Building bridges to a brighter future for the aged.
THE GARRISON INSTITUTE ON AGING

The strong and dynamic spirit of West Texas’ aging population is the heart of the Texas Tech University Health Sciences Center’s aging initiative. The Garrison Institute on Aging (GIA), as the keystone for the aging initiative, is helping seniors successfully age and extend the years of quality life through a multifaceted approach. From investigating causes of neurodegenerative diseases, to seeking answers for patients and families dealing with Alzheimer’s disease, to preparing healthcare professionals for the growing demands of geriatric care, the GIA is addressing the health issues of an aging population. Growing old is inevitable; however, healthy aging and a good quality of life in the golden years is an attainable goal. This report details the GIA’s research, education, and healthcare programs dedicated to improving the health of America’s seniors.

BUILDING THE AGING INITIATIVE

The Garrison Institute on Aging emerged as a collaborative, interdisciplinary aging initiative developed by leaders from the Texas Tech University Health Sciences Center Schools of Allied Health Sciences, Medicine, Nursing, and Pharmacy. In 1999, the Texas Tech University System Board of Regents approved the establishment of the Institute for Healthy Aging to meet the Health Sciences Center’s strategic priority in aging. In February 2005, the Institute was renamed the Garrison Institute on Aging (GIA) in honor of Mildred and Shirley L. Garrison’s leadership and commitment to advance aging and Alzheimer’s disease research, education, and service for West Texans (for more information on the Garrisons, see page 10).

The vision of the GIA is to become nationally recognized as a center of excellence for the creation and application of new knowledge about healthy aging through research, innovative interdisciplinary education, model healthcare delivery systems, and expertise in health policy.

By 2030, the U.S. population aged 65 and over will exceed 70 million, which is almost twice the number of people currently over 65.
Building Bridges to a Dynamic Infrastructure

In the past academic year, the Institute has welcomed a new direction from Paula Grammas, PhD, a highly qualified administrator and leading Alzheimer’s disease researcher. In her new role as Executive Director for the GIA and the Mildred and Shirley L. Garrison Chair in Aging, Dr. Grammas joined an established team of faculty and staff with interest and expertise in geriatrics, neurodegenerative disorders, community health, drug therapeutics, patient care, and teaching. Under her leadership, the GIA established the following new functional units and goals:

**Research Division** to expand research capacity in Alzheimer’s disease and other neurodegenerative diseases of aging.

**Education Division** to increase knowledge and awareness of age-related healthcare issues through educational offerings to the Health Sciences Center faculty and students, health professionals, rural communities, and the general public.

**Clinical Service Division** to build geriatric clinical care capacity and clinical research infrastructure.

**Center for Advancement of Quality in Long-Term Care** to expand education, research, and health policy initiatives directed at improving the quality of institutional and community-based long-term care.

**Development and Advancement** to build endowments and financial support for long-term sustainability of GIA programs and activities.

While many of the nation’s academic health centers have a focus on geriatric care, we believe the GIA’s comprehensive, interdisciplinary approach to aging reflects a broader concept. As this report will detail, by building bridges in aging research, education, and service between our schools, campuses, and the community, we can work toward one common goal: improving the health of America’s seniors.

“We have a very strong initiative building at the Health Sciences Center, and the Institute is the way to bring it all under one roof.”

Paula Grammas, PhD Executive Director
BUILDING BRIDGES TO RECOGNIZED RESEARCH

Texas Tech University Health Sciences Center has made an institutional commitment to the study and treatment of neurodegenerative disorders in aging including Alzheimer’s and Parkinson’s diseases with the GIA serving as the scientific foundation for aging research. Over the last year, the GIA has significantly expanded research capacity in Alzheimer’s disease by building its research infrastructure to support new and existing scientific investigators and increase scientific scholarship.

RECRUITMENT OF KEY SCIENTISTS. Developing core researchers with complementary skills who work together to identify the mechanisms that underlie nerve cell death in Alzheimer’s and other age-related neurodegenerative diseases is an integral component of elevating the Health Sciences Center’s aging research to national prominence. Highlights of the GIA recruitment efforts are featured below:

• Paula Grammas, PhD, to serve as the GIA’s executive director and lead the Grammas Research Group, a team of investigators, postdoctoral research associates, and students focused on the role that endothelial cells play in vascular mediated neuronal cell death in Alzheimer’s disease with funding from the National Institutes of Health. Dr. Grammas’ has received national recognition for her research in Alzheimer’s disease. Under her leadership, the GIA will be able to advance its Alzheimer’s disease research program to national prominence.

• Mark Lyte, PhD, MS, MT (ASCP), to serve as a scientist in the School of Pharmacy with funding from the National Institutes of Health and research interests in microbial endocrinology, an emerging field which seeks to examine the interface between microorganisms and the neuroendocrine system in both health and disease.

• Xingjia Wang, PhD, to serve as the director of scientific development and lead the Wang Research Group investigating the role of cyclooxygnease-2 in testosterone biosyntheses in male aging with funding from the National Institutes of Health.

• A focused plan for securing resources and recruiting scientists for the Neurodegenerative Research Team (see Figure 1 on page 5).

• New facilities and equipment to accommodate GIA scientists including an additional 1500 square feet of laboratory space, a modular maze and runway for animal test studies, single color real-time PCR detection system for assay analysis, and a chemiluminescent detection system for gel documentation and imaging.
COLLABORATIONS TO MAKE A DIFFERENCE. Dr. Grammas has initiated the following actions to build bridges in aging research at the Health Sciences Center:

- A research collaboration among the GIA, the School of Pharmacy Department of Pharmaceutical Sciences, and the School of Medicine Department of Neuropsychiatry to create a tripartite initiative, the Collaborative Drug Development Initiative for Aging Disorders (CoDIAD), to develop patentable drugs with novel mechanisms of action aimed at diseases that are characteristic of the aging population.

- An Interdisciplinary Alzheimer’s Research Team with faculty members from the GIA, School of Medicine, School of Nursing, and Texas Tech University College of Engineering to design and launch research projects including a longitudinal rural aging study.

AGING SEED GRANT PROGRAM: 5 YEAR OUTCOMES. With funding support through the U.S. Administration on Aging (Aging Research & Training Grant No. 90AM2378), the GIA managed a five-year research initiative from 2000-2005 to increase funded peer-reviewed research in the field of aging and to dialogue about new research opportunities. Seed grant awards supported 19 research projects in clinical and long-term care, geriatric education, and basic or translational research totaling $2,039,497 (for a complete list of GIA seed grants see page 17). The seed grant program has resulted in new knowledge to impact elder care and additional grants to national level organizations.

Elder Care Impact: The GIA Seed Grant Program has generated new knowledge to advance healthy aging in the following areas:

- Demographics, rural access to healthcare, and dimensions of healthy aging
- Health literacy and pain relief
- Falling and balance assessment
- Early recognition and treatment for Alzheimer’s disease
- Assistive technology for seniors with communication and movement disorders
- Depression among elderly Hispanics and Anglos
- Pharmacy profiles for patients with diabetes and cardiovascular disease
- End of life care

Grants Submitted to National-Level Organizations: Based on GIA sponsored research, 18 grants were submitted to these national-level organizations and four were funded for a total of $1,387,968:

- National Institute on Aging
- Agency for Healthcare Research and Quality
- National Institute for Occupational Safety and Health
- National Science Foundation
- Alzheimer's Association
- American Federation for Aging Research

Spotlight: Grammas Research

Since establishing the Grammas Research Laboratory in 2004, several important and exciting developments have occurred.

Dr. Grammas’ long-standing interest in a possible vascular basis for Alzheimer’s disease has received considerable attention from the research community.

Her research team discovered a protein present in the blood vessels of Alzheimer’s disease patients but not found in the blood vessels of patients without the disease. This finding is potentially relevant for understanding Alzheimer’s disease because this protein can cause nerve cell death, a critical step in the development of this disease.

The team has also established behavioral methods for analyzing cognitive and memory functions in rodents.

Researchers are now able to test whether specific drugs slow memory decline in animal models of Alzheimer’s disease or improve memory in aged animals.
ADVANCING SCHOLARSHIP IN GERIATRICS. Findings from GIA research and educational programs have contributed to numerous manuscripts, presentations, and publications to advance scholarship and knowledge in geriatrics (for a complete list of publications see page 18). In addition:

- Findings have been presented at over 53 national meetings.
- Collaborative projects between Texas Tech schools and campuses have increased.
- Patricia McHazlett was named as a national student finalist for the Merck/AFAR Research Scholarship in Geriatric Pharmacology for work on a GIA sponsored project.

Figure 1: Neurodegenerative Research Team

Paula Grammas, PhD
GIA Executive Director,
Mildred & Shirley L. Garrison
Chair in Aging,
Professor of Neuropsychiatry

Neurodegenerative Research Team

Sid. E. O’Bryant, PhD
Director of
Neuropsychology &
Cognitive Neuroscience

Tarbox Chair of
Behavioral Neurology &
Dementia
(Funded)

Don & Kay Cash Regents
Chair in Alzheimer’s Disease
(Funded - Recruitment in Process)

The CH Foundation
Regents Chair in Parkinson’s Disease
(Funded)

Corinne Payne Wright
Regents Chair in Alzheimer’s Disease
(Funded - Recruitment in Process)

Clinical Trials
Physician Scientist
(Not Funded)

Long-Term Care
Nurse Scientist
(Not Funded)
BUILDING BRIDGES TO INNOVATIVE EDUCATION

Education is a key component of the GIA mission. The education division has a diverse range of programs to educate the long-term care workforce, health professionals, students, and the community. Program goals are to advance excellence in geriatric healthcare and educate seniors and their families about health issues and healthy lifestyles.

EDUCATION FOR THE LONG-TERM CARE WORKFORCE. The Geriatric Education and Training Academy (the Academy) was established in 2003 to meet the long-term care educational needs throughout West Texas. The Academy has successfully engaged in several collaborations to achieve its mission of enhancing the health of older persons by advancing best practices and professionalism in long-term care. At present the Academy is entirely supported by funds from private donors and state and federal agencies.

Programs for Nursing Home Staff: The first programs undertaken by the Academy, in collaboration with the School of Nursing, were directed at nurses and nurse aides who work in nursing homes. A total of 380 licensed vocational nurses (LVN) and certified nurse aides (CNA) attended courses, exceeding the Academy’s annual goal of 300 participants (see Table 1). This positive response to training reinforces the premise on which the Academy was founded: direct care workers in long-term care need and desire further training to enhance their caregiving skills.

| Table 1: 2004-2005 Courses Offered by the Geriatric Education & Training Academy |
|---------------------------------------------------------------|----------------|----------------|----------------|
| Advanced CNA Courses                                         | Supervisory Skills for LVNs | Geriatric Care for LVNs |
| Restraints                                                   | Quality Improvement         | Geriatric Assessment |
| Nutritional Needs of the Elderly                             | Time Management             | Enhancing Clinical Skills |
| Strokes                                                      | Delegation                  | Polypharmacy          |
| Processes of Normal Aging                                    | Long-Term Care Regulatory Processes | Alzheimer’s Disease and Other Dementias |
| Team Building                                                | Leadership and Management   | Wound Care            |
| Conflict Resolution                                          | Conflict Resolution         |                           |

Geriatric Nurse Leadership Project: In collaboration with the School of Nursing, this project was designed to educate registered nurse (RN) leaders in advanced geriatric care and establish a network of colleagues dedicated to advancing nursing home care. Ninety-four RNs from 57 long-term care facilities in West Texas attended a three-day intensive training session focused on clinical geriatric care followed by bi-annual networking leadership forums. Leadership programs included root cause analysis, effective leadership and management styles, stress management, effective communication, legal and ethical decision making, and nursing informatics.
Geriatric Education Center Consortium: In collaboration with the School of Pharmacy and the South, West and Panhandle Consortium of Geriatric Education Centers of Texas, directed by the University of Texas Health Sciences Center at San Antonio, the following programs to address special long-term care needs were developed and offered:

- **Elder Law and Advanced Directives: What Health Professionals Should Know.** This program was presented to 473 health professionals, students, and community members. Core components of the program included legal issues to consider when caring for elderly patients and special issues surrounding dementia and advanced directives. A public resource about elder law and advanced directives was added to the GIA website.

- **Interdisciplinary Traineeships for Long-Term Care Surveyors.** Eight individuals employed as long-term care surveyors in Texas completed a four-day traineeship in geriatric pharmacotherapy, oral health and dental care assessment, and geriatric nutrition assessment. Trainees were provided with extensive resource materials in a “train-the-trainer” format to teach fellow surveyors in their regional offices.

**EDUCATION FOR FAMILY CAREGIVERS.** The West Texas Cares Project, in collaboration with six Area Agencies on Aging, was developed as an outreach to family caregivers to help them self-identify and access services. The project was named “National Caregiver Champion Program” by the U.S. Administration on Aging in 2004 because of its excellent array of services that include public service announcements, website (www.west-texascares.com), training on how to communicate with health professionals, and a 2006 calendar featuring inspirational caregiver stories.

**EDUCATION FOR THE COMMUNITY.** The Garrison Lecture Series on Healthy Aging was established to offer seniors in the community the latest information about healthy aging including innovative research, healthy living tips, and caregiving. The series is held monthly from September to May with an average attendance of 90 seniors. Spring 2005 topics included:

- **Mild Memory Disorders of Mid-Life: The Road Well Traveled,** featuring Randolph B. Schiffer, MD, Professor and Chair, Department of Neuropsychiatry
- **To Treat or Not to Treat: High Blood Pressure in Frail Elderly,** featuring Rebecca Sleeper-Irons, PharmD, Assistant Professor of Geriatrics, Department of Pharmacy Practice
- **Elder Law,** featuring Glen Provost, JD, MPH, Chief Planning and Project Development Officer
- **Nutrition,** featuring Katherine Chauncey, PhD, RD, FADA, Associate Professor and Nutritionist; Department of Family & Community Medicine
- **Pain Medications: The Vioxx/Celebrex Controversy,** featuring Craig Cox, PharmD, Assistant Professor, Department of Pharmacy Practice
As an additional resource for community groups, the GIA established the **GIA Speakers Bureau**, in which GIA faculty and staff are available to speak to community groups on a variety of age-related topics including Alzheimer’s disease, healthy aging, and nutrition.

**EDUCATION FOR HEALTH PROFESSIONALS.** The Health Sciences Center and the GIA developed educational programs to advance geriatric knowledge for physicians, pharmacists, nurses, therapists, administrators, and other practicing health professionals as well as the Health Sciences Center faculty and students. These programs are summarized in Table 2.

<table>
<thead>
<tr>
<th>Table 2: Educational Programs for Health Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Aging Symposium</strong></td>
</tr>
<tr>
<td>• Targets health professionals interested in geriatric care and features nationally recognized experts in aging.</td>
</tr>
<tr>
<td><strong>Mary E. Bivins Geriatric Fellowship Program</strong></td>
</tr>
<tr>
<td>• Developed under the leadership of Dr. Steve Berk, MD, Regional Dean of the School of Medicine in Amarillo.</td>
</tr>
<tr>
<td>• Established to train physicians specializing in geriatric medicine.</td>
</tr>
<tr>
<td>• Funded through a $350,000 grant from the Amarillo Area Foundation and the Bivens Foundation in Amarillo.</td>
</tr>
<tr>
<td><strong>Garrison Interdisciplinary Team</strong></td>
</tr>
<tr>
<td>• “Brainstorming” team to develop educational and research projects directed at geriatrics and long-term care.</td>
</tr>
<tr>
<td>• Composed of representatives from the Garrison Center, GIA, and each Health Sciences Center school.</td>
</tr>
<tr>
<td>• 2005 projects: <em>Student Scholars in Geriatrics</em> program and interdisciplinary course in dementia for Health Sciences Center students.</td>
</tr>
<tr>
<td><strong>Student Scholars in Geriatrics</strong></td>
</tr>
<tr>
<td>• Purpose is to promote geriatrics among Health Sciences Center students.</td>
</tr>
<tr>
<td>• 8 students selected for the 2005-2006 year through a competitive application process.</td>
</tr>
<tr>
<td>• Required activities include participation in educational meetings and completion of geriatric-related projects.</td>
</tr>
</tbody>
</table>

**Historical Highlights**

1999
The Texas Tech University Board of Regents approves establishment of the Institute for Healthy Aging.

2000
U.S. Administration on Aging approves first-year funding for the Institute for Healthy Aging.

2001
Mildred and Shirley L. Garrison's gift to the School of Nursing establishes an endowed professorship in geriatric nursing.
BUILDING BRIDGES TO VITAL GERIATRIC HEALTHCARE

Providing high quality specialized geriatric healthcare services has become a priority for all Health Sciences Center schools. The GIA’s role in the health services arena is to identify opportunities and facilitate partnership development to establish new healthcare programs. The following specialized geriatric services are now offered as part of the Health Sciences Center’s institutional commitment to aging:

ALZHEIMER’S DISEASE ACADEMY. Operated by the School of Medicine at Amarillo to offer community education programs for the general public and medical education for students, medical residents, and practicing physicians to better understand, identify, and treat Alzheimer’s disease.

CENTER FOR REHABILITATION RESEARCH. Operated by the School of Allied Health Sciences to offer balance assessment and clinical gait analysis for people who are at an increased risk of falling due to neurological and neuromuscular dysfunctions.

CRAIG METHODIST RETIREMENT COMMUNITY. Operated by Sears-Methodist Retirement System with facilities for independent living, assisted living, specialized Alzheimer’s care, residential nursing care and skilled nursing care on one campus; serves as the teaching nursing home for the Amarillo aging programs.

GERIATRIC ASSESSMENT CLINIC. Operated by the School of Medicine at Amarillo to provide specialized geriatric assessments for frail elderly patients. Comprehensive assessments are conducted by an interdisciplinary team that includes a geriatrician, pharmacist, nurse and social worker.

GERIATRIC PHARMACY PRACTICE. Operated by the School of Pharmacy to provide consulting pharmacy services to nursing homes in Lubbock and Amarillo.

MEMORY DISORDERS CLINIC. Operated by the Department of Neuropsychiatry with a team of neurologists and neuropsychologists to provide memory disorder evaluations and state-of-the-art treatment for cognitive impairment, Alzheimer’s disease, and other dementias.

MEMORY SHOPPE. Operated by the Department of Neuropsychiatry to offer personalized training programs to slow memory loss and improve quality of life for persons with cognitive impairments.
MILDRED AND SHIRLEY L GARRISON GERIATRIC EDUCATION AND CARE CENTER
(GARRISON CENTER). A 120-bed teaching nursing home on the Texas Tech University campus owned and operated by Sears-Methodist Retirement System to provide residential care, specialized dementia care, and skilled nursing care for Lubbock and the surrounding region and to serve as a clinical training and research site for Health Sciences Center faculty and students.

SENIOR HOUSE CALLS (SHC). Operated by the School of Nursing with generous funding from The CH Foundation, this nurse-practitioner managed primary care practice is designed to meet the needs of home-bound elderly who have difficulty traveling to a doctor’s office or clinic. Visits are conducted in the patient’s home rather than in an office setting.

SPEECH, LANGUAGE & HEARING CLINIC. Operated by the School of Allied Health Sciences to provide speech-language therapy and psychosocial and family support for individuals with loss of language skills due to a stroke, Parkinson’s disease, dementia, and other degenerative diseases.

In Tribute to Mildred and Shirley L. Garrison

The Garrison Institute on Aging would not be possible without the very generous support of Mildred and Shirley L. Garrison. Mr. and Mrs. Garrison began their successful partnership as husband and wife after meeting in a church youth group in 1939 and marrying in 1941. After graduating from Texas Tech University, Mr. Garrison was an agriculture teacher before serving in the Army during World War II. In 1948, the Garrisons embarked on a farming career and began to develop their family legacy with the purchase of land and other partnerships in ranching, cattle feed and banking. Together, Mildred and Shirley have built a strong legacy and have given compassionately to support research, education and health care for Alzheimer’s disease. Texas Tech University Health Sciences Center and the Garrison Institute on Aging are gratefully indebted to their generosity and dedication to advancing care for people with Alzheimer’s disease.
BUILDING BRIDGES TO QUALITY LONG-TERM CARE

The GIA was designated as a Center for the Advancement of Quality in Long-Term Care by the 78th Texas Legislature for the purpose of understanding and addressing issues that influence the nursing home’s ability to provide high quality care to residents. Following are some questions addressed this year in an effort to advance the quality of long-term care:

Will innovative technology impact the quality of care in nursing homes? A pre-post evaluation study was conducted to explore the impact of electronic health records (EHRs) on resident outcomes, nurses’ documentation efficiencies, job satisfaction, and costs in a 120-bed nursing home. Because of strong study results suggesting nurses have more time to spend in resident care and resident outcomes may be improved by using EHRs, the Texas Department of Aging and Disability Services has funded a Phase II project to identify barriers and facilitators to implementing EHRs throughout Texas.

Does the strict regulatory environment in nursing homes affect staff satisfaction and turnover? A qualitative study was conducted to explore perceptions about job satisfaction and the regulatory environment among certified nurse aids and licensed vocational nurses in selected nursing homes in West Texas. The study culminated in a paper submitted for publication in a leading journal with strategies to improve the survey process, reduce paperwork inefficiencies, eliminate toxic management behaviors, address key environmental stressors, and improve staffing levels.

How can the number of well-trained nurses and nurse aides desiring to work in long-term care be improved in the near- and long-term for Lubbock and the surrounding communities? A community task force was established composed of representatives from the School of Nursing, GIA, Lubbock nursing homes, the South Plains College Nursing program, and the WorkSource of the South Plains. The goal of the task force is to identify collaborative initiatives to improve the quality and quantity of the long-term care workforce. Two initiatives currently underway are to a) increase the number of nurse aides trained annually in the community and b) work with the state regulatory agency to allow nursing students to work as nurse aides after completing a specified segment of their nursing program.

“...as the need for caregiving rises greatly, the number of available caregivers—both professional and volunteer—is dwindling. We appear to be on the threshold of a crisis in long-term care.”

From Taking Care: Ethical Caregiving in our Aging Society (2005),
The President’s Council on Bioethics
Can advanced education for the long-term care workforce improve job satisfaction, reduce turnover and improve resident outcomes? The GIA's Geriatric Education and Training Academy (as described within this report) was established for the specific purpose of improving the educational level of long-term care nurses and nurse aides thus improving job satisfaction, reducing turnover, and improving resident outcomes. The continued support of this program from the long-term care community and funding agencies is evidence of its effectiveness in advancing the quality of the long-term care workforce.

How can state and national health policy be influenced to improve long-term care? The Aging Law and Policy Program was established as a component of the Center to serve as a state and national resource for analysis and advocacy of aging-related health policies. Glen Provost, JD, MPH, served on the joint Texas House-Senate Legislative Committee for Long-Term Care. Mr. Provost and Mr. Shirley Garrison were appointed as Texas representatives to the 2005 White House Conference on Aging. Mr. Provost also developed an extensive educational program to help health professionals understand the intricacies of elder law as it relates to elder patients and advanced directives.
BUILDING BRIDGES TO LONG-TERM SUSTAINABILITY

The GIA employs a team of 17 to manage its comprehensive aging research and education programs and maintain relationships with faculty members and researchers across all Health Sciences Center schools and campuses. Revenue sources include institutional support, endowment funds, private donations, and grants from federal, state and local agencies and foundations. Developing and advancing new partnerships and revenue sources is vital to meeting the GIA’s mission, ensuring long-term sustainability, and creating lasting improvements in the care and health of older adults.

SUPPORT FOR THE FUTURE. Building and sustaining high quality, state-of-the-art research and education programs requires both human and material resources. Thanks in part to several generous donors, the GIA has been able to significantly expand its programs this year.

Growing Endowments. In 2005, the GIA received the largest gift in the history of the Health Sciences Center: a $5 million endowment for educational, research and outreach programs from Mildred and Shirley L. Garrison. Additionally, in 2003 Mr. and Mrs. Garrison gave generously to establish the Mildred and Shirley L. Garrison Chair in Aging, currently held by Dr. Paula Grammas, as well as providing significant operational funds for current use.

Three new endowed chairs were also secured to advance Alzheimer's and Parkinson's disease research this year. They include the following:

- Don and Kay Cash Regents Chair in Alzheimer's Disease
- Corrine Payne Wright Regents Chair in Alzheimer's Disease
- The CH Foundation Regents Chair in Parkinson’s Disease

Although the GIA is emerging as a leader in aging research and education, sustaining its comprehensive program and meeting its goals will require more financial resources than are currently available. Thus the GIA has developed these new marketing and donor development initiatives:

- **GIA Advancement Committee:** Charged with increasing the Garrison Institute Endowment for operations to $15 million by 2008, this committee of volunteers, GIA staff, and Health Sciences Center development officers meet regularly to develop new strategies for GIA advancement.
- **Friends of the Garrison:** A new program for individuals and businesses to support the GIA on an annual membership basis or through memorial or honorarium gifts.

A complete list of private donations and gifts secured in FY2005 is available on page 15.
MAKING THE MOST OF OUR ANNUAL RESOURCES. In FY2005, the GIA’s total budget of over $1.3 million included both external and internal funding sources. External funding sources were extramural grants from local, state, and federal agencies, foundation grants, and private gifts in the form of revenue generating endowments or direct operational support. Table 3 details private donations and Table 4 lists research and education grants. Internal funding sources were from the Office of the President and the School of Medicine Dean’s Office and Department of Neuropsychiatry. Figure 2 shows the total expenses in FY2005 by revenue source and Figure 3 is the projected expenses for FY2006.

These annual sources of revenue support programs in all GIA divisions discussed in this report. GIA staff and researchers constantly look for new opportunities and partnerships to advance our resources by writing grants, communicating GIA goals with others, and fostering new donor relations.
Table 3: Private Donations Secured in FY2005

<table>
<thead>
<tr>
<th>Program of Support</th>
<th>Donor</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garrison Institute on Aging Endowment</td>
<td>Mildred and Shirley L. Garrison</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>Corrine Payne Wright Regents Endowed Chair in Alzheimer’s Disease</td>
<td>The Wright Family with a match from the TTU Regents Foundation</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Don and Kay Cash Regents Endowed Chair in Alzheimer’s Disease</td>
<td>Don and Kay Cash Foundation with a match from the TTU Regents Foundation</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>The CH Foundation Regents Endowed Chair in Parkinson’s Disease</td>
<td>The CH Foundation with a match from the TTU Regents Foundation</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Geriatric Education and Training Academy</td>
<td>Anonymous donor</td>
<td>$250,000</td>
</tr>
<tr>
<td>Garrison Institute on Aging Research and Administration</td>
<td>Anonymous donor, Friends of the Garrison, and Memorial Donations</td>
<td>$101,740</td>
</tr>
<tr>
<td>West Texas Cares Project</td>
<td>Holloway Foundation</td>
<td>$10,000</td>
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<td></td>
<td></td>
<td><strong>$8,361,740</strong></td>
</tr>
</tbody>
</table>

Table 4: Research & Education Grants in FY2005

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Grant</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration on Aging (AoA)</td>
<td>Aging Research &amp; Training (Year V of V)</td>
<td>$211,392</td>
</tr>
<tr>
<td>National Institute of Health (NIH)</td>
<td>Is There a Link Between Alzheimer’s Disease and Atherosclerosis (Year II of V)</td>
<td>$195,066</td>
</tr>
<tr>
<td>University of Texas Health Science Center at San Antonio - Subcontract for Health Resources Service Administration (HRSA) Grant</td>
<td>Geriatric Education Center</td>
<td>$107,862</td>
</tr>
<tr>
<td>U.S. Department of Education (DoE) - Congressional Earmark</td>
<td>Geriatric Education &amp; Training Academy (Year II of III)</td>
<td>$83,746</td>
</tr>
<tr>
<td>School of Nursing - Subcontract for HRSA Grant</td>
<td>Geriatric Education &amp; Training Academy - Preparing the RN Workforce</td>
<td>$36,147</td>
</tr>
<tr>
<td>National Institute of Health (NIH)</td>
<td>Vascular Mediated Neuronal Cell Death (Year V of V)</td>
<td>$28,717</td>
</tr>
<tr>
<td>Texas Department of Aging and Disability Services (TDADS)</td>
<td>Electronic Health Records (EHRs) in Long-Term Care</td>
<td>$19,546</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>$682,476</strong></td>
</tr>
</tbody>
</table>
Figure 4: Organizational Chart

M. Roy Wilson, MD, MS
TTUHSC President

Roderick Nairn, PhD
Executive Vice President for Academic Affairs

Paula Grammas, PhD
GIA Executive Director,
Mildred & Shirley L. Garrison
Endowed Chair for Aging,
Professor of Neuropsychiatry

GIA Internal Advisory Board

Terri Stahl, Research Unit Coordinator

Mark Lyte, PhD
Pharmacology Scientist & Director of Collaborative Research

Xingjia Wang, PhD
Director of Scientific Development

UMC Endowed Chair for Geriatrics: Family Med/Internal Med

Barbara Cherry, RN, MSN, MBA
Director of Operations, Director of Interdisciplinary Programs

Lynn Bickley, MD
Director of Geriatric Education (Interim)

Neurodegenerative Research Team

Annette Nichols-Boles, MS
Assistant Director

Ann Laurence, MS
Director of Education & Training Programs

Sheilah Patridge, CHES
Associate Director, Operations & Development

Diane Botello, RN
Educator

Sophie McDougal, Accountant

Deniese Smith, Business Assistant
Aging Seed Grants

FUNDED SEED GRANTS: 2000 – 2002 ................................................................. $1,588,371

Aging Well......................................................................................................................... $124,783
P. Yoder-Wise, RN, EdD; School of Nursing, Lubbock

Diabetes and Cardiovascular Heart Disease Screening and Follow-up of Elderly and Hispanic West Texans by Pharmacists in Urban and Rural Communities........................................................... $161,150
A. Nelson, Jr., PhD; Pharmaceutical Sciences, School of Pharmacy, Amarillo

Early Recognition and Therapeutic Intervention for Persons with Alzheimer’s Disease in West Texas ...................................................................................................................... $50,000
R. Schiffer, MD; Neuropsychiatry, School of Medicine, Lubbock

Efficacy of an Assistive Technology Based Intervention in Older Individuals with Neurogenic Communicative and Movement Impairments: A Multidisciplinary Approach.......................................................... $50,000
R. Koul, PhD; Communication Disorders, School of Allied Health, Lubbock

Health Literacy and OTC Pain Reliever Selection and Use Among the Elderly .......................................................................................................................... $125,000
C. Raehl, PharmD; Pharmacy Practice, School of Pharmacy, Amarillo

Psychological Distress Among Elderly Hispanic and Anglo Residents of El Paso ................................................................. $100,000
D. Briones, MD; Neuropsychiatry, School of Medicine, El Paso

Reducing the Risk of Falling Among Elderly West Texans: Assessment of Balance ...................................................................................... $150,990
J. Sawyer, PT, PhD; Rehabilitation Sciences, School of Allied Health, Lubbock

Texas Tech 5000 .............................................................................................................. $826,448
J. Rohrer, PhD; Health Services Research Management, Lubbock

FUNDED SEED GRANTS: 2002 – 2004 ................................................................. $256,875

Alzheimer’s disease Among El Paso’s Residential Mexican-American Elderly:
Epidemiological Identification through Clinical Diagnoses.................................................................................. $50,000
M. Guerrero, Jr., MD; Neuropsychiatry, School of Medicine, El Paso

Effect of Spironolactone on Diastolic Function in the Elderly............................................................................................... $9,575
C. Roongritong, MD; Internal Medicine, School of Medicine, Lubbock

Efficacy of an Assistive Technology-Based Intervention in Older Individuals with Neurogenic Communicative and Movement Impairments: A Multidisciplinary Approach.......................................................... $32,565
R. Koul, PhD; Communication Disorders, School of Allied Health, Lubbock

Improving Health Literacy and Medication Use in Elderly: Visagraph Study................................................................................. $34,498
C. Raehl, PharmD; Pharmacy Practice, School of Pharmacy, Amarillo

A Nationwide Survey of Long-Term Care Facilities to Determine the Characteristics of Medication Administration through Enteral Feeding Catheters........................................................................ $30,272
C. Seifert, PharmD; Pharmacy Practice, School of Pharmacy, Lubbock

Role of cyclooxygenase-2 in Testosterone Biosynthesis in Male Aging...................................................................................... $50,000
X. Wang, PhD; Cell Biology & Biochemistry, School of Medicine, Lubbock

Stroke and Neuroprotective Mechanisms in the Aged Brain................................................................................................. $49,965
J. Fowler, PhD; Physiology, School of Medicine, Lubbock

FUNDED SEED GRANTS: 2003 – 2005 ................................................................. $194,251

Aging and Neurosteroidogenesis................................................................................. $47,990
D.M. Stocco, PhD, Cell Biology and Biochemistry; P. Syapin, PhD, Pharmacology and Neuroscience, School of Medicine Lubbock

Novel Drugs With a Dual Mechanism of Action for the Prevention and/or Treatment of Alzheimer’s Disease ......................................................... $49,086
C. Van der Schyf, D.Sc., Pharmaceutical Sciences, School of Pharmacy, Amarillo

Reducing Medication Related Total Serum Anticholinergic Activity in Long-Term Care Elders with Demetia ...................................................................... $49,650
A. Stenhouse, MD, Internal Medicine, School of Medicine, Amarillo

Modeling the Impact of Medication Management and CPOE on Adherence to Therapeutic Guidelines................................................. $47,525
R. Patry, DrPH, Pharmacy Practice, School of Pharmacy, Amarillo

TOTAL FUNDING FOR AGING SEED GRANTS 2000 – 2005................................................................. $2,039,497


Geldenhuys WJ, Malan SF, Bloomquist JR, Van der Schyf CJ. NGP1-01, a pentacycloundecylamine, and its derivatives are uncompetitive antagonists acting at a novel site on the N-methyl-D-aspartate receptor. *J Pharmacol Exp Ther*. (Under review).


Rudd KM, Raehl CL, Abbruscato TJ, Bond CA, Stenhouse AC. Methods to assist clinicians in determining the anticholinergic potential of medications in the geriatric population. *Pharmacotherapy.* (In press).


This list includes all publications resulting from the Seed Grants program, as well as publications by GIA faculty.
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We are deeply grateful to those who have remembered the Institute in their giving. With their support, we are building bridges to a brighter future for the aged through research, education, and healthcare.

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**Aging Resources**

www.ttuhsc.edu/aging: featuring aging resources, schedules for the Lecture Series, elder law and family caregiver resources, and links to other aging-related websites.

**Building Bridges:** Quarterly newsletter available electronically at GIA website featuring activities, health tips, and research updates.

**www.westtexascares.com:** Support group and resources for caregivers caring for an elderly loved one.
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