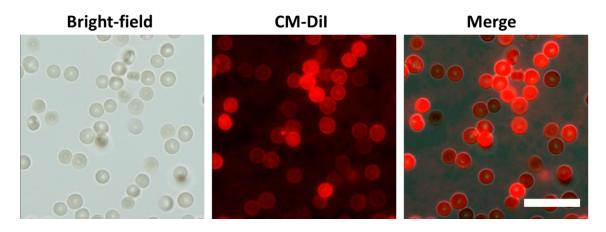
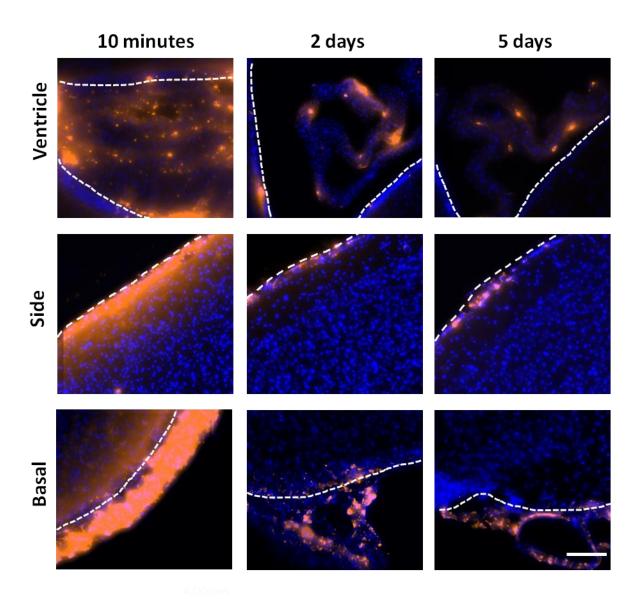
## **ONLINE INFORMATION**

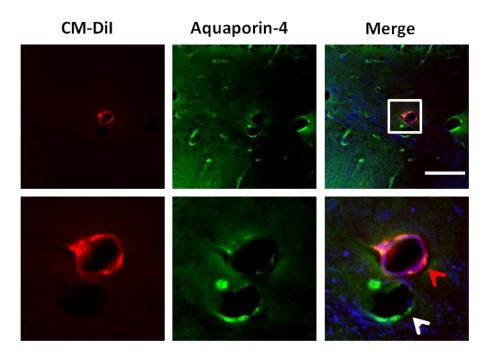
## SUPPLEMENTAL FIGURES



**Supplemental figure 1.** Purified erythrocytes are strongly labeled with CM-DiI. Cell population is entirely erythrocytes and almost all cells were labeled with CM-DiI. Image acquired with brightfield and epifluorescent microscope. Scale bar represents  $20~\mu m$ .



**Supplementary figure 2.** Representative distribution of CM-DiI labeled erythrocytes after SAH in ventricle, brain surface, and base of brain. Intact erythrocytes were found in the ventricles 10 minutes after SAH. By day 2 and 5, the dye was localized in discrete cells in the choroid plexus. On the lateral surface of the brain, particularly on the ipsilateral side as the burr hole, we observed intact erythrocytes. By 2 and 5 days, the dye was localized in distinct spindle shaped cells. Lastly, large quantities of intact erythrocytes were seen at the base of the brain, particularly at the injection site. By day 2 and 5, the dye was primarily contained within a number of mononuclear spindle or rounded cells, which we classified as meningeal macrophages. Dotted lines represent border between ventricles and brain tissue (top row), or brain tissue and subarachnoid space (middle and last rows). Scale bar is 100 µm.



**Supplementary figure 3**. Representative images of AQP4 coverage of blood vessels. Surrounding vessels that are CM-DiI<sup>-</sup>, we observe strong AQP4 expression in the perivascular region (white arrow). However, in vessels that have perivascular CM-DiI<sup>+</sup> macrophages, we observed a reduction of AQP4 staining (red arrow). Second row is an inset from the top row (within the white square). Representative of n=5 independent experiments. Scale bar represents 100 μm.