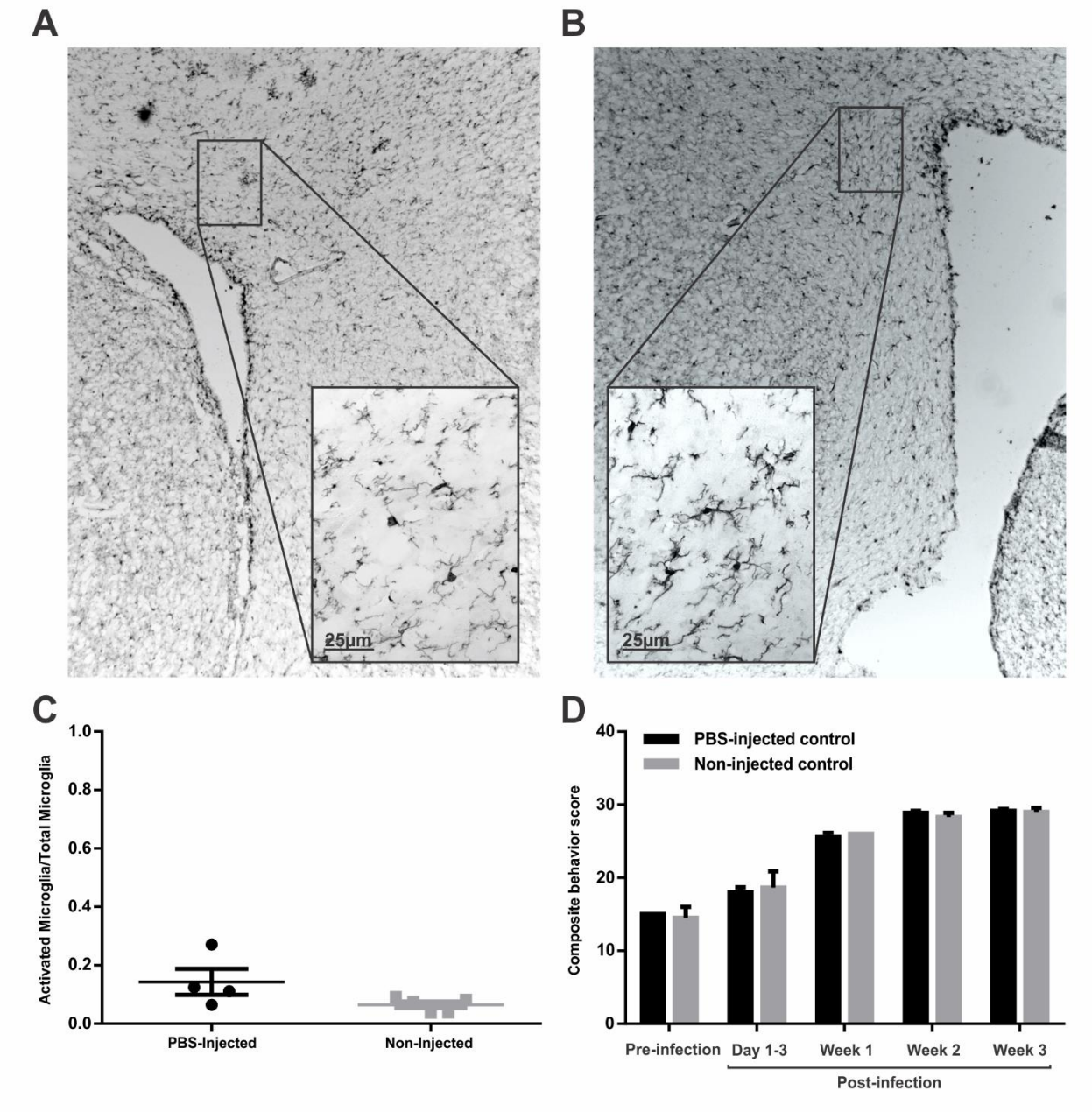
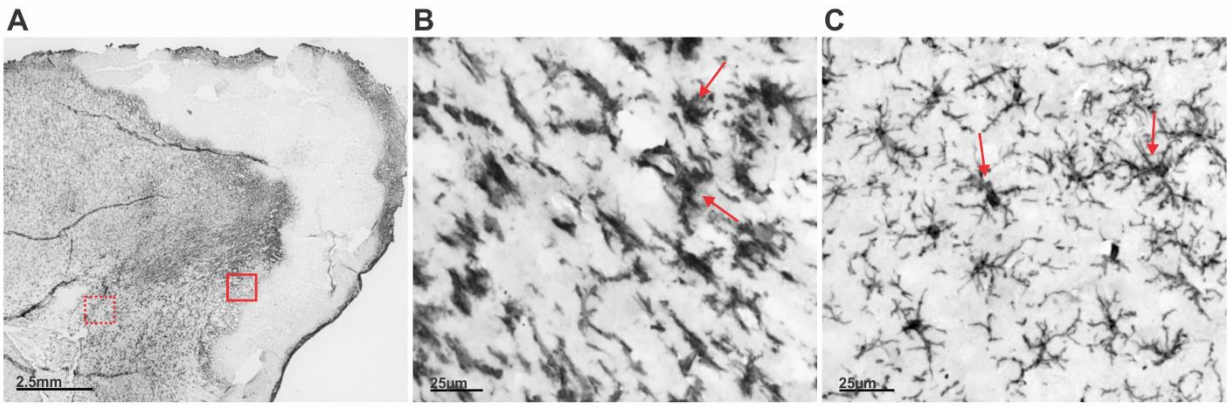
ONLINE SUPPLEMENTARY MATERIALS:



Supplementary Figure 1. PBS-injected and non-injected control animals demonstrated no difference in microglial activation and composite behavior scores. A. Low and high power sections from PBS-injected (Sham) control demonstrate inactivated microglia morphology, including long, thin processes and small cell bodies and is similar to **(B)** low and high power sections from non-injected (Naïve) control. **C.** Quantitative analyses (activation index) in the corpus callosum demonstrates no statistically significant difference between PBS-injected control and non-

injected control. (PBS-injected mean±s.e.m. 0.14 ± 0.04 [n=4], non-injected mean±s.e.m. 0.06 ± 0.01 [n=5]; unpaired t-test; $p = 0.1$). **D.** There was no statistically significant difference between composite behavior score in the PBS-injected and non-injected control animals (pre-infection PBS-injected mean±s.e.m. 15 ± 0 [n=2], non-injected mean±s.e.m. 14.5 ± 1.52 [n=6]; day 1-3 PBS-injected mean ±s.e.m. 18.03 ± 0.65 [n=12], non-injected mean±s.e.m. 18.67 ± 2.22 [n=6]; week 1 PBS-injected mean±s.e.m. 25.54 ± 0.6 [n=12], non-injected mean±s.e.m. 26 ± 0 [n=2]; week 2 PBS-injected mean±s.e.m. 28.88 ± 0.27 [n=12], non-injected mean±s.e.m. 28.33 ± 0.56 [n=6]; week 3 PBS-injected mean±s.e.m. 29.15 ± 0.27 [n=10], non-injected mean±s.e.m. 29 ± 0.58 [n=4]; paired t-test $P = 0.94$).

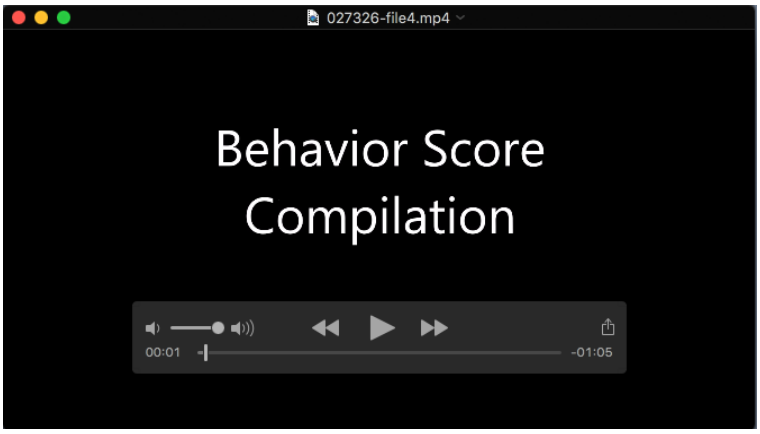


Supplementary Figure 2. Increased microglial activation in the area surrounding the tuberculoma. A. The number of Iba-1 positive microglia was increased at the rim of the tuberculoma where the bacilli are localized as well (Fig 3C). **B.** The microglia along the tuberculum rim showed an activated morphology; whereas, the microglial cells farther from the site of infection were less activated with more ramification with longer processes and smaller cell bodies **(C)**.

Movie 1. 3D reconstruction of the ^{124}I DPA-713 PET/CT imaging of a *M. tuberculosis*-infected rabbit. *M. tuberculosis*-infected rabbit at 24 hours post-tracer injection seen in Fig. 5. As with the uninfected animal, the PET signal is seen at the site of injection (ear vein) as well as the heart. However, unlike the uninfected animal, there is PET signal localization to the brain's right hemisphere, which is the site of the tuberculoma seen on gross pathology in Fig. 5.

Movie 2. 3D reconstruction of the ^{124}I DPA-713 PET/CT imaging of an uninfected rabbit.

Uninfected rabbit at 24 hours post-tracer injection seen in Fig. 5. There is minimal PET signal seen at the site of injection (ear vein) and the heart and virtually no signal seen in the brain.



Movie 3. Video compilation demonstrating normal behavior in uninfected rabbits compared to *M. tuberculosis*-infected animals. *M. tuberculosis*-infected animals exhibit neurological deficits such as abnormal head and body position and inability to lift the body, head tilt, dragging its limbs and abnormal hopping etc. The last section of the video compilation is of a *M. tuberculosis*-infected rabbit with a clinical seizure where the rabbit is intermittently staring off to the side with facial twitching.