Crafting a 3-5 Year Research Agenda

1. Where do I want to be as a researcher in 5 years? What level of involvement as a researcher is right for me? What do I want to be known for as a researcher? (Provide 2-3 sentences for each area)

Topic 1: I want to be part of a research team that is well-established and known for its work in creating, implementing, and evaluating ways to bring evidence-based, highly scalable, and sustained fall prevention programs to community groups serving older adults. As such, myself- and my team members- will be sought after by others for consultation in best practices for disseminating community-based programs and in a competitive position for future research funding.

Topic 2: I want to contribute to our understanding of the impact of various curricular and co-curricular learning experiences on student academic success and career choices, particularly for underserved, low income, and first-generation college students. MU faculty utilize many innovative and potentially high-impact teaching practices but do not frequently leverage their work into funded research opportunities that expand and build upon this work. I would like to foster this research area among our faculty and engage in the research within my areas of responsibility.

2. Describe your research topic Priorities over the next 2-3 years

Short description of each topic	3-5 key research questions/ knowledge gaps associated with this topic that are priorities to pursue now.	Describe your readiness to engage in research in each topic area: Research experience, publications, professional practice, etc.
Topic 1: Falls are a major source of injury and disability among older adults. Many falls are preventable with lifestyle modifications that increase overall fitness and decrease risk factors. Many community-based fitness and risk-factor training programs have been created and proven effective in decreasing falls and fall risk factors. Scaling these programs for broad dissemination, reach, and inclusion across communities has been difficult: Funding for such programs is limited; Staff at community agencies have limited time to devote to new programs; The Lay leader model, good in theory, has very high attrition levels; older adults are often unaware of the programs and of their own risk level; lack of participant accessibility to program delivery sites.	1. What characteristics of falls prevention lay leaders are most predictive of long-term continuation as a lay leader? 2. How do we improve our reach into underserved communities? 3. We need additional robust data to sway insurance companies of the cost benefit of making these health promotion programs a covered service (SAIL for us). 4. How does the level of fall risk of participants in various programs impact the benefit they receive from the program? 5. How well does the traditional 'train-the-trainer' lay leader model prepare leaders who deliver the program with fidelity over time?	I am part of a well-established team of MU faculty with a federal award to support the delivery of evidence-based fall prevention programs regionally. The funding supports dissemination of programs- not research on the effectiveness of the interventions. As part of the award responsibilities of all fall-prevention grantees, participants in our falls prevention programs complete the award agencies' pre and post survey of demographic, basic health information, and self-reported assessment of impact of the program. The anonymized survey data is entered into a national database that aggregates the data from all awardees. The MU team has been given access to the participant data from all subjects entered into the national database (@150,000 participants) to run analyses of outcomes across programs and participants. At this point we have: • Received 3 federal grants to disseminate programs ($1,400,000) • Been awarded two additional small, private foundation grants and are preparing a third one. • Presented our work at 1-2 regional or national conferences annually. • Published 2 peer-reviewed journal articles.

Short description of each topic	3-5 key research questions/ knowledge gaps associated with this topic that are priorities to pursue now.	Describe your readiness to engage in research in each topic area: Research experience, publications, professional practice, etc.
Topic 2: From informal discussion with faculty and some formal data, we know that many MU students are under-prepared for college, are first in their family to attend college, struggle with rigorous courses/major, and have limited time to participate in non-required course activities because of work or family responsibilities. There are many HIPs that can help these students and externally supported grants, particularly targeting smaller sized, minority-serving institutions, to deliver and assess various HIPs. MU faculty and staff engage in many HIPs. However, we do not often systematically assess the broader impact of these activities and disseminate the findings to a broader audience. All steps needed to build a justification for external funding to expand upon these activities.	Need for descriptive and exploratory data assessing the impact of the Summer student research fellowship program (a program I oversee). • Characteristics of the students (demographics, degree types, levels, rationale for participating) • Rationale for why faculty chose the student they did. • Reflections on facilitators or barriers to DEI in the methods used to solicit participants and choose fellows. • Student feedback on the summer experience; longer-term follow-up on their continued involvement in research, influence on academic success, and career choices. • Faculty feedback on the impact of the summer support on their research agenda, impact of the student fellows working with them, recommendations for changes, continued mentorship of these students beyond the fellowship, etc	The summer student research fellowship program has been long-standing at MU. At first, it was limited to undergraduate. It was eventually opened up to graduate students. We have reasonable records of the students who have participated from 2018 on, but have not systematically collected any data on the short or long-term impact of participation. Given the large increase in the number of students applying (74 students this year compared to 28 students 2018) and faculty participation (28 faculty applying this year compared to 14 in 2018), it is time for close examination. Student application form provides qualitative insights into student motivation for participating, why they believe they are a good fit, and how it fits into their career plans. This provides a rich source of data for analysis. Having a small team of faculty to help assess the prior qualitative data would be helpful. Particularly those who have coordinated the fellowships

3. Key Milestones for the next 12 months (or beyond if you prefer)

Timeline	Key Milestones for Research Topic 1 Fall prevention	Key Milestones for Research Topic 2 Summer Research Fellowship
Summer 2023 (by 9/1/2023)	• With two team members, submit a journal article describing the characteristics of the SAIL lay-leaders we have trained and explore for differences between those who went on to lead a SAIL exercise class vs did not. • Complete first round of data analysis from the national database on the risk-level of participants in the various falls prevention classes and link to outcomes. • Monthly participation in oversight of current falls prevention grant (I am a co-PI) toward achieving workplan goals.	• Work with current fellowship coordinator to update a survey for students and faculty about the impact of the experience, recommendations for the future. • Establish a mechanism for long-term tracking of the students' career and academic outcomes. Determine if IRB approval is required and, if yes, submit a proposal for the project. • As a quality improvement project, collate all the applications from 2018 to 2023 for a comprehensive review of the characteristics of students and faculty participating in the program.

Fall 2023 (by 12/31/2023)	• Identify additional external grant opportunity to support a study on the effectiveness of SAIL when scaled for broad delivery. • Contribute to the completion of the analysis of the data from the national database about risk factors. • Monthly fall prevention grant oversight.	• Bring together a small team to review prior choices for participation through the eyes of DEI. What are we missing? What needs improvement? • Establish a methodology and implement a project to analyze the aggregated 2018-2023 summer research participation data, both quantitatively & qualitatively.
Spring 2024 (by 5/20/2024)	• Serve as a grant reviewer for ACL for fall prevention or Chronic Disease grants. • Contribute to the interpretation and discussion section of the journal article reporting the national database findings. • Serve as a writer for the grant proposal for assessing effectiveness of SAIL. • Monthly fall prevention grant oversight	• By February 15, 2024, make recommended modifications in summer research application and decision-making processes to increase DEI in any area identified as weak. • Pilot the improvements in the 2024 application process (starts by 3/1/2024) with a well-defined evaluation plan.
Summer 2024 (by 9/1/2024)	• Submit the grant proposal for assessing SAIL effectiveness at scale. • Listed as contributor on 2 relevant conference presentations over the past year. • Listed as a co-author on 2 relevant journal articles submitted for publication over the past year.	• Analyze the 2024 data and identify areas with gaps in access/inclusion to address in future grant opportunities. • Based on 2018-2023 overview and more detailed assessment of 2024, prepare and submit a grant opportunity to enhance student success with this high impact practice: Building research capacity for emerging research institutions that are minority serving.