

SF05-S1

Recent Studies of Therapeutic Ultrasound

15:50-16:15

Room 203

Chairperson(s): **Jae Young Lee** (*Seoul National University Hospital, Korea*)
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Focused Ultrasound and Its CNS Application

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Focused ultrasound has unique niche to be able to sharply steer focused energy into the deep-seated tissues. With the technological breakthrough, the modality has now successfully conquered the challenge and can perform focused ultrasound energy delivery transcranially. Regulatory now approved its clinical practice for thermal ablation for essential tremor dominant brain dysfunction, and other CNS application is under development, such as the blood-brain barrier opening. Clinician relies on engineers dedicating on comprehensive system design to secure focused ultrasound energy delivery and to eventually achieve therapeutic bioeffect. In this presentation, one device development in using neuronavigation-guided focused ultrasound for blood-brain barrier opening device, will be introduced. The trajectory starting from preclinical verification, engineering design, and now the proof-of-concept clinical testing, will be also briefed.