



Office of the Vice President for
Research, Economic Development,
and Knowledge Enterprise

2022 ANNUAL REPORT





Annual Report of Sponsored Program Activities
for the fiscal year ending August 31, 2022.

Report Data Finalized December 31, 2022.

**The University of Texas at San Antonio
The Office of the Vice President for Research,
Economic Development, and Knowledge Enterprise**

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Revised 2023. Data sources include: Sponsored Projects Administration,
Research Support, Strategic Research Initiatives, Commercialization
and Innovation, Research Integrity, Research Finance and Operations,
and the Institute for Economic Development. All financial data has been
rounded to the nearest dollar.

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FY22 EXPENDITURE SUMMARY

The growth and success of UTSA's Knowledge Enterprise are evidenced by the quality of our dedicated faculty and students, the consistent rise in scholarly research awards and subsequent expenditures, and other vital data culled from various sources, including NSF HERD. This report is a culmination of last years dedicated work by our incredible faculty, staff, and students, which led to the institution's recognition as a Carnegie R1 research-intensive university. UTSA is now in the 4% of the 146 universities and one of only 21 Hispanic-serving Institutions on this elite list of R1 organizations.

TOTAL RESEARCH EXPENDITURES

\$141.7M

\$70.55M

RESTRICTED

\$71.14M

UNRESTRICTED

\$54.20M

FEDERAL

\$16.16M

NON-FEDERAL

TOP 10 LARGEST RESEARCH AWARDS

\$18,196,393

John Huggins, Dhireesha Kudithipudi,

Jeff Prevost, Howard Grimes

National Security Collaboration Center (NSCC)

KCEID Electrical Engineering

VPREDKE Cybersecurity Manufacturing Innovation Institute

Advanced Capabilities for Cyber Resilient and Assured

Missions (ACCRAM)

US Department of the Air Force

\$6,785,000

Chiung-Yu Hung, Jose Lopez-Ribot, Jieh-Juen Yu

COS Molecular Microbiology and Immunology

*SA-CCRC-Development of Therapeutics and Vaccines Against
Coccidioidomycosis.*

National Institute of Allergy and Infectious Diseases

\$4,483,675

Rajendra Boppana, Philip Menard, Gregory White

COS Computer Science

ACOB Information Systems & Cyber Security

COS Center for Infrastructure Assurance and Security (CIAS)

*Scholarship for Service program with emphasis on diversity, men-
toring, and career success*

National Science Foundation

\$3,087,131

Stanton McHardy

COS Center for Innovative Drug Discovery (CIDD)

*Center for Innovative Drug Discovery: Expansion of a Highly
Productive Shared Cancer Drug Discovery Resource for Texas*

Cancer Prevention and Res Inst of TX 527

\$3,086,776

Albert Salgado

VPREDKE IED Small Business Development Center

South-West TX SBDC Program Renewal FY21-22 SATX

United States Small Business Administration

\$3,000,000

Heather Shipley, Vanessa Sansone, Arturo Montoya

Rodriguez, Mark Appleford

COEHD Education Leadership & Policy Studies

KCEID Civil Engineering

University College

VP Academic Affairs

*HSI Institutional Transformation Project: STEM Undergradu-
ate Education through a Latinx Student Success Framework*

National Science Foundation

\$2,596,915

Edwin Barea-Rodriguez

COS MARC at the University of Texas at San Antonio

National Institute of General Medical Sciences

\$2,462,114

Kristen Lindahl, Jorge Solis, Bedrettin Yazan, Becky

Huang, Kathryn Henderson, Martha Sidury

Christiansen, Olesya Kisselev, Zhongfeng Tian

COEHD Bicultural-Bilingual Studies

*Project SELF: Secondary English Learners and Families Ad-
vancing Academic Literacy in the Content Areas*

US Department of Education

\$2,000,000

Kiran Bhaganagar, Christopher Combs, Alberto

Mestas-Nunez, Alan Whittington, Stephen Ackley

KCIED Mechanical Engineering

COS Geological Sciences

*COS Center for Advanced Measurements in Extreme
Environments (CAMEE)*

National Aeronautics and Space Administration

\$1,850,000

Tammy Wyatt

VP Student Affairs Student Success

*Foster Care UTSA Supervised Independent Living Contract
(SIL Program)*

Texas Department of Family and Protective Service

EXPENDITURES BY COLLEGE

| COLLEGE | AMOUNT |
|---|----------------------|
| CARLOS ALVAREZ COLLEGE OF BUSINESS | \$11,168,312 |
| COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT | \$9,049,712 |
| MARGIE AND BILL KLESSE COLLEGE OF ENGINEERING AND INTEGRATED DESIGN | \$29,374,269 |
| COLLEGE OF LIBERAL AND FINE ARTS | \$8,540,047 |
| COLLEGE OF SCIENCES | \$45,217,844 |
| COLLEGE FOR HEALTH, COMMUNITY, AND POLICY | \$12,411,643 |
| HONORS COLLEGE | \$14,080 |
| UNIVERSITY COLLEGE | \$6,132,990 |
| VP ACADEMIC AFFAIRS | \$3,276,943 |
| VP KNOWLEDGE ENTERPRISE | \$16,002,482 |
| OTHER (VPBA, VPUR, ETC.) | \$514,999 |
| TOTAL | \$141,703,321 |



EXPENDITURES BY RESEARCH CENTERS & INSTITUTES

CENTER & INSTITUTES

AMOUNT

| | |
|--|-------------|
| ACADEMY FOR TEACHER EXCELLENCE RESEARCH CENTER | \$591,099 |
| BANK OF AMERICA CHILD AND ADOLESCENT POLICY RESEARCH INSTITUTE (BACAPRI) | \$1,197,673 |
| BRAIN HEALTH CONSORTIUM | \$1,900,703 |
| CENTER FOR ADVANCED MEASUREMENTS IN EXTREME ENVIRONMENTS (CAMEE) | \$1,123,029 |
| CENTER FOR ADVANCED MANUFACTURING & LEAN SYSTEMS (CAMLS) | \$710,866 |
| CENTER FOR ARCHEOLOGICAL RESEARCH (CAR) | \$1,119,395 |
| CENTER FOR COMMUNITY BASED AND APPLIED HEALTH RESEARCH (CCBAHR) | \$1,081,671 |
| CENTER FOR CULTURAL SUSTAINABILITY (CCS) | \$416,430 |
| CENTER FOR EXCELLENCE IN ENGINEERING EDUCATION RESEARCH (CE3R) | \$1,788,587 |
| CYBER CENTER FOR SECURITY AND ANALYTICS | \$1,698,088 |
| CENTER FOR INFRASTRUCTURE ASSURANCE AND SECURITY (CIAS) | \$1,286,930 |
| CENTER FOR INNOVATION AND DRUG DISCOVERY (CIDD) | \$967,468 |
| CENTER FOR RESEARCH AND TRAINING IN THE SCIENCES (CRTS) | \$2,404,349 |
| CENTER FOR URBAN AND REGIONAL PLANNING RESEARCH (CURPR) | \$7,051 |
| CYBERSECURITY MANUFACTURING INNOVATION INSTITUTE (CYMANII) | \$8,353,086 |
| INSTITUTE FOR CYBER SECURITY (ICS) | \$797,970 |
| INSTITUTE FOR DEMOGRAPHIC AND SOCIOECONOMIC RESEARCH (IDSR) | \$443,160 |
| INSTITUTE FOR HEALTH DISPARITIES RESEARCH (IHDR) | \$297,067 |
| INSTITUTE OF REGENERATIVE MEDICINE (IRM) | \$442,893 |
| INSTITUTE FOR WATER RESEARCH, SUSTAINABILITY AND POLICY (IWRSP) | \$30,522 |
| MATRIX AI CONSORTIUM FOR HUMAN WELL-BEING | \$873,540 |
| NATIONAL SECURITY COLLABORATION CENTER | \$509,227 |
| OPEN CLOUD INSTITUTE (OCI) | \$795,541 |
| SAN ANTONIO CELLULAR THERAPEUTICS INSTITUTE (SACTI) | \$373,314 |
| SUSTAINABLE PERVASIVE URBAN RESILIENCE (SPUR) | \$555,157 |
| SOUTH TEXAS CENTER FOR EMERGING INFECTIOUS DISEASES (STCEID) | \$4,210,727 |
| TEXAS SUSTAINABLE ENERGY RESEARCH INSTITUTE (TSERI) | \$1,995,323 |
| URBAN EDUCATION INSTITUTE | \$307,920 |
| UTSA MEXICO CENTER | \$182,530 |
| UTSA NEUROSCIENCES INSTITUTE (NI) | \$2,346,530 |
| WOMEN'S STUDIES INSTITUTE (WSI) | \$23,196 |
| POLICY STUDIES CENTER (PSC) | \$7,607 |
| SCHOOL OF DATA SCIENCE (SDS) | \$4,706 |

TOTAL

\$38,843,358

AWARDS

| COLLEGE | NUMBER | DOLLAR AMOUNT |
|---|------------|----------------------|
| CARLOS ALVAREZ COLLEGE OF BUSINESS | 25 | \$4,938,904 |
| COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT | 41 | \$11,802,273 |
| MARGIE AND BILL KLESSE COLLEGE OF ENGINEERING AND INTEGRATED DESIGN | 97 | \$26,069,185 |
| COLLEGE OF LIBERAL AND FINE ARTS | 49 | \$2,029,656 |
| COLLEGE OF SCIENCES | 96 | \$34,205,330 |
| COLLEGE FOR HEALTH, COMMUNITY, AND POLICY | 48 | \$7,412,295 |
| UNIVERSITY COLLEGE | 1 | \$832,500 |
| VP ACADEMIC AFFAIRS | 21 | \$5,308,127 |
| VP KNOWLEDGE ENTERPRISE | 19 | \$18,552,790 |
| *OTHER (VPBA, VPUR, ETC.) | 3 | \$2,184,442 |
| TOTAL | 400 | \$113,335,502 |



PROPOSALS BY COLLEGE

| COLLEGE | AMOUNT |
|---|-------------|
| CARLOS ALVAREZ COLLEGE OF BUSINESS | 48 |
| COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT | 65 |
| MARGIE AND BILL KLESSE COLLEGE OF ENGINEERING AND INTEGRATED DESIGN | 308 |
| COLLEGE OF LIBERAL AND FINE ARTS | 108 |
| COLLEGE OF SCIENCES | 290 |
| COLLEGE FOR HEALTH, COMMUNITY, AND POLICY | 117 |
| HONORS COLLEGE | 2 |
| UNIVERSITY COLLEGE | 2 |
| VP ACADEMIC AFFAIRS | 25 |
| VP KNOWLEDGE ENTERPRISE | 40 |
| *OTHER (VPBA, VPUR, ETC.) | 13 |
| TOTAL | 1018 |

PROPOSALS BY SOURCE

| SOURCE | AMOUNT |
|----------------------|-------------|
| DEVELOPMENT & GIFTS | 1 |
| FEDERAL GOVERNMENT | 386 |
| FEDERAL PASS THROUGH | 251 |
| PRIVATE | 195 |
| LOCAL GOVERNMENT | 55 |
| OTHER GOVERNMENT | 12 |
| STATE GOVERNMENT | 118 |
| TOTAL | 1018 |

FY22 SEED GRANTS

The UTSA Office for Research, Economic Development, and Knowledge Enterprise has awarded its annual seed grants to spark innovation on campus. This money, distributed through five funding mechanisms, funds new research projects or new lines of inquiry to advance their research portfolio through the discovery process.

GRANTS FOR RESEARCH ADVANCEMENT AND TRANSFORMATION (GREAT)

The GREAT program provides seed grants to support new areas of research for faculty at UTSA, to assemble preliminary data that can be used to seek extramural funding and advance UTSA's goal of reaching Tier One status.

- » OCTOBER 1, 2021 THROUGH JULY 31, 2022
- » \$ 80,000 AWARDED: \$20,000 PER RESEARCHER X 4 NEW PROJECTS

College of Architecture and Construction Planning

Angela Lombardi, Ph.D., Department of Architecture
Toward Cultural Heritage Scientific Conservation: Characterization of Spanish Colonial Stones and Lime Mortars in the San Antonio Missions, Texas

College of Engineering

Ao Du, Ph.D., Department of Civil and Environmental Engineering | *Regional Natural Hazard Risk Assessment Methodology toward Resilient 5G Telecommunication Infrastructure Deployment*

College of Education and Human Development

Leslie Neely, Ph.D., Department of Educational Psychology | *A step towards smart and connected health in behavior analysis*

College of Sciences

Murtuza Jadliwala, Ph.D., Department of Computer Science | *Addressing Security and Privacy Challenges in Visual Augmented Reality (VAR) applications*

CONNECTING THROUGH RESEARCH PARTNERSHIPS (CONNECT)

The CONNECT Program is a joint effort between The UTSA and the Southwest Research Institute (SwRI). The program encourages interaction between investigators in support of the acquisitions of established extramural, peer-reviewed research funding. This agreement provides unprecedented opportunities for researchers to work together in addressing issues of mutual interest and need.

- » OCTOBER 1, 2021 THROUGH JULY 31, 2022
- » \$250,000 AWARDED: \$125,000 PER TEAM (\$50,000 UTSA; \$75,000 SwRI)

Hai-Cho Han, Ph.D., UTSA and **Keith A. Bartels, Ph.D.**, SwRI
Modeling the trabecular structure in human heart and its change in heart failure patients

Gary Jacobs, Ph.D., UTSA and **Grant S. Seuser, Ph.D.**, SwRI
CO2 to Fuel: Combining Reverse Water Gas Shift and Fischer Tropsch Synthesis into a Single Reactor

INTERNAL RESEARCH AWARDS (INTRA)

The Internal Research Awards (INTRA) program is part of the UTSA Vice President for Research, Economic Development, and Knowledge Enterprise's coordinated efforts to promote research and scholarship of the highest quality. This program offers experience in identifying and submitting applications to potential funding sources, provides preliminary data to support applications for extramural funding, and enhances scholarly and creative activities.

- » OCTOBER 1, 2021 THROUGH JULY 31, 2022
- » \$95,000 AWARDED: \$5,000 PER RESEARCHER X 19 NEW RESEARCH PROJECTS

College of Architecture and Construction Planning

Jae Yong Suk, Ph.D., Department of Architecture
Investigation of Nighttime Lighting Environment of UTSA Main Campus for Student and Public Safety

Ibukun Awolusi, Ph.D., Department of Construction Science | *Privacy and Security in the Application of IoT-Based Wearable Sensing Devices for Safety and Health Monitoring in Construction*

Jiannan Cai, Ph.D., Department of Construction Science | *Understanding and Predicting Worker Behavior in Human-Robot Co-Construction*

College of Business

Hu Harrison Liu, Ph.D., Department of Accounting
Short Selling and Executive Stock Option Exercises

Krishnamurthy 'K.K' Raman, Ph.D., Department of Accounting | *The Effect of Clawback Adoptions on Institutional Investment Decisions*

Jennifer Yin, Ph.D., Department of Accounting
Family Firms and Penalized Firm Misconduct

Juan Mao, Ph.D., Department of Accounting
The Impact of COVID-19 on Remote Audits and Group Audits

College of Education and Human Development

Claudia Interiano-Shiverdecker, Ph.D., Department of Counseling | *Recruitment and Retention of Students in a Bilingual Counseling Certificate Program*

College of Liberal and Fine Arts

Oswaldo Zapata, Ph.D., Department of Music
Latin American Music Recording

Sue Hum, Ph.D., Department of English
Visualizing the Yellow Peril: Racializing the Chinese, 1834-1941

Omar Valerio-Jimenez, Ph.D., Department of History
Challenging Exclusion in Education: Mexican Americans and School Reform

Pablo Requena, Ph.D., Department of Modern Languages and Literatures | *Dialectal variation in the acquisition of Spanish early verb morphology*

Paul Ardoin, Ph.D., Department of Philosophy and Classics
Monstrous Becketts

Ritu Mathur, Ph.D., Department of Political Science and Geography | *Security Archives and the Problem of Cyber Arms Control*

College for Health, Community and Policy

Sherri Simmons-Horton, Ph.D., Department of Social Work
Perceptions of Current and Former Social Work | Students on Anti-Racist Praxis

Ying Huang, Ph.D., Department of Demography | *Income Loss and Mental Health Outcomes During the COVID-19 Pandemic in the United States—Investigating the Moderating Role of Metropolitan Racial Residential Segregation*

Kara Joyner, Ph.D., Department of Demography | *The Effects of Partisanship on Mate Choices*

Se-Woong Park, Ph.D., Department of Kinesiology
Characterizing predictive gaze patterns and brain activity in children with autism spectrum disorder

Tianou Zhang, Ph.D., Department of Kinesiology | *The Effects of Nicotinamide Riboside Supplementation and Exercise Training on Body Composition and Physical Performance in Older Adults with Sarcopenic Obesity*



TRANSDISCIPLINARY TEAMS (T2) PROGRAM

The Transdisciplinary Teams (T2) Program provides seed grants to support UTSA faculty members to engage in scholarly research activities that foster transdisciplinary collaborations. The primary goal of these awards is to assemble teams of researchers from different disciplines that will establish a foundation to seek extramural funding.

- » OCTOBER 1, 2021 THROUGH JULY 31, 2022
- » \$100,000 AWARDED: \$20,000 PER RESEARCHER X 5 NEW RESEARCH PROJECTS

TEAM:

Angela Lombardi, Ph.D., College of Architecture and Construction Planning, Department of Architecture
Lorenzo Brancaleon, Ph.D., College of Sciences, Department of Physics and Astronomy
Arturo Ponce Pedrasa, Ph.D., College of Sciences, Department of Physics and Astronomy
Paul LeBlanc, Ph.D., College of Liberal and Fine Arts, Department of Communications
Cultural Heritage and Climate change: The biological colonization in the San Antonio Missions - biodeterioration vs bioprotection debate.

TEAM:

Teja Guda, Ph.D., College of Engineering, Department of Biomedical Engineering
Janakiram Seshu, Ph.D., College of Sciences, Department of Biology
Mario Flores, Ph.D., College of Engineering, Department of Electrical and Computer Engineering
Microphysiological models of the upper airway to evaluate pathogen resistance

TEAM:

Rebecca Bria, Ph.D., College of Liberal and Fine Arts, Department of Anthropology
Hongjie Xie, Ph.D., College of Sciences, Department of Geological Sciences
Kristen Brown, Ph.D., College of Engineering, Department of Civil and Environmental Engineering
Changing Environment in the Glacial Watershed of the Cordillera Blanca, Peru under the Warming Climate: Understanding the shifting local dynamics of water availability, agriculture, and energy production

TEAM:

Sue Hum, Ph.D., College of Liberal and Fine Arts, Department of English
Rebecca Weston, Ph.D., College of Health, Community and Policy, Department of Psychology
Aaron Cassill, Ph.D., College of Sciences, Department of Biology
Greg Elliott, Ph.D., College of Liberal and Fine Arts, Department of Art and Art History
Investigating STEM Students' Approaches to Innovative Thinking Through Focus Groups

TEAM:

Allison Veach, Ph.D., College of Sciences, Department of Environmental Science and Ecology
Saugata Datta, Ph.D., College of Sciences, Department of Geology
Corey Sparks, Ph.D., College of Health, Community and Policy, Department of Demography
Linking the urban microbiome to lawn care choices: how does xeriscaping impact the microbiome?

BRAIN HEALTH CONSORTIUM COLLABORATIVE SEED GRANT PROGRAM

The Brain Health Consortium (BHC) Collaborative Seed Grant (CSG) program is offering seed grants to support collaborative research at UTSA. These grants support a broad range of transdisciplinary research that may yield fundamental insights into the mechanisms underlying brain disorders.

- » OCTOBER 1, 2021 THROUGH JUNE 30, 2022
- » \$ 30,000 AWARDED: \$15,000 PER RESEARCHER X 2 NEW PROJECTS

College of Sciences

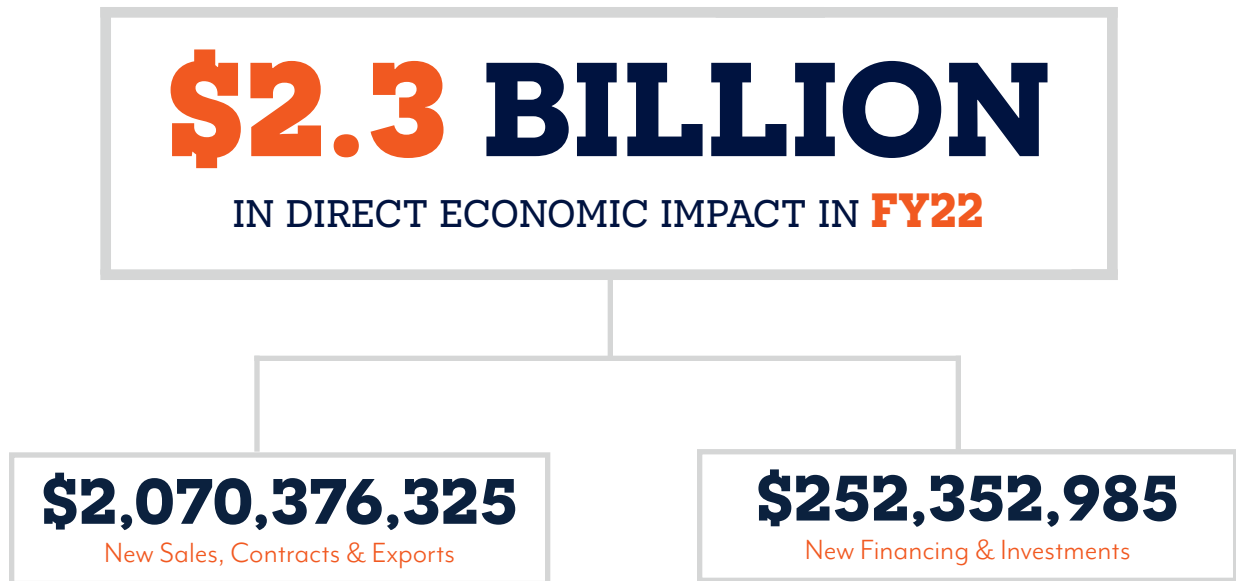
Brian Hermann, Ph.D., Department of Biology | *Localization of mammalian spermatogonial stem cells and their niche using spatial genomics.*

College of Engineering

Marzieh Hajjaghamemar, Ph.D., Department of Biomedical Engineering | *Sport-Related Head Exposures in Female Athletes and Discovery of the Sex-Specific Differences*

INSTITUTE FOR ECONOMIC DEVELOPMENT

Since 1979, UTSA's economic development programs have been building the economy, one business at a time. UTSA's Institute for Economic Development hosts a variety of centers and programs that facilitate economic, community and business development at the local, regional and national levels. Programs serve the entrepreneur who is just starting a business to the experienced business owner looking for new markets, to communities seeking to improve their economic health.



UTSA IED

» THE IED PROVIDES:

- Economic Development
- Technology
- Business Assistance
- International & Minority Business Development
- Government Contracting & Procurement
- Research
- Trade

» HIGHLIGHTS & MILESTONES IN FY22

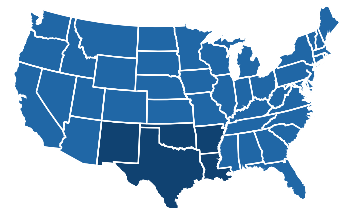
- Created **2,864** jobs and retained **7,373**
- Created **483** businesses starts
- Created **541** of business expansions
- Generated **\$27,020,900** in new tax revenue
- Offered **1,410** training events and courses

» THE IED OPERATES IN:

UTSA SBDC:
11 COUNTIES



SWTAAC: 5 STATES
SBDCNET AND MBDABC: 50 STATES



PTAC:
42 COUNTIES



SBDC ITC: 24 COUNTRIES



TXSW SBDC
NETWORK:



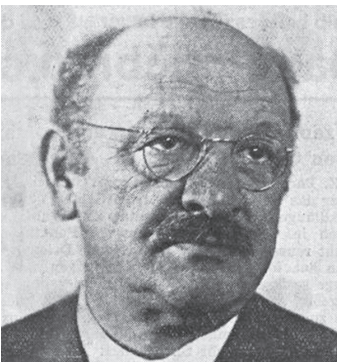
79 COUNTIES

CENTERS & INSTITUTES SPOTLIGHT

UTSA Brain Health Consortium

The Brain Health Consortium is dedicated to discovering the inner workings of the brain through a collaborative, transdisciplinary team comprised of researchers with expertise in stem cells and precision medicine, neuroscience, biomedical engineering, and psychology and behavior, and is led by **Dr. Jenny Hsieh**. In FY22, the Brain Health Consortium submitted 43 proposals worth \$43 million and was awarded seven new awards worth \$434,000. In total the BHC FY22 expenses were at \$2.1M.

» RESEARCH HIGHLIGHTS



The BHC incubated the **Oskar Fischer Prize**, totaling \$4M, with awards presented on June 22 during the TAMEST conference in San Antonio, followed by a 1-day scientific symposium to discuss the work of Alzheimer's researchers.

Dr. Jenny Hsieh was a member of The University of Texas System wide Brain Research Summit, held November 7-8; an event to come together to highlight the innovative brain health research taking place across the UT System, including the BHC.



BHC members are part of a new exciting research intensive department in the College of Sciences, **Neuroscience, Developmental and Regenerative Biology (NDRB)**. The Department of NDRB also launched a new doctoral program in Developmental and Regenerative Sciences, which gives graduates a competitive edge in the emerging regenerative medicine sector.

UTSA doctoral students, **Vanessa Cerda** and **Tara Flaugh**, in neuroscience earn prestigious fellowships to support their research training at UTSA. Both students will conduct their research in Dr. Nicole Wicha's Brain, Language, and Cognition Laboratory.

RESEARCH FACULTY EXCELLENCE

INNOVATOR OF THE YEAR 2022



The Innovator of the Year is **Chung-Yu Hung**, associate professor in the Department of Molecular Microbiology and Immunology. She is an expert in the field of *Coccidioides*, also known as San Joaquin Valley fever, an infectious fungal disease that affects the respiratory system. Focused on the development of therapeutics, diagnostics and vaccines against these *Coccidioides* infections, she is currently developing a human vaccine with recombinant antigen and mRNA technologies with recent funding from the National Institutes of Health.

Using a five-year, \$6.8 million grant from the NIH this past year, Hung established a research unit that develops therapeutics and vaccines against valley fever. She has filed six patents, all related to *Coccidioides*, including antigens, associated strains and copies for vaccine use (human and veterinary animals) against coccidioidomycosis.

Hung is co-director of the Vaccine Development Center at San Antonio and an executive committee member of the South Texas Center for Emerging Infectious Diseases. She is a member of the American Association of Immunologists, the American Society for Microbiology, the Medical Mycological Society of the Americas (MMSA), and the Infectious Diseases Society of America (IDSA).

With nearly 70 peer-reviewed publications, Hung's research has been featured in the *Journal of Fungi*, *Frontiers in Cellular and Infection Microbiology*, *International Journal of Nanomedicine* and the *Journal of Immunology*.

NATIONAL ACADEMY OF INVENTORS

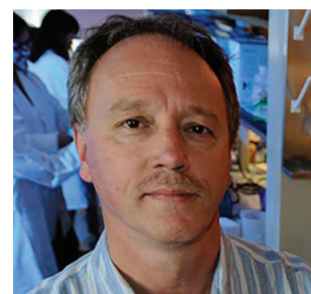


Anson (Joo) L. Ong, the USAA Foundation Distinguished Professor and senior associate dean of administration and graduate programs in the university's College of Engineering and Integrated Design (CEID), has been named a Fellow of the National Academy of

Inventors (NAI). The appointment recognizes the lifetime contributions made by Ong who has built a career in engineering education and in research and development.



Amanda Fernandez



Thomas Forsthuber



Eugene John

The National Academy of Inventors (NAI) has also named 83 academic inventors to its 2022 class of NAI Senior Members. Among these are UTSA faculty members **Amanda Fernandez, Thomas Forsthuber and Eugene John**.

NAI Senior Members are active faculty members, scientists and administrators from NAI Member Institutions who have demonstrated remarkable innovation producing technologies that have brought or aspire to bring real impact on the welfare of society. They also have growing success in patents, licensing and commercialization.

