

## **Supplementary Figure Legends**

**Supplementary Figure 1. Regions-of-interests (ROIs) for signal-to-noise (SNR) and contrast-to-noise (CNR) measurements.** To determine the impact of GdAuNP on the T1-weighted signal, ROIs were drawn to calculate the CNR between areas with and without contrast injections. To assess the SNR, a noise measurement from outside the brain was used in comparison to brain tissue.