Wake Forest Claude D. Pepper Older Americans Independence Center (P30 AG021332)

Open House - January 21, 2021
The Purpose of the OAIC Program:

“... to increase scientific knowledge leading to better ways to maintain or restore independence in older persons.”

“. . . to develop or strengthen awardee institutions’ programs that focus on and sustain progress in a key area in aging research related to the mission of the OAIC program.”
Current Centers:

Wake’s Theme:

Integrating pathways affecting physical function for new approaches to disability treatment and prevention.
WF OAIC’s Evolution

‘92 – ‘02
- P60 focused on Knee OA
- FAST (Aerobic versus Resistance Training); ADAPT (2x2 RCT weight loss / Exercise); OASIS (Observational Study)

‘02 – ‘07
- P30 – “Muscular Approach to Disability”
- Sarcopenia Focused; Body Composition Core; Initiated IASDR (Integrated Aging Studies Data and Sample Repository)

‘08 – ‘13
- “Integrating pathways affecting physical function for new approaches to disability treatment and prevention” – Focus on Adipose Tissue, Obesity Treatment, Behavioral Intervention Trials

‘13 –’18
- “Integrating pathways affecting physical function . . .”
- Continuation + Positioning for Geroscience-Guided Trials; Putting Discoveries to Work; Advocating for Aging Outcomes in Clinical Trials including Older Adults

‘18–’23
- “Integrating pathways affecting physical function. . . “
- Integrating the Brain and the Body; Integrating Geroscience Trials;
WF OAIC 2018-2023

Aims:

• Discover new pathways contributing to age-related declines in physical function and disability risk;
• Develop, evaluate and refine strategies for disability prevention and treatment;
• Translate proven strategies beyond traditional research environments;
• Train the next generation of research leaders focused on disability treatment and prevention
Leadership and Administrative Core (Kritchevsky / Kitzman)

Research Education Component (Kritchevsky / Houston)

Pilot and Exploratory Studies Core (Kitzman / Register)

Clinical Research Core (Williamson / Rejeski / Beavers / Marsh)

Biostatistics and Research Information Systems Core (Miller / Ip / Leng)

Integrative Biology Core (Nicklas / Delbono)

BioImaging Resource Core (Hugenschmidt / Lenchik)

Governance
Monthly Executive Committee meetings
Annual External Advisory Board Meeting

Leadership Development: Klepin, Ding, Beavers, Justice, Weaver
Strategies for an Aging Society: The Geroscience Hypothesis

Target a specific disease → Delay the Targeted Disease

OR

Delay aging (by targeting basic molecular processes of aging) → Delay multiple age related diseases
Senolytics in idiopathic pulmonary fibrosis: Results from a first-in-human, open-label, pilot study

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*p < 0.05

eFI and incident healthcare outcomes (Pajewski & Callahan)

Frailty status based on the eFI was defined as:
- Fit (eFI≤0.10)
- Pre-frail (0.10<eFI≤0.21)
- Frail (eFI>0.21) or
- Not Defined.

Shaded areas denote 95% point-wise confidence intervals.
Connecting the Brain and Body

Close collaboration with the WF-ADRC

- Shared Governance
- Collaboration on Outreach and Recruitment
- OAIC added cognitive measures; ADRC added physical function measures
- Working on MRI analysis pipelines

Supplements

- Synergy (Tau PET imaging and mobility function)
- Amyloid PET imaging in B-NET

Training (Lockhart; Handing)
Kaplan-Meier Curve for Survival by Decline category: Health ABC

<table>
<thead>
<tr>
<th>Category</th>
<th>Main Risk Factors</th>
<th>Main Protective Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Decline (445)</td>
<td>Self-Rated Health</td>
<td>Grip, DSST, Albumin</td>
</tr>
<tr>
<td>Physical Decline (407)</td>
<td>White</td>
<td>Vitamin D, 400 M Walk Time</td>
</tr>
<tr>
<td>Dual Decline (211)</td>
<td>Depressive Sx, Age</td>
<td>DSST, 400 M Walk Time</td>
</tr>
</tbody>
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What the OAIC Supports

• **People** - any scholar who wishes to improve the functioning of older adults or better understand the aging process.

• **Discovery** – Pilot funds, research development projects

• **Learning** – Salary & research expenses and learning activities for early career researchers

• **Grant Development** – Advice on gerontologizing studies, sample size, power, design, preliminary data, boiler plate, prep

• **Research Conduct** – Administrative & coordinator support, recruitment, assessment, data management and analysis

• **Sponsorship and Connection** to an international community of aging researchers.

• **Collaboration** between departments and centers/institutes; between clinical, basic, epidemiological scientists; between institutions/programs.