

# **Characterizing Focused-Ultrasound Mediated Drug Delivery to the Heterogeneous Primate Brain *In Vivo* with Acoustic Monitoring**

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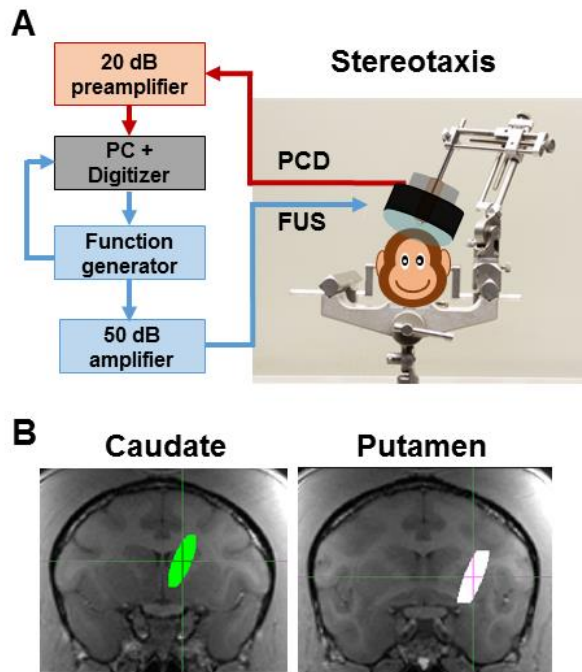
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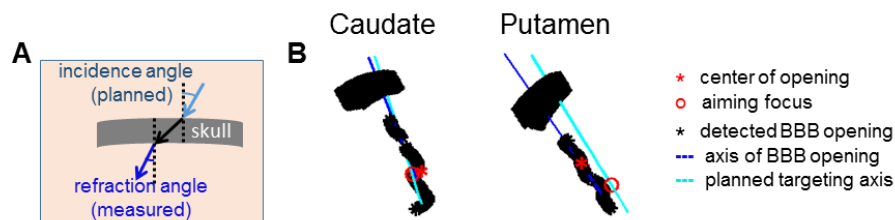
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**Supplementary Figure 1.** Experimental setup (A) and targeted region (B).

(A) A focused ultrasound (FUS) transducer was used for sonication and a hydrophone coaxially and confocally aligned with the FUS transducer served for passive cavitation detection (PCD). (B) Targeting was performed using stereotaxis with pre-planning for focusing at the caudate nucleus (left) or putamen (right) based on the structural MRI scan with a stereotax in advance.



**Supplementary Figure 2.** Illustration of incidence angle to the skull (A) and the BBB opening in caudate and putamen (B) corresponded to Figure 5A-B. (A) Illustration of acoustic path intersecting the skull, where the incidence angle was measured by the planned targeting trajectory and the refraction angle by the opening trajectory. (B) 3D visualization of targeting and opening trajectory intersecting the skull. Frame-based stereotaxic targeting accuracy.

**Supplementary Table 1.** Physiological records and vital signs of the animals during sonication

	Age (yo)	Weight (kg)	Heart rate (bpm)	Blood pressure (mmHg)		SpO <sub>2</sub> (%)	Breathing rate (bpm)	ETCO <sub>2</sub> * (mmHg)
				Systolic	Diastolic			
<b>NHP 1</b>	9	9	–	–	–	–	–	–
<b>NHP 2</b>	8	8	102 ± 6	70 ± 7	28 ± 4	97 ± 3	15 ± 2	53 ± 2
<b>NHP 3</b>	20	10	107 ± 7	61 ± 10	26 ± 2	98 ± 2	11 ± 3	43 ± 3
<b>NHP 4</b>	20	10	–	–	–	–	–	–

\*end-tidal CO<sub>2</sub>