ONLINE SUPPLEMENT

Pharmacologically Increasing Collateral Perfusion during Acute Stroke using a Carboxyhemoglobin Gas Transfer Agent (Sanguinate™) in Spontaneously Hypertensive Rats

Marilyn J. Cipolla, PhD,[1] Italo Linfante, MD,[2] Abe Abuchowski, PhD[3], Ronald Jubin, PhD[3] and Siu-Lung Chan, PhD[1]

[1]Department of Neurological Sciences and Pharmacology, University of Vermont College of Medicine, Burlington, VT
[2]Miami Cardiac and Vascular Institute and Neuroscience Center, Baptist Hospital, Miami, FL
[3]Prolong Pharmaceuticals, LLC, South Plainfield, NJ

Corresponding Author:

Marilyn J. Cipolla, PhD
Department of Neurological Sciences
University of Vermont
149 Beaumont Ave.; HSRF 416A
Burlington, VT 05405
Phone: 802-656-9714; Fax: 802-656-8704
Email: Marilyn.Cipolla@uvm.edu

Supplemental Figures

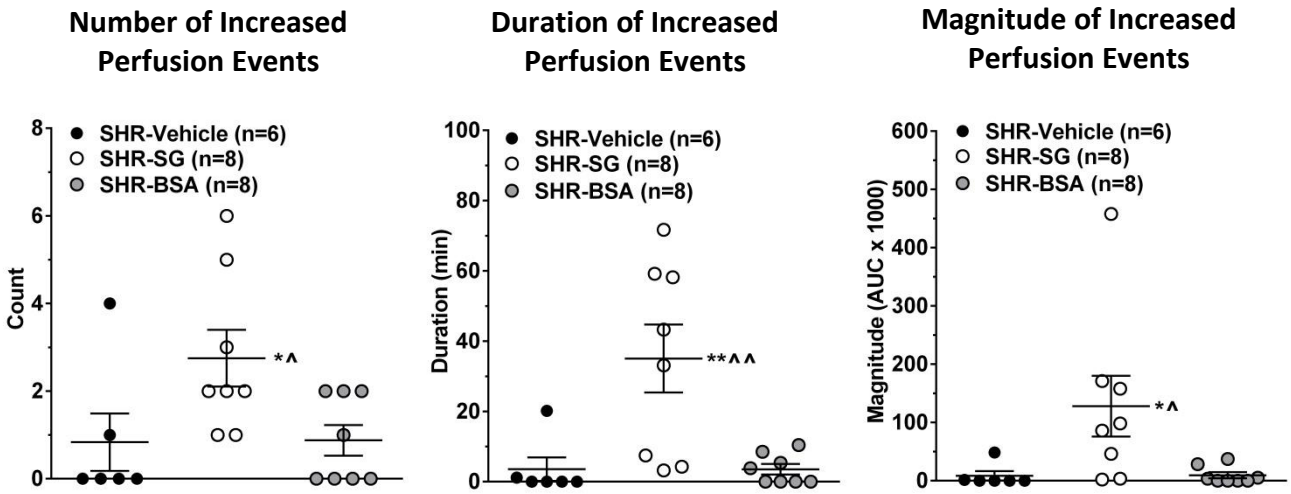

Figure S1: Effect of SG and BSA on discrete increased collateral perfusion events. BSA did not have an effect on the number, duration and magnitude of increased collateral perfusion events that were similar to vehicle-treated SHR. ^ p<0.05 vs. SHR-BSA; * p<0.05 vs. SHR-vehicle; ^^p<0.01 vs. SHR-BSA; **p<0.01 vs. SHR-vehicle.

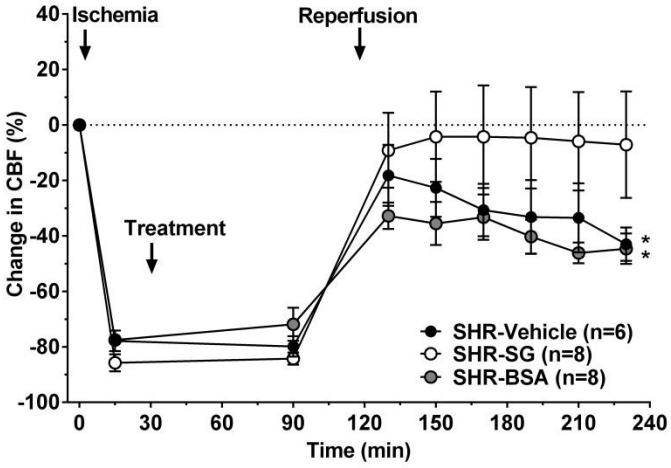

Figure S2: Effect of SG and BSA on reperfusion CBF. Graph showing change in core MCA CBF during ischemia and reperfusion in SHR treated with vehicle, SG or 5% BSA to raise blood pressure. Treatment with 5% BSA did not improve reperfusion that was similar to vehicle. *p<0.05 vs. baseline by repeated measures ANOVA.

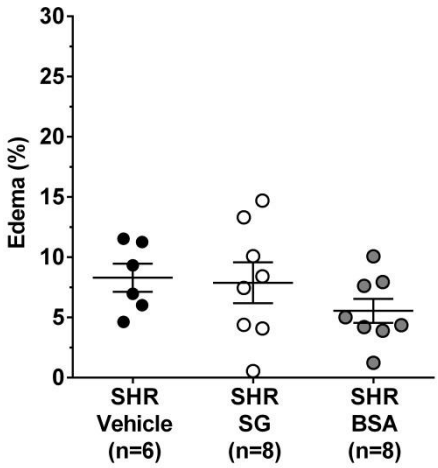

Figure S3: Effect of early SG treatment and BSA on edema. Graph showing edema measured off TTC-stained brain sections for SHR treated with vehicle, SG or 5% BSA after 30 minutes of ischemia. There was no difference between groups.

Supplemental Table: Body weights, baseline mean arterial blood pressure and arterial blood gases of all animals during MCAO surgeries

	SHR Early-Veh	HSR Early-SG	SHR Early-BSA	SHR Delayed-Veh	SHR Delayed-SG
n	6	8	8	6	7
Age (weeks)	16.7±0.3	17.1±0.3	17.0±0.2	16.7±0.3	16.9±0.3
Weight (g)	305±8	315±7	308±9	338±3	341±3
Mean Arterial Pressure (mmHg)	111±4	106±7	95±3	105±4	119±4
Arterial Blood Gases					
Start					
pH	7.36±0.01	7.39±0.02	7.40±0.01	7.37±0.03	7.37±0.03
pCO_2 (mm Hg)	39.5±1.3	38.6 ± 1.7	38.5±1.5	37.3±3.2	36.8±2.1
pO_2 (mm Hg)	126.0±10.8	110.5±7.5	114.1±6.7	113.8±4.0	109.7±5.1
Middle					
pH	7.34±0.01	7.39±0.01	7.38±0.01	7.36±0.02	7.37±0.02
pCO_2 (mm Hg)	41.9±2.5	45.2±1.0	42.3±1.3	42.4±1.7	42.4±2.0
pO_2 (mm Hg)	107.5±7.4	99.3±7.3	94.4±2.4	106.7±4.9	107.9±5.8
End					
pH	7.33±0.01	7.41±0.01	7.38±0.01	7.34±0.01	7.36±0.01
pCO_2 (mm Hg)	44.0±1.7	42.7±1.0	40.6±1.3	42.4±1.0	42.4±1.7
pO_2 (mm Hg)	104.5±7.7	105.3±6.3	96.5±2.7	104.5±6.9	96.6±4.4
Body Temperature					
Start (° C)	36.9±0.1	36.9±0.1	36.9±0.1	37.0±0.1	36.8±0.1
End (° C)	36.8±0.1	36.7±0.2	36.9±0.1	37.0±0.1	37.0±0.1