individual’s exercise capacity. Nineteen subjects participated in evaluating the proposed system, and we found that the risk factors (body composition, hemodynamics, blood enzymes, and exercise variables) related to obesity were statistically significantly improved. Other exercise prescriptions for chronic diseases and symptoms will be able to adapt to the proposed system so that we believe it would be substantially helpful to improve geriatric diseases and symptoms by using technology-driven exercise.

TECHNOLOGY, YOGA, AND HALLWAY WALKS TO MAINTAIN FUNCTION AND SELF-EFFICACY DURING THE HOME-BOUND MONTHS OF WINTER
Kim LeBard-Rankila, University of Wisconsin Superior, Superior, Wisconsin, United States

Winter months present individuals with a unique challenge, decreased daily movement that can lead to decreased physical and emotional health. Snow and ice cause hazardous walkways and driving conditions that can lead to falls and decreased travel out of the home. For those that live in states that have four seasons, when spring comes many of them have spent a large majority of their daily lives indoors for 3-5 months. This isolation can cause decreased daily movement, aggravate medical conditions, challenge healthy eating habits, and cause social isolation. Participants for this study live in a 32-apartment building, which all occupants are independent with daily living skills and are 60 years or older. The study assessed if motivational texting, yoga in the apartment’s community center, and short hall-way walks can help maintain or increase self-efficacy. Flexibility, hand-grip strength, and perceived quality of life were assessed.

SESSION 7660 (SYMPOSIUM)
INSIGHTS GAINED FROM DEVELOPING ACADEMIC-COMMUNITY PARTNERSHIPS FOR MINORITY AGING, COMMUNITY-ENGAGED RESEARCH
Chair: Ronica Rooks
Discussant: Peter Lichtenberg

Increasingly community-engaged research, characterized by collaborations between researchers and community partners, is recognized as an important part of translating research into improved health outcomes and reduced health disparities for community participants. Training community participants to engage in some or all aspects of this research, particularly focusing on racial and ethnic minority older adults, highlights the need to understand its opportunities and challenges. With this symposium we will discuss and reflect on community-engaged and community-based participatory research approaches to community-academic partnerships with minority older adults. The first presentation addresses recruitment, retention, and training of a community advisory board of older African Americans in Michigan. The second presentation addresses a health education outreach and engagement program to improve health outcomes among older African Americans in California. The third presentation combines community engagement with survey design methods for research with older Native Hawaiian and Pacific Islander adults to improve data collection and health outcomes in this U.S. population. The final presentation examines partnerships between a hospital memory clinic, meal delivery service, research university, and low-income health clinic to improve caregiver and dementia patient outcomes for minority older adults. The symposium discussant will address opportunities, challenges, and implications of community-academic partnerships promoting minority aging.

BUILDING AND SUSTAINING A COMMUNITY ADVISORY BOARD OF AFRICAN AMERICAN OLDER ADULTS FOR VOLUNTEER RESEARCH
Jamie Mitchell,1 Tam Perry,2 Vicki Johnson-Lawrence,3 and Vanessa Rorai,4 1. University of Michigan, Ann Arbor, Michigan, United States, 2. Wayne State University, Detroit, Michigan, United States, 3. Michigan State University-Flint, Flint, Michigan, United States, 4. Healthier Black Elders Center, Detroit, Michigan, United States

Older African Americans’ (AA) participation in health-related research is severely limited; they are not involved in sufficient numbers and for sufficient duration to ensure the applicability of advancements in medical and behavioral health. This research participation gap exacerbates older AAs vulnerability to poor health outcomes and disparities. The Michigan Center for Urban African American Aging Research employs a progressive community-based participatory model that utilizes a structured community advisory board (CAB) of older AAs in metro Detroit to oversee the research recruitment and retention of fellow AA older adult research participants. CAB members are provided ongoing training on social and behavioral health research, supported in acting as a consultancy to outside researchers where they can be compensated for their expertise and engagement, and empowered as gatekeepers of a participant research registry of over 1000 AA older adults. This model has broad potential for advancing community engaged research with AA older adults.

ADVOCATES FOR AFRICAN AMERICAN ELDERS: ENGAGING OLDER ADULTS IN EDUCATION AND RESEARCH
Karen Lincoln, University of Southern California, Los Angeles, California, United States

Advocates for African American Elders (AAAE) is an outreach and engagement program at the University of Southern California, providing culturally competent health education for older African Americans throughout Los Angeles County (LAC). Founded in 2012 to address racial disparities in health outcomes, AAAE partners with community-based agencies, government, and health plans to address the persistent growing needs of older African Americans. AAAE educates and disseminates information about healthcare policies and resources through fact sheets, educational forums, and the AAAE website. It
collaborates with local healthcare providers to improve outreach, education, and care, and assesses service needs and resources via surveys in LAC. The program engages in community-based participatory research to provide real-world solutions for improving health outcomes and build community research capacity. This presentation will highlight AAAE’s community-based approach to raising awareness, increasing knowledge and access to healthcare resources, and improving health outcomes for older African Americans and their families.

COMMUNITY-ENGAGED RESEARCH OF OLDER PACIFIC ISLANDER ADULTS: RESULTS FROM THE PIHS AND THE NHPI NHIS
Sela Panapasa, University of Michigan, University of Michigan, Michigan, United States

Despite the well-established need to measure and address the growing issue of disparities among older minority populations, little is known about the prevalence and correlates of disability, morbidity, and mortality among older US Pacific Islander adults. This paper discusses culturally appropriate approaches for conducting evidence-based research on a representative probability sample of older Native Hawaiian and Pacific Islander adults interviewed as part of the Pacific Islander Health Study and Native Hawaiian and Pacific Islander National Health Interview Survey. Important strategies that increase response rates and respondent participation when engaging this multi-ethnic and culturally diverse special population in research are highlighted. The model describes successful methodologies that combine CBPR approaches of community engagement with more traditional survey design methods. The findings from this work emphasize the importance of representative data on hard-to-survey populations to illustrate granular differences in health outcomes within underrepresented populations that are not reflected in national health surveys.

WORKING WITH COMMUNITIES TO SUPPORT MINORITY CAREGIVERS: THE PRISMA HEALTH REACH EXPANSION PROJECT
Mindi Spencer, Maggi Miller, Diana Jahries, James Davis, University Of South Carolina, Columbia, South Carolina, United States, 2. Center for Success in Aging, PRISMA Health, Greenville, South Carolina, United States

In 2019, the NIH presented the results of its two-year visioning process to advance the science of minority health and health disparities. The PRISMA Health REACH Expansion (PH-REACH E) is an innovative, community-academic partnership between a hospital memory clinic, meal delivery service, research university, and low-income health clinic. The purpose is to: 1) increase the dementia capability of community-based programs, 2) offer caregivers of persons with dementia the REACH intervention, and 3) identify and connect racial minority and/or rural residents with services to promote health and well-being in older adulthood. This presentation will detail the PH-REACH E framework and present program results, which include improved caregiver outcomes (e.g., reduced burden, increased self-efficacy, reduced depression) and enhanced dementia capability (e.g., increased dementia knowledge) of partner organizations. This program illustrates some key recommendations of the NIH – community engagement in intervention adaptation, multisectoral collaboration, and promoting systems-level change to reduce health disparities.

SESSION 7665 (SYMPOSIUM)

THE GEOMETRIC FRAMEWORK FOR NUTRITION: NEW INSIGHTS INTO HOW WE EAT AFFECTS HOW WE AGE
Chair: Alan Cohen
Co-Chair: David Raubenheimer

The geometric framework for nutrition (GFN) is an approach to understanding the effect of nutrition considering multiple nutrients simultaneously. Originally developed in experimental studies of insects to model how nutritional needs evolve depending on ecological context, and since extended to many taxa including non-human primates in the wild, the technique is increasingly applied to understand human health and aging. Here, we invite four varied talks showcasing the flexibility and potential of this approach from the basic biology of aging to observational human studies and clinical trials. D. Raubenheimer will give an overview of the method, its history, and its applications in aging and human health. D. Wahl will present results showing how GFN can help develop diets that recapitulate caloric restriction and its effects on brain aging. S. Das will show how GFN can be used to improve the feasibility of caloric restriction in humans without compromising its effects. Finally, A. Cohen will present results showing how GFN can be deployed in an epidemiological context and used to characterize complex interactions among large numbers of nutrients in determining health. Together, these results show that a simplistic conception of nutrition as calories is far from sufficient to understand its effects on health and aging. Evolution has shaped the nutritional needs of each species for its environment, with appropriate levels of flexibility. GFN provides an approach to capture the relevant nuance, with the results presented at this symposium but scratching the surface. Nutrition Interest Group Sponsored Symposium.

NUTRIENT INTAKE PATTERNS PREDICT HOMEOSTATIC DYSREGULATION IN AN OLDER QUEBECK POPULATION
Alan Cohen, Alistair Senior, Véronique Legault, David Raubenheimer, Stephen Simpson, Nancy Presse, Pierrette Gaudreau, and David Le Couteur, 1. Universite de Sherbrooke, St-Denis-de-Brompton, Quebec, Canada, 2. University of Sydney, Camperdown, New South Wales, Australia, 3. Université de Sherbrooke, Sherbrooke, Quebec, Canada, 4. University of Sydney, Sydney, New South Wales, Australia, 5. University of Sherbrooke, Sherbrooke, Quebec, Canada, 6. University of Montreal, Montreal, Quebec, Canada

The geometric framework for nutrition has largely been applied to macronutrients in experimental settings. Here, we utilize the framework to examine both macro and micronutrient intake patterns in observational human