Cluster Hire Proposal for a
Center for Excellence in Aging Research and Training

Authors: Rebecca Ready¹, Rebecca Spencer¹, Karen Helfer² and Cynthia Jacelon³

¹ Department of Psychology
² Department of Communication Disorders
³ School of Nursing

Introduction

Our society is aging at an unprecedented rate with untold implications at the individual, familial, and societal level. Tremendous resources are available to support research on aging and train the next generation of scholars to better understand the aging process and help older adults live enjoyable and productive lives. This proposal aims to position the University of Massachusetts, Amherst to take full advantage of these resources and to become a leader in the field of aging research and training.

In recent years, the University of Massachusetts, Amherst has responded to the need for more aging research and training. For example, there are currently 29 faculty members who identify some portion of their research as aging-related and about 37% of these faculty were hired in 2000 or later. These hires have greatly increased the research productivity of aging-related research on campus, as evidenced in publication rates and grant dollars awarded, and these upward trends promise to continue.

Supporting this, in 2005, the Aging Interest Group was established within the School of Public Health and Health Sciences (SPHHS). Faculty engaged in aging research recognized the value of collaborative research and training and created the interest group to network with and support one another. Members of the faculty outside of SPHHS were invited to join the group several months after its inception. The group, headed by Karen Helfer (Communication Disorders), has sustained itself over time, driven largely by strong faculty interest in collaborative efforts.

Despite the lack of central support, the Aging Interest Group has flourished and currently includes faculty members from 15 departments and 6 colleges. Given the success of this group, we propose transitioning from an Aging Interest Group to a Center for Excellence in Aging Research and Training. This Center will have two components:

1) We will be an interdisciplinary research unit which will support collaborative research through facilitated grant seeking and a colloquium series.

2) We will establish a teaching component which increases aging-focused coursework in support of a Graduate Certificate Program in Aging Studies. A proposal for a graduate certificate program has been initiated in recent years (Appendix 1) and the proposed cluster hires and broader plan for a Center for Excellence will help bring this plan to fruition.

Proven excellence of UMass, Amherst in aging research

The University of Massachusetts, Amherst has proven excellence in aging research and is poised to move to the next level as an integrated Center for Excellence. Research productivity has been high and the trend promises to continue to increase. In each year spanning 2006-2008, faculty engaged in aging-related research...
were awarded over $2,500,000 in grant funding (Figure 1, Appendix 2). Peer-reviewed publications are also on an upward trajectory (Figure 2). Given these numbers and the absence of a facilitated Center, it is remarkable that over one-third of the faculty who identify themselves as aging researchers have been hired in the past 8 years. This speaks to the important and cutting-edge nature of aging related research in the current environment; and also goes to show the prospects of what can be accomplished on campus with an integrated, systematic hiring plan and strong, central leadership.

Interdisciplinary cooperation and organizational plan for sustainability

The Aging Research Network diagram (Appendix 3) illustrates the vast range of departments participating in aging research. These departments fall under the Schools of Nursing, Social and Behavioral Science (Political Science, Anthropology, Economics), Engineering (Mechanical and Industrial Engineering, and Electrical and Computer Engineering), Public Health and Health Sciences (Communications Disorders, Public Health, Nutrition, and Kinesiology), Management (Hospitality and Tourism Management, Management) and the future College of Life Sciences (Psychology, Chemistry, Computer Science). These faculty are intimately interconnected with some of the most innovative and productive groups on campus, including the Center for Research on Families, the Neuroscience and Behavior Program, the Center for Neuroendocrine Studies, and the Human MRI/S group. One of our proposed hires would bridge to Biology, a department not yet involved with the Aging Interest Group.

We propose a two phase plan for the interdisciplinary Aging Interest Group to transition to a position as a Center for Excellence on Aging Research and Training:

Phase 1: Development. The development phase will take place over the first two years after the acceptance of the cluster hire proposal (9/09-9/11). A Director for the Center will be appointed. Also, during this phase, the hiring process will begin for the proposed cluster hires. To logistically handle the creation of a new Center and the hiring of new faculty, which will be time consuming for our faculty, we will conduct searches for the proposed hires at rate of 1-2 hires per year. As such, during this phase, we expect to search for Hiring Priorities 1-3 (see below) during these years. Additionally, the graduate certificate program in aging studies will be established. This process has already begun (Appendix 1).

Another component of this phase will be the development of student recruitment materials (posters, brochures, website) so that we can promote the program at national conferences on aging, geriatrics, and health and so we can begin to work with the Development Office to initiate fundraising efforts to support the Center’s work. Finally, we will establish a monthly colloquium series open to all areas. Colloquium speakers will be external and internal to the University of Massachusetts, Amherst.

Phase 2: Transition to self-sustainment. The goal of the second phase is to bring the Center to a point of long-term self-sustainability. First, any additional cluster hires will take place. Ideally, we will conduct searches for Hiring Priorities 4-5 (see below) during this period.

Second, the Director will be charged with applying for external funds to support the Center. Potential funding sources are a training grant (T32) or project grant (P01 or P30) through NIH or individual or corporate donors. This phase is expected to last 2-3 yrs (09/11-09/13 or 9/14).

Financial Plan
Critically, to support the successful transition of the Aging Interest Group to a Center for Excellence, we need the support of the University. During Phases 1 and 2, we ask for one course buy-out for the Director of the Center, who will be charged with the duties of documenting and submitting the necessary paperwork for the graduate certificate program (Phase 1) and taking the lead on grant writing and fundraising (Phase 2). The Director will also initiate meetings of the faculty for formulating the promotional nature of the Center, promote the job talks of candidates, coordinate the speaker series, and oversee the certificate program. An additional $10,000 in annual funding, for these initial years until grant support is obtained, will be requested for promotional materials and travel, to host distinguished speakers, and to host consultants on campus (from NIH, for example) that can help build the Center for Excellence with an eye towards sustainability and independence. Finally, we request one part-time graduate student assistant (10 hrs/week) to conduct administrative duties during Phases 1-2. While these financial requests might seem lofty in these economic times, we are realistic as to the support needed to make a successful transition to a Center for Excellence.

Support of the departments, schools and colleges

An advantage of this proposal is that much of the groundwork and structure for a Center for Excellence in Aging Research and Training has already been laid. A strong research faculty already exists, their research productivity is high, grant dollars are strong, and several aging-related courses are already on the books (Appendix 4). In the creation of the graduate certificate program, which is already underway (Appendix 1), a few additional courses will be added. Some of these, such as Biology of Aging, will be introduced in conjunction with the proposed hires as those come to fruition.

Further, departments involved in aging research are enthusiastic supporters of this proposal; please see attached letters of support from Communication Disorders, Kinesiology, and Nursing. Further, the chairs of Anthropology, Biology, and Psychology have given verbal support to this proposal.

Established leadership for initiative on campus

For Phases 1 and 2 and beyond, a director will be appointed for the Center every two years. The areas of expertise of senior faculty with aging interests are quite varied across departments and rotating leadership across departments will be critical to ensure that the diversity of voices and interests in the group are adequately represented and to balance any burden or benefits a department receives from having the directorship in their department. Additionally, a faculty member must be tenured to be considered for the position.

The Director will play an active role in organizing and coordinating aging research, training, and teaching on campus. This person will facilitate research collaborations across departments, will coordinate collaborative grant-writing, and will develop and oversee mentorship activities for junior faculty on campus with aging interests, making sure they are well integrated in the aging community on campus and that they have the support and connections that they need to flourish. They also will work closely with the Development office to increase charitable donations, from industry and alum, to support aging research and training on campus.

Ability to attract funding

Over $10 million has been awarded to aging-related faculty at UMass, Amherst between 2003 and 2008. This research is being sponsored by agencies including the National Institute on Aging, National Institute on Deafness and other Communication Disorders, Institute of Nursing Research, and the American College of Sports Medicine. Many new faculty have been awarded internal Faculty Research Grants to support age-related projects positioning themselves for success in competition for external awards. Figure 1 illustrates
the positive trajectory of funding obtained by our aging research faculty.

Funding agencies are prioritizing aging-related research with the unprecedented aging of our society (Figure 3). The National Institute of Aging is projected to award approximately $1.1 billion to fund age-related research in FY 2010 (Figure 4). Due to the high amount of aging research currently being conducted at the UMass, Amherst, we are poised to be competitive in garnering some of these funds. The National Institute of Aging put strong emphasis on interdisciplinary research and our targeted hires were developed with an eye toward finding individuals with expertise in areas that will bring together and capitalize on research currently being done here. It should be noted that the Behavioral and Social Research program within the National Institutes of Aging has seven special initiatives for the coming years, including Health Disparities, Aging Minds, Interventions and Behavior Change, which fall within the interests of individuals we seek to hire. These individuals will be essential in helping develop new programs of research that span disciplines. In addition to making us more attractive for research dollars, these new hires will be instrumental when applying for research training grants, as they will be able to offer coursework in areas for which we do not currently have expertise.

**Prospects for success in establishing UMass as a leader in aging research**

The best case scenario for this proposal is that with these five hires, UMass, Amherst will become a university known for top-tier aging research, attracting the students and research dollars to a Center for Excellence in Aging Research and Training. The worst case scenario for this proposal, if accepted, is that we are given only a portion of the proposed hires or these hires are delayed. Under the latter scenario, this process has not been for naught: The planning meetings for this application have already brought together the faculty of the Aging Interest Group and reinvigorated our efforts to push for a graduate certificate program in aging studies. The certificate program is most likely to come to fruition, even without with the Center for Excellence, but the Center make this program more valuable. In the end, our group, in any format, will benefit from hires which more strongly link our research areas and support teaching on aging more broadly.

**Plan for assessing success of the Center for Aging**

There are several benchmarks which can be used to gauge the success of the new hires and the Center for Excellent in Aging Research and Training. First, research productivity will be measured by the number of peer-reviewed publications and grant dollars awarded just as we illustrate here. These two metrics have been on an upward trajectory in recent years and, even without new hires, are likely to continue to rise. With new hires, we expect to see a noticeable boost in our funding level within 5 years. Another benchmark for success will be securing external funds (e.g., T32 funds, donors) to support the Center.

For the certificate program, enrollment numbers will be a major gauge of success. In the initial year of the program, we hope to have 5 students enrolled and then increasing by 5 in each coming year with a maximum enrollment of 15 to 25 students per year. Another measure of success for the Center for Excellence in Aging Research and Training will be increased numbers of courses that pertain to aging; currently there are approximately 4 graduate and 1 undergraduate courses offered regularly; we hope to increase these numbers to at least 6 and 3 in the next two years and have a long-term goal of 10 graduate level and 6 undergraduate level courses on aging across campus. Potential courses to be taught by new hires are highlighted below.

**Proposed hires and their roles**

We propose the following hires to strengthen the Center for Excellent in Aging Research and Training. All hires will be at the assistant professor level. These Hiring Priorities will take place in stages. We propose hiring at a rate of 1-2 new faculty per year.
**Hiring Priority #1:** Hire in animal models of aging and age-related disease. This hire would likely be housed in the Department of Biology and/or Psychology. A key gap in our research on aging is that involving animal models and in vivo recordings. Currently we have a dynamic faculty involved in human aging research and a contingent involved in molecular and cellular research on aging and age-related disease. A faculty hire, who does research on an animal model of problems that our human and molecular researchers are interested in (memory, Parkinson’s disease), would create collaborations between existing faculty. Importantly, this hire will fill a significant gap in our teaching on aging at the graduate and undergraduate levels: Biology of Aging and Biology of Age-Related Disease. These courses would strengthen a graduate certificate program for aging studies.

**Hiring Priority #2:** Hire in epidemiology of age-related disorders or problems. This hire would likely fall within the School of Public Health and Health Sciences. Relevant age-related disorders or problems that would overlap and add to existing strengths on campus would be stroke, Alzheimer’s disease or other dementias, or falls. For example, an investigator focused on stroke would have immediate connections with faculty in Communication Disorders, who already have a strong focus on stroke-related language impairments. Further, stroke has implications on motor function, which would be a nice bridge with Kinesiology, which houses a large, productive, and well-funded group of aging researchers. Finally, there would be natural links with Psychology due to the impact of stroke on emotions and cognition. A teaching gap would also be fulfilled by this hire. This person would teach courses related to the epidemiology diseases of aging that would be attractive to students in all of the participating departments and be essential to the certificate program as well.

**Hiring Priority #3:** Hire in health disparities. This hire would likely be in the Department of Nursing. A faculty member who studies health disparities in older adults would fill an important gap in our research strengths. Women outnumber men in the oldest segment of our population two to one. Many of these older women live at or below the poverty line. In addition, the older population is becoming more diverse and with diversity comes racial and economic inequalities. This faculty member would be in a position to collaborate with investigators focused on diseases of aging which impact differentially along gender and racial lines (Communication Disorders, Psychology), investigators focused on gender and race (in Anthropology and Political Science), and those with an emphasis on life quality and cost of informal care (Psychology, Economics). Teaching duties would be related to Aging and Health, with focuses on gender, SES, ethnicity, culture, and race.

**Hiring Priority #4:** Hire in psychopathology. This hire would likely be in the Department of Psychology. The research conducted by several faculty relates to emotion, stress, individual differences, and maximizing life quality, especially in the face of significant life challenge and/or disease. What is sorely missing from this picture is an individual with expertise in psychopathology in later life. Psychopathology is highly co-morbid with medical and neurologic diseases of aging; further, risk factors for psychopathology are somewhat unique in later adulthood. There also are strong linkages between symptoms of psychopathology, such as depressive symptoms, and cognitive impairment in older adults. A hire in psychopathology would add strength and depth to the current faculty and would significantly enhance funding and teaching opportunities. The psychology department has long been in need of a faculty member to teach Psychopathology which this hire will fulfill.

**Hiring Priority #5:** Hire in cognitive neuroscience of language. This hire would likely be in Communication Disorders, Linguistics, or Psychology. The Department of Communication Disorders has been a significant component of the Aging Interest Group. The applied nature of this research is attractive to funding agencies. For this reason in particular, we would like to tie these researchers together with the basic researchers of our network. This could be done with a hire in the area of cognitive neuroscience of language. This hire would be someone studying language perception, production, and/or psycholinguistics in healthy older adults. Notably, this hire would bridge with another strong interest group on campus, the psycholinguistics interest group. Coursework offered by this hire will allow for more training in cognitive changes in aging.
The older adult population is growing fast. Persons who are over 85 years of age are the fastest growing segment. More and more individuals are living into their 11th decade. Meanwhile, the baby boomers have survived in larger numbers than ever before. The first wave of this post world war II group are now approaching retirement age. Individuals in every field will need skills to be able to meet the wants and needs of these older adults.

As this population ages, many individuals will experience chronic health problems including impaired mobility. Others will find themselves caring for spouses and older relatives. Issues such as safe driving, accessible housing, adequate mental and physical healthcare, and safe communities are issues of growing magnitude. By creating a graduate certificate in aging studies, the University of Massachusetts Amherst and the Five College network can become leaders in this important area. There is a strong core of faculty with aging expertise across many disciplines on campus including nursing, psychology, exercise physiology, computer science, engineering, etc.

The certificate would consist of 5 courses at the 500 level or above. Two courses would be core courses, Healthy Aging (Nursing 648), and a course in Research on Aging that would be a survey course in research being conducted on campus. This course could be taught by various departments on a rotating basis. The other three courses would be electives taken in at least two departments of the student’s choice. This program design would assure the student had an interdisciplinary experience.

There are at least 32 faculty across 15 departments in six schools and colleges on the University of Massachusetts Amherst campus and the other four colleges in the area who self identify as having aging as part of their program of research. There are many connections among faculty focused on aging across the university. However, to date there has not been a concerted effort to offer systematic graduate training in aging. Creating a certificate program could encourage growth in the offerings for our graduate students, provide a forum for diverse faculty to come together, and attract high quality graduate students to campus. The certificate in aging Studies is the first step toward a center for excellence in Aging Research and Training on the U. Massachusetts Amherst campus.
Appendix 2

Alphabetical list of persons awarded aging-related grant funding since 2003:

Graham Caldwell, Kinesiology
Yu-kyong Choe, Communication Disorders
Nancy Cohen, Nutrition
Jane A. Kent-Braun, Kinesiology
Don Fisher, Engineering
Nancy Folbre, Economics
Rod Grupen, Computer Science
Karen Helfer, Communication Disorders
Cynthia Jacelon, Nursing
Gary Kamen, Kinesiology
Jacquie Kurland, Communication Disorders
Agnes Lacreuse, Psychology
Rebecca Ready, Psychology
Lynette Liedy Sievert, Anthropology
Rebecca Spencer, Psychology
Richard Van Emmerick, Kinesiology
Richard Wood, Nutrition
Appendix 4

University of Massachusetts Amherst
Course Offerings in Aging
Spring 2007 – Fall 2009

**Graduate Courses**

**School of Nursing**
648 Concepts of Healthy Aging

797C Special Topics in Aging

664 Advance Practice Nursing Theory
In the Care of Acutely Ill Adult and Elderly Individuals

668 Advanced Practice Nursing Theory
In the Care of Chronically Ill Adult and Elderly Individuals

690A Clinical Practica with Chronically Ill Older Adults

690 Clinical Practica with Acutely Ill Older Adults

**Psychology**
591 Cognition and Aging
Also: Journal Club on Aging, Hormones, and Cognition

**Computer Science**
691 Technology and Aging

**Undergraduate Courses**

**Nursing**
391D Aging: Living Longer, Healthier and more Meaningful Lives

**Psychology**
365 Psychology of Aging
320 Learning and Thinking

**Computer Science**
491 Technology and Aging

**Marketing**
391D Generational Cohorts Values That Direct Behavior Throughout Life