

Introduction

If I may, I would like to take a moment to provide a brief framework of the topic we are discussing here today. This may seem like an obvious statement, but the incidence of many diseases increases rapidly with aging. In fact, sixty five percent of all of the people who will die in the world today will die of age-related causes. In the United States, this percentage is closer to 90%. The problem is that aging is a co-factor in many diseases including cancer, heart disease, type 2 diabetes, hypertension and the most obvious one, Alzheimer's disease.

1) What research is being done in SC (MUSC)

Within this broad definition of “aging”, MUSC has an equally broad portfolio of aging related research. Of course, NIH plays a significant role in supporting this research with grants ranging from traditional individual investigator R01 proposals to larger Center grants. However, our aging research is also supported by the Alzheimer's Association, American Heart Association, American Cancer Society and the US Army as well as corporate support and various other foundations. Our total aging research portfolio of approximately \$33MM in direct costs is divided almost evenly between NIH (37%), corporate (31%) and other agencies (32%). These grants span all colleges within MUSC with the College of Medicine being the largest at 86% and the College of Nursing being our fastest growing.

2) What is the impact/importance of NIH funding for this research

In aging related research, MUSC's NIH portfolio provides approximately \$11.7MM in total direct costs. This NIH support is critical for our research mission for several reasons, but has been on the decline over the past few years due to pressures on the availability of NIH funds. Competition for NIH grant funding is fierce with the success rate for competitive grants being a significant challenge. The level of NIH funding also affects our ability to recruit top scientists to MUSC as NIH funding is used as a means of ranking a University.

One challenge for MUSC in securing additional NIH funding specifically in the area of Alzheimer's Disease and aging in general is the lack of an “Alzheimer's Disease Research Center” (ADRC). Such a center would make MUSC significantly more competitive in funding from the National Institute on Aging (NIA) as it would provide the necessary clinical focus for the recruitment and management of research subjects. NIH provides funding for ADRCs, however, we would need to first “seed” such a center at MUSC for several years before applying for such funding as a proven track record is critical for successful NIH funding.

3) How has this research positively impacted people's lives in SC

Research funding in the area of aging related diseases has a positive impact on the citizens of SC. Aside from providing a means for our citizens to participate in the latest advances in aging research, a focus on aging research can attract top clinicians and scientists to work at MUSC.

4) How can we promote/increasing private funding for continued research; how can we leverage public dollars

With the current pressures of securing research funding, particularly at the beginning of an individual's career, we have had to think creatively to develop alternative revenue streams for supporting research. In an attempt to address this challenge, approximately one year ago a colleague of mine and I established “Donors Cure Foundation”. Donors Cure (a 501c3 charitable

foundation licensed in nearly all 50 states) provides a mechanism to engage the public in supporting research through crowd funding. Donors Cure attempts to at least partially fill the gap in funding important medical research, particularly for 'pilot' projects and for early career scientists. Researchers use Donors Cure to explore new, creative ideas that they can eventually fund through a larger grant mechanism such as NIH.

Donors Cure teaches researchers to share what they do with non-scientists, an often overlooked, but important, skill. As a result, non-scientists get a glimpse into what research is really like and can be personally invested in finding a cure. In this way, we open the communication lines between researchers and the general public making donors partners – not just checkwriters. Currently, our supporting institutions include MUSC, Foundation for Research Development, Medical College of Wisconsin, State University of NY (upstate), Harvard-Massachusetts General Hospital, University of California (San Diego) and Washington University (St. Louis).

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