

# Saeid Taheri

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## EDUCATION

Ph.D., electrical engineering, University of New Mexico, 2004  
M.Sc., electrical engineering, University of Tehran, 1994  
B.S., electrical engineering, Sharif University of Technology, 1990

## POSITIONS and EXPERIENCES

**Director USF Preclinical Imaging Center** University of South Florida, Tampa, FL Jan 2021–Present

- 7.0 T MRI Scanner.
- PET imaging.
- MRS PET/CT 120

**Assistant Professor (research)** University of South Florida, Tampa, FL Aug 2015–Present

- Conducted research on Vascular Cognitive Impairment (VCI) patients by using perfusion and diffusion MRI and studied the blood-brain barrier (BBB).
- Conducted translational research on neurovascular unit in neurodegenerative diseases and stroke using animal models of diseases and patients.
- Used Bruker 7.0T MRI scanner to study cerebral ischemia, TBI and neurodegenerative diseases in rodent models.
- Senior Scientist at molecular and functional imaging center using MRS 7.0T MRI scanner.

**Assistant Professor** Medical University of South Carolina, Charleston, SC Nov 2010–Jul. 2015

- Conducted research on Vascular Cognitive Impairment (VCI) patients by using perfusion and diffusion MRI and studied the blood-brain barrier (BBB).
- Conducted translational research on neurovascular unit in neurodegenerative diseases and stroke using animal models of diseases and patients.
- Managed Bruker 7.0T preclinical MRI scanner.

**Research Assistant Professor** University of New Mexico, Department of Neurology, Albuquerque, NM Oct 2007-Oct 2010

- Translated dynamic contrast enhanced MRI-based methods for studying the blood-brain barrier permeability and quantifications of barrier transfer rates in patients with stroke, MS and VCI.
- Studied VCID and MS using 1.5T and 3T MRI.
- Managed Bruker 4.7T preclinical MRI scanner.

**Postdoctoral Associate** University of New Mexico, Department of Neurology, Albuquerque, NM Feb 2005-Sep 2007

- Maintained MR system for daily use, trained MR users, helped in signal and image processing. Preparation of animal models for MR imaging and monitoring diseases.
- Worked on optimization and development of MR sequences for a large-bore Bruker 4.7T research MRI system.
- Developed pulse sequences for off-resonance imaging.
- Developed image processing techniques for DCE-MRI method in quantifying the Blood-Brain Barrier permeability in small animal models.

**Research Scientist** University of New Mexico, Orthopedics Department, Albuquerque, NM Jan 2002-Jan 2005

- Used adaptive signal processing methods and modeled the microscopic behavior of soft tissues, ligaments and tendons under repeated stress and strain.
- Designed and implemented hardware/software for on-line measurement and processing of bone temperature during bone surgery using micro-sensors and LABVIEW.
- Low SNR signals obtained from multiple channels were linearly filtered and then processed to extract the temperature information.

**Research Assistant** UNM NASA Autonomous Control Engineering Center (ACE), Albuquerque, NM 2001-2002

- Conducted modeling and simulation of distributed systems using DEVS/HLA
- Considered event-driven abstraction for controlling distributed robot systems.

**Research Assistant** Universidad Nacional de Mexico, Mexico City, Mexico 1997-2000

- Conducted research on applying wavelet-based methods for dynamical system identification.

**Engineer** Monenco Consulting Co., Tehran, Iran 1994-1995

- Applied Monte Carlo simulation and modeling method for evaluating the effects of lightning on power transmission lines.

## TEACHING EXPERIENCE

### **Instructor**

- *Signals and Systems*, UNM, Fall 2002, and Fall 2007
- *Clinical/Systems Neuroscience*, MUSC, Fall 2012 (Co-Instructor)
- *Pharmacodynamic/Pharmacokinetics*, USF, Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2021, and Fall 2022 (Co-Instructor)

### **Teaching Assistant**

- *Digital Signal Processing*, invited lecturer, UNM, Spring 2004
- *Probability and Statistics*, invited lecturer, UNM, Spring 2003
- *Large Scale Systems*, UNM, Fall 2002
- *Linear Control Systems*, UNM, Spring 2001

## LIST OF PUBLICATIONS

### **Book Chapter**

- 57 Candelario-Jalil E., **Taheri S.**, and Rosenberg G.A., Brain Edema in Neurological Disease, Neurochemical Mechanisms in Disease. Series: Advances in Neurobiology, Vol. 1. Blass, John P. (Ed.) 1st Edition, 2011, ISBN: 978-1-4419-7103-6: Springer

### **Peer-Reviewed Articles**

- 56 J Yu, H. Zhu, M. Kindy, **S Taheri\***, (2023), The impact of a high-sodium diet regimen on cerebrovascular morphology and cerebral perfusion in Alzheimer's disease, Cerebral Circulation-Cognition and Behavior vol 4, 100161.
- 55 A Haque, A Das, S Samantaray, D Matzelle, M Capone, G Wallace, A N Husarik, **S Taheri**, RJ Reiter, A Varma, SK Ray, NL Banik, (2022) Premarin Reduces Neurodegeneration and Promotes Improvement of Function in an Animal Model of Spinal Cord Injury, International journal of molecular sciences, 23(4), 2384. PMID: 35216504
- 54 J Yu, H Zhu, MS Kindy, **S Taheri\***, (2021) Cytochrome P450 CYP2E1 suppression ameliorates cerebral ischemia reperfusion injury, Antioxidants 10 (1), 52. PMID: 33466250
- 53 J Yu, H Zhu, **S Taheri**, W Mondy, S Perry, C Kirstein, MS Kindy, (2021) Effects of GrandFusion Diet on Cognitive Impairment in Transgenic Mouse Model of Alzheimer's Disease, Nutrients 13 (1), 117.
- 52 J Yu, H Zhu, **S Taheri**, W Mondy, S Perry, MS Kindy, (2021) Plant-Based Nutritional Supplementation Attenuates LPS-Induced Low-Grade Systemic Activation, International Journal of Molecular Sciences 22 (2), 573. PMID: 33430045
- 51 N Yazdani, MS Kindy, **S Taheri\***, (2020) CBF regulation in hypertension and Alzheimer's disease, Clinical and Experimental Hypertension 42 (7), 622-639 PMID: 32420765
- 50 **Saeid Taheri\***, J Yu, H Zhu, H. Shi, Mark S Kindy, (2019) Hemispheric diaschisis after ischemia reperfusion: a longitudinal voxel-based study by MRI, Translational Neuroscience, Research and Review, vol 12, issue 1 27-37.
- 49 J Yu, H Zhu, **S Taheri**, W Mondy, L Bonilha, GS Magwood, D Lackland, ... (2019) Serum amyloid A-mediated inflammasome activation of microglial cells in cerebral ischemia Journal of Neuroscience 39 (47), 9465-9476
- 48 J Yu, H Zhu, **S Taheri**, W Monday, S Perry, MS Kindy (2019) Reduced Neuroinflammation and Improved Functional Recovery after Traumatic Brain Injury by Prophylactic Diet Supplementation in Mice Nutrients 11 (2), 299 PMID: 30708954

- 47 J Yu, H Zhu, **S Taheri**, W Mondy, C Kirstein, W Swindell, D Ko, MS Kindy (2019) GM6 Attenuates Alzheimer's Disease Pathology in APP Mice, *Molecular neurobiology*, 1-11 PMID: 30798443
- 46 Brittany Lang, Mark S. Kindy, Andrew Kozel, Susan Schultz, and **Saeid Taheri\***, (2018) Multi-parametric classification of vascular cognitive impairment and dementia: the impact of cerebrovascular injury biomarkers, *Journal of Alzheimer's Disease*, vol. 62, no. 1, pp. 39-60, PMID:29439338
- 45 J Yu, H Zhu, **S Taheri**, W Mondy, S Perry, MS Kindy (2018) Impact of nutrition on inflammation, tauopathy, and behavioral outcomes from chronic traumatic encephalopathy *Journal of neuroinflammation* 15 (1), 277 PMID:30249250
- 44 J Yu, H Zhu, **S Taheri**, S Perry, M Kindy, (2018) The effect of diet on improved endurance in male C57BL/6 mice *Nutrients* 10 (8), , PMID: 30115854
- 43 Joao Prola Netto, Jeffrey Iliff , Danica Stanimirovic, Ken Krohn, Bronwyn Hamilton, Csanad Varallyay, Seymour Gahramanov, Heike Daldrup-Link, Christopher d'Esterre, Berislav Zlokovic, Haris Sair, Yueh Lee, **Saeid Taheri**, Rajan Jain, Ashok Panigrahy, Daniel Reich, Lester R. Drewes, Edward A. Neuwelt, Mauricio Castillo,(2017) Neurovascular unit: basic and clinical imaging with emphasis on advantages of ferumoxytol, *Neurosurgery*, 1-11. PMID: 28973554
- 42 Jin Yu, Hong Zhu, Stephen Perry, **S Taheri** and Mark S Kindy, (2017) Daily supplementation with GrandFusion improves memory and learning in aged rats, *Journal of Aging*, 9(3): 1041–1054. PMCID: PMC5391217
- 41 **Taheri S\***, Yu J, Zhu Hong, Kindy Mark S (2016) High-Sodium Diet Has Opposing Effects on Mean Arterial Blood Pressure and Cerebral Perfusion in a Transgenic Mouse Model of Alzheimer's Disease. *J Alzheimer's Dis.* Oct 4;54(3):1061-1072. PMID: 27567835
- 40 **Taheri S\***, Zhu Xun, Jane Joseph, Ronald See, Carmela Reichel (2016) Cocaine and methamphetamine induce opposing changes in BOLD signal response in rats, *Brain Research*, Jul 1;1642:497-504. PMCID: PMC4899179
- 39 **Taheri S\***, Gary A. Rosenberg, Jon H. Shah, (2016) Analysis of Pharmacokinetics of Gd-DTPA for Dynamic Contrast-enhanced Magnetic Resonance Imaging, *Magnetic Resonance Imaging*, Sep; 34(7): 1034–1040. PMCID: PMC4947005
- 38 Jin Yu, Hong Zhu, Sebastiano Gattoni-Celli, **Taheri S** and Mark Stephen Kindy (2016), Dietary supplementation of GrandFusion®mitigates cerebral ischemia-induced neuronal damage and attenuates inflammation, *Nutr Neurosci.* Sep;19(7):290-300. PMID: 25879584
- 37 Keren NI, **S Taheri S**, Vazey, EM, Morgan PS, Granholm,AE, GS Aston-Jones, Eckert M (2015) Histologic Validation of Locus Coeruleus MRI Contrast in Post-mortem Tissue, *NeuroImage Volume* 113, June 2015, Pages 235–245. PMID:25791783.
- 36 **Taheri S\***, Shunmugavel A, Lowe D, and Shi H. (2014) Isoflurane reduces the ischemia reperfusion injury surge: A longitudinal study with MRI, *Journal of Brain Research*, *in press*, 2014: DOI:10.1016/j.brainres.2014.08.003, PMID:25124744.

- 35 Zhang, Z., Yan J., **Taheri S.**, Liu J., Shi H (2014) Hypoxia-inducible factor 1 contributes to N-acetylcysteine's protection in stroke, *Free Radical Biology and Medicine*,(68):8-21. DOI: 10.1016/j.freeradbiomed.2013.11.007, PMID:24296245.
- 34 Hassanshahi G., Amin M., Shunmugavel A., Vazirinejad R., Vakilian A., Sanji M., Shamsizadeh A., Rafatpanah H., Poor NM., Moosavi SR., and **Taheri S\***. (2013) Temporal expression profile of CXC chemokines in serum of patients with spinal cord injury. *Neurochem Int.* 6;63(5):363-367. DOI: 10.1016/j.neuint.2013.07.012; PMID: 23927862
- 33 Yang Y., Thompson J.F., **Taheri S.**, Estrada E.Y., Mcavoy T.A., Hill J.W., Salayandia V.M., and Rosenberg G.A.(2013) "Early inhibition of MMP activity in ischemic rat brain promotes expression of tight junction proteins and angiogenesis during recovery", *Journal of CBFM*, 33(7):1104-14;PMID:23571276
- 32 Hart B., **Taheri S.**, Rosenberg G.A., and Morisson L.(2013) Dynamic Contrast-Enhanced MRI Evaluation of Cerebral Cavernous Malformations. *J Translational Stroke Research*, 4(5):500-506.
- 31 Gasparovic C, Prestopnik J, **Taheri S**, Huisa B, Schrader R, and . Rosenberg GA, "1H-MRS Metabolite Levels Correlate with Executive Function in Vascular Cognitive Impairment", *J Neurol Neurosurg Psychiatry* 2013;00:1–7.
- 30 **Taheri S\***, Rosenberg GA, and Ford C, "Quantification of blood-to-brain barrier in multiple sclerosis". *Multiple Sclerosis and Related Disorders*. Volume2, Issue 2, April 2013, Pages 124–132 (**Cover figure**).
- 29 Yan, J., Bo Zhou B., **Taheri S.**, Shi H., "Differential effects of HIF-1 inhibition by YC-1 on the overall outcome and blood brain-barrier damage in a rat model of ischemic stroke", accepted for publication, *PLOS One*, 6(11), e27798, 2011, PMID:22110762.
- 28 Huisa B. Gasparovic C., **Taheri S.**, J Prestopnik, and Rosenberg G.A., "Imaging of Subacute Blood-Brain Barrier Disruption after Methadone Overdose", *Journal of NeuroImaging*, eprint, Jan 2012,PMID: 2211853.
- 27 **Taheri S.\***, Gasparovic C., Shah N.J., and Rosenberg G.A., "Quantitative measurement of blood-to-brain influx rate constant in human using dynamic contrast-enhanced MRI with fast T<sub>1</sub> mapping", *MRM*, Volume 65, Issue 4, pages 1036–1042, April 2011 (**Cover Figure**).
- 26 Candelario-Jalil E., Thompson J., **Taheri S.**, Grossetete M., Adair J., Edmonds E., Prestopnik J., Wills J., and Rosenberg GA, "Matrix Metalloproteinases in CSF are Associated with CSF Albumin Index In Vascular Cognitive Impairment", *Stroke*, March, 2011.
25. **Taheri S.**, Adair J., Edmonds E., Huisa B., Prestopnik J., Gasparovic C., Grosettete M., Neeb H., Shah N.J., Sood R., and Rosenberg G.A., "Blood-Brain Barrier Disruption in Patients with Vascular Cognitive Impairment Quantified by Dynamic Contrast-Enhanced Magnetic Resonance Imaging", *Stroke*, Jun. 2011.

24. **Taheri S.**, Candelario-Jalil E., Estrada E., and Rosenberg G.A., "Spatiotemporal Correlations between Blood-Brain Barrier Permeability Changes and Apparent Diffusion Coefficient in a Rat Model of Ischemic Stroke", *PLos Journal*, Vol 4, iss 8, Aug. 2009. 1-9.
23. Sood R., Yang Y., **Taheri S.**, Candelario-Jalil E., Walker E.J., Thompson J., and Rosenberg G.A., "Increased apparent diffusion coefficients on MRI linked with matrix metalloproteinases and edema in white matter after bilateral carotid artery occlusion in rats". *Journal of CBFM*, 29, 2008; 308-316.
22. Candelario-Jalil E., **Taheri S.**, Yang Y., Estrada E., Sood R., Rosenberg G.A., "Cyclooxygenase Inhibition Limits Neuroinflammation-Induced Blood Brain Barrier Breakdown through a Mechanism Involving Reduction in Matrix Metalloproteinase-9 Expression and Activity". *Journal of Pharmacology and Experimental Therapeutics (JPET)*, 2007; 323(2):488-498.
21. Sood R., **Taheri S.**, Candelario-Jalil E., Estrada, E., and Rosenberg, G.A. "Early Beneficial Effect of MMP Inhibition on BBB Permeability as Measured by MRI Countered by Impaired Long-Term Recovery after Stroke in Rat Brain". *Journal of CBFM*, 2007; 1-8.
20. **Taheri S.**, and Sood R., "Partial Volume Effect Compensation for Improved Reliability of Quantitative Blood-Brain Barrier Permeability. *Journal of MRM*, 2007; 25(5): 613-625.
19. Sood R., and **Taheri S.**, Estrada E., Rosenberg G., "Quantitative Evaluation of the Effect of Propylene Glycol on BBB Permeability. *Journal of MRI*, 2007; 25: 39-47.
18. **Taheri S.**, and Sood R. "Kalman Filtering for Reliable Estimation of BBB Permeability", *Journal of MRI*, 2006; 24:1039-1049.
17. **Taheri S.**, and Sood R., "Spin Lock MRI with Amplitude- and Phase Modulated Adiabatic Wave Forms: an MR Simulation Study", *Journal of MRI*, 2006; 24:51-59.
16. **Taheri S.**, Taha R., Firoozbakhsh K., Moneim M., "Interrelating Creep and Stress Relaxation of Medial Collateral Ligaments Using a Fuzzily Modeled Collagen Fiber Recruitment", Transactions of the Wissex Institute of Technology, WIT press, UK, 2005; 663-671.
15. **Taheri S.**, "Cross-Layer Routing and Multiple Access Protocol for Ad Hoc Networks", Proceedings of IEEE Workshop on High Performance Switching and Routing, 2004.
14. **Taheri S.**, "Improving the Performance of TCP in Structure-less Networks with Virtual Infrastructures", Proceedings of IEEE CCC and Networking, CCNC04, Las Vegas, NV, 2004; 256-261.
13. **Taheri S.**, "Label-Based Multi-Ring Structure for Routing in All Optical Networks", Proceedings of CISS02, Princeton University, 2002; 68-73.
12. **Taheri S.**, and Scaglione A., "Token Enabled Multi-Carrier Code Division Multiple Access for Broadband Wireless Local Area Networks", Proceedings of ICC02 NY.2002; 1913-1917.
11. **Taheri S.**, and Scaglione A., "Token Assignment Multiple Access for Low Collision High Bandwidth Ad Hoc Networks", Proceedings of IEEE ICASSP01, Salt Lake City Utah, 2001.
10. **Taheri S.**, "Enhanced Freeze TCP and its Challenges for Mobile Environment, Proceedings of Information Sciences and Systems", Proceedings of CISS01, Johns Hopkins University, March 2001.

9. **Taheri S.**, and Calva G., "Immune System Mechanism to Facilitate Federation Formation", Proceedings of IEEE Conference on Control (ICC01), Mexico City, Mexico, 2001; 25-30.
8. **Taheri S.**, and Jamshidi M., "ANN-Based Sliding Mode Control for Non-Holonomic Mobile Robots", Proceedings of IEEE CCE, Anchorage, Alaska, 2000; 664-667.
7. **Taheri S.**, Zeigler BP., and Sarjoughian H., "Discrete Event Modeling and Simulation of Multi-robot Systems", Proceedings of AI, Simulation and Modeling Conference, Tucson Arizona, 2000; 297-304.
6. **Taheri S.**, "Adaptive K-Nearest Neighbor Classification Rule Based on Fuzzy Generalized Dempster-Shafer Theory", Proceedings of International Symposium on Information Theory and its Applications, Mexico City, Mexico, 1998.
5. **Taheri S.**, and Tang Y., "Multi-Wavelet Based Methods in Dynamical System Identification", IFAC, Algorithms and Architectures for Real-Time Control, Proceedings of AARTC98, Mexico, 1998.
4. **Taheri S.**, and Calva G., "Automatic Anomaly Detection in ECG Signal by Fuzzy Decision Making", Proceedings of IEEE Conference on Computers in Cardiology, Cleveland Ohio, September 1998.
3. **Taheri S.**, "Mathematical Considerations for Neural Networks in System Identification and Function Approximation", Proceedings of 4th World Congress on Expert System, Mexico City, March 1998.
2. **Taheri S.**, and Nezafat R., "Adaptive Multi-Wavelet Transform Based on Evidence Theory for Medical Image Processing", Proceedings of First International Conference on Computer Vision, Pattern Recognition and Image Processing, CVPRIP98, North Carolina, Oct. 1998.
1. Nezafat R., Tabesh A., **Taheri S.**, Lucas C., Zia M., "Feature Selection and Classification for Diagnosing Breast Cancer", Proceedings of IASTED Artificial Intelligence and Soft Computing, Mexico, 1998; 310-313.

## INVITED TALKS

2. "Quantification of blood-brain barrier, a translational research" 21th Annual Blood-Brain Barrier meeting, March 19-21 (2015), Skamania Lodge, Stevenson, WA.
1. "Nuts and bolts in DCE-MRI" Aug 12 (2013), Health Sciences Center, University of New Mexico, Albuquerque, NM.

## GRANT SUPPORT

### Grants in resubmission

**R21-NS084250-01**

S. Taheri (PI)

*Post-conditioning with volatile anesthetic isoflurane after ischemia induces tolerance.*

The goal of this project is to establish mechanism of tolerance induced by isoflurane in MCAO model of stroke.

Role: PI

**R21-NS091738-01**

S. Taheri/M. Kindy (Multiple PIs)

*PCXCL-12 and its role in blood-spinal cord barrier recovery of spinal cord injury*

The goal of this project is to investigate the role of chemokines in BSCB and recovery from injury.

Role: PI

**R01-DA039268-01**

S. Taheri (PI)

*In vivo quantitative measurements of Meth-induced neurovascular changes during abstinence.*

The goal of this project is to investigate the role of meth on vascular injury and BBB damage.

Role: PI

### **Ongoing Research Support**

**Florida Department of Health 20A18** S. Taheri (PI) \$250,000 1/1/2020– 12/30/2024

*Impact of cerebrovascular pathology on Alzheimer's disease and other dementia.*

The main goal of the studies in this proposal is to *in vivo* investigate the impairment of cerebrovascular pathologies on the progression of AD and other dementia in patients diagnosed with cognitive impairments.

Role: PI

**R01 000000-01**

G. Thinakaran (PI)

02/01/22 – 01/30/26

*Spatial and Temporal role of BIN1 in tau pathology in Alzheimer's disease.*

In this research we use *in vivo* MR imaging techniques to investigate the role of BIN1 on alteration of brain anatomical areas important to memory and cognition

Role: Collaborator

### **Completed Research Projects**

**Alzheimer's Association VMF-14-322119** S. Taheri (PI) \$250,000 14/1/2015 – 9/2019

*Contribution of BBB pathologies to Alzheimer's disease and Dementia.*

The main goal of the studies in this proposal is to *in vivo* investigate the impairment of BBB in patients diagnosed with cognitive impairments.

Role: PI

**R01 NS065849-01A2**

E. Candelario-Jalil (PI)

05/1/11 – 04/30/17

*Cyclooxygenase-2 Regulation of Blood-Brain Barrier Opening in Ischemic Stroke*

In this research we study the effect of inhibition of Cyclooxygenase-2 on BBB in rat ischemic model of focal stroke.

Role: Collaborator

**R01-NS059962-06**

Surojit Paul (PI)

04/2013 – 03/1018

*Role of Brain Specific Tyrosine Phosphatase STEP in Neuroprotection and Death.*

The overall objective of this project is to determine whether interventions to enhance STEP signaling can facilitate long-term protection from ischemia induced damage and improves functional recovery both in young and aging animals.

Role: Consultant

**R03-DA034727-01**

C. Rachel/S. Taheri (Multiple PIs)

\$221,250

01/2013 – 06/1014

*Measuring in vivo meth-induced neurovascular changes using quantitative MRI.*

The goal of this project is to investigate neuroinflammation in animal model of self administered meth using MR imaging techniques.

Role: Co-PI

**Alzheimer's Association NIRG-12-242467**

S. Taheri (PI)

\$100,000

11/2012 – 11/2014

*Monitoring the effect of hypertension on the BBB in APP mice model of AD.*



The main goal of the studies in this proposal is to measure *in vivo* the hallmarks of inflammatory changes in the brain of amyloid-precursor protein (APP) transgenic mice under regular diet and diet-induced high blood pressure (HBP).

Role: PI

**R01 NS065456-04**

N.L. Banik (PI)

10/2012 – 9/30/15

*Neuroendocrine Therapy to Improve Locomotor Function in Spinal Cord Injury.*

The goal of this project is to study the effect of estrogen on spinal cord injury treatment.

Role: Collaborator

**R21-MH099534-01**

G.S. Aston-Jones (PI)

08/2012 – 07/30/14

*Effects of Locus Coeruleus Activation: Selective Optogenetic Stimulation and fMRI.*

The goal of this project is to establish an empirical foundation for measuring locus coeruleus (LC)- norepinephrine (NE) system effects in target networks using functional magnetic resonance imaging (fMRI).

Role: Collaborator

**AHA 09BGIA2261177**

S. Taheri (PI)

07/2009 – 06/2012

*Predicting Tissue Fate in Acute Cerebral Ischemia Using BBB Permeability and ADC of Water Measured by Multimodal Magnetic Resonance Imaging*

The goal of this project was to use temporal and spatial data of BBB permeability and edema (ADC) to build a MR tissue signature model to predict the tissue fate in damaged areas of brain.

Role: PI

**R01 NS058807**

H. Shi (PI)

01/2008 – 03/31/13

*Mechanism of Hypoxia Inducible Factor 1 in Cerebral Ischemia.*

The goal of this project is to study the oxidative stress and its role in hypoxia inducible factor (HIF-1) stability in ischemic brains utilizing multidisciplinary approaches including MRI.

Role: Collaborator

**R01 NS052305**

G.A. Rosenberg (PI)

01/2004-12/2008

*Metalloproteinase regulation of Neuronal Death*

This proposal was to investigate the convergence of Metalloproteinase activity and death receptor signaling in neurons.

Role: Collaborator

**Bayer Co.**

G.A. Rosenberg (PI)

01/2008-12/2008

*Pilot study of Gd-DTPA enhanced Quantitative BBB Permeability Measurement*

In this proposal we study the pharmacokinetics of contrast agent on MR-based methods in quantification of BBB permeability.

Role: Collaborator

**UNM HSC-Signature Program in Brain and Behavior Illness.** B. Hart (PI) 08/2009 - 06/2010

*Neuroimaging Markers in Cerebral Cavernous Malformations Type 1 (CCM1) in New Mexico*

The goal of this pilot study was to utilize detailed neuroimaging techniques to determine whether blood brain barrier permeability may be useful as a biomarker of disease severity and progression in carriers of the CCM1 gene.

Role: Collaborator

**R01 NS052305**

G.A. Rosenberg (PI)

02/2009 - 2/2011

*Pathobiology of Vascular Cognitive Impairment*

The overall goal of this grant was to study a multimodal assessment of patients with VCI.

Role: Collaborator

**AWARDS**

- Research incentive Award (\$1,4000) College of Pharmacy, University of South Florida, 2019
- Research incentive Award (\$1,200) University of South Florida, 2018

- Stipend grants from International Society of Magnetic Resonance in Medicine (ISMRM), 2007, 2008
- Travel grants from University of New Mexico, 2003, and NASA ACE Center, 2002

#### **Other Experience and Professional Memberships**

2017	Editor, Journal of Alzheimer's disease
2012	Member, American Society for Neuro Radiology (ASNR)
2011	Member, New York Academy of Science (NYAS)
2010	Member, American Heart Association/American Stroke Association (AHA/ASA)
2005	Member, International Society of Magnetic Resonance in Medicine (ISMRM)
2000	Member, Institute of Electrical and Electronic Engineering (IEEE)