

DETAILED PROGRAM

[2023년 10월 6일(금)]

Day 1 Program		
Education Session - Basics of Therapeutic Ultrasound		좌장: 김기동(분당서울대병원) / 손건호(IMGT)
09:00-09:20	Mechanism of Bioeffect by Therapeutic Ultrasound	박은주(서울대병원)
09:20-09:40	Overview of Clinical Application of HIFU Therapy	김영선(민트병원)
09:40-10:00	Ultrasonic Transducer for Therapeutic Applications	이병철(KIST)
Plenary Lecture I		좌장: 이재영(서울의대) / 최민주(제주대학교)
10:00-10:40	The Future Perspective of Brain MRgFUS for Neurosurgery : Lessons Learned, Trouble Faced and Future Direction at Yonsei University	장진우(연세의대)
10:40-11:10	Coffee Break	
Physics & Technology Session - Physics and Technology for Advanced Therapeutic Ultrasound		좌장: 박은주(서울대병원) / 윤경호(연세대학교)
11:10-11:30	Development of a Robotic FUS System Toward Safe and Precise Brain Stimulation	서준호(한국기계연구원)
11:30-11:50	Super-resolution Techniques for the Transcranial Focused Ultrasound Simulation	신민우(연세대학교)
11:50-12:10	Acoustic Stress and Force Control Based on Patterned Interference Radiation Force (PRIF)	박관규(한양대학교)
Scientific Session I		
12:10-12:25	Radiation-free tFUS Treatment Planning using Diffusion Model-based Synthetic CT	박태영(KIST)
12:25-12:40	Comparison of Photodynamic Therapy through Opening the Blood-Brain Barrier Using Ultrasound	한상현(연세대학교)
12:40-13:40	Lunch	
International Session - TAITU / JSTU Session		좌장: 박기주(경희대학교) / 정현호(연세의대)
13:40-14:00	Enhanced Sonodynamic Therapy by Carbon Dots-shelled Microbubbles with Focused Ultrasound	Ching-Hsiang Fan (National Cheng Kung University, Taiwan)
14:00-14:20	Therapeutic Prospects of Gene Delivery using Ultrasound and Nanobubbles	Hiroshi Kida (Fukuoka University School of Medicine, Japan)
14:20-14:40	Building MR-guided Focused Ultrasound System: First Experience from National Taiwan University Hospital	Chih-Horng Wu (National Taiwan University Hospital, Taiwan)
14:40-15:00	Ultrasound Neuromodulation Induces Network Excitation of Cortical Neurons through the Activation of Mechanosensitive Channels	Masafumi Shimojo (National Institutes for Quantum and Radiological Science and Technology, Japan)
Neurology Session (Basic) - Novel Approach of Focused Ultrasound Application for Brain Diseases		좌장: 장진우(연세의대) / 김형민(KIST)
15:30-15:50	Bidirectional Control of Epileptiform Activity by Focused Ultrasound Stimulations	박진형(성균관대학교)
15:50-16:10	Acousto-bioelectronics for Cancer Treatments	송승현(숙명여자대학교)
16:10-16:30	Ultrasound-mediated Neuromodulation	이현주(KAIST)
Debate / Policy - 창립학회부터 10년을 돌아보며 앞으로 KSTU 발전 방향은?		사회자: 박주영(가천대학교)
16:30-17:00	패널토의	패널: 최민주(제주대학교) 김영선(민트병원) 김 선(제이시스템디컬)
General Assembly		사회자: 김형민(KIST)

[2023년 10월 7일(토)]

Day 2 Program		
Industry Session (공동주최: 범부처전주기료기기연구개발사업단)		좌장: 박주영(가천대학교) / 김태형(범부처의료기기사업단)
09:00-09:15	Preclinical Study Results and Preparation of Clinical Trial Using Sonotrip V20 in SNUH	박수진(서울대병원)
09:15-09:30	Development of a Low-intensity Focused Ultrasound Stimulation System for Non-invasive Brain Neuromodulation	서선일(Neurosona)
09:30-09:45	Drug Loaded Sono-sensitive Nanoparticle의 집속초음파 조건에 따른 약물 방출효과 연구	김대승(IMGIT)
09:45-10:00	Development of a histotripsy system capable of diagnosis and therapy for thyroid tumour treatment	허정민(Alpinion)
Plenary Lecture II		좌장: 노용래(경북대학교) / 이학중(분당서울대병원)
10:00-10:40	Focused Ultrasound Strategies for Treating Neoplastic Diseases	Richard J. Price (The University of Virginia)
Neurology Session (Clinical) - New Indication of Low Intensity Focused Ultrasound		좌장: 이은정(서울의대) / 홍석호(서울아산병원)
11:10-11:30	A Pilot Study of Low-intensity Ultrasound for Patients with Prodromal AD and AD dementia	김재호(한림대학교)
11:30-11:50	Effect of Low-Intensity Transcranial Focused Ultrasound Stimulation in Patients with Major Depressive Disorder: A Randomized, Double-Blind, Sham-Controlled Clinical Trial	석정호(연세대학교)
11:50-12:10	Focused Ultrasound in the Treatment of Alzheimer's Disease	박소희(영남대학교)
Scientific Session II		
12:10-12:25	A Method for the Guidance and Monitoring of Treatment by using Ultrasound Therapeutic Transducers	신의지(DGIST)
12:25-12:40	Development of a 128-channel 1D HIFU Array System for Skin Care Treatment	김주환(DGIST)
12:40-13:40	Lunch	
Scientific Session III		좌장: 서종범(연세대학교) / 정목근(대진대학교)
13:40-13:55	Ultrasonocoverslip: In-vitro Platform for High-throughput Assay of Cell Type-specific Neuromodulation with Ultra-low-intensity Ultrasound Stimulation	이근형(성균관대학교)
13:55-14:10	Enhancement of Antitumor Immunotherapy using Microbubble-combined Sonodynamic Therapy in Murine Breast Tumor	김미정(분당서울대병원)
14:10-14:25	Tumor Suppressive Immune Response Induced by FUS in Pancreatic Cancer: In Vivo Study	박은주(서울대병원)
14:25-14:40	Cavitation Energy Level Analysis during Boiling Histotripsy and Pressure-modulated Shockwave Histotripsy	안세준(경희대학교)
14:40-14:55	Closed-loop Seizure Control with Transcranial Focused Ultrasound and Electrocorticography-based System on the Rat Model	금정은(KIST)
14:55-15:10	Focused Ultrasound as a Novel Non-invasive Method for the Delivery of Gold Nanoparticles to Retinal Ganglion Cells	박준원(연세대학교)
15:10-15:40	Coffee Break	
Oncology Session - Oncologic Application of Focused Ultrasound: Current and Future		좌장: 조성용(서울의대) / 최동석(최상산부인과의원)
15:40-16:00	Recent Update in Application of HIFU for Pancreatic Cancer	이동호(서울의대)
16:00-16:20	The Role of HIFU in Prostate Cancer Treatment	이학민(분당서울대병원)
16:20-16:40	Clinical Potential of Histotripsy in Cancer Treatment	박기주(경희대학교)
Award & Closing Ceremony		