**Supplementary Figures**

**Design and validation of a multi-point injection technology for MR-guided convection enhanced delivery in the brain**

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**Supplementary Figure 1.** Overview of the dimensions of the MINT catheter showing the ejected microcannula position of the device designed for infusions in non-human primates.



**Supplementary Figure 2.** Volume distribution was calculated as the sum of the volume of the three ellipsoids according to the formula V=4/3𝜋abc. (**A**) The major and minor semiaxes of the front view and (**B**) the minor semiaxis of the side (mirror) view were used in the calculations as shown.



**Supplementary Figure 3.** (**A**) Snapshots of the volume distribution VD during single point CED injections from only the MINT central microcannula. (**B**) Average VD/Vi at from the MINT central microcannula at 3 and 5 µL/min total flow rate. Error bars represent S.D. for n=4 trials.