

2024년 대한치료초음파학회 제10차 정기학술대회

2024년 11월 22일(금) ~ 23일(토) | 서울 더케이호텔 별관

Day 1 Program

08:50-08:55 **Opening Address** 이재영 (대한치료초음파학회 회장)

08:55-09:00 **Congratulatory Address** 조정연 (대한초음파의학회 이사장)

09:00-10:00 Education Session I

Chairs 정목근 (대진대학교), 홍석호 (서울아산병원)

09:00-09:20 치료 초음파 연구를 위한 동물실험 기법 개요

박은주 (서울대학교병원)

09:20-09:40 Body Applications of HIFU Therapy: Overview of Clinical Outcomes

김영선 (민트병원)

09:40-10:00 Transcranial Focused Ultrasound: Current Advances and Future Prospects in Neurological Treatment

이은정 (서울대학교병원)

10:00-10:30 Plenary Lecture I

Chairs 노용래 (경북대학교), 이학중 (분당서울대학교병원)

10:00-10:30 FUS for Pancreatic Cancer Treatment: A Personal Journey from Lab to Patient since 2007

이재영 (서울대학교병원)

10:30-11:00 Coffee Break

11:00-12:00 Drug Delivery & Carrier for Therapeutic Ultrasound

Chairs 박은주 (서울대학교병원), 이동호 (서울대학교병원)

11:00-11:20 엑소좀막 융합 미세기포를 통한 약물 전달 효과 증대

김현철 (서강대학교)

11:20-11:40 Engineered Extracellular Vesicles for Sonodynamic Cancer Therapy

심민석 (인천대학교)

11:40-12:00 Ultrasound-based Therapeutic Monitoring for Focused Ultrasound Blood-Brain Barrier Opening

배수아 (서강대학교)

12:00-12:40 Meet the Authors

Chairs 김영선 (민트병원), 김형민 (KIST)

12:00-12:10 TBD

12:10-12:20 TBD

12:20-12:30 TBD

12:30-12:40 시상

12:40-13:40 Lunch

13:40-15:00 International Session Sponsored by the FUS Foundation

Chairs 박기주 (경희대학교), 이은정 (서울대학교병원)

13:40-14:00 Molecular Determinants Sensing Mechanism of Low-Intensity Ultrasound: Tool Development, Scientific Discovery, Clinical Implication, and Pitfalls

Jaw-Lin Wang (National Taiwan University)

14:00-14:20 TRPC6 is an Essential Molecule for Ultrasound-induced Neuromodulation in the Mammalian Brain

Yumi Matsushita (National Institutes for Quantum Science and Technology)

14:20-14:40	Targeted Brain Delivery of Curcumin-loaded Nanoparticles using Focused Ultrasound in a Parkinson's Disease Mouse Model Shu-Mei Yang (National Taiwan University)	
14:40-15:00	Development of a Sonogenetic Brain Stimulation Technology Kaede Yoshida (Hokkaido University)	
15:00-15:40	Poster Session I / Coffee Break	
15:40-17:00	Physics and Biological Responses by Therapeutic Ultrasound I	
Chairs	장진호 (DGIST), 손건호 (IMGT)	
15:40-16:00	Acoustic Tweezers for Biomedical Applications 임해균 (부경대학교)	
16:00-16:20	Ultrasonic Neuromodulation via Astrocytic TRPA1 오수진 (KIST)	
16:20-16:40	Molecular Rational Design Strategies for Photo/Sono-dynamic Therapy 권태혁 (UNIST)	
16:40-17:00	Ultrasound Devices for Therapeutic Ultrasound 이현주 (KAIST)	
17:00-17:30	General Assembly	김형민 (대한치료초음파학회 총무이사)
18:00-20:00	Gala Dinner	

Day 2 Program		
09:00-10:00	Education Session II	
Chairs	서준호 (한국기계연구원), 최동석 (최상산부인과의원)	
09:00-09:20	LLM 및 Generative AI의 원리 및 의료 활용 김남국 (서울아산병원)	
09:20-09:40	Practical Guide to ChatGPT and Generative AI for Scholarly Work 이정무 (서울대학교 병원)	
09:40-10:00	Intelligent Ultrasound Systems for Better Diagnostics and Treatment 황재윤 (DGIST)	
10:00-10:30	Plenary Lecture II	
Chairs	이재영 (서울대학교 병원), 최민주 (제주대학교)	
10:00-10:30	Non-invasive Histotripsy Cancer Treatment: The Road from Bench to Bedside Zhen Xu (University of Michigan)	
10:30-11:10	Poster Session II / Coffee Break	
11:10-12:10	Neurological Applications of Therapeutic Ultrasound	
Chairs	박진형 (성균관대학교), 장원석 (세브란스병원)	
11:10-11:30	Acoustic Neuromodulation via Molecular Profiling: Elucidating Cell Type-specific Neural Dynamics 현정호 (DGIST)	
11:30-11:50	Advancing Non-invasive Brain Stimulation: Long-term Plasticity through Ultrasound 박주민 (IBS)	
11:50-12:10	집속초음파 뇌수술의 경험과 발전의 과제 전상용 (서울아산병원)	

12:10 - 13:10 Scientific Session I	
Chairs	김기동 (분당서울대학교병원), 배수아 (서강대학교)
12:10-12:22	Characterization of Acoustic Droplet Vaporization(ADV) and Inertial Cavitation(IC) in Nanodroplets under Diverse Conditions 엄태인 (서울대학교)
12:22-12:34	Investigation into Fractionation of Ex Vivo Porcine and Bovine Livers by Pressure-modulated Shockwave Histotripsy 안세준 (경희대학교)
12:34-12:46	Role of P2X7 Receptor during Low-intensity Focused Ultrasound-induced Blood-brain Barrier Modulation 박준원 (연세대학교)
12:46-12:58	Accelerated Cerebrospinal Fluid Drainage Using Low-Intensity Transcranial Focused Ultrasound 최태원 (성균관대학교)
12:58-13:10	Golay-coded Ultrasonic Transmission for Controlled Blood-brain Barrier Opening and Brain Tumor Treatment 장서연 (성균관대학교)
13:10-14:10 Lunch	
14:10-15:10 Scientific Session II	
Chairs	박주영 (가천대학교), 김재호 (한림대학교)
14:10-14:22	tFUS Stimulation on the Ischemic Stroke Rat Model Contralesional Motor Cortex Modulates Interhemispheric Balance 금정은 (KIST)
14:22-14:34	Focused Ultrasound Alleviates Ventriculomegaly and Behavioral Impairment in a Hydrocephalus Model 서영희 (KIST)
14:34-14:46	Enhanced Delivery of Lazertinib by Focused Ultrasound in a Metastatic Brain Tumor Rat Model with L858R/T890M Mutation 공찬호 (연세대학교)
14:46-14:58	Performance and Safety Evaluation of Ultrasound Device for Blood-brain Barrier Opening in Non-human Primates 박찬욱 (뉴머스)
14:58-15:10	Long-term Clinical Outcome of a Novel Bilateral Capsulotomy with Focused Ultrasound in Refractory Obsessive-compulsive Disorder Treatment 장경원 (삼성서울병원)
15:10-15:40 Coffee Break	
15:40-17:00 Physics and Biological Responses by for Therapeutic Ultrasound II	
Chairs	이병철 (KIST), 조성용 (서울대학교병원)
15:40-16:00	Ultrasound-assisted Photothermal Therapy (ULTRA-PTT) Based on Ultrasound-induced Optical Clearing 장진호 (DGIST)
16:00-16:20	Ultrasonic Repression of TRPA1-dependent Astrocyte Reactivity Confers Neuroprotection in Models of Lewy Body Dementia 박진형 (성균관대학교)
16:20-16:40	Ultrasound-triggered Three Dimensional Hyaluronic Acid Hydrogel Promotes in Vitro and in Vivo Reprogramming into Induced Pluripotent Stem Cells 이수홍 (동국대학교)
16:40-17:00	Cavitation-enhanced Sonothrombolysis Techniques for Venous Thromboembolism 김진욱 (경북대학교)
17:00-17:30 Award & Closing Ceremony	