Stony Brook University | Biomedical Engineering
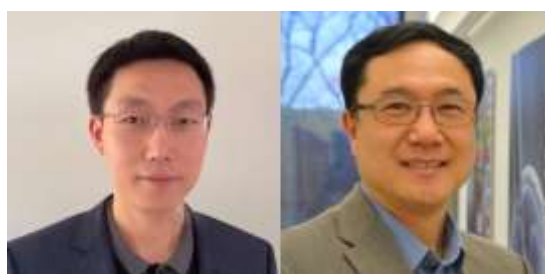
SPRING 2022 NEWSLETTER

CHAIR'S MESSAGE

Greeting from **Stony Brook University BME**! It is an exciting time for Biomedical Engineering research and education. New areas of development are opening daily, from nano-based engineering of tissues to making the exploration of outer space safe for mankind. With outstanding and diversified faculty and enthusiastic students working in advanced biomedical engineering disciplinary areas, such as multi-scale medical imaging (at the birthplace of MRI), nanotechnology and biomaterials, brain research for psychological disorders and Alzheimer's disease, and tissue engineering and regeneration, it is an excellent time to pursue research and academic careers and studies right here at Stony Brook University.

YI-XIAN QIN, Distinguished Professor and Chair

RECENT FUNDING SUCCESS

Zhu and Qin receive $2.5M NIH award to study tissue regeneration

DONGHUI (DON) ZHU and **YI-XIAN QIN** (MPIs) were awarded a 5-year NIDDK R01 grant titled "Bioresorbable zinc staples for anatomoses in the digestive tract." This project will evaluate the efficacy of zinc-based bioresorbable staples with outstanding biomechanical strength and healing potential for GI anastomoses.

Wang receives an NIH R21 grant to study spatial proteomics

JUN WANG received an R21 grant on "High-Resolution Spatial MIST Technology for Functional Proteomic Study of Neuroinflammation in Alzheimer's Disease," which will be funded for 2 years with a total of $426K funding.
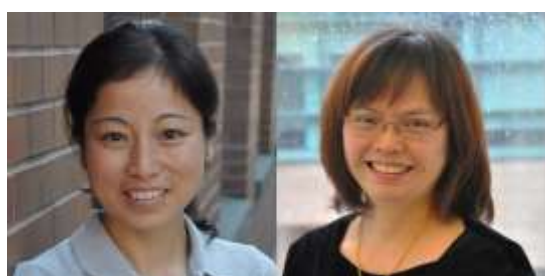
Brouzes wins Fall Seed Grant Award

ERIC BROUZES received a Fall 2021 Seed Grant Award from Stony Brook University for "Platform for High Spatial and Transcriptomic Resolution." This technology will generate high-resolution sequencing with spatial information of tissue samples.

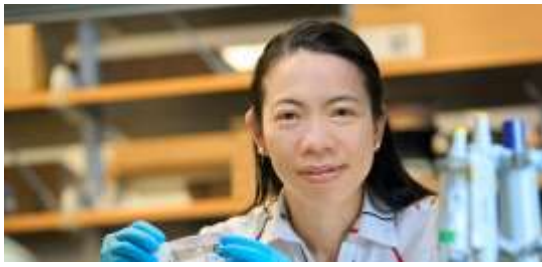### Pan and Du win Fall Seed Grant Award

YINGTIAN PAN and **CONGWU DU**, together with Styliani-Anna E. Tsirka (Pharmacological Sciences), received a Fall 2021 Seed Grant Award from Stony Brook University for "AI-enhanced Multimodality Optical Platform to Image Tumor Microenvironment in Awake Brain".

Yin and Du win SBU Seed Award

WEI YIN and **CONGWU DU** (Co-PIs) received a Stony Brook University Spring 2022 Revise and Resubmit award for "Astrocyte iNOS regulates cocaine-induced vasoconstriction in cocaine addiction."

FACULTY AWARDS

Chan selected as recipient of 2021 Chancellor's Award for Excellence in Faculty Services

MEI LIN (ETE) CHAN was honored with this year's Chancellor's Award for Excellence in faculty services for her outstanding contributions to the university.

Rubin receives 2022 Outstanding Mentor Award

CLINTON RUBIN, SUNY Distinguished Professor and Director of Center for Biotechnology, was selected for Stony Brook University's 2022 Outstanding Mentor Award in recognition of his long service as an exemplary mentor and his exceptional commitment to mentoring and supporting the intellectual, creative, scholarly, and professional growth of his faculty mentees.

GAANN Fellowships Help Fund Research in Areas of National Need

DAVID RUBENSTEIN, Associate Professor and Associate Dean for Academic and Student Affairs of Graduate School, and three other Principal Investigators won the U.S. Department of Education's Graduate Assistance in Areas of National Need (GAANN) program last year. GAANN awards are made to specific academic departments or other programs to support graduate fellowships, and is now generating a high impact for Stony Brook University.

STUDENT/ALUMNI NEWS

Stars of Stony Brook Gala features BME Students

PURVA SHENOY '23 and **CHRISTOPHER MOORE '24** were recognized as Trustee Scholars at the 2022 Stars of Stony Brook Gala, which raised $2.4 million for student scholarships. This year's Gala honored Prince Albert II of Monaco and Stony Brook distinguished alumnus John L. Hennessy.

Four BME Students Receive SUNY Chancellor's Awards for Student Excellence

BME majors **ETHAN ERTEL**, **ABDULLAH HASSAN**, and **LIA STRAIT** and BME minor **JOSHUA GOODMAN** were among 13 Stony Brook students honored with the State University of New York's Chancellor's Awards for Student Excellence (CASE). This is the highest honor awarded to SUNY students who have demonstrated academic excellence and leadership.

BME Students Contribute to Art + STEM = STEAM Exhibition

In collaboration with renowned artist Professor Nobuho Nagasawa from the Department of Art, BME students from Professor **MEI LIN (ETE) CHAN**'s class worked with Sculpture students to create a STEAM exhibition and showcased their creative, interactive art pieces_in a special STEAM event.

STUDENT AWARDS

FARZANA ALI (advisor: Christine DiLorenzo) placed 3rd at SBU's Three Minute Thesis Competition. She was also the Abstract Finalist in the Graduate Student category at the Renaissance School of Medicine's 16th Women in Medicine Research Day. **KYLE BAYLOUS** (advisor: Danny Bluestein) led the NeedleShield project which won the Stony Brook's Small Business Development Center (SBDC) 2022 Entrepreneurship Challenge, with a $10,000 prize. **ALEXANDER MAUS** and **HARRY JUNG** received SBU's 2022 Provost's Award for Academic Excellence.

NOTABLE PUBLICATIONS

Balázsi discovers targeting "cell clustering" by gene deletion reduces drug resistance

GÁBOR BALÁZSI, Henry Laufer Endowed Professor, published a study in Communications Biology that centers on disassembling cell clusters that can form an added barrier of drug resistance in the disease process. This research is a step towards tackling drug resistance of microorganisms, a major global health challenge.

About Stony Brook BME

The Department of Biomedical Engineering was founded in December 2000, jointly established by the College of Engineering and Applied Sciences (CEAS) and the Renaissance School of Medicine (RSOM) at Stony Brook University. The BME department currently has 22 core and approximately 50 program faculty members. The mission of the Department is to fully integrate the cutting edge of engineering and physical sciences with the state-of-the-art biology to advance human health. The ABET-accredited undergraduate program serves approximately 500 BME majors. The Graduate Program in BME has approximately 100 MS and doctoral students. The BME Department enjoys close collaboration with the facilities and faculty at the newly established Institute for Engineering-Driven Medicine (IEDM), Center for Biotechnology, Brookhaven National Laboratory (BNL), and Cold Spring Harbor Labs (CSHL).

More about Stony Brook BME:

BME core faculty
Program faculty
Research areas
Undergraduate program
Ph.D. & M.S. program
Affiliated labs and Facilities

Stony Brook University | Biomedical Engineering