One of the benefits of this large, national cohort study with black and white participants is the opportunity to involve a breadth of researchers in the science. REGARDS actively solicits and engages early career and minority investigators to lead or participate in manuscripts as well as ancillary studies. REGARDS has provided opportunities for >175 ancillary studies, including those that enrich existing outcomes, provide new outcomes, assess new exposures, link with other national data, support extended analyses, and assess genetic associations. Over 70% of the 500+ publications to date have a lead author who was not a funded REGARDS investigator. In this presentation, we will discuss some of the innovative ancillary studies and high-impact manuscripts that have grown out of REGARDS, the processes for developing an ancillary study/manuscript, and the procedures for obtaining REGARDS data. We will describe opportunities for mentored research for junior investigators, as well as independent research projects.

SESSION 7715 (SYMPOSIUM)

REVERSING COGNITIVE DECLINE IN AGING: REVERSIBLE MECHANISTIC DEFECTS AND A NOVEL NUTRITIONAL INTERVENTION
Chair: Rajagopal Sekhar
Co-Chair: George Taffet

Aging is the biggest risk factor for cognitive-decline and Alzheimer's disease (AD), but underlying mechanisms are not well-understood and interventions are lacking. Cognitive-decline in AD has been associated with deficiency of glutathione, (the most abundant, intracellular, antioxidant protein), elevated oxidative-stress, insulin-resistance and increased inflammation. We identified and reported that glutathione-deficiency and oxidative-stress in older-adults occur due to decreased availability of precursor amino-acids glycine and cysteine, and can be corrected with GlyNAC (a combination of glycine and the cysteine precursor N-acetylcysteine). We hypothesized that cognitive decline in older-adults is linked to glutathione-deficiency, mitochondrial-dysfunction, oxidative-stress, insulin-resistance, and inflammation. The first abstract discusses the rationale and findings of an open-label clinical trial: compared to young-humans, older-adults had cognitive-decline, glutathione-deficiency, mitochondrial-dysfunction, abnormal glucose-metabolism and insulin-resistance, oxidative-stress, endothelial-dysfunction and inflammation. These defects were improved/reversed by supplementing GlyNAC for 24-weeks, but benefits receded on stopping GlyNAC for 12-weeks. The second abstract presents a study in 8 young (20-weeks old) and 16 aged (90-weeks old) wild-type male C57BL/6J mice where we found that aged-mice had naturally-occurring cognitive-impairment, and brain defects in glutathione-deficiency, oxidative-stress, glucose-transport, mitochondrial glucose-oxidation, insulin-resistance, endoplasmic-retticulum stress, autophagy, mitophagy, inflammation, senescence, genomic and telomere damage. Aged-mice received either GlyNAC or isonitrogenous-placebo supplementation for 8-weeks, and only GlyNAC-fed mice improved cognition and brain defects. Collectively these data highlights the discovery of novel and reversible mechanistic defects in older-adults and aged-mice with naturally-occurring cognitive-decline, and identifies that supplementing GlyNAC can improve brain-health and cognition. These findings could have important implications for reversing cognitive-decline in older-adults, and AD.

REVERSING COGNITIVE-DECLINE IN OLDER ADULTS IN AN OPEN-LABEL CLINICAL TRIAL: NOVEL MECHANISMS AND THE ROLE OF GLYNAC
Chun Liu, Rajagopal Sekhar, Premranjan Kumar, Charles Minard, and Shaji Chacko, Baylor College of Medicine, Houston, Texas, United States

Age-associated cognitive-decline is an important risk factor for Alzheimer's disease, but interventions are lacking. We conducted an open-label trial to test our hypotheses on whether: (1) compared to 8 healthy young adults (25y), 8 'healthy' older adults (74y) have cognitive decline, decreased glucose availability for the brain due to mitochondrial dysfunction, elevated insulin-resistance, oxidative-stress and elevated inflammation; (2) supplementing glycine and N-acetylcysteine (GlyNAC) for 24-weeks corrects deficiency of the endogenous-antioxidant Glutathione and improves these defects, and thereby cognition; (3) stopping GlyNAC supplementation for 12-weeks results in a decline in accrued benefits. Outcome measures included cognitive testing (Montreal cognitive assessment; trail-making tests; verbal-fluency tests; digital-symbol substitution-test), mitochondrial fuel-oxidation, RBC-Glutathione concentrations, plasma oxidative-stress, insulin-resistance and inflammation, and tracer-studies to measure glucose metabolism. Results validated our hypotheses and showed that GlyNAC-supplementation corrected these defects and improved cognition. This trial suggests that supplementing GlyNAC may be important for improving/preventing age-associated cognitive-decline in older adults.

REVERSING MITOCHONDRIAL, METABOLIC AND MOLECULAR DEFECTS IN THE BRAIN IMPROVES COGNITION IN AGED MICE
Rajagopal Sekhar, and Premranjan Kumar, Baylor College of Medicine, Houston, Texas, United States

Age-associated cognitive-decline is a risk factor for Alzheimer's disease (AD), but mechanisms are not well understood, and interventions are lacking. Rodent studies on AD have not led to therapeutic breakthroughs for cognitively-impaired humans. In an open-label trial in older-adults we found that supplementing GlyNAC (glutathione precursors glycine and N-acetylcysteine) improved cognitive-decline, defects in whole-body mitochondrial-function, and systemic insulin-resistance, oxidative-stress, and inflammation. We hypothesized that aged-mice will have similar defects in the brain, and studied male C57BL/6J mice as follows: young-mice (20w) were compared to two-groups of aged-mice (90-weeks) receiving either GlyNAC or isonitrogenous-placebo diets for 8-weeks. GlyNAC-supplementation improved cognition, and the following measures in the brain: glutathione-concentrations, glucose-transporters in blood-brain-barrier and neurons, mitochondrial glucose-oxidation, oxidative-stress, endoplasmic-retticulum stress, autophagy, mitophagy,
inflammation, senescence, genomic and telomere damage. These data provide mechanistic insights into the novel and beneficial role of GlyNAC supplementation to reverse cognitive-decline in aging, and holds promise for human AD.

SESSION 7720 (SYMPOSIUM)

HOW TO PUBLISH: PREPARING MANUSCRIPTS FOR CLARITY, TRANSPARENCY, SCHOLARLY INTEGRITY, AND SUCCESS
Chair: Suzanne Meeks

The GSA publications team sponsors this annual symposium to assist prospective authors to successfully publish their gerontological scholarship in GSA’s high impact and influential journals. The first part of the session will include five brief presentations from the Editors-in-chief of Journals of Gerontology-Series B, Social and Psychological Sciences, The Gerontologist, and Innovation in Aging, plus one of GSA’s managing editors. We will integrate practical tips with principles of publication ethics and scholarly integrity. The topics will be as follows: (1) preparing your manuscript, including how to choose the right journal; (2) strong and ethical scholarly writing for multidisciplinary audiences; (3) transparency, documentation, and Open Science; (4) successfully responding to reviews; and (5) working with Scholar One. Following these presentations, we will hold round table discussions with editors from the GSA journals portfolio. At these roundtables, editors will answer questions related to the podium presentations and other questions specific to each journal. Intended audiences include emerging and international scholars, and authors interested in learning more about best practices and tips for getting their scholarly work published.

HOW TO SUCCESSFULLY CHOOSE A JOURNAL
Laura Sands, Virginia Tech, Blacksburg, Virginia, United States

Article submissions to The Gerontological Society of America’s high impact scientific journals continue to increase each year which has led to editors becoming more selective about which articles are accepted for publication. The purpose of this session is to describe how to efficiently and successfully navigate the process of determining which journal is the best fit for your manuscript. Objectives of the workshop include guidance in: (1) understanding the differences in scope and features of each journal; (2) determining which journal is most appropriate for the topic and methods of your manuscript; (3) appreciating how to use journals’ Instructions to Authors to your benefit, and (3) conveying the scientific contribution of your article to the journal.

STRONG AND ETHICAL SCHOLARLY WRITING FOR MULTIDISCIPLINARY AUDIENCES
Suzanne Meeks, University of Louisville, Louisville, Kentucky, United States

This presentation will emphasize the importance of plain, good writing. Editors of high impact journals read 10 or more manuscripts per week, and are under pressure to reject 80-90% of them. Regardless of scholarly quality, if the point and contribution are not clear in a quick scan of the paper, it likely will not be reviewed favorably. I will provide tips for strong scientific writing that are commonly violated in manuscript submissions, and provide references for additional writing support. I will also discuss some common publication ethics issues that arise during the review process, including author contributions and embedding your scholarship in the context of prior work.

TRANSPARENCY, DOCUMENTATION, AND OPEN SCIENCE
Derek Isaacowitz, Northeastern University, Boston, Massachusetts, United States

Some GSA journals are especially interested in promoting transparency and open science practices, reflecting how some subdisciplines in aging are moving toward open science practices faster than others. In this talk, I will consider the transparency and open science practices that seem most relevant to aging researchers, such as preregistration, open data, open materials and code, sample size justification and analytic tools for considering null effects. I will also discuss potential challenges to implementing these practices as well as reasons why it is important to do so despite these challenges. The focus will be on pragmatic suggestions for researchers planning and conducting studies now that they hope to publish later.

RESPONDING TO REVIEWERS
Deborah Carr, Boston University, Boston, Massachusetts, United States

An invitation to “revise and resubmit” one’s manuscript, especially for a highly competitive journal, is an important achievement. However, it is not a guarantee that a revised manuscript will ultimately be accepted for publication. I will provide insights into what differentiates a “major” versus “minor” R&R invitation, will provide background on how editors and reviewers arrive at these decisions, and will provide detailed tips for crafting a revision memo and revised manuscript that has an excellent chance of being accepted for publication (while staying within a journal’s word count limits). I will also offer suggestions for navigating revisions when reviewers offer discrepant feedback, or make suggestions that may not ultimately enhance the quality or impact of the manuscript.

GSA MANAGING EDITORS’ PERSPECTIVE ON SUBMISSION DOS AND DON’TS
Kathleen Jackson, and Karen Jung, The Gerontological Society of America, Washington, District of Columbia, United States

In this presentation, the managing editors of GSA’s peer-reviewed journals will discuss how the editorial offices operate and their roles in the publishing process. The topics will include how to navigate the ScholarOne submission system, why it is important to read the Instructions to Authors, and how authors can work with the editorial offices to increase the visibility and impact of their published articles.

SESSION 7725 (SYMPOSIUM)

ESPO AND BUTLER-WILLIAMS SYMPOSIUM: RACE, ETHNICITY, AND OVERCOMING BARRIERS TO UNDERSTAND WHY AGING MATTERS
Chair: Roland Thorpe, Jr.
Co-Chair: Jamie Justice

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