

International Research Network on Cerebral Hemodynamic Regulation (CARNet)
4th Annual Meeting
San Diego, CA, USA
April 26-30, 2014

	Tuesday, April 29	Wednesday April 30
8-10	<p><u>Refresher Course on Cerebral Autoregulation</u> Dr. Jorge Serrador & Dr. Yu-Chieh Tzeng. San Diego Marriott Marquis & Marina, Balboa</p>	<p><u>Cerebral Autoregulation in Pathological Conditions</u> Convention Center, Room 20A</p> <p><i>Cerebral Autoregulation, Brain White Matter Lesions and Cognitive Dysfunction in Mild Cognitive Impairment</i> Dr. Rong Zhang</p> <p><i>Extremes in Cerebral Autoregulation: Clinical Experience in Head Trauma Patients,</i> Dr. Rune Aaslid</p> <p><i>The cytokines TNF MCP-1 and CINC-1 mediate diminished dilation of middle cerebral artery after ischemic stroke in rats</i> Z Broskova, D Anthony, Z Bagi</p> <p><i>Regional cerebral blood flow responses to rapid reductions in blood pressure after high level spinal cord injury: the effect of alpha1-agonist</i> A Phillips, A Krassioukov, P Ainslie, D Warburton</p> <p><i>Cerebral blood flow regulation during blood loss compared to lower body negative pressure in humans</i> J Barnes, B Johnson, V Convertino, M Joyner, C Rickards</p> <p>tPA-S481A prevents impairment of cerebrovascular autoregulation by endogenous tPA after traumatic brain injury by upregulating p38 MAPK and inhibiting ET-1 W Armstead, L Bohman, J Riley, S Yarovoi, A Higazi, D Cines</p>

<p>10:30-12:30</p>		<p><u>Autonomic and Other Control of the Cerebral Circulation</u> Convention Center, Room 25B</p> <p><i>Reflex Cerebrovascular Control in Humans: Parsimony Cannot Play Here!</i> Dr. Kevin Shoemaker</p> <p><i>Autoregulation, critical closing pressure, and hemorrhage in the brain of the preterm neonate: ontogeny and insights for management strategies</i> Dr. Ken Brady</p> <p><i>Increases in sympathetic activity during cold pressor test does not cause cerebral vasoconstriction</i> J Serrador, M Blatt, B Ghobreal, M Falvo</p> <p><i>The role of cerebral oxygenation on tolerance to central hypovolemia</i> Victoria L. Kay Caroline A. Rickards</p> <p><i>Immunohistochemical evidence of a reduced vasodilatory capacity in vertebrobasilar arteries in pre-hypertensive Spontaneous Hypertensive Rats (PH-SHR)</i> E Roloff, S Kasparov, J Paton</p> <p><i>Comparing cerebral blood flow velocity and cerebral blood flow measures between transcranial Doppler ultrasound and phase contrast magnetic resonance imaging during hypercapnia and hypocapnia</i> N Coverdale, J Gati, O Opalevych, A Perrotta, JK Shoemaker</p>
<p>12:30-2:15</p>	<p>Poster Sessions Cerebral Autoregulation in Pathological Conditions</p> <p>Cerebral Blood Flow Regulation in Aging</p>	<p>Poster Sessions Autonomic and Other Control of the Cerebral Circulation</p> <p>Cerebral Autoregulation: The Quandary of Quantification</p>

2:30-4:30	<p><u>Practical Course on Performing TCD</u> San Diego Marriott Marquis & Marina, Balboa</p>	<p><u>Cerebral Autoregulation: The Quandary of Quantification</u> Convention Center, Room 25B</p> <p><i>TCD: What does velocity tell us? The debate over absolute vs relative changes</i> Dr. Jorge Serrador</p> <p><i>From models to numbers</i> Dr. David Simpson</p> <p><i>The mirage of autoregulation</i> Prof. Ronney Panerai</p> <p><i>Resisting the seduction of cerebral autoregulation</i> Dr. Yu-Chieh Tzeng</p> <p><i>Nonstationary multivariate modeling of cerebral autoregulation during resting state and hypercapnia</i> K Kostoglou, M Poulin, G Mitsis</p> <p>Interindividual relationships between blood pressure and cerebral blood flow variability T Witter, B MacRae, T O'Donnell, M Berry YC Tzeng</p>
5-6	<p><u>CARNet Bootstrap Meeting</u> San Diego Marriott Marquis & Marina, Cardiff</p>	<p><u>CARNet Business Meeting</u> San Diego Marriott Marquis & Marina, Marina Ballroom G</p>
6-7		

POSTER SESSIONS

Cerebral Autoregulation in Pathological Conditions

Contribution of voltage-gated potassium channels in cerebrovascular dysfunction associated with a genetic model of ischemic small vessel disease

F Dabertrand, C Kræigaard, A Bonev, J Brayden, A Joutel, M Nelson

The cytokines TNF MCP-1 and CINC-1 mediate diminished dilation of middle cerebral artery after ischemic stroke in rats

Z Broskova, D Anthony, Z Bagi

Sudden Onset of Hearing Loss after Cerebral Ischemia

P Kamat, A Kalani, S Tyagi, N Tyagi

Improving the sensitivity of neurovascular coupling assessment using motor-cognitive paradigms post-stroke

A Salinet, T Robinson, R Panerai

Dynamic cerebral autoregulation is heterogeneous in different subtypes of acute ischemic stroke

Z Ni Guo, J Liu, Y Xing, Y Yang

Brain tissue oxygenation in response to changes in arterial pressure in patients with mild cognitive impairment

J Liu, T Tarumi, B Tseng, C Hill, K Armstrong, L Hynan, T Hodics, R Zhang

Dynamic Cerebral Autoregulation and Tissue Oxygenation in Amnesic Mild Cognitive Impairment

T Tarumi, D Dunskey, M Ayaz, J Liu, C Hill, K Armstrong, K Martin-Cook, M Cullum, R Zhang

Regional cerebral blood flow responses to rapid reductions in blood pressure after high level spinal cord injury: the effect of alpha1-agonist

A Phillips, A Krassioukov, P Ainslie, D Warburton

Cerebral blood flow regulation during blood loss compared to lower body negative pressure in humans

J Barnes, B Johnson, Convertino, M Joyner, C Rickards

Cerebral Autoregulation in Fulminant Hepatic Failure

R Nogueira, F Mendes, M Pacheco, K Lins, M Jacobsen, T Edson, B Seng-Shu

Dynamic cerebral pressure-flow relationships in aging and long-term heart transplant recipients

J Smirl, M Haykowsky, K Marsden, H Jones, M Nelson, P Ainslie

Blunted Cerebrovascular Response to Exogenous Nitric Oxide in POTS

A Del Pozzi, M Medow, J Stewart

tPA-S481A prevents impairment of cerebrovascular autoregulation by endogenous tPA after traumatic brain injury by upregulating p38 MAPK and inhibiting ET-1

W Armstead, L Bohman, J Riley, S Yarovoi Abd, A Higazi, D Cines

Uncoupling of flow-pressure relationships following sport concussion in elite athletes
S Bishop, T Burnett, J Smirl, P Ainslie, P Donkelaar, P Neary

Reduced Vestibular Function in Veterans is Associated with Worse Cerebral Autoregulation
J Serrador, A Acosta, B Ghobreal, M Blatt

Cerebral blood flow regulation is affected immediately following a concussion
J Tosto, M Falvo, L Reyes, M Blatt, B Ghobreal, J Serrador

Two approaches to the Pressure-Volume Relationship after Traumatic Brain Injury using respiratory stimuli
C Haubrich

Post-traumatic stress disorder does not affect cerebrovascular reactivity
J Stojanovic-Radic, L Reyes, B Ghobreal, M Blatt, A Acosta, H Chandler, J Serrador

Autonomic Dysfunction in Veterans with Gulf War Illness
L Reyes, M Falvo, M Blatt, B Ghobreal, A Acosta, J Serrador

Cerebral autoregulation: the quandry of quantification

The effects of transcranial Doppler probe placement on cerebral autoregulation measurements
D de Jong, J Lagro, A van den Abeelen, K Slump, O Meulenbroek, J Claassen

Evaluating the repeatability of measuring CBFV and estimating ARI at the MCA vs ICA
R Nogueira, N Saeed, R Panerai, T Robinson, E Bor-Seng-Shu

Methodological considerations for cerebrovascular reactivity testing and analysis
J Inskip, R Ravensbergen, S O'Connor, V Claydon

The Effect of Different Body Positions on the Assessment of Dynamic Cerebral Autoregulation
J Luis, J Chacon

Influence of dynamic cerebral autoregulation on presyncope in endurance athletes
M Paquette, O Le Blanc, A Gaudreau, P Moreau, A Clément, G Thibault, P Brassard

Middle cerebral artery mean flow velocity changes to non-pharmacologically induced hypertension and hypotension in humans
P Brassard, M Paquette, O Le Blanc, A Gaudreau, P Moreau, A Clément, G Thibault

Are there differences in cerebral autoregulation between small increases or decreases of blood pressure?
D Simpson, A Birch, R Panerai

Quantifying autoregulation from estimated model parameters: an optimization approach
D Simpson, C Berroeta, E Katsogridakis, R Panerai

Comparison of Autoregulatory Indexes on Spontaneous Variations with Linear Support Vector Machines
Max L. Chacon, F Bello, J Jara, R Panerai

Nonstationary multivariate modeling of cerebral autoregulation during resting state and hypercapnia
K Kostoglou, M Poulin, G Mitsis

Interindividual relationships between blood pressure and cerebral blood flow variability
T Witter, B MacRae, T O'Donnell, M Berry, Y Tzeng

Autonomic and other control of the cerebral circulation

Are the upper limits of cerebral autoregulation at gross and microcirculatory levels different? Does nitric oxide (NO) play a role?
E Thompson, A Coney, J Marshall

Comparing cerebral blood flow velocity and cerebral blood flow measures between transcranial Doppler ultrasound and phase contrast magnetic resonance imaging during hypercapnia and hypocapnia
N Coverdale, J Gati, O Opalevych, A Perrotta, J Shoemaker

Influence of cholinergic blockade on the cerebral blood flow response to exercise in humans
I Braz, A Shantsila, A Adlan, N Secher, J Fisher

Effects of physical exertion and heat on cerebrovascular response in professional firefighters
J Neary, M Butz, B Dahlstrom, J Smirl, S Bishop

Blunted increases in vertebral blood flow during L-arginine infusion in patients with hypertension
L Vianna, I Fernandes, T Barbosa, T Amaral, N Rocha, N Secher, A N³brega

Effects of antioxidants on cerebrovascular hemodynamics during moderate and high intensity exercise
G Morales, D White, P Raven

Oscillatory Cerebral Blood Flow in Postural Tachycardia Syndrome
A Del Pozzi, M Medow, J Stewart

Increases in sympathetic activity during cold pressor test does not cause cerebral vasoconstriction
J Serrador, M Blatt, B Ghobreal, M Falvo

Immunohistochemical evidence of a reduced vasodilatory capacity in vertebrobasilar arteries in pre-hypertensive Spontaneous Hypertensive Rats (PH-SHR)
E Roloff, S Kasparov, J Paton

Spinal cord injury and disruption of extrinsic sympathetic control of cerebral vasculature does not significantly alter cerebrovascular reactivity to carbon dioxide
J Inskip, R Ravensbergen, S O'Connor, V Claydon

Time dynamics of cerebral blood flow during LBNP
M Kasprovicz, M Czosnyka, R Diehl, C Haubrich

APS Cerebral blood flow regulation in aging

Cerebral autoregulation individual variability and white matter hyperintensity

J Liu, B Tseng, M Khan, T Tarumi, C Hill, K Armstrong

Cerebral Hemodynamics in Normal Aging: Associations with Central Hemodynamics and Cerebral Small Vessel Disease

T Tarumi, M Ayaz, J Liu, B Tseng, R Parker, R Jonathan, C Tinajero, W Zaidi, R Zhang

Reduced cerebral autoregulation as the genesis of symptoms in orthostatic intolerance in elderly

M Sanders, A van den Abeelen, C Slump, J Lagro, J Claassen

Age-related differences in carotid and cerebral blood flow regulation

S Kruse, S Ranadive, J Taylor, M Joyner, J Barnes

The impact of aging on cerebral vasomotor reactivity to carbon dioxide

J Riley, T Tarumi, R Parker, K Armstrong, Cynthia Tinajero, R Zhang