

# TAMEST NEWS

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

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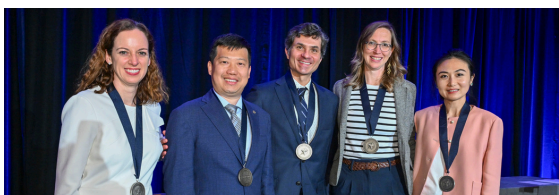
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## TAMEST 2025 Annual Conference a Success



The **TAMEST 2025 Annual Conference: Transformational Breakthroughs** took place February 4-6, 2025, at the Westin Irving Convention Center at Las Colinas in Irving, Texas.

The conference had high registration and record-breaking sponsorship levels including presenting sponsors Breyer Capital and Lyda Hill Philanthropies. It explored some of the most disruptive breakthroughs in science and technology set to change our way of life in the coming years.

Speakers examined game-changing advancements in materials science and nanotechnology, space exploration, regeneration and synthetic biology, energy transition and more.

### CONFERENCE STATISTICS

35 SPEAKERS AND PANELISTS  
33 SPONSORS  
63 TAMEST PROTÉGÉS NOMINATED  
43 POSTER CHALLENGE PARTICIPANTS  
388 REGISTRANTS



**VIEW PHOTOS  
AND SLIDES:**

**TAMEST.org/2025**

# TAMEST

## 2025 Board of Directors

### Honorary Chair

**The Honorable Kay Bailey Hutchison**

*Former United States Senator  
Former United States Ambassador  
to NATO*

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*University of Houston*

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*Baylor College of Medicine*

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*Southwest Research Institute  
The University of Texas at San Antonio*

**Roderic Pettigrew, M.D., Ph.D. (NAM, NAE)**

*Texas A&M University  
Houston Methodist Hospital*

**Kenneth S. Ramos, M.D., Ph.D. (NAM)**

*Texas A&M Health*

**Marlan O. Scully, Ph.D. (NAS)**

*Texas A&M University*

## TAMEST Board of Directors Appoints New Leadership at February Meeting



The TAMEST Board of Directors officially appointed **Ganesh Thakur, Ph.D. (NAE), University of Houston**, as Board President and **Cheryl Lyn Walker, Ph.D. (NAM), Baylor College of Medicine**, as Board Vice President at their February 2025 meeting. Both will serve a two-year term.

"I am honored to become President of TAMEST and love the collaborative spirit of the organization, which allows prominent research leaders across the state to come together to deliberate and support research in medicine, engineering, science and technology," **said Dr. Thakur.**

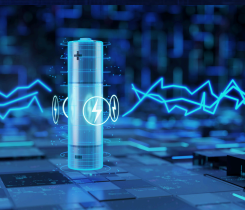
The TAMEST Board President and Vice President help coordinate and guide the TAMEST Board of Directors in planning strategy, programs and communications. The Board also welcomed three new members in 2025: **Stephen A. Fuselier, Ph.D. (NAS), Southwest Research Institute**, **Duoja "DJ" Pan, Ph.D. (NAS), UT Southwestern Medical Center** and **Kenneth S. Ramos, M.D., Ph.D. (NAM), Texas A&M Health.**

"More than ever, it is important to take a multi-disciplinary and multi-institutional approach to science and research in our state," **said Dr. Walker.** "I am in constant awe of the innovative and life-changing research taking place here. It is an honor to support it any way I can."

The TAMEST Board also recognizes and thanks **David E. Daniel, Ph.D. (NAE), The University of Texas at Dallas**, who has served on the Executive Committee for the last six years and retired from the Board this year. Other 2025 retired board members include **Helen Piwnica-Worms, Ph.D. (NAM, NAS), The University of Texas MD Anderson Cancer Center**, who served as Secretary since 2020; Board Member **Chau-Chyun Chen, Sc.D. (NAE), Texas Tech University**; and Board Member **José N. Onuchic, Ph.D. (NAS), Rice University.**

### Save the Date:

[TAMEST.org/2026](https://TAMEST.org/2026)



**TAMEST** ★ 2026 ANNUAL CONFERENCE  
**CONFRONTING  
CLIMATE CHANGE**

**February 2-4, 2026 | Kimpton Santo Hotel | San Antonio, Texas**



# Lyda Hill and Lyda Hill Philanthropies Award \$3 Million to Texas Researchers to Accelerate High-Risk, High-Impact Ideas

The Hill Prizes, funded by Lyda Hill Philanthropies, recognize and advance top Texas innovators and researchers whose work could have a significant impact on science and society. The prizes are selected by a committee of TAMEST members who identify and recognize exceptional innovators by providing seed funding to advance groundbreaking science, highlighting Texas as a premier destination for world-class research.

Each 2025 Hill Prizes recipient received \$500,000 for their winning proposal. In addition, at least \$1 million in discretionary research funding will be allocated by Lyda Hill Philanthropies on an ad hoc basis to highly ranked applicants and finalists not selected as recipients.

**Kenneth M. Hargreaves,  
D.D.S., Ph.D.**  
UT Health San Antonio

*for developing non-opioid analgesics, also known as pain killers, to reduce the use of opioids and prevent drug addiction*



**Peter J. Hotez,  
M.D., Ph.D. (NAM)**  
Baylor College of Medicine

*for creating a critical response to escalating health risks intensified by climate disasters through The Texas Virosphere Project*



**Joan Frances Brennecke,  
Ph.D. (NAE)**  
The University of Texas at Austin

*for developing advanced, stable and energy-efficient membrane technology to separate olefins from paraffins*

Co-PI: Benny D. Freeman, Ph.D. (NAE),  
The University of Texas at Austin



**David J. Mangelsdorf,  
Ph.D. (NAM, NAS)**  
UT Southwestern Medical Center

*for exploring a novel vulnerability in the signaling pathway that governs soybean cyst nematode (SCN) infection in soybeans*

Co-PI: Steven A. Kliewer, Ph.D. (NAS),  
UT Southwestern Medical Center



**Robert De Lorenzo, M.D.**  
EmergenceMed LLC

*for addressing longstanding issues in airway management for emergency, critical care and surgical settings*

Co-PI : R. Lyle Hood, Ph.D., The University of Texas at San Antonio (not pictured)



**James Chelikowsky, Ph.D.**  
The University of Texas at Austin

*for his innovative approach to designing and discovering permanent magnets that do not rely on rare-earth materials*

Co-PI: J. Ping Liu, Ph.D., The University of Texas at Arlington (not pictured)



## Join TAMEST for an Information Session on the 2026 Hill Prizes



Join TAMEST for an information session on the Hill Prizes, funded by Lyda Hill Philanthropies, on Tuesday, April 15, 2025, from 10 a.m.–11 a.m. CT via Zoom to learn more about the prizes, application process and selection criteria. Applications for the 2026 Hill Prizes will open on May 1, 2025.



**LEARN MORE:** [TAMEST.org/hill-prizes](https://TAMEST.org/hill-prizes)



# TEXAS' RISING STAR RESEARCHERS

## 2025 O'Donnell Awards Recipients

The Edith and Peter O'Donnell Awards showcase the best and brightest in Texas research, whose creative work could have a lasting impact on our lives. The awardees are rising stars in their field, all within 15 years of their first faculty appointment or 25 years of their first private sector appointment. Their work meets the highest standards of science, and the paths to their discoveries show immense ingenuity and imagination. Each award includes a \$25,000 honorarium and an invitation to present at TAMEST's Annual Conference each year. Since 2006, 16 O'Donnell Awards recipients have been elected to one of the National Academies and five have been elected to multiple academies.



### MEDICINE

**Lauren Averett Byers, M.D.**

**The University of Texas MD Anderson Cancer Center**  
*for identifying novel therapeutic strategies and making fundamental discoveries related to small cell lung cancer*

### ENGINEERING

**Yan Yao, Ph.D.**

**University of Houston**  
*for creating environmental and sustainable solutions for lithium-ion battery technology*

### BIOLOGICAL SCIENCES

**Ilya J. Finkelstein, Ph.D.**

**The University of Texas at Austin**  
*for improving the safety and efficacy of gene editing and understanding the mechanisms of DNA repair to potentially cure diseases*

### PHYSICAL SCIENCES

**Caitlin M. Casey, Ph.D.**

**The University of Texas at Austin**  
*for discovering the most distant and massive galaxies that have reshaped our understanding of early Universe star formation and supermassive black holes*

### TECHNOLOGY INNOVATION

**Faye Liu, Ph.D.**

**RevoChem LLC**  
*for pioneering geochemical fingerprinting technology to optimize energy production processes thousands of feet below the Earth's surface*



## 2026 Edith and Peter O'Donnell Awards



**Help celebrate 20 years of recognizing rising stars in Texas:**  
**Nominations Open Through April 30**  
**[TAMEST.org/odonnell-awards](https://TAMEST.org/odonnell-awards)**

# TAMEST Gives Kay Bailey Hutchison Distinguished Service Award to Lyda Hill and Lyda Hill Philanthropies



TAMEST announced **Lyda Hill** and **Lyda Hill Philanthropies** as the Kay Bailey Hutchison Distinguished Service Award recipients. TAMEST recognized Lyda Hill and her team at the opening reception of the TAMEST 2025 Annual Conference for empowering and enabling groundbreaking research in science and nature that profoundly impacts society.

Lyda Hill, a successful businesswoman and world-renowned philanthropist, believes science can solve many of the world's most challenging issues and has chosen to donate all of her estate to philanthropy and scientific research.

## 2025 Mary Beth Maddox Award and Lectureship Recipient Presents at TAMEST Conference



**Gerta Hoxhaj, Ph.D., Children's Medical Center Research Institute at UT Southwestern (CRI)**, was named as the recipient of the 2025 Mary Beth Maddox Award and Lectureship and officially honored at the TAMEST 2025 Annual Conference.



She was chosen for her work in cancer metabolism and revealing new mechanisms crucial for the growth and survival of cancer cells. The Mary Beth Maddox Award and Lectureship recognizes women scientists in Texas bringing new ideas and innovations to the fight against cancer.

## TAMEST Celebrates 20 Years of Innovation and Impact at Pegasus Park



On Tuesday, September 3, TAMEST gathered its members, research institution leaders and others from the research community to attend a special 20th Anniversary Reception and networking event at Pegasus Park in Dallas. The evening featured an on-stage conversation with **Former United States Senator, The Honorable Kay Bailey Hutchison**, then-TAMEST Board President **Brendan Lee, M.D., Ph.D. (NAM)**, Baylor College of Medicine and **UT Southwestern Medical Center President Daniel K. Podolsky, M.D. (NAM)**, commemorating the 20th anniversary of TAMEST.

## TAMEST Annual Fund Raises Record Amount in 2024 Fiscal Year

RECORD-BREAKING YEAR

**\$80,000+**  
**RAISED**

[TAMEST.ORG/SUPPORT](https://tamest.org/support)

Thanks to the generosity of TAMEST members and supporters, TAMEST raised more than \$80,000 in its 2024 annual fund campaign — a record-breaking achievement.

TAMEST is especially grateful to renowned innovator, co-inventor of Ethernet and internet pioneer, **TAMEST Member Bob Metcalfe, Ph.D. (NAE), The University of Texas at Austin**, for a generous gift of \$25,000 to support TAMEST's National Academies Advancement Initiative.

"TAMEST's efforts help ensure that we're not only recognizing the already-prominent figures in science, but also those whose essential work might otherwise go unnoticed," said **Dr. Metcalfe**. "This is crucial for a thriving scientific community in Texas."

The funds from this year's annual fund campaign will be used to advance three key initiatives at TAMEST:

- **NASEM Advancement Initiative:** strategically identify top-tier candidates and help them be nominated to the National Academies
- **Mary Beth Maddox Award and Lectureship:** continue investing in the program, allocating additional staff resources and incorporating improved software to make the nomination process more streamlined
- **Protégé Program:** offer Protégés highly-discounted registration to the TAMEST annual meeting

# TAMEST Congratulates 14 Texans Elected to NAE



TAMEST welcomes 11 new members and congratulates three current members on their election to the National Academy of Engineering (NAE) in 2025.

Of the 14 new NAE members from Texas, four are past TAMEST Protégés, two have served as TAMEST conference co-chairs and two are past speakers at the TAMEST annual conference.

- **Samuel Achilefu, Ph.D. (NAM, NAE)**, UT Southwestern Medical Center\*
- **Vanderlei Salvador Bagnato, Ph.D. (NAE, NAS)**, Texas A&M University\*
- **Osvaldo A. Bascur, Ph.D. (NAE)**, OSB Digital LLC
- **Rodney D.W. Bowersox (NAE)**, Ph.D., Texas A&M University\*\*
- **Lisa Brannon-Peppas, Ph.D. (NAE)**, PeppChem Consulting
- **Patrick Chapman, Ph.D. (NAE)**, Stormentum, Inc.
- **Denise C. Johnson (NAE)**, Caterpillar Inc.
- **Lydia E. Kavraki, Ph.D. (NAM, NAE)**, Rice University\* \*\*
- **Dale E. Klein, Ph.D. (NAE)**, The University of Texas at Austin
- **Donald Mark Lipkin, Ph.D. (NAE)**, Texas A&M University\*\*
- **Karen McKee (NAE)**, ExxonMobil Product Solutions Co.
- **Mark Papermaster (NAE)**, Advanced Micro Devices
- **Ellen M. Rathje, Ph.D. (NAE)**, The University of Texas at Austin\*\*
- **Jim Wiethorn, Ph.D. (NAE)**, International Crane & Construction Safety Solutions LLC

\*Current TAMEST Member  
\*\*Past TAMEST Protégé

# TAMEST Welcomes New Member Institutions



TAMEST recognized its two newest TAMEST Member Institutions at the TAMEST 2025 Annual Conference, the **Southwest Research Institute** and the **Texas Biomedical Research Institute**. With the addition of these two institutions, TAMEST is now proud to represent 24 member institutions across the state of Texas.

## TAMEST Holds VPR Research Workshop



Presidents and research leaders from Texas research institutions, universities and health centers joined together for a VPR Research Workshop ahead of the TAMEST 2025 Annual Conference. The workshop focused on three major research funding and recruitment initiatives: **The Advanced Research Projects Agency for Health (ARPA-H)**, the **Texas Space Commission** and a special presentation on the **Governor's University Research Initiative (GURI)**.

## TAMEST Presents 2025 Protégé Poster Challenge at Annual Conference



Forty-three TAMEST protégés participated in the 2025 TAMEST Protégé Poster Challenge. New this year, the program also featured a networking reception for protégés ahead of the TAMEST 2025 Annual Conference. The protégés presented their posters to judges and conference attendees, and the top four presented them on the conference stage while also participating in a finalist breakfast on the last morning of the conference with special VIP guests. The Grand Prize Winner was Teja Guda, Ph.D., The University of Texas at San Antonio (pictured top left).

# TAMEST 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](https://TAMEST.org/news).



## ***Leading the Edith and Peter O'Donnell Awards Committee:***

**"I was an O'Donnell Award winner many years ago, and it is a huge award in our state. Texas has many really good and very talented scientists, and these awards are very competitive and hard to get. I was honored when I received [it]."**

**Margaret "Peggy" A. Goodell, Ph.D. (NAM), Baylor College of Medicine**

*TAMEST Edith and Peter O'Donnell Awards Committee Chair*

## ***Creating the Hagler Institute for Advanced Study at Texas A&M University:***

**"It is of vital importance to have an easy way for faculty to act on their ambitions to team with top people in their field. These collaborations have proven to be life-changing for many faculty hosts, graduate students, and remarkably, the Fellows themselves."**

**John L. Junkins, Ph.D. (NAE), Texas A&M University**



## ***Participating in the TAMEST Protégé Program Prior to National Academy Election:***

**"Attending the TAMEST conference as a protégé was quite an honor. It gave me an opportunity to hear from and interact with NAS members from across the state. I also learned a lot from the cross-disciplinary nature of the conference."**

**Sharon Y.R. Dent, Ph.D. (NAS), The University of Texas MD Anderson Cancer Center**

## ***Engaging Private and Public Partnerships in the Future of Space Travel:***

**"We partner with industry and academia to advance the future of human spaceflight and expand the space economy locally and nationally. And Johnson [Space Center] is at the forefront of NASA's human spaceflight and commercialization efforts. There are several startups and companies that are a part of making our missions work together."**

**Vanessa E. Wyche (NAE), NASA's Johnson Space Center**



## ***Discussing the Mary Beth Maddox Award and Lectureship:***

**"Many factors contribute to the challenges women face in academic science, and these factors begin to exert themselves early in life. That makes it so important to highlight and celebrate the success of outstanding women researchers."**

**Ralph DeBerardinis, M.D., Ph.D. (NAM), UT Southwestern Medical Center**

*Mary Beth Maddox Award and Lectureship Committee Chair*

## ***Being Elected to the Royal Society of Engineering (FREng):***

**"I was shocked and surprised that it happened – it is a tremendous honor. Being a member of a National Academy, such as the FREng or the NAE, means more opportunities to learn and contribute something meaningful."**

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



## ***Co-Chairing the TAMEST Annual Conference:***

**"[The TAMEST Annual Conference] is an excellent platform to bring together leading minds to discuss and address critical issues in science and technology and continue to position Texas on the world stage."**

**Walter E. Voit, Ph.D., The University of Texas at Dallas**

*TAMEST 2025 Annual Conference Co-Chair*

## ***Presenting on Stage as a TAMEST Protégé Poster Challenge Finalist***

**"It was a great time to speak to a very broad audience about something very specific and that I was very passionate about. It felt like a TED talk on steroids. I thoroughly enjoyed the experience and it also reinforced the feeling that science communication is a critical aspect of driving technology adoption."**

**Teja Guda, Ph.D., The University of Texas at San Antonio**

*TAMEST 2025 Protégé Poster Challenge Grand Prize Winner*



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**Upcoming Deadlines and Events:**

<b>April 15, 2025</b>	<b>April 30, 2025</b>	<b>May 7, 2025</b>	<b>May 1-31, 2025</b>	<b>August 1-September 30, 2025</b>	<b>February 2-4, 2026</b>
2026 Hill Prizes Information Session <a href="https://tamest.org/hill-prizes">TAMEST.org/hill-prizes</a>	2026 Edith and Peter O'Donnell Awards Nomination Deadline <a href="https://tamest.org/odonnell-awards">TAMEST.org/odonnell-awards</a>	2025 Mary Beth Maddox Lecture Series, UT Southwestern Medical Center <a href="https://tamest.org/mary-beth-maddox-award">TAMEST.org/mary-beth-maddox-award</a>	2026 Hill Prizes Request for Applications Open <a href="https://tamest.org/hill-prizes">TAMEST.org/hill-prizes</a>	2026 Mary Beth Maddox Award Nominations Open <a href="https://tamest.org/mary-beth-maddox-award">TAMEST.org/mary-beth-maddox-award</a>	TAMEST 2026 Annual Conference: Confronting Climate Change, San Antonio, Texas <a href="https://tamest.org/2026">TAMEST.org/2026</a>

**About TAMEST** Texas Academy of Medicine,  
Engineering, Science & Technology

TAMEST (Texas Academy of Medicine, Engineering, Science and Technology) 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 355 members, eight Nobel Laureates and 24 member institutions, TAMEST is composed of Texas-based members of the three National Academies (National Academy of Medicine, National Academy of Engineering and National Academy of Sciences) and other honorific organizations. 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 300 TAMEST members have been inducted into the National Academies or recruited to Texas.



TEXAS TECH



*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