



TEXAS BIOMEDICAL
RESEARCH INSTITUTE
DISCOVERY & LEARNING INITIATIVE



As a nonprofit 501c3 organization, Texas Biomed values the philanthropic support of the community. Your donation will support mission-critical efforts such as researching and improving our programs.

Science that Inspires.

Fortifying the STEM Career Pipeline

Texas Biomed strongly believes in educating the next generation of laboratory professionals and has developed its **Discovery & Learning Initiative** with the end in mind – inspiring a new generation of STEM leaders and advocates. We believe in the importance of education and experience, and we strive to share our experiences with a broader community, because whether you are a scientist, a lawyer or a chef, all careers rely on STEM principles, and science will always need supporters across our community.

The US Bureau of Labor Statistics has identified the US will need more than one million additional STEM professionals in the next decade. Building connections between researchers, educators and students can foster student interest in STEM careers (Han, 2017; Murcia et al., 2020) thereby addressing the need for additional STEM professionals.

(K-12)

Pre-collegiate STEM Curriculum

Texas Biomed's STEM education platform provides tools for educators to provide hands-on learning where students can apply academic content by creatively solving real-world problems with innovative design-based solutions that prepare students for future career opportunities. Additionally, Texas Biomed provides tours for high school students as part of a collaborative with the Texas Biomedical Forum to provide students an up-close and personal look at science in the lab.

Higher Education

Undergraduate and graduate students have an opportunity to apply for internships on the Texas Biomed campus and work directly with our scientists and veterinarians in the lab and in the field. These experiential learning opportunities can last from the 8-week summer program through a years-long graduate study program, which enable students to dive deeper into career development and career exploration opportunities.

Post-doctorate | Continuing Education SPARC (Scientists Preparing for a Robust Career)

Texas Biomed believes learning never stops and provides a unique training ground for new scientists and veterinarians to begin their careers in an environment that facilitates continuing education. Texas Biomed connects young professionals with one another for mentorship, fellowship and training in and out of the lab. Fellowships are available to young professionals who showcase significant promise and the Institute's staff scientist training program exposes new scientists to ins-and-outs of running a lab, from grant writing to employee health and safety.

Community Outreach Tours | Speakers | Science Fairs

Texas Biomed's commitment to education extends to the South Texas region, as our scientists are available for speaking engagements, or business groups can visit the Institute for more in-person learning. Also part of our community outreach program includes participation in several community science fairs, including Girls Inc. RockIT Into the Future, Girl Scouts of America's STEM fair and the San Antonio Hispanic Chamber of Commerce's CORE 4 STEM program targeting students in San Antonio with less access to scientific learning resources.

Begin With the End in Mind

Texas Biomedical Research Institute, a not-for-profit, independent research institute, is a pioneer within the biomedical research community, making significant strides to protect our global community from the threats of infectious diseases. To continue this important work, the next generation of researchers needs to be fostered long before they enter the lab. As part of our strategic plan, Texas Biomed has developed a comprehensive STEM education program, providing enrichment opportunities for students at all levels of education.

Current Programmatic Elements

K-12 Curriculum Resources on topics from infectious diseases to lab and animal safety

- Multi-grade level; multidisciplinary; online and in-person
- Elementary exploratory and observational activities
- Secondary career and content connections, including in-person tours and scientific presentation

Undergraduate and Graduate Internship Program

- Experiential learning
- Career development & career exploration

Graduate Student Scholarship Program

- Research collaboration
- Career development

Graduate Students and Postdoctoral Fellows

- TBAT – Texas Biomed Association of Trainees provides networking, mentorship, career development and community outreach opportunities

Community

- Scientific expert speaking opportunities
- Community campus tours (online and in-person)



Future Programmatic Elements

K-12 Curriculum Resources on topics from infectious diseases to lab and animal safety

- Education Standards Alignment
- Multi-grade level; multidisciplinary
- Additional elementary exploratory and observational activities
- Secondary career and content connections, including mock laboratory experiences

Undergraduate and Graduate Internship Program

- Supervise summer mock lab participants

Graduate Student Scholarship Program

- Mock Lab Supervisor

Graduate Students and Postdoctoral Fellows

- Scientists Preparing for a Robust Career (SPARC), exploring career options in research, academia, policy and entrepreneurship

Community

- Bioscience Business Briefings is a business-to-business outreach program connecting experts in key scientific areas directly with businesses and their employees to address concerns arising in science and research.



Foster the Next Generation

Outreach & Education Partners

Founding Organizational Member of:

- San Antonio Partnership for Precision Therapeutics
- San Antonio Vaccine Development Center

K-12 and Collegiate Partners

- UTSA
- UTHealth San Antonio
- Trinity University
- St. Mary's University
- Palo Alto College
- CAST Med High School
- The Texas Biomedical Forum (hosts high school tours from around the state)
- Texas A&M Agricultural Extension Service

Nonprofit STEM Education Partners

- Girl Scouts of America
- Girls, Inc. San Antonio
- Texas Public Radio
- YWCA San Antonio
- San Antonio Hispanic Chamber CORE4STEM

Business Partners in Outreach

- BioMedSA
- SA Economic Development Foundation
- Velocity TX
- Health Cell
- San Antonio Chamber of Commerce Leadership San Antonio
- SA Medical Foundation
- Founder's Council
- The Argyle

Funding Partners

- Charles Butt Foundation
- Cowles Foundation
- Edouard Foundation
- Douglass Foundation
- Tim and Karen Hixon Foundation

Advance the STEM Career Pipeline

Texas Biomed is driven to develop STEM education that strengthens the career pipeline and increases workforce competency. The comprehensive Discovery & Learning education program will build upon San Antonio's scientific foundation to become a hub for innovation and a dynamic influencer within STEM education at the local, state, and national levels. By supporting the Discovery & Learning Program, you are helping build stronger students, a more educated community and a more powerful workforce of the future. **Join us today!**

