



ISBUS 2025 Pasadena, CA Dec 10 - 12, 2025
International Symposium on Biomolecular Ultrasound & Sonogenetics

THURSDAY DEC 11th, AM

SESSION	BOARD#	POSTER TITLE
1	1	Jung, Jinhwan Ultrasound Localization Microscopy Lite (ULM Lite): Ultrasound Localization Microscopy with Resource-Efficient Signal Processing Scheme
1	3	Li, Yueming Miniaturized optically-generated Bessel beam ultrasound for volumetric transcranial brain stimulation
1	5	Daghlian, George Acoustic tumor paint for real-time imaging, surgical guidance and recurrence monitoring of brain tumors with ultrasound
1	7	Barturen-Larrea, Pierina Longitudinal brain-wide imaging of metastasis dynamics using acoustic reporter genes
1	9	Yang, Jee Won Ultrasonic Reporter for Kinase Activity
1	11	Kosmides, Theresa Sizing Up Nanobubbles: Characterization from Chemical Analysis to Echogenicity
1	13	Cho, Eungyeong Non-Invasive Neural Modulation via High-Frequency Sonogenetics
1	15	Bell, Kama Ultrasound control of gene expression in human induced pluripotent stem cells via heat shock promoters
1	17	Liu, Yanlin Effect of Ultrasound on Astrocytic Calcium in Vitro
1	19	Choi, Taweon Low-Intensity Transcranial Ultrasound in Glymphatic Function and Brain Waste Removal
1	21	Hu, Xiaoran Sonochemical Activation of Covalent Prodrugs via Deep-Penetrating Ultrasound
1	23	Kolios, Michael A comparison of nanobubbles and gas vesicles using ultra-high frequency ultrasound and acoustic flow cytometry
1	25	Anastasiadis, Pavlos Acoustic emissions dose and spatial control of blood-brain barrier modulation with FUS
1	27	Anastasiadis, Pavlos FUS-mediated BBB modulation to enhance high-grade glioma immunotherapy
1	29	Anastasiadis, Pavlos Neuromodulatory Focused Ultrasound Prevents Hippocampal Epileptic Network Development Through Activating GABAergic Neuronal Populations



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SESSION	BOARD#		POSTER TITLE
2	2	Liu, Ann	Thermally controlled state switches for engineered macrophages
2	4	Nystrom, Nivin	Computationally-guided Minimization of Acoustic Reporter Genes for Single-AAV Delivery
2	6	Chen, Laura	Considerations for evaluating ultrasound-mediated gene delivery in vitro: cell destruction and viability reporting
2	8	Tsitsos, Fotios	Mechanistic insights into theranostic ultrasound-mediated brain gene delivery
2	10	Zareian, Fatemeh	Functional Ultrasound imaging reveals Brain and Spinal Cord signatures of bladder pressure for neural interface development
2	12	Walsh, Callum	Planar multielectrode array recordings from primary neuron cultures are a powerful high-throughput assay for sonogenetics and ultrasound neuromodulation
2	14	Anderson, Megan	Cellular and Circuit Mechanisms of Transcranial Ultrasound-Evoked Motor Behavior
2	16	Adewusi, Femi	Dual Frequency Imaging of Acoustic Reporter Gene (ARG) Expression in LM2-4 Breast Cancer Cells
2	18	Weng, Yu	Advancing Nanobubble-Enhanced Ultrasound Imaging: From Phantoms to In Vivo Studies
2	20	Favre, Hugues	Super-resolution cellular ultrasound imaging based on nonlinear gas vesicle scattering
2	22	Vassallo, Reid	Development of a PSMA-targeted gas vesicle for biomolecular prostate cancer imaging
2	24	Hakopian, Erik	MK-801 Administration Causes Functional Connectivity Changes in the Septohippocampal Circuit & Surrounding Areas



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FRIDAY DEC 12th, AM

SESSION	BOARD#		POSTER TITLE
3	1	Wei, Fan	Ultrasound-Induced Mechanotransduction in Tumor Spheroid
3	3	Gong, Chen	Non-invasive Cardiac Pacemaker Based on Sonogenetics
3	5	Ji, Jie	Ultrasound-Mediated Sonogenetic Approaches to Vision Restoration
3	7	Yuan, Zhou	Integrated CRISPR-Cas9 and Sonogenetic Tumor Engineering Boosts CAR-T Cell Efficacy in Triple-Negative Breast Cancer
3	9	Zhong, Shan	Machine Learning Enhanced Functional Ultrasound Imaging for predicting drug-induced brain hemodynamic changes
3	11	Agyeman, Kofi	Unravelling Effects of Epilepsy-foci Resection and Responsive Neurostimulation in the Human Brain using Functional Ultrasound Imaging of Interictal Activity
3	13	Wang, Huiliang (Evan)	H-bonded organic frameworks as ultrasound-programmable delivery platform for sono-chemogenetics
3	15	Yuan, Jinyun	Enrichment of Brain Tumor-Derived ctDNAs and MicroRNAs in Blood Circulation in Patients Using Sonobiopsy
3	17	Xu, Tianqi	TRPV4-F617L as an Ultrasound-sensitive Actuator for In Vivo Sonogenetic Neuromodulation
3	19	Xu, Kevin	A prefrontal cortex-hypothalamus circuit for heart rate control in non-human primates
3	21	Zhang, Sarah	A precision tool for neuroimmune regulation in the brain, meninges and skull by ultrasound
3	23	Lee, Jae-Huyn	Magneto- and sono-genetics for non-invasive, remote neuromodulation
3	25	Choi, Myeong Ryeoi	Ultrasound Modulates Macrophage Mechanotransduction: Membrane Reorganization and Downstream Signaling
3	27	Gong, Xinrui	Non-genetic water-induced photoacoustic neurostimulation
3	29	Phan, Thi-Nhan	Targeted stimulation of GABAergic neurons by sonogenetics suppresses acute epilepsy



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4	2	Yoon, Chi Woo	Tumor Priming by Ultrasound Mechanogenetics for CAR T Therapy
4	4	Yoo, Jinhee	Genotype-Linked Neuro Signatures Revealed by Ultrasound- Enhanced Exosome Secretion and Antibody-Free SERS
4	6	Yoo, Jinhee	Sono-epigenetics: a gentle and non-invasive approach to comprehending and modulating epigenetic processes.
4	8	Yoo, Jinhee	Acoustically Induced Mechanical Biomarkers for Evaluating Stem Cell Spheroid Differentiation
4	10	Lee, Sunho	Takoyaki Imaging: Real-time 3D Imaging of Gas Vesicles with a Multiplexed Matrix Array Transducer
4	12	Mitsuda, Lisa	Ultrasonic Response of TRPA1 with Vibration Enhancer for Sonogenetics
4	14	Liang, Kaitlyn	Difference-Frequency Ultrasound (dfUS) Imaging with Multiple Linear Array Transducers
4	16	Griswold, Ethan	Quantifying Dorsal Root Ganglion Focused Ultrasound Neuromodulation Effects through RNA Sequencing
4	18	Yu, Xi	Tumor Spheroid-Based, Heat-Barcoding FACS Platform Illuminates Intrinsic Drivers of CAR T Infiltration
4	20	Khorsandi, Sina	Clinical Ultrasound Triggers Targeted Immunotherapy Against Melanoma via Microbubble-Mediated STING Activation
4	22	Dessailly, Erwan	Sonogenetics: from the mechano-sensitive channel to brain stimulation for visual restoration
4	24	Wilkinson, Courtney	Acoustically targeted chemogenetics in the treatment of fentanyl addiction: A proof-of-concept preclinical study
4	26	Park, Jeongwoo	A Handheld Tri-Modal Imaging Probe Using a Transparent Ultrasound Transducer Array
4	28	Link, Schuyler	Enhanced Transrestinal Ultrasound Delivery
4	30	Chen, Joshua	Ultrasonic Biosensors for Real-Time Detection of Neurotransmitters
4	32	Yoon, Sangpil	Molecular imaging to visualize cancer biomarkers