

TAMEST NEWS

THE OFFICIAL PRINT NEWSLETTER OF THE TEXAS ACADEMY
OF MEDICINE, ENGINEERING, SCIENCE & TECHNOLOGY

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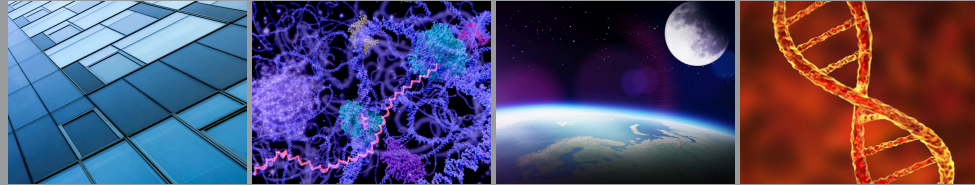
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Join TAMEST in Houston in May for 2023 Conference



TAMEST ★ 2023 ANNUAL CONFERENCE
FORWARD TEXAS >>> **ACCELERATING CHANGE**
May 23-25, 2023 | The InterContinental - Medical Center | Houston, Texas

Members: \$150
Protégés: \$75

Member Institutions: \$250
General: \$500

There is still time to register for the **TAMEST 2023 Annual Conference, Forward Texas: Accelerating Change**, May 23-25, 2023, at The InterContinental Houston - Medical Center in Houston, Texas.

The TAMEST 2023 Annual Conference will gather some of our most celebrated and innovative researchers to examine how science and technology are leading to fundamental changes in society. The cross-disciplinary program will focus on four profound scientific transitions underway: CRISPR gene editing, "big" data science, renewable energy and decarbonization.

A special opening reception will take place the evening of Tuesday, May 23, 2023, in the Morian Hall of Paleontology at the Houston Museum of Natural Science, with guest speaker **Lieutenant General Ross Coffman, Deputy Commanding General, Army Futures Command**.

The TAMEST annual conference is open to the entire research community.

SPEAKERS INCLUDE:



Victor J. Dzau, M.D. (NAM)
President
The National Academy of Medicine



Dirk Smit, Ph.D.
Corporate Chief Scientist
Vice President of Research Strategy
Shell Global



Peter F. Green, Ph.D. (NAE)
Deputy Laboratory Director, Science
and Technology; Chief Research Officer
National Renewable Energy Laboratory



Huda Y. Zoghbi, M.D. (NAM, NAS)
Distinguished Service Professor; Baylor
College of Medicine; Director, Jan and Dan
Duncan Neurological Research Institute



REGISTER TODAY:

TAMEST.org/2023

TAMEST

2023 Board of Directors

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Baylor College of Medicine

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University of Houston

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Texas Tech University

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UT Southwestern Medical Center

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UT Southwestern Medical Center

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Roderic Pettigrew, M.D., Ph.D.

*Texas A&M Health
Texas A&M University
Houston Methodist*

Marlan O. Scully, Ph.D.

Texas A&M University



Photo of TAMEST 2022 Board of Directors at TAMEST 2022 Annual Conference in San Antonio, Texas.

TAMEST Welcomes New Board Leadership

At its January 24, 2023 meeting, the TAMEST Board of Directors officially appointed **Brendan Lee, M.D., Ph.D. (NAM), Baylor College of Medicine, as President** and **Ganesh Thakur, Ph.D. (NAE), University of Houston, as Vice President**. Both will serve a two-year term.

Dr. Lee is the Professor and Chair of Molecular and Human Genetics and Robert and Janice McNair Endowed Chair in Molecular and Human Genetics at Baylor College of Medicine. He is a member of the National Academy of Medicine and has previously served as TAMEST Vice President, TAMEST Treasurer and Chair of the Edith and Peter O'Donnell Award in Medicine Subcommittee. Dr. Lee received the 2009 Edith and Peter O'Donnell Award in Medicine and is the first past recipient to be elected President of TAMEST.

"It is an honor, and I look forward to continuing to expand TAMEST's impact in Texas and our work to define and support rising star researchers in our state," **said Dr. Lee**. "We also really hope to be a source of expertise to help partner with stakeholders to encourage innovation, collaboration, talent cultivation and economic growth in our state."

Dr. Thakur is the Distinguished Professor of Petroleum Engineering at the Cullen College of Engineering and Director for Energy Industry Partnerships at University of Houston. He is a member of the National Academy of Engineering and The National Academy of Inventors. He has previously served as TAMEST Treasurer and TAMEST Treasurer-elect.

"I am privileged to become Vice President of TAMEST and love that I get to work closely with other prominent research leaders across the state and the world to promote research in medicine, engineering, science, and technology, developing the next generation of scientific leaders within the state of Texas and across the world," **said Dr. Thakur**.

The TAMEST Board President and Vice President help coordinate and guide the TAMEST Board of Directors in planning strategy, programs and communications.

In addition, the Board also welcomed two new board members: **Selda Gunsel, Ph.D. (NAE), Shell Global Solutions** and **Bonnie Bartel, Ph.D. (NAS), Rice University**. Dr. Gunsel will serve as Treasurer-Elect of TAMEST.

The TAMEST Board gave a special thanks to **2021-2022 Board President David E. Daniel, Ph.D. (NAE), The University of Texas at Dallas**, who will serve as TAMEST Past President on the Board for the next two years. TAMEST also recognized the service of retiring members **Richard Dixon, D.Phil. (NAS, FRS), University of North Texas** and **2021-2022 Past President Amelie Ramirez, Dr.P.H. (NAM), UT Health San Antonio**, who has served on the Executive Committee the last six years.

TAMEST Board of Directors by the Numbers

15

Total
Members

13

Institutions
and
Companies
Represented

5

Members
from Each
National
Academy

3

Past
O'Donnell
Awards
Recipients

TAMEST Welcomes Six New Member Institutions in 2023



Working together to work wonders.

TAMEST is proud to welcome six new member institutions in 2023.

The new institutions include **Baylor University, Texas Tech University Health Sciences Center, The University of North Texas Health Science Center, The University of Texas at El Paso, The University of Texas Medical Branch at Galveston, and The University of Texas Rio Grande Valley.**

TAMEST member institutions are vital partners in fulfilling TAMEST's mission. Their support strengthens and expands our efforts to foster the next generation of researchers and innovators, increases collaboration across disciplines and addresses critical issues that are important to the state.

The addition of these new institutions is thanks to top-tier recruitment to Texas and an increasing number of scientists and researchers elected to the National Academies across the state. The TAMEST Board of Directors has also recently expanded member institution eligibility to include research universities designated as Carnegie R1 and medical centers designated Carnegie Special Focus Four-Year Research Institutions in the state.

"We work to lift up all Texas research and innovation to help recruit and retain top talent and draw awareness to the incredible research at our research universities, medical centers and companies and research institutes in Texas," said **TAMEST 2023 Board President Brendan Lee, M.D., Ph.D. (NAM), Baylor College of Medicine.**

"TAMEST's unique interdisciplinary model has become an effective recruitment tool for research and industry in our state. Welcoming additional top-tier research institutions to our organization helps amplify our work and mission and better serve our community."

The six new member institutions will officially be welcomed at the opening reception of the **TAMEST 2023 Annual Conference** on May 23, 2023, in Houston, Texas.



TEXAS ACADEMY OF MEDICINE,
ENGINEERING, SCIENCE &
TECHNOLOGY



335+
Members



22
Member Institutions



50+
Industry Members



9
Nobel Laureates

TAMEST 2022 Conference Summary Available for Download

» FORWARD TEXAS IMPERATIVES FOR HEALTH TAMEST 2022 ANNUAL CONFERENCE CONFERENCE SUMMARY



June 20-22, 2022 | The Westin Riverwalk | San Antonio, Texas

TAMEST Texas Academy of Medicine,
Engineering, Science & Technology

Our **TAMEST 2022 Annual Conference: Forward Texas – Imperatives for Health**, explored how Texas can build the vibrant, healthy communities of tomorrow and addressed topics like health care, education, infrastructure and infectious disease.

30+ SPEAKERS AND PANELISTS

35+ SPONSORS

45+ TAMEST PROTÉGÉS

250+ REGISTRANTS

Download a copy of our **TAMEST 2022 Conference Summary** at TAMEST.org/2022.

Dr. Florencia McAllister Named Recipient of the Mary Beth Maddox Award and Lectureship



Florencia McAllister, M.D.
Associate Professor
The University of Texas
MD Anderson Cancer Center

TAMEST is pleased to announce **Florencia McAllister, M.D., The University of Texas MD Anderson Cancer Center**, as the recipient of the **2023 Mary Beth Maddox Award and Lectureship** in cancer research. She was chosen for her seminal discoveries at the intersection of microbes, the immune system and pancreatic cancer, leading to insights into early detection, prevention and therapeutic strategies to fight the disease.

The Mary Beth Maddox Award and Lectureship recognizes women scientists in Texas bringing new ideas and innovations to the fight against cancer. It was established in 2022 in honor of Mary Beth Maddox, former Executive Director of TAMEST, who passed away after a valiant battle with pancreatic cancer.

Dr. McAllister is an Associate Professor in the Department of Clinical Cancer Prevention at MD Anderson. Her breakthrough discovery characterized the microbiomes present within pancreatic tumors, finding unique microbes and immune cells in long-term survivors. Her work is opening the door to a novel angle of intervention for pancreatic cancer and holds great promise for improving the care and treatment of patients with cancer.

"It was my greatest pleasure to nominate Dr. Florencia McAllister for the Mary Beth Maddox Award and Lectureship, as her groundbreaking work on microbes as tumor modulators have played a major role in illuminating the role of the microbiome in cancer and in translating these insights into novel therapeutic trials," **said Nominator and TAMEST Member Ronald A. DePinho, M.D. (NAM, NAS), MD Anderson.** "She is a true phenomenon and leader in the field of pancreatic tumor microenvironment, and I anticipate that her creative science will lead to new treatments and real hope for patients suffering from this dreaded disease. I know that our beloved Mary Beth Maddox would be thrilled with the recipient of this coveted award named in her honor."

Dr. McAllister will be officially presented with the award on the first full day of the **TAMEST 2023 Annual Conference: Forward Texas – Accelerating Change**, on May 24, 2023, at The InterContinental – Medical Center in Houston, Texas. She will also give a series of lectures at the four NIH National Cancer Institute Designated Cancer Centers in Texas.



2024 Edith and Peter O'Donnell Awards

Nominations Close April 30



Help TAMEST recognize the next generation of Texas researchers:

TAMEST.org/odonnell-awards

TAMEST Kicks Off 2022 Mary Beth Maddox Lecture Series in Houston, Dallas



Last fall, TAMEST teamed up with the **Harold C. Simmons Comprehensive Cancer Center at UT Southwestern Medical Center**, **The University of Texas at MD Anderson Cancer Center** and the **Dan L Duncan Comprehensive Cancer Center at Baylor College of Medicine** to host a series of lectures with **2022 Mary Beth Maddox Award and Lectureship Recipient Yun Nancy Huang, Ph.D., Texas A&M Health**. Dr. Huang was chosen for the **2022 Mary Beth Maddox Award and Lectureship** for contributing prominently to the field of cancer epigenetics, the study of heritable changes to molecular processes affecting the body that influence the flow of information between the DNA of cancer cells and their gene expression patterns. She was recognized on stage at the TAMEST 2022 Annual Conference in San Antonio where she received her award and honorarium before presenting her research on the conference stage to the greater research community. She then presented her research in Houston on September 28, 2022 and in Dallas on November 15, 2022. Both presentations were followed by a networking reception.



TEXAS' RISING STAR RESEARCHERS

2023 O'Donnell Awards Recipients

MEDICINE



Jennifer Wargo, M.D.
The University of Texas
MD Anderson Cancer Center

ENGINEERING



Jamie Padgett, Ph.D.
Rice University

BIOLOGICAL SCIENCES



James J. Collins III, Ph.D.
UT Southwestern
Medical Center

PHYSICAL SCIENCES



Erez Lieberman Aiden, Ph.D.
Baylor College
of Medicine

TECHNOLOGY INNOVATION



Chengbo Li, Ph.D.
ConocoPhillips

Understanding the microbiome's effect on cancer treatment. Building multi-hazard resilience models to protect infrastructure from extreme weather-related events. Identifying new treatment paths for parasitic worms devastating the developing world. Mapping and understanding the architecture of the human genome and its potential for curing disease. Innovating new seismic survey technology for the oil and gas industry that leaves less of an environmental impact and increases efficiency.

These are the discoveries by Texas' rising stars in research being honored with the **2023 Edith and Peter O'Donnell Awards** by TAMEST. Each award includes a \$25,000 honorarium and an invitation to present at the TAMEST 2023 Annual Conference, May 23-25, 2023, in Houston, Texas. Since 2006, 15 O'Donnell Awards recipients have been elected to one of the National Academies, and three have been elected to more than one academy. Videos of the 2023 Edith and Peter O'Donnell Awards Recipients can be found on the TAMEST website at TAMEST.org/odonnell-awards/2023.

2023 Edith and Peter O'Donnell Awards Committee Chair

"The Edith and Peter O'Donnell Awards aim to identify rising stars in Texas research to support their careers moving forward, and there is no question that this year's recipients are incredible researchers who epitomize the Texas can-do spirit."

- Ann Beal Salamone (NAE), Rochal Industries

Biological Sciences: James J. Collins III, Ph.D., UT Southwestern Medical Center

"Dr. Collins is a bold visionary who has not only identified new therapeutic avenues against schistosomes by focusing instead on the eggs and reproduction, but he has uncovered new paradigms in cell signaling and developmental biology as well."

- Nominator David J. Mangelsdorf, Ph.D. (NAS)
UT Southwestern Medical Center

Medicine: Jennifer Wargo, M.D., The University of Texas MD Anderson Cancer Center

"From the clinic to the lab, Dr. Wargo has dedicated her life to cancer patients and to figuring out how treatment with immunotherapy and other forms of cancer therapy can improve outcomes."

- Nominator James P. Allison, Ph.D. (Nobel Laureate, NAM, NAS)
The University of Texas MD Anderson Cancer Center

Physical Sciences: Erez Lieberman Aiden, Ph.D., Baylor College of Medicine

"Dr. Aiden doesn't just use genetics, he uses computation, physics and other specialties to tackle these big questions of how the human genome folds and fits inside a single cell nucleus and how manipulating that process leads to potential clinical application."

- Nominator Brendan Lee, M.D., Ph.D. (NAM)
Baylor College of Medicine

Engineering: Jamie Padgett, Ph.D., Rice University

"Dr. Padgett gets that you can't look at everything in silos, especially when it comes to infrastructure systems. You must look at the interdependencies and come up with a multi-hazard approach, which makes the work much more complex."

- Nominator Reginald DesRoches, Ph.D. (NAE), Rice University

Technology Innovation: Chengbo Li, Ph.D., ConocoPhillips

"When you look at the research in the geophysical imaging, it is very clear that Dr. Li's work is redefining the industry standard for seismic surveying."

- Nominator Jie Zhang, Ph.D. (NAE), GeoTomo LLC

Edith and Peter O'Donnell Awards by the Numbers

5

Award
Categories

15

Past Recipients Elected
into a National Academy

70+

Rising Star
Researchers Honored

\$1.75M+

Total Amount
Awarded to Recipients

5

TAMEST Welcomes Four New NAE Members

TAMEST congratulates four new members on their election to the National Academy of Engineering (NAE).

The group includes the first faculty member from **The University of Texas Rio Grande Valley (UTRGV)** to be elected to a National Academy. **New TAMEST Member Karen Lozano, Ph.D. (NAE), UTRGV**, was also a speaker at one of TAMEST's first summits in 2007.

TAMEST will welcome these and other new 2023 Texas-based National Academy members at the opening reception of the TAMEST 2024 Annual Conference in Austin, Texas.

Meet our new NAE members:



Leo H. Chiang, Ph.D. (NAE)
Dow Chemical Co.

For contributions to process data analytics and its applications to process monitoring and for continuous improvement in the chemical industry



Benny D. Freeman, Ph.D. (NAE)
The University of Texas at Austin

For the development of polymeric membranes for gas separation, ion transport, and gas and water purification



Karen Lozano, Ph.D. (NAE)
The University of Texas Rio Grande Valley
Former 2007 TAMEST Summit Speaker

For contributions to nanofiber research and commercialization, and mentoring of undergraduate students from underserved populations



Vanessa E. Wyche (NAE)
NASA Johnson Space Center

For leadership of NASA's Johnson Space Center, enabling a commercial space economy and future Moon and Mars missions

TAMEST Hosts Two-Part Natural Hazards Summit

TAMEST
NATURAL
HAZARDS
SUMMIT

Responding to and Mitigating the Impacts



200+

REGISTRANTS

35+

SPEAKERS AND PANELISTS

The **TAMEST Natural Hazards Summit: Responding to and Mitigating the Impacts** held Part II of its two-part series on Monday, May 16, 2022, presented by Texas Tech University's National Wind Institute.

Nearly 75 experts convened from across the United States and Canada at Texas Tech's International Cultural Center in Lubbock, Texas for the discussions. The summit examined natural hazards' warnings, response, and engineering aspects, with a focus on tornadoes, thunderstorms, drought and hail.

Part I took place virtually on October 19, 2021, via Zoom. The session was presented by the Hurricane Resilience Research Institute (HuRRI) at the University of Houston.

Both programs examined what the state needs to know and do to prepare for future natural disasters, unprecedented weather events and global pandemics, including response, recovery and mitigation of the impacts.

"We have improved in technology related to tornado tracking, to collecting data in the field and to implementation in the field," said **Summit Co-Chair Kishor Mehta, Ph.D. (NAE), Texas Tech University**. "At the same time, we still have a long way to go in terms of implementing the things that we have learned while also dealing with human behavior. Human behavior is an area we really need to focus on moving forward."

View summit videos and slides:
TAMEST.org/natural-hazards-summit

TAMEST Hosts Event at University of Houston

On Monday, September 26, 2022, TAMEST welcomed nearly 70 guests from across the Houston area to attend a reception with the **University of Houston (UH)**.

The dinner and networking event included remarks from **UH's President and Chancellor of the University of Houston System, Renu Khator, Ph.D.**; **TAMEST President Brendan Lee, M.D., Ph.D. (NAM)**, Baylor College of Medicine and **TAMEST Vice President Ganesh Thakur, Ph.D. (NAE)**, University of Houston.



Lyda Hill's '80 Acts of Kindness' Donates to TAMEST



In October 2022, Lyda Hill Philanthropies donated \$80,000 to TAMEST as part of their "80 Acts of Kindness" campaign. In honor of Lyda Hill's 80th birthday, the campaign gave gifts to 80 separate non-profits across the country.

The donation has directly supported operational costs for TAMEST, including important programming supporting the next generation of promising researchers in the state, like The Mary Beth Maddox Award and Lectureship and Protégé Program. We are incredibly grateful for their steadfast support.

TAMEST Member Profiles

TAMEST profiles one of its members or affiliates in each issue of its digital newsletter.
See all TAMEST news and updates and sign up for the digital newsletter at TAMEST.org/news.

Industrial Innovation:

"In the oil industry or any industry in general, **if you can apply new science and new technology together, good things happen**. We have been able to do that in oilfields, and this provides new insights into earth science and never-ending opportunities to learn."



Oliver Mullins, Ph.D. (NAE), SLB
2024 Edith and Peter O'Donnell Awards Committee Chair

TAMEST Protégé Program:

"**The TAMEST Protégé Program sustains a pipeline of rising talent that is crucial in cultivating the future of research and innovation in our state.** It's important for early and mid-career researchers to understand that it is not impossible to become a member of the National Academies."



Francisco G. Cigarroa, M.D. (NAM), UT Health San Antonio
Former TAMEST Board President

TAMEST Mission:

"**I am the first President of TAMEST that is a former Edith and Peter O'Donnell Awardee**, and as such, I am literally a product of TAMEST and the manifestation of its vision and mission."



Brendan Lee, M.D., Ph.D. (NAM)
Baylor College of Medicine
TAMEST Board President; 2009 O'Donnell Award Recipient in Medicine

Natural Hazards:

"We are largely limited to how we **manage ourselves and our infrastructure in the face of uncertainty** and natural variability in the environment."



Danny Reible, Ph.D. (NAE)
Texas Tech University
TAMEST Natural Hazards Summit Committee Member

Research Interests:

"**What makes me most passionate is when I understand something that I didn't understand before and that no one understood before.** I love knowing the answer, understanding its application and where it is going."



Elaine Oran, Ph.D. (NAE)
Texas A&M University

The Edith and Peter O'Donnell Awards:



Van Nguyen Truskett, Ph.D.
The University of Texas at Austin

2016 O'Donnell Award Recipient in Technology Innovation

"**To be recognized as a 'rising star,' means you are known as an expert or leader in your field, but the nuance in it is a responsibility to pay it forward.** That opens up opportunities to share yourself as well as to learn and collaborate with people in ways that you have not been aware of before."

Water Management:

"**I am extremely curious about understanding how systems function** and how we can adapt water management to address droughts and floods and many other challenges."



Bridget R. Scanlon, Ph.D. (NAE)
The University of Texas at Austin

Academic and Industry Partnerships:

"**I believe collaboration between industry and academia goes like a 'hand and glove'** and is key to nurturing informed innovation and growing technology that has a high chance of success."



Ganesh C. Thakur, Ph.D. (NAE)
University of Houston
TAMEST Board Vice President

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tamest@austin.utexas.edu

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512.471.3823

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Upcoming Deadlines and Events:

April 28, 2023

2023 TAMEST Protégé
Poster Challenge Deadline
[TAMEST.org/protége-
program](https://TAMEST.org/protége-program)

April 30, 2023

2024 Edith and Peter
O'Donnell Awards
Nomination Deadline
[TAMEST.org/odonnell-
awards](https://TAMEST.org/odonnell-awards)

May 23-25, 2023

TAMEST 2023 Annual Conference
Forward Texas: Accelerating
Change
Houston, Texas
TAMEST.org/2023

February 5-7, 2024

TAMEST 2024 Annual
Conference: Artificial
Intelligence and Machine
Learning, Austin, Texas
Save the Date

About TAMEST

Texas Academy of Medicine,
Engineering, Science & Technology

TAMEST was co-founded in 2004 by the Honorable Kay Bailey Hutchison and Nobel Laureates Michael S. Brown, M.D., and Richard E. Smalley, Ph.D. With more than 335 members and 22 member institutions, TAMEST is composed of the Texas-based members of the three National Academies (National Academy of Medicine, National Academy of Engineering and National Academy of Sciences), the Royal Society and the state's 9 Nobel Laureates. We bring together the state's brightest minds in medicine, engineering, science and technology to foster collaboration, and to advance research, innovation and business in Texas.

TAMEST's unique interdisciplinary model has become an effective recruitment tool for top research and development centers across Texas. Since our founding, more than 275 TAMEST members have been inducted into the National Academies or relocated to Texas.



TAMEST recognizes members of the Founders of the Endowment and the Legacy Circle, whose extraordinary commitment ensures sustainable funds to continue the mission of promoting excellence in science and technology.

Founders of the Endowment

Anadarko Foundation • AT&T • BNSF Foundation • ConocoPhillips • Energy Future Holdings • Edith and Peter O'Donnell • Temple-Inland • The USAA Foundation

Legacy Circle

The Eugene McDermott Foundation