

Regional Institute on Aging

Fourth Year Highlights

The Regional Institute on Aging (RIA) is a virtual research organization designed to serve the citizens of metropolitan Wichita, Sedgwick and the adjacent counties, the state of Kansas, and, eventually, the surrounding Midwestern states. Highlights of the fourth year of operation include collaboration with the KUSM-W, the development of Wichita Women in Science (WWiS), completion of the Gridley Hoover Pilot Research Program, the Work Group on Falls, the Falling LinkS Toolkit , and the Work Force Work Group.

Collaboration with Kansas University School of Medicine—Wichita (KUSM-W): With the arrival of the new KUSM-W Associate Dean for Research, Dr. Michele Mariscalco, a significant effort during this period has focused on the development of research relationships between WSU and KUSM-W. This has included regular meetings and communications with Dr. Mariscalco, the launch of WWiS described below, construction of work groups that will ultimately lead to joint research efforts (see BRITE below), and direct consultations with KUSM-W investigators on the development of research grant applications.

Over the long haul, the two universities will significantly strengthen their research operations by working collaboratively, pooling talent and resources, to address clinical, behavioral, community-based and epidemiological research questions of importance to Kansans.

Wichita Women in Science

The purpose of Wichita Women in Science (WWiS) is to provide a neutral forum for women scientists, clinical investigators, and senior science administrators to meet and establish relationships which then serve as the foundation for building new research collaborations. WWiS was created by Drs. Teresa Radebaugh, and Michele Mariscalco (KUSM-W). The first meeting was held on December 17, 2010 and attended by Drs. Zulma-Toro Ramos, Jan Twomey and Shalini Prasad.

WSU and KUSM-W have expressed a desire to work together. The senior administrations of the organizations are in agreement and steps have been taken to build a research bridge between the universities. For the developing relationship to yield significant research activity requires WSU and KU faculties, WSU graduate students and KU medical students and residents to learn about the work of others and to build personal relationships with colleagues. In the fall of 2010, the WSU Office of Research Administration (ORA) held an evening “meet and greet” gathering with invitations to investigators and leaders of both universities. The plan for Wichita Women in Science builds off of the ORA gathering and extends it.

There are many models for such an organization including Women in Neuroscience and The Society of Women Engineers. Most are, however, organized around a scientific discipline or profession. Wichita Women in Science is focused on a city and region and crosses scientific, technical, and professional boundaries.

The long range goal is to establish a strong core group of scientists, clinical investigators, and senior science administrators to help construct and solidify the research relationships between the two universities as well as linking with businesses, foundations, medical centers, community organizations, and other colleges in the south central Kansas region.

WWiS meets about every four weeks and is an informal organization. It does not have a board, dues, or bylaws, but consists simply of an email mailing list through which announcements of the day, time and location of the gathering will occur. It began with 5 women, representing both campuses, establishing a core group who share the vision for WWiS. Each subsequent gathering issued 2 to 4 invitations to new 'members.' WWiS is not exclusionary and will methodically extend invitations to new 'members' in order to assure the long range goal is held firm.

Gridley Hoover Pilot Research Program: The RIA, through the generous support of Mr. Curt Gridley and Ms. Tracy Hoover, has completed the third and final year of the Gridley Hoover Pilot Research Program. The program provided investigators with significant short-term funding to collect preliminary data to underpin hypothesis-driven research grant applications (e.g., NIH RO1s). The 2007-2008 round awardees were: Drs. Greg Meissen, Elaine Steinke and Deborah Ballard-Reisch. The second round, 2008-2009, awardees were: Drs. Louis Medvene, LaDonna Hale, and Lyn Goldberg. The 2009-2010 awardees were: Kyoung Hag Lee, MSW, Ph.D., "Bereavement, coping and health among older adults in assisted living facilities," and Riu Ni, Ph.D., "Improve older drivers' visual performance through training." The group met on November 8, 2010 for final reports from the first and second round awardees and progress reports on the 2009-2010 funded projects.

Now that the program is coming to a close, we are planning a final 'wrap up' gathering to highlight the work undertaken and the development of aging research at Wichita State University. This event is projected for the fall of 2011.

Each funded investigator will develop and present a conference-style poster describing his/her investigation and the outcomes. Many of the projects included, and relied upon, partners in the community. These organizations and their representatives will be invited to participate in the poster presentation. WSU President Donald Beggs, Interim Provost Keith Pickus, and Dean J. David McDonald will be invited to make remarks as well as Dr. Elizabeth King, on

behalf of the WSU Foundation, Dr. James Rhatigan and the donors, Mr. Curt Gridley and Ms. Tracy Hoover.

Mr. Gridley, who recommended the plan, has also suggested that the event be filmed and a short documentary produced. The documentary would include brief interviews with each investigator, their community partners and the above noted WSU representatives. The documentary may then be used by the WSU Foundation to illustrate the types of programs that can be developed with donor funds and the type of involvement donors may have with university investigators.

Development of Research Teams:

Work Group on Health Care Resources in Rural and Frontier Kansas (Work Force Work Group): The Work Group first met in the fall of 2008. The focus of its discussions is on direct care workers (DCW) who provide short-term care that allows older people to remain in their homes and long-term care (LTC) in institutional settings for those too frail or ill to live at home. In rural areas, where access to health care is limited by distance and supply, DCWs are a critical health resource for older adults. However, high turnover rates for these key healthcare providers put the health and welfare of older adults at risk.

There is evidence for the extra personal burdens borne by rural DCWs in both the research literature and in anecdotal reports by rural LTC workers and facility administrators. Studies consistently find challenges in rural areas relating to child care, transportation, and other services that assist workers in finding and keeping a job. A study of Kansas nursing homes reported that 72% of the administrators cited personal, family, and transportation problems as the top reason for turnover in their facilities. In the same study, the second most frequently cited reason for turnover is “fired for excessive absences” which is often linked to personal challenges. High job vacancy and turnover rates are linked to negative outcomes including lower quality of care for clients, additional costs for the facilities, and higher numbers of deficiencies in nursing home audits.

The Work Force Work Group is interested in addressing the following issues:

- 1) Identifying the personal challenges experienced by currently employed DCWs and the relationship of these challenges to employment and job performance.
- 2) Developing a web-based education and information program that addresses the personal challenges that drive turnover identified in #1.
- 3) Assessing the web-based education and information program.
- 4) Providing research experience for undergraduate public health, nursing, social service, social science and other interested students as a mechanism to spark interest in graduate health-related education.

The goal is to construct a web based tool of information specific to the personal challenges identified by DCWs. Our plan is distinctive because (1) it focuses on the needs of DCWs by addressing their personal challenges and “what happens

at home”; (2) it is designed for areas of low population density that lack the common supportive services and programs typically found in urban areas; and (3) it uses a web-based delivery method to allow around-the-clock private access while minimizing costs for employers.

The research team submitted an Academic Research and Enhancement Award (AREA or R15) to the National Institutes of Health in February 2010 which was not funded. It was revised and resubmitted in February 2011. Other potential funders will be explored for this neglected and under-researched area.

Members of the Work Group are: Drs. Richard Muma, Pennie Myers and the T3 Team, Teresa Radebaugh, Betty Elder, Ms. Amy Ham and Ms. Rosemary Wright.

Falling Less in Kansas (Falling LinkS)

The Falling LinkS Toolkit was completed during this year. This is a major accomplishment that offers an important self-care tool for older adults residing in rural America. The Toolkit is accessible at www.wichita.edu/aging.

Work to disseminate information about the development of the Falling LinkS Toolkit and the next research steps include the following:

- o The primary paper, “Falling Less in Kansas: Development of a Fall Risk Reduction Toolkit,” is in press in the Journal of Aging Research.
- o A paper emphasizing the role of the vision professional in the reduction of the risk of falling, “The Falling Less in Kansas Toolkit: A Self-Care Intervention,” is in press in the Envision newsletter, Visibility, a professional newsletter with a nationwide circulation of 8000.
- o On April 9, 2011, the Falling LinkS Research Team made a day-long presentation on falling by older adults and the Toolkit to the Kansas Physical Therapy Association conference in Wichita.
- o Dr. Deborah Ballard-Reisch and the team submitted a poster to the Celebrate Aging Research Poster competition and won second place (see discussion below).
- o Dr. LaDonna Hale and team are working on an University Research/Creative Projects Award (URCA) to explore the use of the Falling LinkS Toolkit in several local sites including Health Strategies and senior citizens centers.

The Falling LinkS Research Team, both collectively and as individual scientists, continues to seek funding for additional research work that will clarify the effectiveness of the Toolkit in reducing fall risk. Discussions with a home health

care agency are underway about the possibilities of using the Toolkit with its community resident clients and employed caregivers.

Falling LinkS was funded by the United Methodist Ministry Health Fund and the WSU Graduate School. The research team members include: Drs. Teresa Radebaugh (PI), Candace Bahner, Deborah Ballard-Reisch, LaDonna Hale, Michael Rogers, Nicole Rogers, Mr. Rich Hanley (Harvey County Department on Aging), Ms. Karen Kendrick, Mr. Shannon Riley and Mr. Michael Epp (all from Envision). The project was supported by graduate research assistants: Ashley Archiopoli, Melissa Granville, Bobby Rozzell, Chigozirim Utah, Katie Sue Williams and Rosemary Wright.

Infant Morbidity and Mortality—the BRITE Program: Although not an aging research effort per se, this work falls under the broad heading of efforts to identify research areas offering the potential for collaboration with the Kansas University School of Medicine-Wichita (KUSM-W). Discussions were launched late winter/early spring 2011 with faculty in the Department of Psychology: Drs. Greg Meissen, Rhonda Lewis and Alex Chaparro. It appeared that WSU has an almost critical mass of research expertise and talent in issues of infant and child health. KUSM-W also has significant interest and expertise in infant and child health. Furthermore, Kansas has the highest African American infant mortality rate in the United States. Therefore, it appeared that this might prove to be a focus for a joint effort.

Very shortly after we initiated these discussions, identified African American infant mortality as the research target, scheduled a meeting with KUSM-W investigators (Dr. Michele Mariscalco and others), the National Institute of Child Health and Human Development, NIH, announced a Notice of Intent to Publish a Funding Opportunity Announcement for the BRITE Program (Biomedical and Behavioral Research Innovations to Ensure Equity) in maternal and child health. WSU and KUSM-W investigators are now working to plan an application in response to the RFA when it is issued (likely mid-summer 2011). Dr. Rhonda Lewis is the principal investigator and is leading the work group. The Regional Institute on Aging is now involved only in a supportive grant development role.

Celebrate Aging Research

The Regional Institute on Aging, Lakepoint nursing facilities, and the Wichita Medical Research and Education Foundation sponsored a juried poster competition to “Celebrate Aging Research.” The purpose of the competition was to (1) showcase current aging or aging-related research work by WSU faculty and students and (2) introduce the WSU community to some of the important issues in aging research. All faculty (full or part-time, tenured, tenure track, research, or adjunct) and students (undergraduate or graduate, full or part-time) were invited to submit. The competition was limited to research relevant to human aging. There were no restrictions on the types of questions, methods

used, or disciplines engaged. Multi-disciplinary efforts and community-based research submissions were particularly welcome. The research had to: 1) be reasonably current, i.e., not published and presented extensively and 2) address questions in human aging or be clearly related to human aging.

The posters were juried in two divisions: faculty and student. The posters were assigned to the appropriate division based on lead authorship and scientific contribution to the research. The jury was composed of experts external to WSU. Representatives from Lakepoint nursing facilities and the Wichita Medical Research and Education Foundation served on the jury.

The posters were displayed from late October to mid-November in the lobbies of Ahlberg and Jabara Halls. The prizes for the top three posters in each division were: faculty division: 1st place--\$1000, 2nd place--\$600, third place--\$400; student division: first place--\$800, second place--\$400, third place--\$200. The prizes must be used to defray the expense, i.e., travel, lodging and registration, of attending (1) an aging-related scientific meeting or (2) non-aging-related scientific meeting for the purpose of making an aging research presentation.

The winners of the juried competition were revealed at a ceremony on December 10 the WSU Rhatigan Student Center. The ceremony was hosted by Provost Gary Miller and Associate Provost for Research and Dean, Graduate School J. David McDonald.

Student Division Winners:

1st place Danielle Hermes and team, College of Health Professions. "Benefits of the Wii Fit as an Exercise Program for Older Adults." Ms. Hermes is a third year Doctor of Physical Therapy student, Department of Physical Therapy. Three other DPT and one human performance studies students contributed to the poster. Drs. Camilla Wilson and Nicole Rogers were research advisors.

2nd place Bobby Nguyen and team. Department of Psychology, College of Liberal Arts and Sciences. "Older Adults and Driving: Steering Control, Lane Change and Collision Detection." Mr. Nguyen is a third year Ph.D. student in Dr. Rui Ni's lab. Ms. Jennifer Teves contributed significantly to this project and the poster.

3rd place Mikki Phan and team. Department of Psychology, College of Liberal Arts and Sciences. "Improving Older Adult's Contrast Sensitivity through Repeated Practice." Ms. Phan is a third year graduate student in Dr. Rui Ni's lab.

Faculty Division Winners:

1st place Shalini Prasad, Ph.D. and team. "Nanoporous Sensors for Rapid Detection of Neurodegenerative Diseases." Dr. Prasad is the H. Russell Bomhoff Distinguished Professor in Bioengineering, College of Engineering. Her team includes colleagues from WSU and Arizona State University.

2nd place Deborah Ballard Reisch, Ph.D. and team. “Development of the Falling LinKS Toolkit: An Example of a Community-Grounded Health Promotion Initiative.” Dr. Ballard-Reisch is the Kansas Health Foundation Distinguished Chair in Strategic Communication, Elliott School of Communication. Her team consists of WSU faculty from three colleges and several departments and two community groups.

3rd place Nicole Rogers, Ph.D. and team. “Impact of First Step to Active Health on Older Adult’s Functional Fitness, Balance and Daily Activity.” Dr. Rogers is Assistant Professor and Head of the Gerontology Program, Department of Public Health Sciences, College of Health Professions. Her team includes colleagues from Nagoya City University, Nagoya, Japan, and Louisiana State University.

Lakepoint nursing facilities and Wichita Medical Research and Education Foundation generously underwrote the production of the posters and the travel awards for “Celebrate Aging Research.”

Graduate Research Assistantship Program in Aging:

The Graduate School and the Regional Institute on Aging announced the availability of three graduate research assistantships (GRAs). The goal of the Graduate Research Assistantship Program was to provide support to faculty investigators and enhance their efforts to develop and expand programs of research in aging and in aging-related questions at WSU.

Many tools are required to support and expand a research program. Assistance of well trained graduate students is one important tool. This program aimed to provide (1) support for faculty research programs and (2) research experience for graduate students. All faculty members with full-time appointments for the 2011 academic term were eligible to apply for a GRA.

The format of the application was a poster. At a minimum, the poster contained (1) the scientific problem and its relevance to human aging research, (2) the design and methods to be employed, and (3) the tasks of the GRA, including the plan for supervision and the benefits from the research experience. The posters were displayed in Jabara and Ahlberg Halls so faculty, staff and students had an opportunity to view them. The locations of the posters were announced via WSU Today.

The reviews were conducted by a team of scientists with diverse research backgrounds who were external to WSU. The reviews focused on the scientific merit and the clarity of the question proposed, the potential impact for the faculty member’s research program, the overall contribution to aging research and the benefit to the GRA of the experience proposed.

The following faculty members, and posters, won the competition and received funding for a GRA for academic year 2011-2012:

Sue Nyberg, MHS, PA-C, DFAAPA: “Development, Implementation, and Evaluation of a Senior Mentor Program in PA Education”

Nicole Rogers, Ph.D.: “Increasing the Intensity of Physical Activity of Older Women”

David Eichhorn, Ph.D.: “Model Complexes for the Active Site of Nickel Superoxide Dismutase--an Enzyme Important in Preventing Common Diseases of Aging”

July 19, 2011 T. Radebaugh