

# TARCC Scientific Update

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## **TARCC MEMBER INSTITUTIONS**

Baylor College of Medicine | Texas A&M University Health Science Center | Texas Tech University Health Sciences Center

University of North Texas Health Science Center | UT Health San Antonio | UT-Austin Dell Medical School

UT Southwestern Medical Center | UT Health Houston | UT Medical Branch at Galveston | UT Health Rio Grande Valley

# TARCC MEMBER INSTITUTIONS



# TARCC Steering Committee

David Paydarfar, MD

Mitzi Gonzales, PhD

John DeToledo, MD

Kelly Dineley, PhD

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Bob Barber, PhD

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Michael Dobbs, MD

Munro Cullum, PhD (Chair)

UT Austin Dell Medical School

UT Health San Antonio

Texas Tech Health Science Center

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# TARCC May 12, 2022 In-Person Conference

- Focused on TARCC investigators, collaborators, and trainees
- Allowed TARCC grant recipients and their labs to share research via talks & posters
- Keynote by Sterling Johnson, PhD (University of Wisconsin Alzheimer's Disease Research Center)
- 142 attended from educational and medical institutions across Texas
- Reviewed latest findings on aging and dementia from TARCC sites
- Lectures were streamed live on Facebook
- Encouraged introduction and collaborations within and across TARCC

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# TARCC Virtual Conference, Continued

- 53 scientific posters presented by students, fellows, and established scientists. 15 included analysis of TARCC data, samples, or projects.
- Outstanding poster winners:
  - *The Collateral Damage of COVID-19 on People Living with Mild Cognitive Impairment and Dementia*. Presenting Author: **Jonika Tannous, PhD, Data Analyst, Houston Methodist**
  - *TREM2-Induced Activation of Microglia Contributes to Synaptic Resilience in Non-Demented Individuals with Alzheimer's Neuropathology*. Presenting Author: **Anna Fracassi, PhD, Postdoctoral Fellow, UT Medical Branch at Galveston**
  - *Utility of an Actuarial Neuropsychological Method to Diagnose Mild Cognitive Impairment in a Diverse Population*. Presenting Author: **Anne Carlew, PhD, Assistant Professor, UT Southwestern**
  - *A Small Molecule for Improved Survival of Aging-Relevant Neurons from Alzheimer's Disease Patients*. Presenting Author: **Shuaipeng Ma, PhD, Research Scientist, UT Southwestern**
  - *Cross-seeding Controls A $\beta$  Fibril Populations and Resulting Function*. Presenting Author: **Henry Pan, Doctoral Student, UT Austin**

# TARCC Investigator Grants Program (1 of 2)

In 2018, with a mature database and upon recommendations from the EAC, TARCC moved from a cohort surveillance model to a grants-based program in order to support the best science in the state and enhance TARCC data utilization and productivity.

For the 2021 grant awards, a request for proposals (RFP) was issued with applications due December 10, 2021.

- A total of 68 applications were received, representing all TARCC participating institutions.
- Two external (out of state) expert reviewers provided reviews for each application using NIH-style criteria.
- Scientific reviews, rankings, & applications reviewed by the External Advisory Committee.
- \$5,293,896 in new research awards recommended for 6 of the 10 TARCC Member Institutions in this round.

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# TARCC Investigator Grants Program (2 of 2)

Applications Received	Recommended Rewards	Type
40	6	Investigator Initiated
13	5	Junior Investigator
9	0	Collaborative Research Grants
5	2	Postdoc Fellowship Grants
1	0	Predoc Fellowship Grants
<b>68</b>	<b>13</b>	<b>Totals</b>

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# Recommended Grant Projects – Notifications on July 18, 2022 (1 of 3)

## POSTDOCTORAL FELLOWSHIP GRANTS

Robin C. Hilsabeck, PhD – UT Austin Dell Medical School  
*Continuation of TARCC Neuropsychology Fellowship Program*

Laura Lacritz, PhD – UT Southwestern Medical Center  
*TARCC Neuropsychology of Dementia Postdoctoral Fellowship*

## JUNIOR INVESTIGATOR RESEARCH GRANTS

Christian Lobue, PhD – UT Southwestern Medical Center  
*Modulating brain circuitry to treat word retrieval deficits in amnesic MCI*

Jose Moruno-Manchon, PhD – UT Health Science Center at Houston  
*Cerebrovascular senescence in vascular dementia*

Haiyang Yu, PhD – UT Southwestern Medical Center  
*Determine how chaperones regulate TDP-43 liquid-liquid phase separation*

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# Recommended Grant Projects (2 of 3)

## JUNIOR INVESTIGATOR RESEARCH GRANTS, CONTINUED

Timothy Richardson, DO, PhD – UT Health Science Center at San Antonio

*Digital spatial profiling of hippocampal subregions in tauopathies*

Jamie Walker, MD, PhD – UT Health Science Center at San Antonio

*Spatial proteomic analyses of neuropathologic changes in TARCC participants*

## INVESTIGATOR INITIATED RESEARCH GRANTS

Bhavya Shah, MD – UT Southwestern Medical Center

*Focused Ultrasound Delivery of Radiolabeled Nanobodies to Diagnose Tauopathies*

Xiaoyong Bao, PhD – University of Texas Medical Branch at Galveston

*Biogenesis of tRNA-derived RNA Fragments in Alzheimer's Disease: Novel Biomarkers*

Mark Kunik, MD – Baylor College of Medicine

*Precision Recruitment for Precision Medicine*

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# Recommended Grant Projects (3 of 3)

## INVESTIGATOR INITIATED RESEARCH GRANTS, CONTINUED

Chun-Li Zhang, PhD – UT Southwestern Medical Center

*Targeting Microglia for Alzheimer's Disease*

Jose del R. Millan, PhD – UT Austin Dell Medical School

*Closed-Loop Brain Stimulation as a Potential Intervention for Cognitive Decline*

Rodrigo Morales, PhD and Tatiana Barichello, PhD – UT Health Science Center at Houston

*Effect of COVID-19 in AD, PD and associated protein misfolding*

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# All Awarded Grant Projects are Listed on the TARCC Website

<http://www.txalzresearch.org/research/investigator-grant-awards/>

Postdoctoral Fellowship Grants

Junior Investigator Research Grants

Investigator Initiated Research Grants (includes single site and collaborative awards)

All TARCC sites receive funding!

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# SAVE THE DATE!

- TARCC 2023 Symposium – Thursday January 26, 2023 – in Austin at the AT&T Executive Education and Conference Center

Introductory Address - Ronald C. Petersen, MD, PhD (Mayo Clinic)

Keynote: *Exploring Genetic Studies on Human Neurodegenerative Diseases*

Professor Peter St. George-Hyslop, MD, FRCPC, FRS

University of Cambridge Institute for Medical Research

(Keynote sponsored by The University of Texas at Austin's Mulva Clinic for the Neurosciences & The Oskar Fischer Lecture Series)

- Currently plan to have in-person and virtual options
- <http://www.txalzresearch.org/research/symposia/>

TARCC continues to grow in national and international visibility by supporting and promoting scientific progress in the fight against dementia, a proud reflection upon Texas neurodegenerative research.

TARCC has established itself in the field through its scientific contributions and unique statewide collaborative approach.

Need to continue build on the current momentum and ensure future of TARCC.

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# Questions?



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