



Figure S4 – Relationship between capillary RBC supply rate and oxygen supply rate. Capillary RBC supply rate (SR) and oxygen supply rate (pLO<sub>2</sub>/s) measurements were made using a functional microvascular imaging system, as described in methods. Panels A,B show qO<sub>2</sub> vs SR plots for a sham and CLP experiment, respectively. 95% confidence intervals (Table S1) at the art-end (a) and ven-end (v) of capillary networks were used to categorize RBC SR as slow, average or fast and capillary qO<sub>2</sub> as low, average or high. The diagonal line in panel A shows how coupled variables qO<sub>2</sub> and SR follow a straight line in the control animal. The dashed lines show the average qO<sub>2</sub> and SR in each animal. v = venular-end, a = arteriolar-end of capillary segment. Note that since qO<sub>2</sub> and SR variables are coupled ( $qO_2 = SR \cdot SO_2 \cdot k$ ), data points are expected to fall on a straight line. Marked along the diagonal blue line, in panel A, are the relative slow, average and fast SR categories as determined by the 95% confidence intervals. The dashed lines in panels A,B mark the average capillary qO<sub>2</sub> and SR for the sham and CLP, respectively.