

CURRICULUM VITAE

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PERSONAL DATA:

Date of Birth December 13, 1959
Place of Birth St. Louis, MO. U.S.

EDUCATION:

1978-82 B.A. in Biology Washington University, St. Louis, MO
1983-87 M.D. Hahnemann University, Philadelphia, PA

RESIDENCY TRAINING:

1987-88 Intern, Internal Medicine, Crozer-Chester Medical Center, Chester, PA
1988-91 Resident, Neurology, Boston University School of Medicine, Boston, MA

FELLOWSHIP TRAINING:

1991-93 Behavioral Neurology and Functional Neuroimaging, Massachusetts General Hospital, Boston, MA

FACULTY APPOINTMENTS:

12/2001-6/2011 Assistant Professor in Neurology, Wayne State School of Medicine, Detroit, MI
1996-2001 University of Connecticut Health Center, Farmington, CT

HOSPITAL OR OTHER PROFESSIONAL APPOINTMENTS:

12/2001-6/2011 Detroit Medical Center and Hospitals, Detroit, MI
1/10-5/11 Co-Director Center for Traumatic Brain Injury Research, WSU

PROFESSIONAL SOCIETIES MEMBERSHIP:

American Academy of Neurology
Society of Behavioral Neurology
Society of Magnetic Resonance in Medicine
National Neurotrauma Society
International Neurotrauma Society
North American Brain Injury Society

LICENSURE AND BOARD CERTIFICATION:

Medical Licensure: State of Pennsylvania (inactive)
 State of Massachusetts (inactive)
 State of Connecticut (inactive)
 State of Michigan (active)

Board Certification:

1987 National Board of Medical Examiners 33486036
1996 Diplomate, American Board of Psychiatry and Neurology
2008 Recertification ABPN (American Board of Psychiatry and Neurology)

HONORS/AWARDS:

1982 University Honors, Washington University
1986 Senior Honors Program, Hahnemann University
1986 Letter of Commendation in Psychiatry, Hahnemann University
2004 Detroit's Best Doctors-Hour Magazine
2005 Member Metropolitan Professional Honor Society
2008 Top Scoring Abstract and Presentation Award (first place), 6th North
 American Brain Injury Society (NABIS) Annual Conference, Oct 2-4, New
 Orleans, LA

SERVICE:

Patient Care (2001-2011)

*Staff attending at Harper Hospital, Detroit Receiving Hospital
*General Neurology ambulatory clinic

- *Behavioral Neurology consultation in- and outpatient
- *Preoperative functional mapping of eloquent cortex using fMRI

Editorial

Journal of Cognitive Neuroscience	Ad-hoc reviewer
Annals of Neurology	Ad-hoc reviewer
Epilepsia	Ad-hoc reviewer
Human Brain Mapping	Ad-hoc reviewer
Journal of Neurological Sciences	Ad-hoc reviewer
Brain and Language	Ad-hoc reviewer
Brain	Ad-hoc reviewer

Medical Advisory Board Membership

Michigan Dementia Coalition	2004-2011
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Intramural Committees

Magnetic Resonance Research Review	2004-2011
Departmental 5-year Internal Review-- Clinical Subcommittee Chair	2007-2008

Grant Reviewer

National Science Foundation	2007 (Ad-hoc)
Henry Ford Hospital Intramural Grant Program	2004-2007

TEACHING:

2012 - 2014	Thesis Supervisor for M.S. candidate Hardik Doshi in Bioengineering MRI graduate program
2009 – 2011	Thesis Supervisor for Ph.D. candidate Shelly Yoshida in Translational Neurosciences graduate program
2008 - 2011	Graduate course PYC 7150--Fundamentals of Neuropsychiatric Disorders (single lecture "Disorder of Higher Cortical Function")
2008 - Present	Graduate course PYC 7320—MR Imaging of Neurovascular Disease (course instructor)
2008 - 2010	Lecture on brain imaging to Neuropsychology interns in Department of Physical Medicine and Rehabilitation
2002 - 2011	3-5 lectures on behavioral neurology at noon-time lecture series to residents, students (5-20 residents and students)
2002 - 2011	Yearly core lecture on Dementia to Medicine, Physical Therapy, Physician Assistant programs
2002 - 2011	4-6 weeks per year Clinical teaching rounds for residents, students, rotators, observers on Neurology inpatient service, Harper and DRH Hospitals (4-8 residents and rotators)
2002 - 2011	4 –8 weeks per year Clinical teaching rounds for residents, students in Neurology outpatient service (4-8 residents and students)

RESEARCH INTERESTS:

1. Application of advanced magnetic resonance imaging methods such as diffusion tensor, susceptibility-weighted, MR spectroscopy, morphometry, perfusion and fMRI to the study of traumatic brain injury (TBI)
2. TBI in former NFL football players
3. Use of quantitative EEG and ERP in TBI
4. Imaging of tinnitus and vestibular dysfunction from TBI
5. Neuromodulation of brain using electrical and magnetic stimulation
6. Pituitary hormonal effects in TBI
7. EEG biofeedback as a treatment for sequelae of TBI
8. Neurovascular effects in MS

INVITED LECTURES:

- 02/23/18 2018 PPII Winter Conference – Sedona, AZ – Using Brain Scans to Prove: Pain, Depression, PTSD & TBI
- 11/03/17 BIAMI Neurologic Conference – Traverse City, MI – “Advanced Brain Imaging In The Diagnosis of Brain Injury”
- 09/15/17 BIAMI – Lansing, MI – “Topical Information Relating to Traumatic Pituitary Hypofunction, which is one of the Principal Causes of Persistent Morbidity in mTBI in the Post-Acute Period”
- 05/12/17 Michigan Association for Justice Conference – Detroit, MI – "Advanced Neuro-Imaging in Diagnosing and Treating TBI"
- 03/29/17 NABIS – New Orleans, LA – "The Biggest Thing in Brain Injury Most Docs Miss: Pituitary Insufficiency"
- 09/25/16 Brain Injury Seminar – Tennessee Association of Justice – Nashville, TN – “The Use of Diffusion Tensor Imaging in TBI”
- 05/05/16 AAJ Education Conference TBI seminar – Charleston, SC – "What the New Imaging Techniques Can Tell Us About Deficits"
- 04/08/16 NABIS – "Advanced Neuro-Imaging" – Tampa, FL
- 01/30/15 “Improving Outcomes from Head Trauma using Advanced MRI” to the International Association of Rehabilitation Professionals, Michigan Chapter, and the Michigan Neuropsychological Society – Southfield, MI
- 09/12/14 “Diagnosing the Difficult Mild TBI Case” Brain Injury Association of MI Annual Fall Conference in Lansing, MI
- 04/03/14 Rec Therapy Case Management Conference – Lansing, MI
- 09/27/13 NABIS in New Orleans, LA
- 06/12/13 Dementia Talk – Wayne State
- 05/16/13 St. Mary’s Grand Rounds in Saginaw, MI
- 09/26/12 Invited lecture entitled, “Improving the Diagnosis and Treatment of Brain Injury through the use of Advanced MRI” at the Second Annual Veterans TBI Summit in Lansing, MI
- 09/27/12 Invited lecture entitled, “Improving the Diagnosis and Treatment of Brain Injury through the use of Advanced MRI” at the 32nd Annual meeting of the Brain Injury Association of Michigan in Lansing, MI
- 09/13/12 Invited lecture at The North American Brain Injury Society's Tenth Annual Conference on Brain Injury entitled, “Update on Advanced MR Imaging of Mild TBI”
- 05/17/12 Invited lecture at the Gridiron Greats Hall of Fame Induction and Players only Dinner, entitled “The Effects of NFL Football on the Brain” in Novi, MI

02/20/12 Invited lecture entitled, "Idiopathic intracranial hypertension: similarities & differences with CCSVI" at the 2nd Annual Meeting of the International Society of NeuroVascular Disease, Orlando, FL

09/15/11 Invited lecture at The North American Brain Injury Society's Tenth Annual Conference on Brain Injury entitled, "Advanced MRI in the Detection of Traumatic Brain Injury"

03/13/10 Oral presentation at the 8th World Congress on Brain Injury. "Advanced Magnetic Resonance Imaging of Mild Traumatic Brain Injury in Emergency Settings". Washington DC. #379.

01/04/10 Testified at House Judiciary Committee Field Hearing on "Legal Issues relating to football head injuries" at Wayne State University School of Medicine

10/16/09 Invited lecture at The North American Brain Injury Society's Seventh Annual Conference on Brain Injury, "High Sensitivity Neuropsychological and Quantitative Brain MRI Procedures in the Assessment of Mild to Moderate Traumatic Brain Injuries"

10/14/09 Invited presentation at the American Speech-Language-Hearing Association on-line Audiology Conference, "Imaging traumatic brain injury with magnetic resonance imaging"

03/29/09 Invited lecture at The New York Academy of Traumatic Brain Injury 12th annual multidisciplinary conference: Traumatic Brain Injury: an imperative on intervention

10/14/07 Invited lecture at Annual Meeting of the Michigan Academy of Physician Assistants, "Dementia and Alzheimer's disease."

10/27/07 Invited lecture at 7th Annual Neurology for the Non-Neurologist Conference, CME course, "Current Approaches to the Treatment of Dementia and Alzheimer's Disease."

09/28/07 Lecture to Brain Injury Association of Michigan (BIAM) Annual Meeting, Lansing, MI 2007. "MR Visualization of TBI Pathology: A Multi-Dimensional Approach--Diffusion Tensor Imaging"

01/06 Grand Rounds, Department of Neurology, Henry Ford Hospital, "Cortical Stimulation for the Treatment of Hemiparesis from Stroke"

10/05 fMRI Workshop, Harper Hosp. MR Research, "MR Imaging of Trauma"

08//05 WSU Trauma Symposium, "Diffusion Tensor Imaging of Brain Trauma"

10/05 Grand Rounds, Department of Psychiatry, WSU, "The Neuropsychiatry of Epilepsy"

09/04 Lecture on the topic of memory, aging and hormonal effects at third annual "Speaking of Women's Health", conference hosted by Hutzel Hospital

07/04 Grand Rounds, Department of Neurology, WSU, "Acute Confusional State and Delirium"

07/03 Lecture to primary care physicians, housestaff, "Dementia and Alzheimer's disease; sponsored by Pfizer Pharmaceuticals, Inc.

09/03 Lecture entitled, "Geriatric Neurology", to Geriatric Psychiatry Fellows and staff

05/03 "You heard it here first: Experts discuss the latest advances in their fields" lecture to WSU Alumni Association on recent advances in Alzheimer's disease

10/02 Krieger symposium, lecture, "Dementia and Alzheimer's disease"

09/02 Grand Rounds, Department of Neurology, WSU, "Alzheimer's Disease Update"

08/02 Grand Rounds, Department of Internal Medicine, WSU, "Alzheimer's Disease Update"

04/02 Grand Rounds lecture, "Functional MRI", Rehabilitation Institute of Michigan, Detroit, MI

03/02 Lecture entitled "Aging and Cognition" to Women's Health Initiative Memory Study

1997-01 Neurology Grand Rounds at Hartford Hospital, Hartford, CT

08/99 "Functional MRI and Cognition" symposium at American Psychological Association annual meeting, Boston, MA

10/98 Clinical fMRI course sponsored by Mass. General Hospital, Boston, MA

08/96 Grand Rounds, Departments of Neurosurgery and Radiology, Michigan State University, East Lansing, MI

06/96 Grand Rounds, Departments of Neurosurgery and Neurology, University of Florida, Gainesville, FL

11/95 Grand Rounds, Department of Neurosurgery, Mass. General Hospital, Boston, MA

06/95 Guest Lecturer Department of Psychiatry, The Psychiatric Institute, London, UK

05/95 Symposium speaker at French Society of Cerebrovascular and Metabolism, Lyon, France

1994-5 Lectured in Semi-annual Workshop on "Functional Magnetic Resonance Imaging", MGH-NMR Center, Charlestown, MA

Interviews/Quotations in Popular Media:

October 3, 2011--issue of Sports Illustrated-quoted on treatment received by concussed hockey superstar, Sidney Crosby--
<http://sportsillustrated.cnn.com/vault/article/magazine/MAG1190863/index.htm>

November 1, 2010--issue of Sports Illustrated-quoted on the effects on the brain of subconcussive impacts in football--
<http://sportsillustrated.cnn.com/vault/article/magazine/MAG1176377/2/index.htm>

July 27, 2006--Interviewed for 'Working for your Health' segment for Detroit's Fox TV affiliate (WJBK) regarding use of electrical cortical stimulation as a treatment intervention for stroke induced upper extremity weakness

March 14, 2005--issue of Time Magazine -quoted on TMS and aphasia
<http://www.time.com/time/magazine/article/0,9171,1037684-2,00.html>

November 29, 2004--Interviewed and quoted in Associated Press regarding the use of transcranial magnetic stimulation as a treatment for aphasia

PUBLICATIONS:

Peer Reviewed Papers

- Trifan, G., Gattu, R., Haacke, E. M., Kou, Z., Benson, R. R. (2017) MR imaging findings in mild traumatic brain injury with persistent neurological impairment. *Magnetic Resonance Imaging* 37, 243-251.
- Iraji, A., Benson, R. R., Welch, R. D., O'Neil, B. J., Woodard, J. L., Ayaz, S. I., et al. (2015). Resting State Functional Connectivity in Mild Traumatic Brain Injury at the Acute Stage: Independent Component and Seed-Based Analyses. *J Neurotrauma*.
- Benson, R. R., Gattu, R., & Cacace, A. T. (2014). Left hemisphere fractional anisotropy increase in noise-induced tinnitus: A diffusion tensor imaging (DTI) study of white matter tracts in the brain. *Hear Res*, 309, 8-16.
- May, G., Benson, R., Balon, R., & Boutros, N. (2013). Neurofeedback and traumatic brain injury: a literature review. *Ann Clin Psychiatry*, 25(4), 289-296.
- Gattu, R., Benson, R. R., Kou, K., Zakaria, N., Kallakuri, S., Shen, Y., et al. (2012, May). *DTI-FA Changes in the Rat Marmarou Model of TBI: Correlation with SWI and Histological Evidence of Axonal Injury*. Paper presented at the JMRI, Melbourne.
- Benson, R. R., Gattu, R., Sewick, B., Kou, Z., Zakariah, N., Cavanaugh, J. M., et al. (2012). Detection of hemorrhagic and axonal pathology in mild traumatic brain injury using advanced MRI: Implications for neurorehabilitation. *NeuroRehabilitation*, 31(3), 261-279.
- May, G., Benson, R. R., & Boutros, N. (2011). Meta-analysis of EEG Neurofeedback as a treatment for TBI symptoms. *The Journal of Neurorehabilitation and Neural Repair*, submitted.
- Benson, R. R., Gattu, R., Kou, K., Zakaria, N., Kallakuri, S., Shen, Y., et al. (2011). Preliminary efforts towards refining diffusion tensor image analysis in a rodent model of TBI: using histology as a gold standard. *JMRI*.
- Kou, Z., Wu, Z., Tong, K. A., Holshouser, B., Benson, R. R., Hu, J., et al. (2010). The role of advanced MR imaging findings as biomarkers of traumatic brain injury. *J Head Trauma Rehabil*, 25(4), 267-282.
- Kou, Z., Benson, R. R., Mika, V., Gattu, R., Mango, L., Welch, R., et al. (2010). Advanced Magnetic Resonance Imaging of Mild Traumatic Brain Injury in Emergency Settings. *Brain Injury*.
- Kou, Z., Benson, R. R., Gattu, R., & Haacke, E. M. (2009). Susceptibility Weighted Imaging Complements Diffusion Tensor Imaging in Traumatic Brain Injury. *JMRI*.
- Gattu, R., Latif, Z., Kou, K., Haacke, E. M., & Benson, R. R. (2009). Effect of Voxel Size on DTI Fractional Anisotropy. *JMRI*.
- Benson, R. R., Gattu, R., Raz, N., Kennedy, K., Kou, Z., & Haacke, E. M. (2009). Variation in DTI-FA as a Function of Age and Brain Region: Setting the Stage for Mild TB. *JMRI*.
- Benson, R. R., Gattu, R., Myrtheunjayan, B., Kou, K., & Haacke, E. M. (2009). Semi-Automated Segmentation of Microhemorrhages Revealed by SWI. *JMRI*.

- Benson, R. R., Gattu, R., Kou, Z., & Haacke, E. M. (2009). The use of Advanced MR Imaging Methods in Traumatic Brain Injury: Development of Imaging Biomarkers for Improving Diagnosis, Outcome Prediction and Treatment. *American Academy of Neurology Annual Meeting*.
- Kou, Z., Benson, R. R., Gattu, R., & Haacke, E. M. (2008a). Region-of-Interest Analysis of DTI: FA Histograms Differentiate Mild Traumatic Brain Injury from Controls. *Brain Injury*, 22(supplement 1), 44-45, 94-95.
- Kou, Z., Benson, R. R., Gattu, R., & Haacke, E. M. (2008b). Improving the detection of diffuse axonal injury by complementary use of advanced MRI. *Journal of Head Trauma and Rehabilitation*, 23(5), 57-58.
- Gattu, R., Benson, R. R., Myrtheunjayan, B., Kennedy, K., Raz, N., Kou, Z., et al. (2008). Ageing and Fractional Anisotropy: Global and Regional Results. *JMRI*.
- Elfakhani, M., Kang, A., Greenwald, M., Fuerst, D., & Benson, R. (2007). Case Report of Aphasia Responding to a 6-Week 10 Hz rTMS Protocol. *Electrophysiology and Clinical Neuroscience* 38(3), 190.
- Benson, R. R., Meda, S. A., Vasudevan, S., Kou, Z., Govindarajan, K. A., Hanks, R. A., et al. (2007). Global white matter analysis of diffusion tensor images is predictive of injury severity in traumatic brain injury. *J Neurotrauma*, 24(3), 446-459.
- Whalen, D. H., Benson, R. R., Richardson, M., Swainson, B., Clark, V. P., Lai, S., et al. (2006). Differentiation of speech and nonspeech processing within primary auditory cortex. *J Acoust Soc Am*, 119(1), 575-581.
- Meda, S., Kou, Z., Govindarajan, K., Hanks, R., Meythaler, J., Millis, S., et al. (2006). Diffusion Tensor MRI of White Matter Correlates with Traumatic Brain Injury Severity. *Journal of Neurotrauma*, 23(5), 754.
- Meda, S., Govindarajan, K., Hanks, R., Meythaler, J., Millis, S., Latif, Z., et al. (2006). Whole Brain FA Histogram analysis for improved detection of DAI. *JMRI*.
- Meda, S., Benson, R. R., Vasudevan, S., Govindarajan, K., Hanks, R., Millis, S., et al. (2006). Diffusion Tensor MRI of Whole Brain White Matter is Predictive of Severity of TBI. *Journal of Neurotrauma*, 23(6), 1001.
- Kou, K., Shen, Y., Kallakuri, S., Zakaria, N., Yu, Y., Hu, J., et al. (2006). Ex Vivo diffusion tensor imaging detects impairments of white matter Tract of Rat Brain after Trauma Using Marmarou Model. *Journal of Neurotrauma*, 23(6), 1020.
- Govindarajan, K., Meda, S., Latif, Z., Haacke, E. M., & Benson, R. (2006). Reliability of Language paradigms in fMRI for Pre-operative Mapping. *JMRI*.
- Benson, R. R., Richardson, M., Whalen, D. H., & Lai, S. (2006). Phonetic processing areas revealed by sinewave speech and acoustically similar non-speech. *NeuroImage*, 31(1), 342-353.
- Wolfson, L., Wei, X., Hall, C. B., Panzer, V., Wakefield, D., Benson, R. R., et al. (2005). Accrual of MRI white matter abnormalities in elderly with normal and impaired mobility. *J Neurol Sci*, 232(1-2), 23-27.
- Meda, S., Govindarajan, K., Haacke, E. M., & Benson, R. (2005). Localization of Eloquent Cortex using Functional MRI. *JMRI*.
- Cramer, S. C., Benson, R. R., Himes, D. M., Burra, V. C., Janowsky, J. S., Weinand, M. E., et al. (2005). Use of functional MRI to guide decisions in a clinical stroke trial. *Stroke*, 36(5), e50-52.
- Cramer, S. C., Benson, R. R., Burra, V. C., Himes, D., Crafton, K. R., Janowsky, J. S., et al. (2003). Mapping individual brains to guide restorative therapy after stroke: rationale and pilot studies. *Neurol Res*, 25(8), 811-814.
- Wei, X., Warfield, S. K., Zou, K. H., Wu, Y., Li, X., Guimond, A., et al. (2002). Quantitative analysis of MRI signal abnormalities of brain white matter with high reproducibility and accuracy. *J Magn Reson Imaging*, 15(2), 203-209.
- Benson, R. R., Guttmann, C. R., Wei, X., Warfield, S. K., Hall, C., Schmidt, J. A., et al. (2002). Older people with impaired mobility have specific loci of periventricular abnormality on MRI. *Neurology*, 58(1), 48-55.
- Benson, R. R., Whalen, D. H., Richardson, M., Swainson, B., Clark, V. P., Lai, S., et al. (2001). Parametrically dissociating speech and nonspeech perception in the brain using fMRI. *Brain Lang*, 78(3), 364-396.
- Talavage, T. M., Ledden, P. J., Benson, R. R., Rosen, B. R., & Melcher, J. R. (2000). Frequency-dependent responses exhibited by multiple regions in human auditory cortex. *Hear Res*, 150(1-2), 225-244.
- Benson, R. R., FitzGerald, D. B., LeSueur, L. L., Kennedy, D. N., Kwong, K. K., Buchbinder, B. R., et al. (1999). Language dominance determined by whole brain functional MRI in patients with brain lesions. *Neurology*, 52(4), 798-809.

- FitzGerald, D. B., Cosgrove, G. R., Ronner, S., Jiang, H., Buchbinder, B. R., Belliveau, J. W., et al. (1997). Location of language in the cortex: a comparison between functional MR imaging and electrocortical stimulation. *AJNR Am J Neuroradiol*, 18(8), 1529-1539.
- Cramer, S. C., Nelles, G., Benson, R. R., Kaplan, J. D., Parker, R. A., Kwong, K. K., et al. (1997). A functional MRI study of subjects recovered from hemiparetic stroke. *Stroke*, 28(12), 2518-2527.
- Woodruff, P. W., Benson, R. R., Bandettini, P. A., Kwong, K. K., Howard, R. J., Talavage, T., et al. (1996). Modulation of auditory and visual cortex by selective attention is modality-dependent. *Neuroreport*, 7(12), 1909-1913.
- Benson, R. R., Logan, W. J., Cosgrove, G. R., Cole, A. J., Jiang, H., LeSueur, L. L., et al. (1996). Functional MRI localization of language in a 9-year-old child. *Can J Neurol Sci*, 23(3), 213-219.
- Malach, R., Reppas, J. B., Benson, R. R., Kwong, K. K., Jiang, H., Kennedy, W. A., et al. (1995). Object-related activity revealed by functional magnetic resonance imaging in human occipital cortex. *Proc Natl Acad Sci U S A*, 92(18), 8135-8139.

Book Chapters

1. Benson, R.R., P. Manthana, and D. Kemp, *Behavioral Neurology and Psychiatry: Dementias*; in *Comprehensive Board Review in Neurology*, M.K. Borsody, Editor. 2012, Thieme Medical Publisher: New York. In press.
2. Kou, Z., et al., *Susceptibility weighted imaging*, in *Clinical MR Neuroimaging*, A.W. Gillard, et al., Editors. 2009, Cambridge University Press: Cambridge.

Funded Research

Ongoing Research

H133A080044 Hanks (PI) 10/01/2008 – present

NIDRR (The National Institute on Disability and Rehabilitation Research) “Southeastern Michigan Traumatic Brain Injury System (SEMTBIS)” The major goal of the SEMTBIS is to expand and enhance our comprehensive, multidisciplinary model system of care, largely through involvement in innovative research activities aimed to improve outcomes for persons with traumatic brain injury (TBI) and their families. It is a longitudinal grant that follows survivors of TBI and their caregivers up to 17 years post-injury with respect to cognitive, behavioral, physical, and functional outcomes.

Role: Co-Investigator.

006003: U.S. ARMY Proposal Zhang (PI) 09/01/2010-08/31/2013

“Parallel human and animal models of blast- and concussion-induced tinnitus and related traumatic brain injury (TBI)”

Role: Co-Investigator

Percent Effort: 2.3%

Multidisciplinary Research Group Incubator Grant (Wayne State U. Intramural)

Wayne State University

Center for Traumatic Brain Injury Research

Role: Co-PI, Project PI

Aggregate: \$300,000/year for 3 years

Completed Research Support

Contract Agreement-- Haacke (PI) 11/01/2007 – 10/31/09

National Football League

Neuro-imaging of NFL Retired Players

Goals: Process MR data from normal and TBI patients to visualize white matter damage and

micro-hemorrhages.

Role: Consultant

IDE G010318 Wyler (PI) 8/13/2004 –12/31/2007

Northstar Neuroscience, Inc.

“Safety & Effectiveness of Cortical Stimulation in Treatment of Upper Extremity Hemiparesis”

This study is a randomized, multi-site, trial comparing motor cortex stimulation with conventional therapy for upper extremity hemiparesis.

Role: Co-Investigator, Site PI

Research Grant Benson (PI) 10/28/2004 –4/01/2007

Charles A. Dana Foundation

Biographical Sketches for each listed Senior/Key Person 3 Page 86

Principal Investigator/Program Director (Last, first, middle): Haacke, Ewart, Mark

“Enhanced Recovery from Aphasic Stroke Using Transcranial Magnetic Stimulation and fMRI”

This is a placebo-controlled clinical trial investigating the effectiveness of fMRI-directed magnetic stimulation of a speech perception network to improve aphasic symptoms in chronic aphasia.

Role: Principal Investigator

Research Grant Benson (PI) 05/14/2004 –3/11/2006

Ralph O. Wilson Medical Foundation

“Inducing Aphasia Recovery by Electromagnetic Stimulation of a Neural Network for Phonetic Perception”

This is a placebo-controlled clinical trial investigating the effectiveness of magnetic stimulation of a speech perception network to improve aphasic symptoms in chronic aphasia.

Role: Principal Investigator

