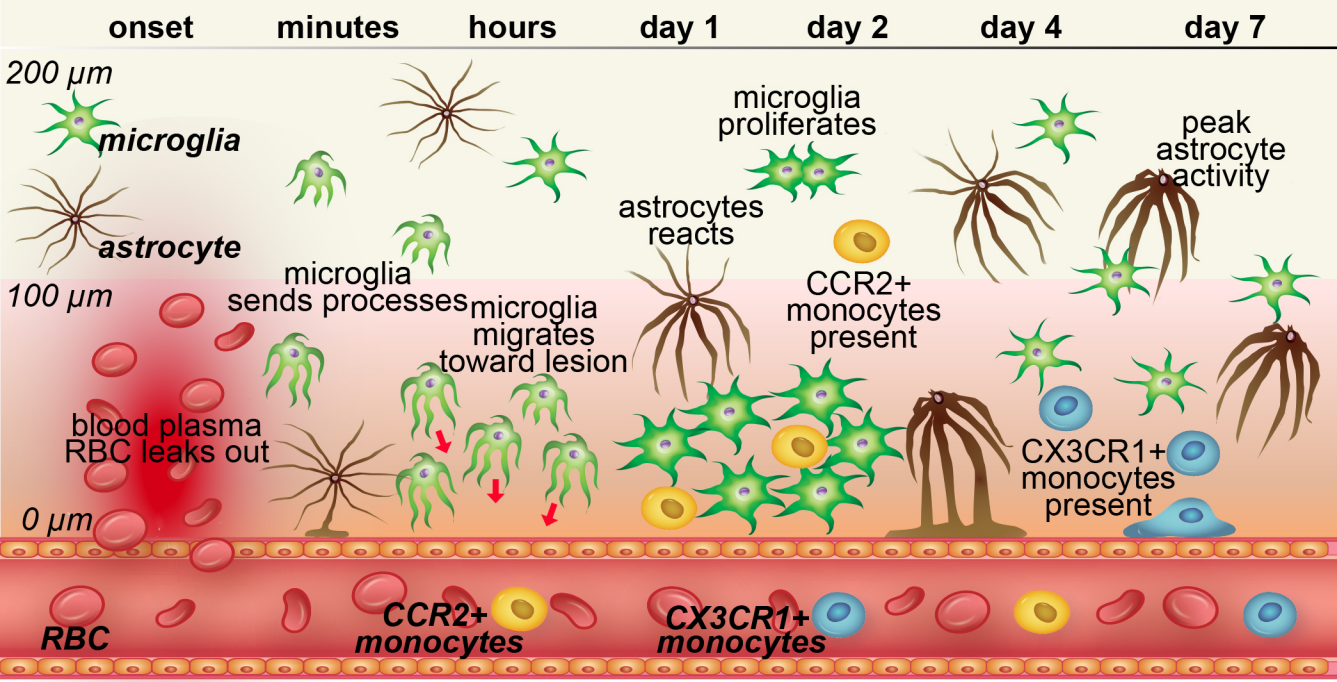

Using in vivo imaging approaches, we studied the response of some classes of inflammatory cells to a cortical microhemorrhage in mice. We found that brain microglia migrated toward the injury over a couple of days and then later proliferated in a shell surrounding the lesion, where microglia density had decreased due to that migration. A small number of blood-borne inflammatory cells were also found near the microhemorrhage. Astrocyte activation followed the microglia response, occurring in the same region where the microglia density increase was observed.