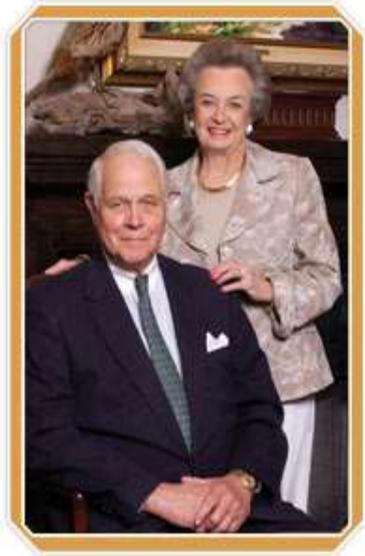


Dementia Care, Research & Needs, San Antonio

Sudha Seshadri, MD,

Director, Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases

Senior Investigator, Framingham Heart Study



San Antonio City Council

Community Health and Equity Committee.



March 28th, 2019



No Conflicts to Disclose

NIA, NINDS funding

NIA: U01 AG049505, U01 AG058589, R01 AG033040, AG061872
R01 AG049607, U01 AG052409, R01 AG054076, AG059421

NINDS: R01 AG017950, UH2 NS100605

<https://biggsinstitute.org/>

The Challenge of Dementia

- **380,000** with Alzheimer's Disease in Texas
- **2nd** in nation for deaths with dementia
- **\$24 Billion** direct, **\$20 Billion** caregiver related costs
- Hispanics have a **30-50% higher** risk, less well studied

Dementia is multifactorial in most persons

Over 40 genes
Vascular, Alzheimer, other aging pathologies

IF UNCHECKED, EXPECT

TRIPLING (3X) OF THESE NUMBERS BY 2050!

(6X) INCREASE IN HISPANICS



Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases: **Our Approach**

- **Comprehensive**

- Clinical care and research
- Basic science and innovative analyses
- Public health and population neuroscience
- Education and training
- Advocacy and community engagement

- **Collaborative**

- University, city, state, national, international

Founded December 2017



Grown to 40 faculty and staff, \$18 M in NIH grants, \$24 M overall in 2018

50+ papers, 700 patient visits in 2018, Clinical Trials, Caregiver Support, Brain Bank 8

Alzheimer, ALS, Frontotemporal dementia, Parkinson's Disease, Lewy body dementia, vascular dementia

Geriatric Neurology & Cognitive and Behavioral Neurology



Sudha Seshadri,
MD



Diane Solomon,
MD



Alicia Parker,
MD



Eduardo Zilli, MD

Movement Disorders



Subhashie
Wijemanne, MD



Juan Ramirez-
Castaneda, MD

Neuromuscular Medicine



Carlyne
Jackson, MD

Neurology



Geriatric & Palliative Care



Neela Patel, MD

Geriatric Psychiatry



Christine Joy, MD

Occupational Therapy



Laura Novak, OTR

Geriatrics,
Psychiatry,
Occupational
Therapy



Neuropsychology



David Gonzalez,
PhD, ABPP-CN



Mitzi Gonzales, PhD



Campbell
Sullivan, PSYD,
ABPP-CN

Psychometry



Trisha
Trainum, MA



Melissa
Flores, MA,
LPC-I



Elena
Brickman, BA



Johanna
Becho, MA,
LMFT-A

Neuropsychology



Social Work



Mario
Villasenor,
MSW

Counseling



Melissa Flores,
LPC-Counselor

Nursing



Generosa
Zimmerman,
MA



Tracy
Summers, LVN



Catherine
McDaniel,
LVN

Clinic Services





Clinics



Superb Care & Research at one stop

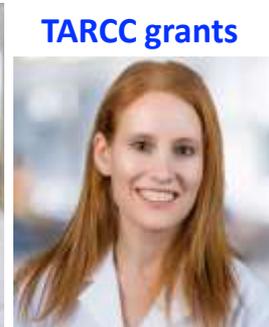
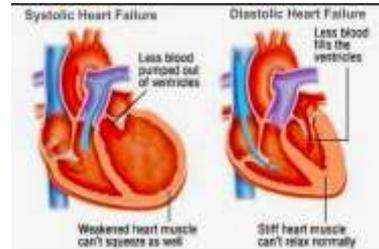
All Patients and Caregivers, Healthy Brain to Brain Donation

- Neurologists, Psychiatrists, Neuropsychologists, Geriatrics, Palliative Care, Radiologist
- Mid-level Providers, Counselor, Social Worker, Nurse, Clinical Geneticist, Dietician
- Occupational-, Physical-, Speech- therapists, Cognitive Rehab

- **Healthy Brain Clinic:** Preventing Dementia
- **MIND Clinic:** Rapid Diagnosis
- **CCPD Clinic:** Comprehensive Care for Persons with Dementia

- Data and Biosample Storage
- **Clinical Research**
- Multicentric Drug & Interventional Trials

*Link to 7 Primary Care Clinics
Laredo, Downtown SA, Promteras*



Drs. Alicia Parker & Mitzit Gonzales

TARCC grants

Portraits of Artists

Emergence of Visual Creativity in Dementia

Bruce L. Miller, MD; Craig E. Hou, MD *Arch Neurology* 2004



Figure 1. Fingerpainting in acrylic by an individual with Alzheimer disease.

We try to **support** patient and family in every way,
Combining insurance payments, philanthropy,
research funds from NIH and foundations, State funding

Partner with persons living with dementia, care partners
Ethicists, community champions (10 on External Advisory Board)



Figure 2. Figurines painted by an individual with frontotemporal dementia.

Quan Yin, watercolor on paper

FTD may 'release' artistic abilities



Mell, J. C. et al. Neurology 2003;60:1707-1710

NEUROLOGY



1year into FTD: Chinese Horoscope Figure, lithograph



Mell, J. C. et al. Neurology 2003;60:1707-1710

NEUROLOGY



Early Cafe Drawing, ink on paper



Biggs Biological and Innovative Research Core

Tau Biology



Sarah Hopp

Bess Frost

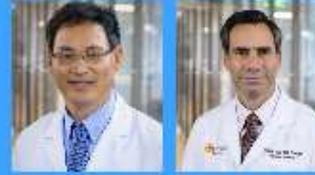
Miranda Orr

Oxidative Stress



Qitao Ran

Metabolism



Xianlin Han

Nick Musi

Brain Injury



Kevin Bieniek

Genetics



Sudha Seshadri

Healthy Aging



Jamie Walker

Vasculature



Veronica Galvan

Bioinformatics



Habil Zare

In vivo Imaging



Peter Fox

Proteostasis



Andrew Pickering

Radek Dobrowolski

Every Patient offered opportunity to join research

Clinical Data
Blood, CSF (Biobank)

Imaging
Genetics
Gait, Eye, Hearing

**National
Alzheimer Disease Center**

Clinical Trials
Observation
Phase 1 and 2
Phase 3

Model to Human (T1)
Effective Implementation (T2)



MIND

Memory Improvement through
Nicotine (patch) Dosing

*Pilot Study to investigate the safety and feasibility of
Senolytic **T**herapy to **M**odulate the **P**rogression
of **A**lzheimer's **D**isease (**SToMP-AD**)*



Observational study of imaging, blood, retinal biomarkers
for Vascular Cognitive Impairment

Mark VCID



Arriving Soon:

Anti-amyloid (GRAUDATE)
Anti Tau aggregation (TauRx)

ADCS trials
Including for moderate to severe AD
Agitation

Need to increase enrollment of Hispanics;

Amyloid: Passive immunotherapy

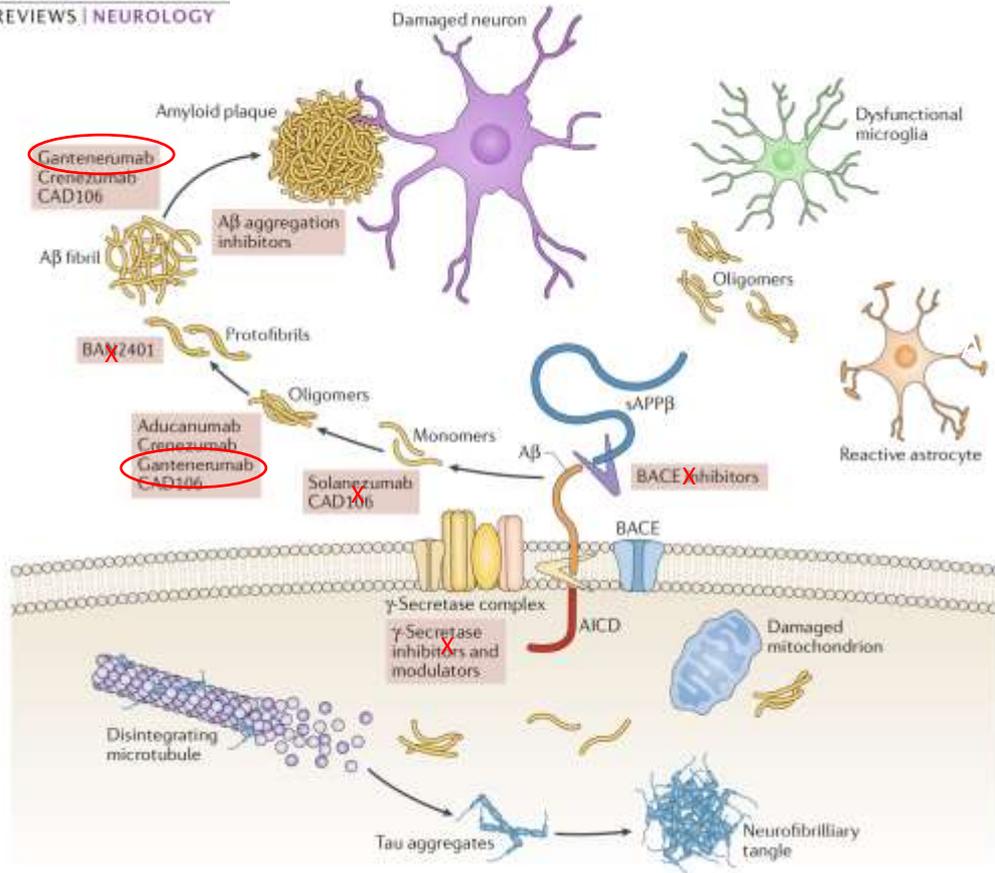
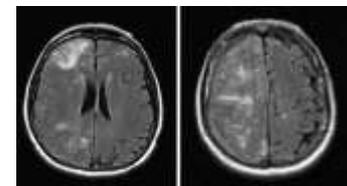


Fig. 1 | **Targets of anti-Aβ drugs.** Mechanisms of action of the main anti-amyloid-β (Aβ) drugs that are currently in phase III clinical development for the treatment of Alzheimer disease. AICD, amyloid precursor protein intracellular domain; BACE, β-secretase; sAPPβ, soluble amyloid precursor protein-β.

Human or humanized mouse antibodies
Phase III trials

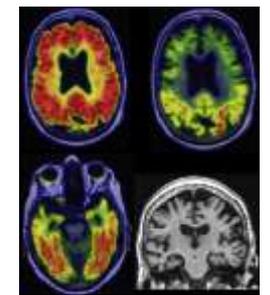
Risk of brain swelling despite slow up-titration



Likely to decrease amyloid; Impact on cognition is less certain

Need to increase enrollment of Hispanics

Most new trials will need either spinal tap or PET imaging



Biggs has PET and will soon have amyloid and tau tracers made on site

Caregiver & Community Engagement

- Caring for Caregiver Programs
- Grace Notes (Choir)
- Dementia-Friendly City Initiatives
- Dietary and Nutrition Advice
- Public Lectures: Dialogues on Dementia
- Lay Advisory Board



Prof. Carol White

MAR
29

Memory and Music with the San Antonio Symphony

Dedicated to transforming the treatment of dementia, the Biggs Institute invites all individuals with a diagnosis of dementia and their caregivers to a free admission open rehearsal with the San Antonio Symphony.

[View event »](#)

MAR
29

Alzheimer's Association Annual Educational Summit

The summit explores lifestyle factors to reduce the risk of dementia, new horizons in research, caregiver grief and grief and practical hands-on techniques to respond to behaviors.

[View event »](#)

APR
11

The Essentials of Caregiving: Caring for the Caregiver

The Essentials of Caregiving is a class providing support and tools to caregivers as they care for a loved one living with a diagnosis of Alzheimer's or related dementia.

[View event »](#)

APR
19

Memory Café

A Memory Café is an inclusive space where caregivers can learn, be inspired and connect with others. Events include coffee, art, music, games and more. Events are held in collaboration with the San Antonio Symphony.

[View event »](#)

APR
25

Caregiver Skills Training Workshop

Attendees will see how a professional ensemble rehearses and be exposed to masterpieces of our Classics Series repertoire and world-class guest artists. Frequently, attendees will also have the unique opportunity to interact with Symphony Music Director, Sebastian Lang-Lessing, as a guest artist, by a pre-rehearsal Q&A session with Symphony Music Director, Sebastian Lang-Lessing.

Events will be staffed by UT Health San Antonio staff and volunteers, making it a safe and comfortable environment for all in attendance.

[View event »](#)



MAY
09

Dialogue on Dementia: "How Dizziness, Falls, Changes in Blood Pressure and Sleep Can Be Heavens Gift, The Brandenburgs, and Tuscan Tour of Taste"

"Dialogue on Dementia" brings renowned physician Markus Beal to you to learn more about the diagnosis of dementia, including research and patient-based discussions on the bridge and advancement of dementia, Alzheimer's and other neurodegenerative diseases.

[View event »](#)

Family Education

Caregiver Skills Training

Interprofessional hands-on training for families providing care

“The professional interdisciplinary support is invaluable when hit with such a devastating diagnosis.”



“These workshops are a safe place surrounded by others like us trying our best to care for someone who can no longer assist with their own care.”

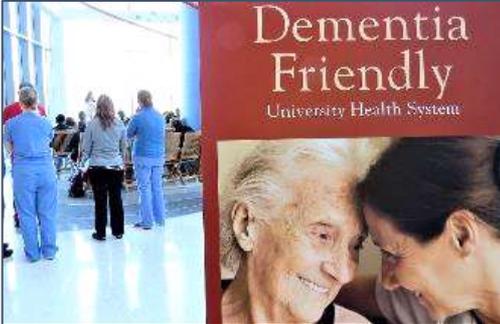
Essentials of Caregiving

Monthly classes, 6 topics

“The information, professionalism, and support is outstanding. I feel empowered and comforted with the knowledge and support I have, and continue to receive.”



Dementia Friendly San Antonio



Priorities from Town Hall

Concerns & fears

- Fear of miscommunication
- Too few safe socialization opportunities
- Stigmatization and judgement

Caregiver support

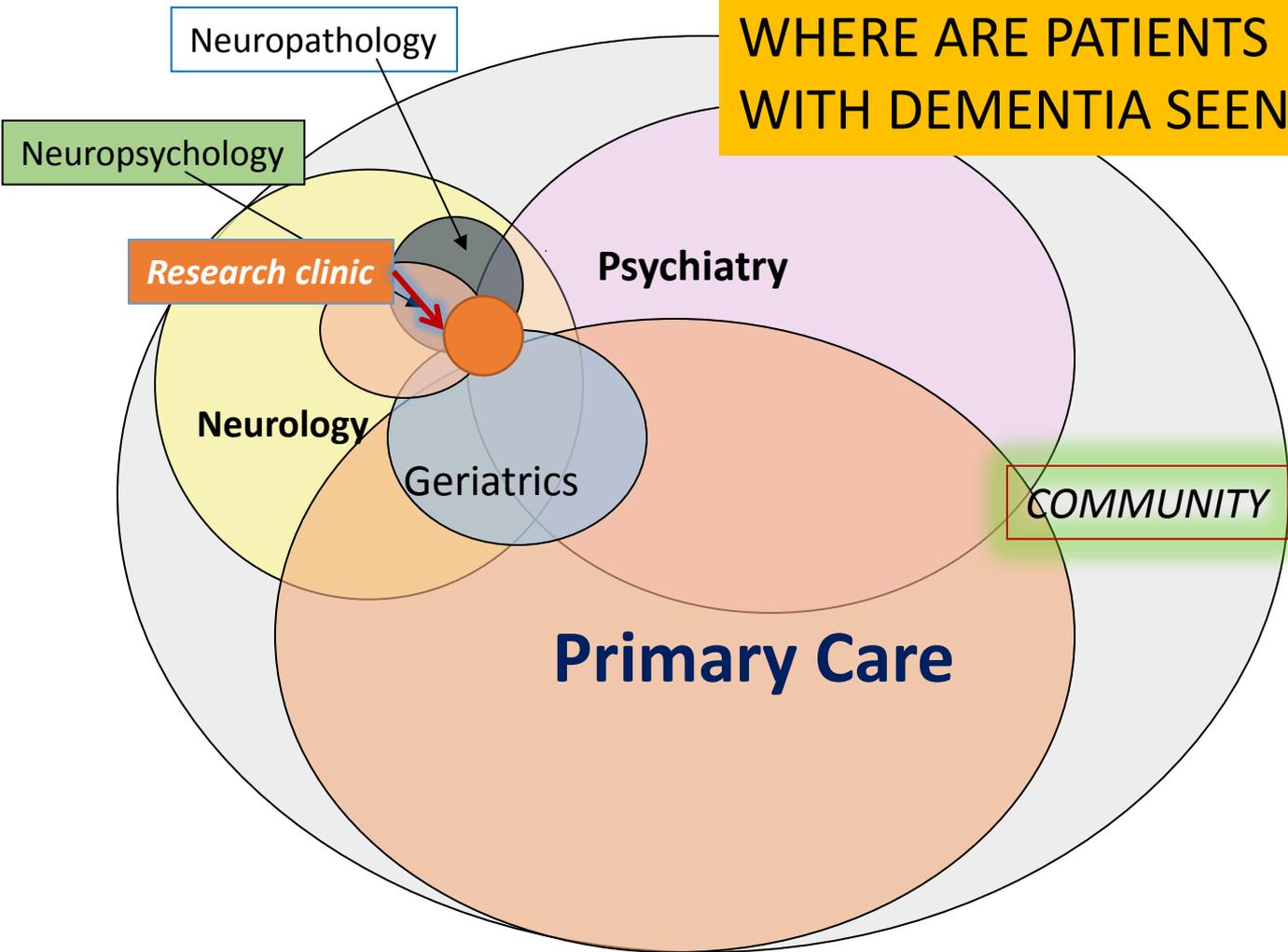
- More education for family caregivers
- Making room for the voices of PLWD and family caregivers

Community engagement & awareness

- Educating medical professionals and community on dementia, caregiving, and resources
- Promoting interactions between PLWD and caregivers
- Better information coming from the doctors and nurses about how to live well with dementia.



WHERE ARE PATIENTS WITH DEMENTIA SEEN?



We need to study all patients, not just ones in research clinic

UT Health Senior Care Model



Conceptual Shift for Palliative Care

Specialist team of doctors, nurses, social workers, chaplains
Focus on quality of life and patient and family preferences



How does the supportive care team help?

- Assess and treat the symptoms of dementia, such as anxiety, trouble sleeping or depression.
- Treat the symptoms of any other health problems.
- Help establish a daily routine for care, help recognize what sets off troubling behavior, and recognize signs of distress.
- Educate as needs change; Support caregivers through stress.
- Avoid unnecessary emergency room visits and hospital stays
- Provide support at all locations and through transitions

Population Studies: SA Heart Studies

Community-based study, ongoing 40 yrs, oversampled 'barrios'
Exceptional diabetes, insulin resistance data

Metabolic Precursors of Hypertension The San Antonio Heart Study

Steven M. Haffner, MD; Heikki Miettinen, MD; Sharon P. Gaskill, MPH; et al

Arch Intern Med. 1996;156(17):1994-2001. doi:10.1001/archinte.1996.00440160106013

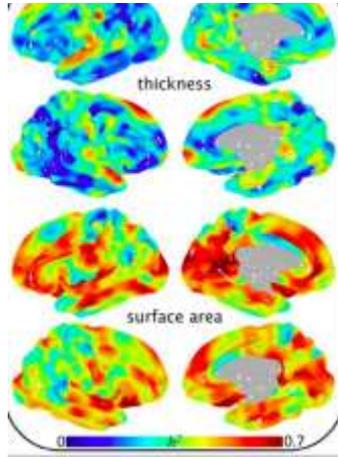


San Antonio Longitudinal Study of Aging

Helen P. Hazuda, Ph.D.
Principal Investigator

- community-based, prospective observational study of 749 individuals who had previously taken part in the San Antonio Heart Study
- elders: aged 65 to 74 years old at SALSA baseline
- 52.6% Mexican American, 47.4% European American
- measures of height, weight, waist circumference and diet soda intake were recorded at each exam phase

Brain Imaging Behav.
2014; 8: 143–152.



<https://markvcid.partners.org/>

NINDS Initiative to identify blood, imaging markers for
Vascular Contributions to Dementia

To Prevent Disease one needs to understand risk factors by studying people BEFORE they become ill



Circulating cortisol and cognitive and structural brain measures

Higher early morning cortisol (STRESS MARKER) associated with lower cortical grey matter volumes, poorer cognition

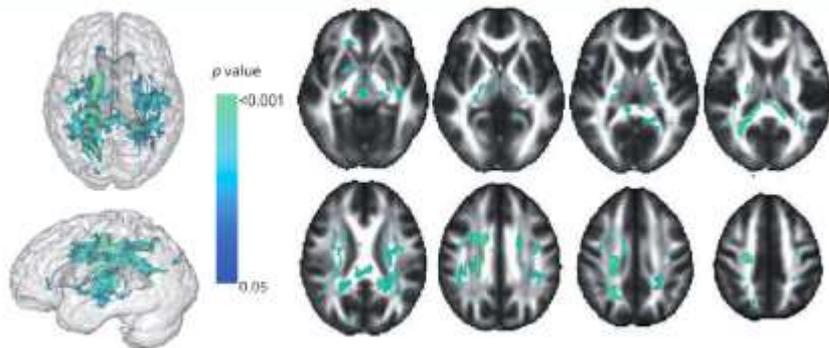
The Framingham Heart Study

PREVENTION

Justin B. Echouffo-Tcheugui, MD, PhD, Sarah C. Conner, MPH, Jayandra J. Himali, PhD, Pauline Maillard, PhD, Charles S. DeCarli, MD, Alexa S. Beiser, PhD, Ramachandran S. Vasan, MD, and Sudha Seshadri, MD

Neurology® 2018;91:e1961-e1970. doi:10.1212/WNL.0000000000006549

Figure 2 Regions of the cerebral white matter in which cortisol (highest tertile vs middle tertile) is associated with decreased fractional anisotropy, people with depression (Center for Epidemiologic Studies Depression Scale score <16 and no depression medications) excluded



About this Attention Score

In the top 5% of all research outputs scored by Altmetric

Mentioned by

- 92 news outlets
- 5 blogs
- 87 tweeters
- 9 Facebook pages
- 1 Google+ user
- 3 Redditors

Correspondence

Dr. Echouffo-Tcheugui
jechouffotcheugui@
bwh.harvard.edu or
echouffotcheugui@
gmail.com





Brain Donation

One donation can provide insight into hundreds of research studies.

[Home](#) » [Clinical Trials](#) » [Brain Donation](#)

When a person donates, they are helping find better ways to diagnose and treat the millions of people living with Alzheimer's disease and related dementias.

Some of the most exciting advances and discoveries come from studying brain tissue. Your help is needed to make this possible.

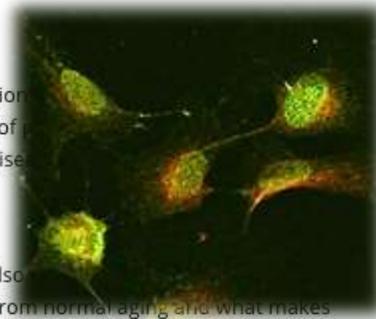
Families receive a definitive diagnosis

Details of the donor's medical history are collected and a careful examination of the brain tissue. A neuropathology report will then be sent to families on the type and levels of brain changes. Family members assess their risks for developing dementia or other neurologic diseases.

Anyone can donate

People who do not exhibit memory loss or other cognitive problems can also donate. Brains without disease help us determine which changes in the brain are from normal aging and what makes

Brain derived neurons



We are available 24 hours a day,
7 days a week to answer your
questions.

Call 210-258-4348

[Free to Family, anywhere in country](#)

[Links to Other Brain Banks](#)

Program to Establish a Neurodegeneration and Study of Aging Registry in San Antonio (PENSAR SanA)





Kevin Bieniek
Brain Bank
Director



Eliana Vasquez
Brain Bank
Coordinator



Jamie Walker
Brain Bank
Co-Director



Leigh Solano
Brain Bank
Histotechnician

Caregiver Support Services Requested

Respite and Recognition of Increased Health and Other Needs

Financial and Material Support (grocery shopping, driving to appointments)

Flexibility in hours, family vacation (at work, classes)

Recognition as caregiver, details of patient (on person, on vehicle, in hospital visits)

Day Activities Centers, Adult Day Care, Day Skills Training Centers (English and Spanish, Stage Specific)

Recreation Programs (Art, Music, Movies, Morgan's Wonderland, Library, Parks, Games, Memory Cafes)

Alicia Trevino Lopez Senior Center type facility for (i) dementia prevention and (ii) dementia friendly times

Volunteer programs for Golfing, Games, Fishing, Special events; intergenerational

Residential group homes for dementia patients, aging in place (safety, home services, telecontact)

Legal Services

Some More Patient Needs

- Insurance-Medicare/Social Security Administration support
- “Promotora” (community health worker) program
- Patient vehicle safety- Coordination of driving assessment, decisions
- Transportation- Availability in extraterritorial jurisdictions outside of current service areas
 - Hwy. 281 north of Marshall Rd. to Comal County Line
 - Alamo Ranch area, far west outside SA city limits within Bexar County
- Training for police, first responders, sales persons, bus drivers
- Reduce isolation, stigma, inform (TV, radio, flyers in library, post office)
- 24/7 Crisis phone line needs to be known

Innovations

- Dementia Friendly Stores (Purple Sign)
- Registry of Persons with Dementia with current and past addresses
- Dementia Friendly Work Environment
- Dementia Friendly Residential Village

Hogeweyk caregivers and house attendants use an in-house currency to help their residents buy groceries at a fully-functional supermarket.



Join us for Dialogue on Dementia at the Tobin Center

Interested in learning more about groundbreaking research on the onset and advancement of dementia? The Biggs Institute and the Alzheimer's Association invite you to join us for Dialogue on Dementia at the Tobin Center on Sunday, Feb. 24.

SOUTH TEXAS ALZHEIMER'S CONFERENCE

Join us for collaboration and discussion on transformational care, research and therapeutics in Alzheimer's disease.

SOUTH TEXAS
ALZHEIMER'S CONFERENCE

Poster Blitz & Panel Discussion



TOPICS

- » Alzheimer's in the Hispanic Population
- » Personalized and Precision Approaches to Dementia Prevention, Diagnosis and Care

February 25-26, 2019 | San Antonio, TX | UTHealthALZ.org

<https://www.tpr.org/post/texas-matters-fight-against-alzheimer-s>

With Special Thanks
to Our Leadership Donors

Any Station Means Charitable Trust

King Family Foundation

Mr. and Mrs. Larry D. Franklin

Dr. and Mrs. William L. Herrick

Fidelity Charitable Gift Fund

Greehey Family Foundation

Keith and Pat Vigeon Orme

Mr. George Cowden

Anonymous

J.M.R. Barker Foundation

The Jesse H. & Susan
Oppenheimer Foundation

Nancy Smith Hurd Foundation

Dr. and Mrs. Ronald K. Calgeard

Mr. Don F. Purman (In Memoriam)
Intercontinental Asset
Management Group, LTD

Mr. and Mrs. Israel Fogiel

Mr. and Mrs. Michael D. Beldon

Charles Schwab Charitable Fund

Mr. and Mrs. Curtis V. Anastasio

Bill and Rebecca Reed

Valero Energy Foundation

Baptist Health Foundation of San Antonio

Dr. and Mrs. Peter T. Frown (In Memoriam)

Mrs. Ann D. Biggs

Mr. and Mrs. Frank S. Moorill

Mr. and Mrs. Jimmy V. Thurmond, Jr.

Mr. and Mrs. James D. Ellis

Mr. and Mrs. David Oppenheimer

Mr. and Mrs. Bartell Zachry, Jr.

Mr. and Mrs. Leonard E. Huber

San Antonio Area Foundation

**Klesse
Foundation**

LeafGuard by Beldon, Inc.

Mary G. Burch

Mr. and Mrs. Ruben M. Escobedo

**The Perry and Ruby Stevens
Charitable Foundation**

Mr. and Mrs. Edward B. Kelley

Mr. and Mrs. Thomas C. Leopold

Mr. and Mrs. Richard W. Evans, Jr.

Mr. and Mrs. Jack E. Gumbler

The O'Kelly-Hemmighaus Foundation

Mr. and Mrs. G. Brian Biggs

Mr. and Mrs. Robert B. Price

Mr. and Mrs. W. Michael Humphreys

The USAA Foundation, Inc.

**Glenn Biggs Institute
for Alzheimer's
& Neurodegenerative Diseases**



UT Health
San Antonio

Mr. and Mrs. Houston H. Harle

The Kronkosky Charitable Foundation

Mr. and Mrs. Jack H. Williams

Sadie Hode

Mr. and Mrs. Gregory Charles King

Estate of Berneice Castella

Mr. and Mrs. Roger R. Hemmighaus

Mrs. G. Craythor

**Robert J. Kleberg, Jr. and Helen C.
Kleberg Foundation**