental and pilot studies
2. Provide standardized health screenings, physical exams, functional status and disability assessments for OAIC investigators.
3. Maintain a health outcomes database on patients admitted to the UTMB Acute Care for Elders (ACE) Unit and the Intensive Care Unit (ICU).
4. Coordinate training in recruitment and retention, and functional assessments.
5. Ensure compliance with regulations governing clinical investigations involving human subjects.
6. Develop novel methodologies to improve research subject recruitment, retention and satisfaction.

Anchored by our expertise in muscle biology, nutrition, and metabolism in aging, the UTMB-OAIC is a leader in translational research in healthy and clinical older populations. Our evolving, translational focus on interventions to prevent functional loss and improve recovery in older adults, demands a coordinated and efficient recruitment, tracking and retention strategy to ensure continued productivity and faculty development.

The core supports three streams of investigator initiated activities. First, it provides expertise and resources for translational and mechanistic investigations on the pathophysiology of muscle aging and sarcopenia. Second, the core provides expertise and resources for the assessment of functional status and disability using a standardized battery of subjective and objective measures. Third, we also provide support for innovative qualitative studies in patient centered outcomes research (PCOR) in recovery from illness, a new area of research in which several of our investigators are funded and have initiated studies.

Recruitment efforts target older adults from the community, patients seeking healthcare in our clinics, and patients admitted in the ACE unit. We have also initiated the development of a research unit in the ICU. Many MICU patients are older adults subsequently transferred to the ACE Unit after critical care. By developing an ICU research lab we are able to capture these patients earlier and follow their recovery. The CRRC1 will also continue to prioritize the recruitment and retention of a diverse subject population including women and older adults of racial/ethnic minority origin.

CRRC1 supported external projects (EP):

(Regulat. = Regulatory support; R = Recruitment only; T = Testing support)

PI	Agency	Grant number	Title	Period	Target # Subjects
Durham (site)	NIAMS	R44AR054993	Non-Invasive Assessment of Skeletal Muscle Loss in Cancer Patients	07/01/07-06/30/15	30 [R]
Goodwin	AHRQ	R24 HS022134	Patient Centered Outcomes Research in the Elderly	05/01/13-04/30/18	Regulat. support
Goodwin	NIA	T32 AG002070	Health of Older Minorities – Training Grant	05/01/04-04/30/16	Regulat. support
Lyons	AHA	13BGIA17110021	STEP AND GO: A Study of Technology-Based Exercise Promotion	07/01/13-06/30/15	50 [R,T]
Ottenbacher	NICHD	K12 HD055929	Rehabilitation Research Career Development Program	09/25/07-08/31/17	Regulat. support
Ottenbacher	NIDRR	H133P110012	Interdisciplinary Rehabilitation Research Training Program	10/01/11-09/30/16	Regulat. Support
Ottenbacher	NICHD	R01 HD06944301	Hospital Readmission & Inpatient Medical Rehabilitation	07/05/12-04/30/16	Regulat. support
Paddon-Jones	NINR	R01 NR01297301	Preserving Muscle Mass & Function in Bedridden Older Adults	02/15/12-12/31/16	60 [R,T]
Paddon-Jones	DRI	1146a	Whey, Protein, Aging & Physical Inactivity	01/01/13-12/31/16	12 [R,T]
Paddon-Jones	DRI	1146b	Distributed Protein Intake, Whey Protein & Aging	06/01/13-07/31/16	12 [R,T]
Rasmussen	NIAMS	R01 AR049877	Nutritional & Contractile Regulation of Muscle Growth	09/15/08-08/31/14	144 [R,T]
Rasmussen	Solae		A Randomized, Controlled Double Blind Acute Study: Effects of Protein Blends on Muscle Protein Synthesis & Breakdown in Aging	10/01/12-09/01/14	20 [R,T]
Rasmussen	Navitor		Effect of Specific Amino Acids on Human Muscle Protein Synthesis	11/14/15-12/31/15	40 Reg, R,T
Rasmussen	NIA		Nutrient Sensing and Signaling in Aging Muscle	11/1/15-10/31/17	40 Reg, R, T
Reistetter	AHRQ	R24 HS022134	Comparative Effectiveness of Patient-Centered Outcomes Following IRF and SNF Stroke Rehabilitation	05/01/13-04/30/18	80 [R]
Riall	ITS	F12545	Patient-Centered Decision	09/01/13-	612 [R]

			Support in Cancer	08/31/15	
Sharma	UT System		Integrated Computer Based Clinical Decision Support System to Improve Care Transition of Patients Hospitalized for Congestive Heart Failure and COPD	10/01/10-09/30/15	Regulat. support
Sharma	UT System		Systems Engineering to Provide Integrated Care for Patients	06/01/12-05/31/15	Regulat. support
Sharma	Sunovion		Economic and Humanistic Impact of Low Peak Inspiratory Flow Rate (PIFR) in COPD Patients: An Observational Analysis	07/01/15-04/30/16	40 Reg, R, T
Sheffield-Moore	NCI	R01 CA127971	Nutrition & Anabolic Interventions in Cancer Cachexia	04/18/08-01/31/15	60 R,T
Sheffield-Moore	Moody Fdn		Viagra Administration and Muscle Growth & Fatigue in Older Humans	04/02/12-04/01/15	72 R,T
Sidossis	ADA	1-14-TS-35	Effect of Brown Adipose Tissue Activation on Insulin Sensitivity in Humans	01/01/14-12/31/16	60 R,T
Tan	AHRQ	R24 HS022134	Developing Decision Support on Mammography in Women with Limited Life Expectancy	05/01/13-04/30/18	Regulat. support
Urban	NASA	NNX10AP86G	Testosterone & Leucine Supplementation as Gender Specific Countermeasures Against Musculoskeletal Loss	07/30/10-07/29/14	Regulat. support
Urban	Moody Fdn		Continuous versus Cycling Long-Term Testosterone	04/02/12-04/01/15	50 R,T
Volpi	Meg Milk		Whey Peptide Following Resistance Exercise & Anabolic Signaling & Muscle	08/06/13-12/05/15	20 R,T
Volpi (clin. site)	NIA	U01 AG029824	ASPirin in Reducing the Effects on the Elderly	10/10/11-01/31/17	100 R,T
Volpi (clin. site)	NIA	U01 AG048270	A Randomized Trial of a Multifactorial Fall Injury Prevention Strategy (STRIDE)	05/15/14-02/28/19	*600* R,T
Volpi	DRI	1229	Whey Protein & Exercise to Accelerate Recovery after Acute Hospitalization	01/01/14-12/31/16	100 R,T

			in Previously Independent Older Adults		
Volpi	NIA	R01 AG030070	Nutrition & Exercise to Improve Protein Metabolism & Prevent Sarcopenia in Aging	08/01/08-05/31/15	108 [R,T]
Volpi (clin. site)	NIMHD	U24 MD006941	A Randomized Recruitment Intervention (RECRUIT)	9/20/11-06/30/16	ASPREE Support
Volpi			Skeletal Muscle Microvascular Perfusion and the Obesity Paradox in CHF	08/03/2009-05/31/16	20 Reg, R,T
Volpi	DRI		Prevalence of Malnutrition and/or Sarcopenia on Hospital Admission	01/12/15-1/12/17	100 Reg, R, T

MBRC2: The Metabolism and Biology Resource Core (MB-RC2) of the UTMB OAIC supports and promotes integrative and translational research on the metabolic and biological mechanisms underlying functional loss and recovery in older adults. The MB-RC2 also supports biological sample storage, tracking and handling for larger clinical trials.

The specific aims are:

1. Provide analytical support and add value to funded translational research on sarcopenia, physical dysfunction and recovery requiring molecular, morphological, or tracer methodologies
2. Leverage other institutional analytical core resources and simplify access for OAIC investigators
3. Develop new translational methods to study the biological and metabolic mechanisms of sarcopenia, physical function and recovery in older adults
4. Train young investigators on the analytical and methodological aspects of translational research on physical function in older adults

Services/support provided by the MBRC2:

- Biorepository
- Stable isotope methodologies for metabolic studies
- Mass spectrometry analyses
- Metabolic modeling
- Total urinary nitrogen analyses
- Cell signaling
- Gene expression
- Muscle morphology (microscopy)
- Cell culture (muscle)
- Transgenic mouse models

OAIC Pilot Projects, Developmental Projects, and Trainee Projects supported by the MBRC2

PI	Title	Support
Celeste Finnerty, PhD	Predictors of Recovery from Burns in the Elderly	Repository

Nisha Garg, PhD	Mitochondrial Biomarkers of Cardiovascular Disease and Recovery in Older Adults	Repository, Signaling
Roberto Garofalo, MD	Oxidative Determinants of Acute Respiratory Tract Infections in Older Adults	Repository
Christopher Fry, PhD	The Role of Stem Cells in Muscle Aging	Morphology, Signaling
Demidmaa Tuvdendorj, MD, PhD	The Mechanism of Intramuscular Accumulation of Acyl-CoA in Aging	Stable isotope
Rene Przkora, MD, PhD	Preconditioning to Improve Total Hip Arthroplasty Outcomes in Older Adults	Study design

MBRC2 supported External Projects (EP). Rep. = Repository; Morph. = Morphology

PI	Agency	Grant number	Title	Period	Support
Børsheim (UAMS)	NIA	R01 AG033761	Effects of amino acids on regional lipid metabolism	12/01/10-11/30/15	Stable isotope, Modeling, Rep.
Drummond (U. Utah)	NIA	K01AG038556	Nutrient regulation of amino acid transporters in aging human skeletal muscle	09/01/11-05/31/15	Stable isotope, Rep. Modeling
Durham (site)	NIAMS	R44AR054993	Non-invasive assessment of skeletal muscle loss in cancer patients	07/01/07-06/30/15	Stable isotope, Rep.
Paddon-Jones	NINR	R01 NR012973	Preserving muscle mass and function in bedridden older adults	02/15/12-12/31/16	Stable isotope, Rep, Signaling, Morph.
Paddon-Jones	DRI	1146a	Whey, protein, aging and physical inactivity	01/01/13-12/31/16	Stable isotope, Rep. Signaling,
Paddon-Jones	DRI	1146b	Distributed protein intake, whey protein and aging	06/01/13-07/31/16	Stable isotope, Rep. Signaling
Rasmussen	NIAMS	R01 AR049877	Nutritional and Contractile Regulation of Muscle Growth	09/15/08-08/31/14	Stable isotope, Rep. PCR, Signaling
Rasmussen	Solae		A Randomized, Controlled Double Blind Acute Study: Effects of Protein Blends on Muscle Protein Synthesis and Breakdown in Aging	10/01/12-09/01/14	Stable isotope, Rep. PCR, Signaling, Respirometry
Rasmussen	Navitor		Effect of Specific Amino Acids on Human Muscle Protein Synthesis	11/14/15-12/31/15	Stable isotope, Rep. PCR, Signaling, Respirometry, Cell culture
Rasmussen	NIA	R56 AG051267	Nutrient Sensing and Signaling in Aging Muscle	11/1/15-10/31/17	Stable isotope, Rep. PCR, Signaling, Respirometry, Cell culture, Transgenic mice
Sheffield-Moore	NCI	R01 CA127971	Nutrition and Anabolic Interventions in Cancer Cachexia	04/18/08-01/31/15	Stable isotope, PCR, Signaling
Sheffield-Moore	Moody Fdn		Viagra administration and muscle growth and fatigue in older humans	04/02/12-04/01/15	Stable isotope, PCR, Signaling
Sidossis	ADA	1-14-TS-35	Effect of brown adipose tissue activation on insulin sensitivity in humans	01/01/14-12/31/16	Stable isotope, Rep. Respirometry
Urban	NASA	NNX10AP86G	Testosterone and Leucine Supplementation as Gender Specific Countermeasures Against Musculoskeletal Loss	07/30/10-07/29/14	Stable isotope
Urban	Moody Fdn		Continuous versus Cycling Long-Term Testosterone	04/02/12-04/01/15	Stable isotope, PCR, Signaling
Volpi	MegMilk		Effects of Post-Exercise Whey Peptide on Muscle mTOR Signaling & Protein Synthesis in Young & Older Adults	08/06/13-08/05/15	Stable isotope, PCR, Signaling, Cell culture

Volpi (site)	NIA	U01 AG029824	ASPirin in Reducing the Effects on the Elderly	10/10/11-01/31/17	Repository
Volpi	DRI	1229	Whey protein & exercise to accelerate recovery after acute hospitalization in previously independent older adults	01/01/14-12/31/16	Repository
Volpi	NIA	R01 AG030070	Nutrition & Exercise to Improve Protein Metabolism & Prevent Sarcopenia in Aging	08/01/08-05/31/15	Stable isotope, PCR, Rep, Morph, Signal.

BDMRC3: As a new core, the major activities of the BDM Core have involved organization of members' activities within the structure of the larger Center activities. To this end, the major activities of the Core largely involved providing statistical and data management support to existing project and pilot projects that have come online within the past year.

In particular, each project funded by the Pilot/Exploratory Studies Core was assigned a BDM Core member to advise project investigators in their design and analysis plans. For each funded study, it was required that the assigned BDM Core member work with the investigator until the study was considered satisfactory before funding would be awarded.

External projects supported by the BDMRC3

PI	Agency	Grant number	Title	Period
Goodwin	CPRIT	RP101207	Comparative Effectiveness Research on Cancer in Texas	08/01/10-07/31/16
Goodwin	AHRQ	R24 HS022134	Patient Centered Outcomes Research in the Elderly	05/01/13-04/30/18
Kuo	AHRQ	R01 HS02064201	Assessing the Role of Nurse Practitioner in Primary Care of Older Adults	07/05/12-04/30/15
Lyons	AHA	13BGIA17110021	STEP AND GO: A Study of Technology-based Exercise Promotion	07/01/13-06/30/15
Markides	NIA	R01 AG10939	Longitudinal Study of Mexican American Elderly Health	04/01/15-03/31/19
Ottenbacher	NIDRR	H133P110012	Interdisciplinary Rehabilitation Research Training Program	10/01/11-09/30/16
Ottenbacher	NICHD	R24 HD065702	National Center for Medical Rehabilitation Research Center for Rehabilitation Research Using Large Datasets	07/03/10-05/31/15
Ottenbacher	NICHD	R01 HD06944301	Hospital Readmission and Inpatient Medical Rehabilitation	07/05/12-04/30/16
Reistetter	NICHD	K01 HD068513	Regional Variability in Inpatient Rehabilitation among Medicare Beneficiaries	04/01/11-03/31/15
Riall	CPRIT	RP101207	Quality of Post-Treatment Surveillance of Older Cancer Patients in Texas	08/01/10-07/31/16
Sheffield-Moore	NCI	R01 CA127971	Nutrition & Anabolic Interventions in Cancer Cachexia	04/18/08-01/31/15
Sheffield-	Moody		Viagra Administration & Muscle	04/02/12-

Moore	Found.		Growth & Fatigue in Older Humans	04/01/15
Volpi	Meg Milk		Whey Peptide Following Resistance Exercise & Anabolic Signaling & Muscle	08/06/13-08/05/15
Volpi	DRI	1229	Whey Protein & Exercise to Accelerate Recovery After Acute Hospitalization in Previously Independent Older Adults	01/01/14-12/31/16
Volpi	NIA	R01 AG030070	Nutrition & Exercise to Improve Protein Metabolism & Prevent Sarcopenia in Aging	08/01/08-05/31/15
Wong	NIA	R01 AG018016	The Mexican Health and Aging Study II (MHAS)	04/15/11-03/31/16

B. Research (See CRRC1, MBRC2, & BDMRC3 in Core section)
C. Pilots (See PESC in Core section)

Section III. Career Development: Provide names and funding subsequent to Pepper pilot funding.

Past five years:

José Manuel Barral, MD, PhD (Pilot awardee 2010-2011)

- Awarded 13GRNT17290006 from AHA (07/01/2013-06/30/2015) entitled, "UNC-45 Facilitated Myosin Folding and its Regulation by Hsp90"

William Durham, PhD (Pilot awardee 2010-2011)

- Awarded R23 AR054993 from NIAMS (07/01/2012-06/30/2015) entitled, "Noninvasive Assessment of Skeletal Muscle Loss in Cancer Patients – Phase 2" [Site PI]

Michael Kinsky, MD (Pilot awardee 2010-2011)

- Awarded W81XWH1210598 from DOD (09/30/2012-09/29/2016) entitled, "Smart Oxygen Monitors to Diagnose and Treat Cardiopulmonary Injuries"

Oberhauser, Andres F. (Pilot awardee 2010-2014)

- Awarded R01 GM118534 from NIDDK (05/01/2016 - 04/30/2020) entitled, "The UNC-45 as a Modulator of Myosin Biogenesis and Function"

Labros Sidossis, PhD (Pilot awardee 2011-2013)

- Awarded 67666 from ADA (01/01/2014-12/31/2016) entitled, "Effect of Brown Adipose Tissue Activation on Insulin Sensitivity in Humans"
- Awarded GM056687 from NIH (09/01/2014-08/31/2018) entitled, "Mechanisms of Fenofibrate Alone or Combined with Propranolol in Burned Patients"

Lyons, Elizabeth J. (Pilot awardee 2013-2014)

- Awarded K07 CA175141 from NCI (09/01/2014 - 08/31/2018) entitled, "Level Up: Video Games for Activity in Breast Cancer Survivors"

- Awarded MRSG-14-165-01-CPPB from ACS (01/01/2015-12/31/20219) entitled, "Self-Monitoring Activity: A Randomized Trial of Game-Oriented Applications"
- Awarded 13BGIA17110021 from AHA (07/01/2013-06/30/2015) entitled, "Step and Go: A Study of Technology-Based Exercise Promotion"

Przkora, Rene (Pilot awardee 2013-2014)

- Awarded 2014 Mentored Research Award from the International Anesthesia Research Society (07/01/2014 – 06/30/2016) entitled, "Preconditioning of Older Patients undergoing Hip Joint Replacement Surgery"

Section IV. Publications: Provide only those that are a direct result of Pepper Center resources and list publications published in the 2015-2016 years only.

Baillargeon, J., Deer, R. R., Kuo, Y. F., Zhang, D., Goodwin, J. S., & Volpi, E. (2016). Androgen Therapy and Rehospitalization in Older Men With Testosterone Deficiency. *Mayo Clin Proc, 91*(5), 587-595. doi:10.1016/j.mayocp.2016.03.016

Bindawas, S. M., Al Snih, S., Ottenbacher, A. J., Graham, J., Protas, E. E., Markides, K. S., & Ottenbacher, K. J. (2015). Association Between Lower Extremity Performance and Health-Related Quality of Life in Elderly Mexican Americans. *J Aging Health, 27*(6), 1026-1045. doi:10.1177/0898264315572115

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Section V. External Advisory Board Members Names, Institutions and Years of service

Neil Alexander, MD Years of Service: 9
University of Michigan
Professor, Division of Geriatric and Palliative Medicine, Department of Internal Medicine
Research Professor, Institute of Gerontology
Director, Mobility Research Center
Director, VA Ann Arbor Health Care System GRECC

Stephen Kritchevsky, PhD Years of Service: 5
Wake Forest School of Medicine
Deputy Director, Translational Science Institute
Director, Sticht Center on Aging
Professor, Gerontology and Geriatric Medicine

Nicolas Musi, MD Years of Service: 1
University of Texas Health Science Center – San Antonio
Professor of Medicine
Director, Barshop Institute for Longevity and Aging Studies
Director, Center for Healthy Aging
Director, San Antonio Geriatric Research, Education, and Clinical Center (GRECC)
Barshop Institute for Longevity and Aging Studies
South Texas Veterans Health Care System

Recognition and Awards

UTMB OAIC

2015 Robert W. Kleemeier Award – Gerontological Society of America
Awarded to Kyriakos Markides, PhD (UTMB OAIC PESC Co-Leader)

2016 ACRM Gold Key Award – American Congress of Rehabilitation Medicine
Awarded to Kenneth J. Ottenbacher, PhD, OTR (UTMB OAIC REC Leader)

2015 Richard D. McKenna Memorial Lecture – Canadian Association for Gastroenterology
Title: *Fifty Years of Gastroenterology, A Personal Reflection* (Banff, Canada – Feb. 28, 2015)
Given by Don W. Powell, MD (UTMB OAIC Internal Advisor)

2016 Texas Regional Chapter of the American College of Sports Medicine Honor Award –
Awarded to Elena Volpi, MD, PhD (UTMB OAIC Director and Clinical Research-RC1 Leader)

2015-2017 Chair of the NIH Aging Systems and Geriatrics Study Section
Appointee: Elena Volpi, MD, PhD (UTMB OAIC Director and Clinical Research-RC1 Leader)

Fellow of the American College of Sports Medicine
Awarded to Douglas Paddon-Jones, PhD (UTMB Clinical Research-RC1 Co-Leader)

2015 Texas Super Doctor
Awarded to Gulshan Sharma, MD, MPH (UTMB Clinical Research-RC1 Co-Leader)

2015 Best Doctors in America
Awarded to Gulshan Sharma, MD, MPH (UTMB Clinical Research-RC1 Co-Leader)

Minority Research

UTMB OAIC

Trainees:

David Flores, PhD
Research Scientist, Department of Preventive Medicine and Community Health
Funded by diversity supplement to the Hispanic Established Populations for Epidemiologic Studies of the Elderly (H-EPESE)
Mentor: K. Markides

Marc A. Garcia, PhD
Postdoctoral Trainee, Sealy Center on Aging
Mentors: R. Wong & K. Markides

Justin C. Howard
MSTAR Student
UTMB Medical School Student
Mentors: E. Volpi & R. Deer

Monique Pappadis, PhD
Pepper (RL5) Scholar
Assistant Professor, Division of Rehabilitation Sciences
Mentors: K. Ottenbacher & J. Goodwin

Joseph Saenz, PhD
Doctoral student
Graduated in May 2016, PhD Program in Population Health Sciences
Title of dissertation: *Facets of Socioeconomic Position and the Onset and Progression of Functional Limitation in Mexico*
Lead advisor: R. Wong

Monica Watford, MS, OTR
Doctoral student
Will graduate in August, PhD Program in Rehabilitation Sciences
Title of dissertation: *Examining Trends and Evaluating Outcomes within the Context of Caretaker Support in Older Minorities with Traumatic Brain Injury*
Lead advisor: K. Ottenbacher

Research:

New R01 grant:
- Title: Long-term Health Outcomes in Mexican American Older Adults
- PI: K. Ottenbacher
- Source: National Institute on Minority Health and Health Disparities, National Institutes of Health, DHHS

Amount: $1,550,000 (Grant# R01 MD-010355)
Period: 2015-2019

Rebeca Wong, PhD conducts research that compares minority with majority populations using data from the U.S. Health and Retirement Study:

- With Marc Garcia, PhD and Brian Downer, PhD, we are estimating the life expectancy free of physical disability and cognitive impairment by US older adults, by race/ethnic groups. The work compares Hispanics with non-Hispanic Whites and Blacks.

- With Brian Downer, PhD and Carlos Diaz-Venegas, PhD, we are examining the prevalence and socioeconomic determinants of cognitive impairment and dementia by US older adults, by race/ethnic groups. The work compares Hispanics with non-Hispanic Whites and Blacks.

- With Miriam Mutambudzi, PhD and Cesar Gonzalez-Gonzalez, PhD, we are conducting an analysis of the impact of diabetes on work and retirement patterns of older adults in the US, also comparing Hispanics with non-Hispanic groups.

Kyriakos Markides, PhD is conducting work with David Flores, PhD focusing on health and health care issues in older Mexican Americans in comparison to other groups.