

Lester & Sue Smith Breast Center



Biotechnology Research Incubator for Teachers and Students (BRITE)

BRITE Biotechnology Research High School Student Symposium 2024

Saturday, August 10, 2024

8:30 AM – 4 PM

Cullen Auditorium, Baylor College of Medicine

One Baylor Plaza, Houston, TX 77030

Scan here to access abstracts,
adapted literature, and end of
the program surveys



BRITE Student Symposium Agenda

- 8:30 am** **Continental Breakfast & Registration** (Rayzor Lounge)
- 9:00 am** **Opening Remarks** (Cullen Auditorium)
Shixia Huang, PhD, BRITE Program Director
Xiang “Shawn” Zhang, PhD, Director, Lester & Sue Smith Breast Center
- 9:10 am** **Keynote Speaker Session**
- **Shixia Huang, PhD**, Professor, Advanced Technology Cores, BCM
“Advanced Technologies for Biomedical Research”
 - **Crystal Shin, PhD**, Assistant Professor, Department of Surgery, BCM
“3D-Fabrication Using Biomaterials for Surgical Applications”
 - **Rayne Rouse, MD**, Associate Professor, Texas Children’s Hospital
“Bench to Bedside: Innovative Cancer Therapies”
- Raffle & 10 Minute Break -----
- 10:00 am** **Oral Presentation 1** [Moderator: Crystal Shin, PhD]
- **Arnab Sarkar** “Low Dose of Crizotinib in Combination with Radiation
Induces Autophagic Cell Death in HepG2 Cells”
 - **Binadie Wickramasinghe** “Comparative Study of Glucose and
Mannose Metabolism in Kidney Cancer Cells Using 13C NMR
Spectroscopy”
 - **Chanya Methaprayoon** “Development of Artificial Intelligence Models
for Facial Emotion Detection”
 - **Eric Pan** “FBXW7 as an Associate of the African American and
Caucasian Breast Cancer Racial”
 - **Erin He** “Identification of Pharmacological Vulnerabilities in Persister
Tumors”
- Raffle & 10 Minute Break -----
- 11:00 am** **Lightning Talks** [Moderator: Zaniqua Bullock]
- 11:30 am** **Lunch** (Rayzor Lounge)
- 12:00 pm** **Poster Presentations** (Rayzor Lounge)

1:00 pm

Oral Presentation 2 [Moderator: Sophie Zhang]

- **Isabel Li** “Degradation of Polyethylene Terephthalate Fibers by Zophobas Morio Larvae”
- **Jason Chen** “Modeling In Vitro Electric Fields through Finite Element Modeling (FEM) in Breast Cancer”
- **Jesoo Kim & Jihoo Park** “Development of Polymeric Nanocomplexes for Enhanced Colorectal Cancer Drug Delivery”
- **Steve Wang** “Exploring Tumor Immune Evasion Mechanisms in Triple-Negative Breast Cancer”
- **Veda Manikonda** “The Correlation between the Gene BIN1 and Prostate Cancer”

----- Raffle & 10 Minute Break -----

2:00 pm

ASPIRATION Oral Presentation [Moderator: Sara Adio-Oduola]

- **Anita Wolfsteiner, Charles Yu, & Mihika Varma** “Manipulating the Hippo Pathway”
- **Audrey Meeks** “CD34+ Cell therapy for refractory Angina”
- **Emerald Tang** “The secret weapon for PCOS: Growth Hormone”
- **Jessica Pradhan** “Vagus Nerve Study”
- **Geetika Surapareddy** “How can we make current cancer treatments better?”

----- Raffle & 10 Minute Break -----

3:00 pm

Awards Ceremony: Guowei Gu, PhD

3:30 pm

Closing Remarks: Crystal Shin, PhD

Research Oral Presentations

Student Name	Student School	Internship Institute	PI/ Mentor
Arnab Sarkar	Glenda Dawson High School, Pearland, TX	Baylor College of Medicine, Houston, TX	Dr. Poonam Sarkar
Binadie Wickramasinghe	Bridgeland High School, Cypress, TX	Baylor College of Medicine, Houston, TX	Dr. Lloyd Lumata
Chanya Methaprayoon	The Awty International School, Houston, TX	University of California, Berkeley, CA	Dr. David Babazadeh
Eric Pan	DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Professor Matthew Blank
Erin He	Bellaire High School, Bellaire, TX	Methodist Research Institute, Houston, TX	Dr. Yulin Li
Isabel Li	Carnegie Vanguard High School, Houston, TX	The University of Texas at Austin, Austin, TX	Dr. Kasia Dinkeloo
Jason Chen	Memorial High School, Houston, TX	Baylor College of Medicine, Houston, TX	Dr. Xiang Zhang
Jihoo Park	Cinco Ranch High School, Katy, TX	Baylor College of Medicine, Houston, TX	Dr. Crystal Shin
Jeesoo Kim	Memorial High School, Houston, TX		
Steve Wang	Dulles High School, Sugar Land, TX	Houston Methodist, Houston, TX	Dr. Shu-Hsia Chen
Veda Manikonda	Bellaire High School, Bellaire, TX	Baylor College of Medicine, Houston, TX	Dr. Salma Kaocha

ASPIRATION Oral Presentations

Anita Wolfsteiner	The Awty International School, Houston, TX	Baylor College of Medicine, Houston, TX	English Laserna
Charles Yu	Bellaire High School, Bellaire, TX		
Mihika Varma	Katy High School, Katy, TX		
Audrey Meeks	Trinity Classical School, Houston, TX	Baylor College of Medicine, Houston, TX	Jamie Provost
Emerald Tang	Bellaire High School, Bellaire, TX	Baylor College of Medicine, Houston, TX	Diego Rojano
Jessica Pradhan	DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Gitanjali Indramohan
Geetika Surapareddy	Tompkins High School, Katy, TX	Baylor College of Medicine, Houston, TX	Na Zhao

Research Poster Presentations & Lightning Talks

Student Name	Poster #	Student School	Internship Institute	PI/Mentor
Advaith Nair	R1	William P. Clements High School, Sugar Land, TX	Baylor College of Medicine, Houston, TX	Dr. Erik Stricker
Alexander Tang	R2	Bellaire High School, Bellaire, TX	Baylor College of Medicine, Houston, TX	Dr. David Lonard
Chelsea Obua	R3	The Awty International School, Houston, TX	Baylor College of Medicine, Houston, TX	Dr. Jian Gu
Jacob Karni	R4	The Kinkaid School, Houston, TX	McGovern Medical School, Houston, TX	Dr. Carolina Gutierrez
Kara Li	R5	Glenda Dawson High School, Pearland, TX	MD Anderson Cancer Center, Houston, TX	Dr. Wantong Yao
Owen Chang	R6	DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Dr. Eric C. Chang
Paras Aggarwal	R7	DeBakey High School, Houston, TX	DeBakey High School, Houston, TX	Dr. Claire P. Gueneau
Ranbin Yao	R8	Glenda Dawson High School, Pearland, TX	Baylor College of Medicine, Houston, TX	Dr. Yong Xu
Ray Tian	R9	The Kinkaid School, Houston, TX	Baylor College of Medicine, Houston, TX	Dr. David Lonard
Sarah Haji	R10	The Awty International School, Houston, TX	Cambridge Center of International Research, Cambridge, UK	Dr. Birol Ay
Sophie Zhang	R11	The Awty International School, Houston, TX	Rice University, Houston, TX	Dr. Mengxi Zhang
Victoria Huang	R12	William P. Clements High School, Sugar Land, TX	University of Houston, Houston, TX	Dr. Martiela Vaz de Freitas
Demir Dilci	R13	The Awty International School, Houston, TX	Baylor College of Medicine, Houston, TX NASA, Houston, TX	Dr. Biykem Bozkurt Dr. Jim Lux
Elise Dilci	R14	The Awty International School, Houston, TX	Baylor College of Medicine, Houston, TX	Dr. Vivian Ho Dr. Biykem Bozkurt

ASPIRATION Poster Presentations & Lightning Talks

Student Name	Poster #	Student School	Institute	Mentor
Alice Zhang Katherine Su	A1	William P. Clements High School, Sugar Land, TX DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Orion Nguyen
Amanda Jerng	A2	Dulles High School, Sugar Land, TX	Baylor College of Medicine, Houston, TX	Benjamin Nwokoye
Anurag Satpathy Kevin Wang	A3	Grand Oaks High School, Spring, TX The Woodlands High School, Woodlands, TX	Baylor College of Medicine, Houston, TX	Ana Rodriguez
Brian Zhang	A4	Bellaire High School, Bellaire, TX	Baylor College of Medicine, Houston, TX	Hira Irshad
Colin Chu Raheem Khokhar	A5	Bellaire High School, Bellaire, TX DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Shahil Pema
Danica Du Henry Ma Sophia Han	A6	St. Agnes Academy, Houston, TX Stephen F. Austin High School, Sugar Land, TX The Awty International School, Houston, TX	Baylor College of Medicine, Houston, TX	Erica Edwards
Emily Zhang Owen Cheng	A7	DeBakey High School, Houston, TX Bellaire High School, Bellaire, TX	Baylor College of Medicine, Houston, TX	Michael Nguyen
Eshan Kottayil	A8	DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Jamie Provost
Haasini Veerakumar	A9	DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Hira Irshad
Ishan Narkar	A10	DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Christina Magyar
Karanikha Saravana Kumar	A11	DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Benjamin Nwokoye
Manas Aggarwal	A12	Carnegie Vanguard High School, Houston TX	Baylor College of Medicine, Houston, TX	Daniel Palacios
Naavya Agarwal	A13	William P. Clements High School, Sugar Land, TX	Baylor College of Medicine, Houston, TX	Melanie Mew
Neha Anurag	A14	Ridge Point High School, Missouri City, TX	Baylor College of Medicine, Houston, TX	Kweku Agyepong

Ragasanjana Manyam Srishti Gupta	A15	DeBakey High School, Houston, TX	Baylor College of Medicine, Houston, TX	Emmanuel Anning
Samuel Hu Elaine Wang	A16	Bellaire High School, Bellaire, TX	Baylor College of Medicine, Houston, TX	Emily Roy
Victoria Zhang	A17	Memorial High School, Houston, TX	Baylor College of Medicine, Houston, TX	Benjamin Nwokoye
Hailin Chen	A18	William P. Clements High School, Sugar Land, TX	Baylor College of Medicine, Houston, TX	Malak Husseinali

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Biotechnology Research Incubator for Teachers and Students (BRITE)



BRITE 2024 Biotechnology Research High School Student Symposium

The BRITE Biotechnology Research High School Student Symposium offers all high school students an opportunity to explore biotechnology and biomedical research through an interactive scientific symposium at Baylor College of Medicine in Houston's Texas Medical Center. The program features keynote speeches with a primary focus on presentations by high school students.

For those with prior research experience, the symposium provides a chance to organize research into a structured abstract and present it in a poster or PowerPoint format to peers and mentors. While submitting an abstract and presenting is encouraged, it is not mandatory. The program welcomes all high school students.

Additionally, the symposium includes the BRITE-ASPIRATION (AI-guided Scientist-mentored Primary Literature Adaptation for STEMM Education) program. This initiative addresses challenges in secondary school STEMM education by using AI-guided tools to help students comprehend complex scientific articles and produce simplified multimedia stories. Through collaboration between scientists and mentored students, the ASPIRATION program aims to make scientific literature more accessible and enhance STEM literacy.

Through the symposium, participating students will: 1) gain insights into scientific conferences; 2) learn about biotechnology and biomedical advancements; 3) gain experience in scientific presentation; 4) enhance their understanding and adaptation of scientific literature; and 5) engage in discussion and scientific inquiry. The goal is to stimulate interest in STEM education, particularly in biotechnology and biomedical fields.

BRITE Program Director: Shixia Huang, PhD, Professor, Baylor College of Medicine

BRITE Symposium Organization Steering Committee:

Crystal Shin, PhD, Assistant Professor, Department of Surgery, BCM
Guowei Gu, PhD, Staff Scientist, Lester and Sue Smith Breast Center, BCM
Zaniqua Bullock, graduate student, BCM
Sara Adio-Oduola, Biomedical Engineering Undergraduate Student, UT Austin
Sophie Zhang, Awty International High School, Houston, Texas
Michael Nguyen, MS, Research Assistant, Advanced Technology Cores, BCM

Advisor:

Xiang "Shawn" Zhang, PhD, Professor and Director, Lester and Sue Smith Breast Center

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Belinda Pennington, Joshua Newby, Sanah Haque, Lester and Sue Smith Breast Center
Drs. Zhongcheng Shi and Yuan Yao, Advanced Technology Cores
Ye Jin Park, and Drs. Weiwei Dang and Hongjie Li, Huffington Center on Aging
Communications & Community Outreach, Baylor College of Medicine
Shandong Fellowship Association of Southern USA