for VAMC staff. They also report that outreach to Veterans about this benefit is limited. Respondents at VAMCs with high rates of enrollment indicate that the relationships with VBA and Veterans Service Organizations facilitates access. Universally, respondents viewed the A&A benefit positively and note that it helps meet Veterans' long-term care needs. As the Veteran population continues to age, it is important that VA ensure equal access to A&A for eligible Veterans. Implications of these findings and next steps will be discussed.

SESSION 3440 (SYMPOSIUM)

INTEREST GROUP SESSION—GEROSCIENCE: METHODS FROM BENCH TO POPULATION SCIENCE TO INFORM CONSTRUCTION OF GEROSCIENCE CLINICAL TRIALS

Chair: Jason L. Sanders, *Brigham and Women's Hospital, Boston, Massachusetts, United States*
Discussant: Anne B. Newman, *University of Pittsburgh, Pittsburgh, Pennsylvania, United States*

We are on the cusp of a revolution in aging science. It has matured to the point where geroscience trials will test interventions in humans which alter aging mechanisms to lengthen healthspan and possibly lifespan. This goal is unprecedented in clinical trial design, and it requires retooling the clinical trial toolbox. Traditionally, trials are constructed around a single disease; interventions target a narrow part of a defined biological pathway involving only one molecule, tissue, or organ; events are well known intermediate endpoints and clinically-defined hard outcomes; and follow up may be short and historically informed based on prior trials. Geroscience trials by design target aging mechanisms which, when altered, are likely to have pleiotropic effects that modify several biologic pathways; efficacy and safety signals may require integration across multiple levels of biologic organization; intermediate endpoints are not agreed upon; and follow up timelines are undefined. In this symposium, we provide guidance on the design of geroscience trials using examples that span from bench to population science. Dr. LeBrasseur will discuss screening senolytic compounds across models of age-associated decline and advancing their candidacy as interventions. Dr. Justice will detail a framework for biomarker selection in geroscience trials, focusing on a trial of metformin as an example. Dr. Sanders will illustrate how observational data can inform phenotype use in clinical trials. Dr. Levine will explain translating omics data for use in geroscience trials, focusing on epigenomics. We expect additional discussion to hasten development of well-designed geroscience trials.

USING OBSERVATIONAL DATA TO INFORM CANDIDATE PHENOTYPES FOR GEROSCIENCE TRIALS

Jason L. Sanders,[1] Alice Arnold,[2] Robert Boudreau,[3] Stephen Kritchevsky,[4] and Anne Newman[3], *1. Brigham and Women's Hospital, Boston, Massachusetts, United States, 2. University of washington, Seattle, Washington, United States, 3. University of pittsburgh, Pittsburgh, Pennsylvania, United States, 4. wake forest school of medicine, Winston-Salem, North Carolina, United States*

Geroscience trials will manipulate aging mechanisms which may have pleiotropic effects and alter multiple biologic processes and clinical outcomes. Determining an intervention's efficacy and safety will require measuring several aspects of aging and intermediate endpoints with less regard to specific diseases. Picking the right measurements will significantly impact a trial's cost-effectiveness and chance of success. Observational studies are ideal resources to test candidate phenotypes before investing in trials. We present a decade's worth of results from the Cardiovascular Health Study as examples of using observational data to inform measurement in geroscience trials. Specifically, we illustrate the underlying theory, construction, operational characteristics, and inter-relationships of candidate phenotypes spanning circulating biomarkers, tissue and organ structure, and functional status, all of which can be used in geroscience trials depending on the intervention's target and predicted outcome.

SENOLYTIC DRUGS: DISCOVERY, TRANSLATION, AND APPLICATION

Nathan LeBrasseur[1], *1. Robert and Arlene Kogod Center on Aging, Mayo Clinic, Rochester, Minnesota, United States*

Diverse forms of molecular and cellular stress trigger senescence, a state of growth arrest in proliferation-competent cells that is often accompanied by a robust secretory phenotype. Senescent cell burden increases with age in multiple tissues and, plausibly, contributes to the pathogenesis of age-related diseases and geriatric syndromes. Discovery science efforts have identified druggable targets in senescent cells, including key nodes in anti-apoptosis pathways, that distinguish them from non-senescent counterparts and enable pharmacological approaches for their selective elimination. The therapeutic potential of senolytic interventions to improve health- and lifespan has been supported by translational research studies, including murine models of aging, atherosclerosis, osteoporosis, neurodegeneration, pulmonary fibrosis, and frailty. These studies have informed the design of first-in-human clinical trials of senolytic drugs, which have recently begun. The objective of this lecture is to highlight both the progress and challenges of advancing interventions targeting senescent cells from bench to bedside.

BIOMARKER STRATEGIES FOR GEROSCIENCE-GUIDED CLINICAL TRIALS

Jamie N. Justice,[1] George A. Kuchel,[2] Nir Barzilai,[3] and Stephen Kritchevsky[1], *1. Wake Forest School of Medicine, Winston-Salem, North Carolina, United States, 2. university of connecticut, Farmington, Connecticut, United States, 3. Albert Einstein College of Medicine, Bronx, New York, United States*

Significant progress in the biology of aging and animal models supports the geroscience hypothesis: by targeting biological aging the onset of age-related diseases can be delayed. Geroscience investigators will test this hypothesis in a multicenter clinical trial, to determine if interventions on biological aging processes can prevent accumulation of multiple age-related diseases and aging phenotypes in older adults. Prodigious activity is underway to develop markers of biological aging, but currently there is no aging biomarker consensus to support geroscience-guided clinical trial outcomes.