SUPPLEMENTARY INFORMATION

Post-Stroke Cognitive Impairment and Brain Hemorrhage are Augmented in Hypertensive Mice

David E. Wong Zhang^{1,2}, Tayla A. Gibson Hughes^{1,2}, Hericka B. Figueiredo Galvao^{1,2}, Cecilia Lo², Quynh Nhu Dinh^{1,2}, Shenpeng R. Zhang^{1,2}, Hyun Ah Kim^{1,2}, Sharmalee Selvaraji³⁻⁵, Andrew N. Clarkson², Thiruma V. Arumugam^{1,2}, Grant Drummond^{1,2}, Christopher G. Sobey^{1,2} and T. Michael De Silva^{1,2}

¹Centre for Cardiovascular Biology and Disease Research and La Trobe Institute for Molecular Sciences (LIMS), La Trobe University, Victoria, Australia;
²Department of Microbiology, Anatomy, Physiology & Pharmacology, School of Agriculture, Biomedicine, Environment, La Trobe University, Victoria, Australia;
³Department of Physiology, Yong Loo Lin School Medicine, National University of Singapore, Singapore, Singapore
⁴Memory Aging and Cognition Centre, Department of Pharmacology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore
⁵NUS Graduate School for Integrative Sciences and Engineering, National University of Singapore, Singapore, Singapore

T. Michael De Silva, PhD

Corresponding author:

Centre for Cardiovascular Biology and Disease Research and La Trobe Institute for Molecular Sciences (LIMS) Department of Microbiology, Anatomy, Physiology & Pharmacology School of Agriculture, Biomedicine, Environment La Trobe University Bundoora, Victoria 3086, Australia e-Mail: <u>t.desilva@latrobe.edu.au</u> Phone: +61-3-94796876

Table 1. Experimental groups

Groups	0.7 mg/kg/d; 14 d protocol	0.28 mg/kg/d; 28 d protocol
NT + Sham	N=10	N=12
NT + Stroke	N=10	N=9
HT + Sham	N=11	N=12
HT + Stroke	N=12	N=13

Supplementary Table 1. Summary of experimental groups. Hypertension (HT; angiotensin II 0.7mg/kg/d or 0.28 mg/kg/d) or normotension (NT) group in combination with either sham or stroke surgery.

Gene	Assay ID	
Arg1	Mm00475988_m1	
Cd14	Mm00438094_g1	
Clcf1	Mm01236492_m1	
EMP1	Mm00515678_m1	
FAM19A3	Mm01305353_m1	
Gbp2	Mm00494575_m1	
114	Mm00445259_m1	
iNOS	Mm00440502_m1	
Psmb8	Mm01278979_m1	
Serping1	Mm00437835_m1	
Srgn	Mm01169070_m1	
Stat3	Mm01219775_m1	
Tgm1	Mm00498375_m1	

 Table 2. Primers used for Real-Time PCR

Supplementary Table 2. Primers used for real time PCR. Assay ID's for genes measured by real time

PCR.



Supplementary Figure 1. Cerebral blood flow in mice from the 14-day protocol. (A) Representative lase speckle contrast images of cerebral blood flow (CBF) of each group at baseline (day 0) and prior to euthanasia (day 14). Cortical CBF was measured in a 20 mm² area shown by the solid line and summarised in **(B)**. The area of perfusion deficit (infarct area) is shown by the dashed line and summarised in **(C)**. **C**erebral blood flow at day 14 is compared to the same area measured at day 0. Data is presented as mean ± SD, n=8-9/group. Two-way ANOVA.



Supplementary Figure 2. Expression of astrocytic and microglial markers in the brain. Classical markers of the (A) proinflammatory A1 astrocytes and (B) anti-inflammatory A2 astrocytes; (C) proinflammatory M1 microglia and (D) anti-inflammatory M2 microglia. Data is presented as mean \pm SD, n=6/group. * Indicates *P*<0.05, two-way ANOVA with Tukey's multiple comparisons test.