



**SUPPLEMENTARY FIG. S4.** Effect of stress and repetitive mild traumatic brain injury (r-mTBI) on social interactions and social memory at the acute time-point and at 3 months after the second repeated unpredictable stress (RUS). In the social interaction test, only the control group showed increased preference for Stranger1 relative to the empty cage at the acute time-point (A). All groups showed no preference for Stranger1 when retested at 3 months after the second RUS (A). In the social memory test, all groups failed to show a preference for Stranger2 at the acute time-point (B). However, at the 3-month time-point, control and stress-only groups showed increased preference for Stranger2 over Stranger1. In (A), the ratio between time spent around the cage of Stranger1 and the empty cage was calculated for each animal to evaluate social interactions. While in (B), the ratio between time spent around the cage of Stranger2 (new mouse) to the total time around both strangers was calculated to evaluate social memory (social novelty recognition). Data in (A) and (B) were analyzed using one sample *t*-test.