CURRICULUM VITAE

REID CARLETON THOMPSON, M.D.
Professor and Vice Chairman of Neurological Surgery
Director of Neurosurgical Oncology
Director, Vanderbilt Brain Tumor Center
Vanderbilt University Medical Center

WORK ADDRESS: Vanderbilt University Medical Center
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DATE OF BIRTH: 08/10/63 Urbana, Illinois

EDUCATION

High School	Deerfield Academy Deerfield, Massachusetts	1981
Undergraduate	Bachelor of Arts Magna Cum Laude with Honors in Biological Sciences University of Maryland Baltimore County Baltimore, Maryland	1985
Graduate	M.D. Johns Hopkins University School of Medicine Baltimore, Maryland	1989
Clinical Training	Halsted Internship in General Surgery Residency in Neurological Surgery Johns Hopkins Hospital Baltimore, Maryland	1989-1990 1990-1995
Advanced Clinical Training	Instructor, Assistant Chief of Service Department of Neurological Surgery Johns Hopkins University School of Medicine	1995-1996
Fellowship	Fellowship in Cerebrovascular Surgery Department of Neurological Surgery Stanford University School of Medicine	1996-1997

Research Training

Merck Foundation Medical Student Research Award 1985-1986
Metabolism of the neuropeptide *N*-acetyl-aspartyl-glutamate
Department of Neuroscience
Johns Hopkins University School of Medicine

Neuro-Oncology Research Fellowship 1993-1995
NIH National Research Service Award
Johns Hopkins University School of Medicine
Department of Neurosurgery
Hunterian Brain Tumor Research Laboratory

LICENSURE

Maryland D47017 1995
California A60166 1996
Tennessee 36131 2002

BOARD CERTIFICATION

Diplomate, American Board of Neurological Surgery 2001

PROFESSIONAL EXPERIENCE

Vanderbilt University Medical Center

Director of Neurosurgical Oncology 2002-pres.
Director, Vanderbilt Brain Tumor Center

Vice-Chairman of Neurological Surgery 2004-pres.

Associate Professor of Neurological Surgery 2002-2008

Professor of Neurological Surgery 2008-pres.

Cedars-Sinai Medical Center

Co-Director Vascular Neurosurgery 1997-2002
Director Neurosurgical Trauma
Attending Neurosurgeon

University of California, Irvine

Assistant Clinical Professor of Neurological Surgery 1998-2001

Stanford University School of Medicine

Instructor, Department of Neurological Surgery 1996-1997

Johns Hopkins University School of Medicine

Instructor, Department of Neurological Surgery 1995-1996

CURRENT RESEARCH INTERESTS

Mechanisms of glioma cell invasion
Stem cell biology of glioma
Time-resolved laser induced fluorescence spectroscopy for detection of brain tumors.
Development of optical contrast agents for the detection of gliomas.
Intra-operative measurement of brain shift
Pathogenesis of cerebral vasospasm

PROFESSIONAL ACTIVITIES

National Committee Service

Young Neurosurgeons Committee (Elected)	2000-2003

Institutional Committee Service

Quality Assurance Representative Cedars-Sinai Division of Neurosurgery	1998-2002
Trauma Performance Improvement Committee Representative Cedars-Sinai Medical Center	1998-2002
Surgery Leadership Committee Cedars-Sinai Medical Center	1999-2002
Clinical Value Improvement Committee Craniotomy Team Leader Cedars-Sinai Medical Center	1998-2000
Main Operating Room Committee Vanderbilt University Medical Center	2004-pres.
Medical Center Medical Board Vanderbilt University Medical Center	2007-pres.
Enterprise Wide Mortality Review Task Force Vanderbilt University Medical Center	2007-pres.
Otolaryngology Chair Search Committee Member	2008

Professional Associations

American Association of Neurological Surgeons	2000

Congress of Neurological Surgeons	2000
Joint Section of Cerebrovascular Surgery American Association of Neurological Surgeons and Congress of Neurological Surgeons	2000
Tennessee Medical Association	2003
Nashville Academy of Medicine & Davidson County Medical Society	2003
American Board of Neurological Surgery	2004
Society for Neuro-Oncology	2004
Tennessee Neurosurgical Society	2004
Section on Tumors Association of Neurological Surgeons and Congress of Neurological Surgeons	2005
North American Skull Base Society	2007

AWARDS, HONORS AND LEADERSHIP RECOGNITION

University of Maryland Chancellor's Merit Scholar	1983-1985
Phi Kappa Phi Honor Society, University of Maryland	1984
Honors Program Outstanding Leadership Award University of Maryland	1984
Outstanding Graduating Senior Biological Sciences University of Maryland Baltimore County	1985
Hunterian Award for Excellence in Neurosurgical Research	1995
Walter Dandy Resident's Award for Outstanding Research in Neurosurgery	1995
Johns Hopkins University School of Medicine Young Investigators Day Certificate of Merit for Postdoctoral Research. Cytokine Enhanced Antitumor Immunotherapy for Brain Tumors	1995
Leadership Development for Physicians in Academic	2006

	Health Centers Harvard School of Public Health	
	Dean's Academic Leadership Program Vanderbilt University Medical Center	2006
	Best Doctors of America	2007-2008
	Outstanding Alumnus Natural and Mathematical Sciences, University of Maryland Baltimore County	2008

TEACHING ACTIVITIES

Johns Hopkins University **School of Medicine**	Instructor, Teaching Assistant 1994-1995 Neuroscience - Neuroanatomy Course	
Stanford University **School of Medicine**	Lecturer, Department of Neurological Surgery	1996-1997
Cedars-Sinai Medical Center	Lecturer, Department of General Surgery Resident Education Seminar Series	1997-2002
	Lecturer, Nursing Research and Development Seminar Series	1997-2002
University of California, Irvine **School of Medicine**	Instructor, Neuroscience-Neuroanatomy Course	1997-2002
Vanderbilt University **Medical School**	Lecturer, Advanced Neuroanatomy Course	2003-pres
Vanderbilt University **School of Engineering**	Lecturer, ES-140 Biomedical Engineering	2003-pres
Vanderbilt University **College of Arts and Sciences**	Lecturer, Psychiatry 235 Biological Basis of Mental Disorders	2003-pres
Vanderbilt University **Graduate Courses**	Instructor: Microsurgical Anatomy of the Orbit	2008

LECTURES AND PRESENTATIONS: (Selected)

Intramural:

Invited Speaker: Paracrine Cytokine Delivery for Brain Tumor Immunotherapy 1996
Department of Neurological Surgery Grand Rounds
Johns Hopkins University School of Medicine. Baltimore, Maryland

Invited Speaker: New Concepts in Cerebral Vasospasm. 1997
Department of Neurology Stroke Conference
Stanford University Medical Center. Palo-Alto, California

Invited Speaker: Diagnosis and Treatment of Brain Tumors and 1997
Cerebral Vascular Malformations.
Nursing Research and Development Seminar
Cedars-Sinai Medical Center. Los Angeles, California

Invited Speaker: New Concepts in Cerebral Vasospasm. 1998
Department of General Surgery Grand Rounds
Cedars-Sinai Medical Center. Los Angeles, California

Invited Speaker: Pituitary Tumors. 1998
Clinical Neuroscience Lecture Series
Cedars-Sinai Medical Center. Los Angeles, California

Invited Speaker: Pituitary Tumors: Neurosurgical Considerations. 1999
Department of Obstetrics and Gynecology Grand Rounds
Cedars-Sinai Medical Center. Los Angeles, California

Invited Speaker: Intracranial Bypass Surgery: The State of the Art.
1999
Department of General Surgery Grand Rounds
Cedars-Sinai Medical Center. Los Angeles, California

Invited Speaker: Carotid Endarterectomy. 1999
Clinical Neuroscience Lecture Series
Cedars-Sinai Medical Center. Los Angeles, California

Invited Speaker: Intracranial Bypass Surgery: State of the Art. 2000
Clinical Neuroscience Lecture Series
Cedars-Sinai Medical Center. Los Angeles, California

Invited Speaker: Management of Intracranial Aneurysms and Subarachnoid 2001
Hemorrhage: State of the Art.
Department of Emergency Medicine Grand Rounds
Cedars-Sinai Medical Center. Los Angeles, California

Invited Speaker: Brain Bypass: State of the Art 2002

Neurosurgery/Neurology Combined Conference
Vanderbilt University Medical Center

Invited Speaker: Section of Surgical Sciences Research Seminar 2003
Vanderbilt University Medical Center, Nashville, Tennessee

Invited Speaker: Development of a Molecular Imaging Agent 2003
for Primary Brain Cancer.
Vanderbilt Institute of Imaging Science
Vanderbilt University Medical Center, Nashville, Tennessee

Invited Speaker: Medical Management of Neurosurgical Emergencies. 2003, 2005
Critical Care Lecture Seminar Series
Vanderbilt University Medical Center, Nashville, Tennessee

Invited Speaker: Operative Approaches to Frontal Region Tumors 2005
Neurosurgery/Neurology Combined Conference
Vanderbilt University Medical Center, Nashville

Invited Speaker: Neurosurgical Infections 2007
Infectious Disease Grand Rounds
Vanderbilt University Medical Center, Nashville, Tennessee

Invited Speaker: Malignant Gliomas: The Future 2007
Neurosurgery/Neurology Combined Conference
Vanderbilt University Medical Center, Nashville

Invited Speaker: Intracranial Neurosurgery: *(how to avoid)* Complications 2007
Neuro-otology Fellows Conference
Vanderbilt University Medical Center

National:

Invited Speaker: Immunotherapy for CNS Cancer Using GM-CSF. 1994
Fred Hutchinson Cancer Research Center, Glioblastoma Workshop
Seattle, Washington

Invited Speaker: Paracrine Cytokine Delivery for Brain Tumor Immunotherapy. 1994
National Institutes of Health - Surgical Neurology Branch. Bethesda, Maryland

Invited Speaker: Cytokine Therapy for the Treatment of Brain Tumors. 1996
Preuss Foundation Seminar on Gene Therapy for Brain Tumors.
The Salk Institute. La Jolla, California

Invited Speaker: The Management of Patients with AVMs and Associated 1997
Intracranial Aneurysms.
Western Neurosurgical Association. Ojai, California

Invited Speaker: The Management of Patients with Arteriovenous Malformations and Associated Intracranial Aneurysms. 1998
Neurosurgery at Jackson Hole. Teton Village, Wyoming

Invited Speaker: The Role of Inflammation in Cerebral Vasospasm. 1999
Neurosurgery at Jackson Hole. Teton Village, Wyoming

Invited Speaker: New Approaches to Brain Tumor Therapy. 1999
Hawaii Association of Neurological Surgeons
Honolulu, Hawaii

Visiting Professor: Innovations in Neurological Surgery: Opportunities for Interdisciplinary Collaboration. 2000
Department of Biomedical Engineering
University of Southern California. Los Angeles, California

Invited Speaker: Neurosurgery: The State of the Art. 2001
Medical Neuroscience Lecture Series
University of California, Irvine School of Medicine. Irvine, California

Visiting Professor: The Management of Patients with AVM's and Associated Intracranial Aneurysms. 2001
Johns Hopkins University Medical Center,
Department of Neurological Surgery. Baltimore, Maryland

Invited Speaker: Innovations in Intraoperative Imaging of Brain Tumors: Lanthanide Chelates and Laser Spectroscopy. 2001
Donlin M. Long, M.D. Scientific Symposium.
Johns Hopkins University School of Medicine. Baltimore, Maryland

Invited Speaker: The Odyssey of Neurosurgery: Opening the Windows of the Mind. 2001
University of California, San Diego. San Diego, California

Visiting Professor: Establishing the Molecular Signature of Brain Cancer 2006
Johns Hopkins University School of Medicine. Baltimore, Maryland

Invited Speaker/ Session Chair: Molecular Imaging Agents for Primary Brain Cancer 2006
5th International Neuro-Oncology Updates
University of Tennessee, Memphis, Tennessee

Invited Speaker: Molecular Imaging. Applications to Clinical Neurosurgery 2008
7th International Neuro-Oncology Updates
Johns Hopkins University School of Medicine

International:

Invited Speaker: Establishing the Molecular Signature of Brain Cancer 2005
4th International Neuro-Oncology Updates
Arezzo, Italy

Invited Speaker: Measuring Intraoperative Brain Shift: Clinical Experience With a Laser Range Scanner. 2007
6th International Neuro-Oncology Updates
Cortona, Italy

Community Service Activity

Community Lecture Series – Stroke: The Latest in Prevention and Treatment. 1998-1999
Los Angeles County

Invited Participant: Brainworks Educational Program 1999-2001
for Los Angeles Unified School District

Invited Participant: National Brain Tumor Foundation 2000
Patient Education Conference. Los Angeles, California

Cancer Answer Evening Lecture Series – Brain Cancer: Hope on the Horizon 2003, 2005
Vanderbilt-Ingram Cancer Center. Nashville, Tennessee

PATENTS

Multiuse, Multimodal Conjugable Lanthanide Chelates. Bornhop, D.J., **Thompson, R.C.**, Goebel, T., Manning, H.C. U.S. Patent Filed (provisional), September, 2001

Cytokine Enhanced Immunotherapy for Brain Tumors. Brem, H., Pardoll, D.M., Jaffee, E.M., Leong K., **Thompson R.C.** (patent pending)

Therapeutic Treatment for Bronchopulmonary Dysplasia. Summar, M.L. Barr, F.E., **Thompson, R.C.** (patent pending)

STUDENTS MENTORED

Vanderbilt University School of Arts and Sciences
Undergraduate Neuroscience Students Mentored

Each student carried out a year long research project with me as part of the NSC 292 independent study program:

Enami Morgan Yasui 2005-2006
Vanderbilt Undergraduate Neuroscience Major
Project: Molecular Imaging of Brain Cancer Using Lanthanide Chelates

Stephanie Miller 2005-2006
Vanderbilt Undergraduate Neuroscience Major
Project: Analysis of CXCR-4 Expression in Human Gliomas

Amanda Adkins Manaceau 2005-2006
Vanderbilt Undergraduate Neuroscience Major
Project: Quantum Dot Imaging of Human Gliomas

Mark Storolis 2006-2007
Vanderbilt Undergraduate Neuroscience Major
Project: Molecular Imaging of Brain Cancer

Joani Christensen 2006-2007
Vanderbilt Undergraduate Neuroscience Major
Project: Clinical Neurosurgery

Jennifer Gima 2006-2007
Vanderbilt Undergraduate Neuroscience Major
Project: Development of a Mouse model of glioma – PTEN/P53
Independent Reading Course NSC 291 (2007)

Michelle Equinda 2007-2008
Vanderbilt Undergraduate Neuroscience Major
Project: Stem Cell Biology of Glioma
Independent Reading Course NSC 291 (2008)

Brent Hughes 2007-2008
Vanderbilt Undergraduate Neuroscience Major
Project: PTEN Biology in Human Glial Neoplasms
Independent Reading Course NSC 291 (2008)

Laila Hassam-Malani 2008-present
Vanderbilt Undergraduate Neuroscience Major
Project: Stem Cell Biology of Glioma

Vanderbilt University School of Engineering
Biomedical Engineering Students Mentored

Blake Hooper 2006-2007
Vanderbilt Department of Biomedical Engineering
Project: Clinical Neurosurgery

Vanderbilt University Medical Students Mentored

Kenneth J. Niermann, M.D. 2002-2004
Initially Vanderbilt University 4th year medical student (2002)
Postdoctoral Cancer Imaging Research Fellow (2003-2004)
Currently: Resident in Radiation Oncology Vanderbilt Medical Center

Justin Bachman, M.D. 2005-2006
Vanderbilt University Medical Scholar Program Mentor
Project: The Role of bmi-1 in Human Glial Neoplasms
Currently: Resident in Internal Medicine Johns Hopkins Medical Center

Jason A. Winston, M.D. 2005-2006
Vanderbilt University 3rd /4th year medical student
Currently: Resident in Psychiatry at Washington University Medical Center
Project: The role of CXCR-4 in Glioma Invasion

Katie Lane Cox, M.D. 2005-2006
Vanderbilt University 3rd /4th year medical student
Currently: Resident in Emergency Medicine at Vanderbilt Medical Center
Project: Clinical Neurosurgery

Kristina Collins, M.D. 2005-2006
Vanderbilt University 3rd /4th year medical student
Currently: Resident in Dermatology at Harvard
Project: Clinical Neurosurgery

Kevin Hong Ma 2006-2007
Emphasis Program: Vanderbilt University 1st year medical student
(Co-Mentor with Michael Miga, Ph.D. Biomedical Engineering)
Project: Measuring Intraoperative Brain Shift

Mayshan Ghiassi, M.D. 2006-2007
Vanderbilt University 4th year medical student
Currently: Resident in Neurological Surgery at Vanderbilt Medical Center
Project: Database Development – Brain Tumor Repository

Kelly Lynne Shaffer, M.D. 2006-2007
Vanderbilt University 3rd year medical student
Currently: Resident in Neurological Surgery at University of Cincinnati
Project: Intracranial Aneurysm Following Ipsilateral Carotid Endarterectomy

Erin Burke 2006-2007
Clinical Preceptorship. First year Vanderbilt medical student mentoring program

Irving Ye 2007-2008
Clinical Preceptorship. First year Vanderbilt medical student mentoring program

Lauren Mitchell 2007-2008
Clinical Preceptorship. First year Vanderbilt medical student mentoring program

Michael Wolfe 2008-
Clinical Preceptorship. First year Vanderbilt medical student mentoring program

Carrie Buchanon 2008-
Clinical Preceptorship. First year Vanderbilt medical student mentoring program

Sam Crosby 2007-2008
Vanderbilt University 3rd year medical student
Project: Atypical Meningioma

Vanderbilt University School of Medicine Residents Mentored

John R. Floyd, M.D. 2004-2006
NIH Neuro-Genomics Research Fellowship Recipient
American Brain Tumor Association Grant Award Recipient
Project: **"**Invasive Proteome: Analysis of the Proteins in the Invasive Margin and Infiltrating Tumor Cells in Malignant Gliomas Using Laser Capture Microdissection."
Currently: Neurosurgical Oncology Fellow M.D. Anderson Cancer Center
Houston, Texas

Charles B. Stevenson, M.D. 2005-2007
2 year research experience in Neurosurgical Oncology
Project: The Role of CXCR-4 in Human Glial Neoplasms

Vanderbilt University Post Graduate Fellows Mentored

Khubaib Y. Mapara, M.D. 2005-2007
Currently: Resident in General Surgery Vanderbilt Medical Center
2 year research experience in Neurosurgical Oncology
Projects: Stem Cell Biology of Gliomas

Kathryn M. McMillan, Ph.D. 2005-2008
Imaging Research Fellow
Department of Radiology and Radiological Sciences
Vanderbilt University Medical Center
Project: Multiparametric Imaging of Human Brain Cancer

Sara Zeiber, M.D. 2007-
Currently: Pediatric Neuro-Oncology Fellow
Vanderbilt University Medical Center
Project: Developmental signaling mechanisms in low grade astrocytomas

Vanderbilt University School of Medicine Mentored Faculty

Moneeb Ehtesham, M.D. 2004-2008
Initially a Research Fellow in the Department of Neurosurgery (2004)
Currently: Assistant Professor of Neurological Surgery and Cancer Biology.
Vanderbilt University Medical Center (tenure track).
NIH R0-1 Funding: Neural precursor cell therapy for disseminated glioma

Michael Edgeworth, M.D. 2004-2008
Clinical Neuro-Oncology Fellow 2004-2005
I served as a Co Mentor for his research through the Vanderbilt MSCI Program:
Department of Neurology Vanderbilt University Medical Center
Currently: Assistant Professor of Neurology
Vanderbilt University Medical Center

Ty W. Abel, M.D., Ph.D. 2006-2008
Assistant Professor of Pathology – Neuropathology Division
Vanderbilt University Medical Center
I currently serve on Dr. Abel's research/career mentoring committee

Jonathan Xu, Ph.D. 2008
Assistant Professor of Neurological Surgery and Cancer Biology
Awarded an American Brain Tumor Association Grant:
Identification of Plasma Protein Markers for early Detection of Glioblastoma Multiforme.

Thesis and Dissertation Committees

Steven C. Gebhart, Ph.D. 2003
Spectral Imaging Development for in vivo Brain Tissue Diagnosis.
Ph.D. Thesis Proposal
Biomedical Engineering, Vanderbilt University,

Tuhin Kumar Sinha, Ph.D 2004
Cortical Shift Characterization Using a Laser Range Scanner for Neurosurgery
Ph.D. Thesis Proposal
Biomedical Engineering, Vanderbilt University, December, 2004

Prashant Dumpuri, Ph.D. 2006
Development and Quantification of an Atlas-Based Method for
Model-Updated Image-Guided Neurosurgery
Ph.D. Thesis Proposal
Biomedical Engineering, Vanderbilt University, September, 2006.

Sara Lynn Frappier, Ph.D candidate 2007-present
Quantitative Small Molecule Imaging
Correlated with Proteome Response by MALDI & IMS
Postdoctoral Thesis
Department of Chemistry, Vanderbilt University

PUBLICATIONS

Research Papers (Peer Reviewed)

A. Published

1. Blakely, R.D., Ory-Lavolee, L., **Thompson, R.C.**, Coyle, J.T. Synaptosomal transport of radiolabel from *N*-acetyl-aspartyl-^{3}[H] glutamate suggests a mechanism of inactivation of an excitatory neuropeptide. *Journal of Neurochemistry* 47: 1013-1019, 1986.

2. Blakely, R.D., Robinson, M.B., **Thompson, R.C.**, Coyle, J.T. Hydrolysis of the brain dipeptide *N*-acetyl-L-aspartyl-L-glutamate: Subcellular and regional distribution, ontogeny, and the effect of lesions on N-acetylated-α-linked acidic dipeptidase activity. *Journal of Neurochemistry* 50: 1200-1209, 1988.

3. Weingart, J.D., **Thompson, R.C.**, Tyler, B., Colvin, O.M., Brem, H. Local delivery of the topoisomerase I inhibitor camptothecin prolongs survival in the rat intracranial 9L gliosarcoma model. *International Journal of Cancer* 62: 605-609, 1995.

4. **Thompson, R.C.**, Pardoll, D.M., Jaffee, E.M., Ewend, M.G., Tyler, B.M., Brem, H. Systemic and local paracrine cytokine therapies utilizing transduced tumor cells are synergistic in treating intracranial tumors. *Journal of Immunotherapy* 19(6): 405-413, 1996.

5. Mofid, M.M., **Thompson, R.C.**, Pardol, C.A., Burger, P., Manson, P.N., Vanderkolk, C.A. Biocompatibility of fixation materials in the brain. *Plastic and Reconstructive Surgery* 100(1): 14-20, 1997.

6. Sills, A.K., Clatterbuck, R.E., **Thompson, R.C.**, Cohen, P.L., Tamargo, R.J. Endothelial cell expression of intercellular adhesion molecule-1 in experimental posthemorrhagic vasospasm. *Neurosurgery* 41: 453-461, 1997.

7. Fung, L.K., Ewend, M.G., Sills, A.K., Sipos, E.P., **Thompson, R.C.**, Watts, M., Colvin, O.M., Brem, H., Saltzman, W.M. Pharmacokinetics of interstitial delivery of carmustine, 4-hydroperoxycyclophosphamide and paclitaxel from a biodegradable polymer in the monkey brain. *Cancer Research* 58: 672-684, 1998.

8. **Thompson, R.C.**, Steinberg, G.K., Marks, M., Levy, R. The management of patients with AVMs and associated intracranial aneurysms. *Neurosurgery* 43: 202-212, 1998.

9. Golby, A., Marks, M., **Thompson, R.C**., Steinberg, G.K. Direct and combined revascularization in pediatric moyamoya disease. *Neurosurgery* 45: 50-60, 1999.

10. Stoodley, M.A., **Thompson, R.C.**, Mitchell, R.S., Marks, M.P., Steinberg, G.K. Neurosurgical and neuro endovascular management of Takayasu's arteritis. *Neurosurgery* 46: 841-51, 2000.

11. Ewend, M.G., **Thompson, R.C.**, Anderson, R., Sills, A.K., Stavely-O'Carroll, K., Tyler, B.M., Hanes, J., Brat, D., Thomas, M., Jaffee, E.M., Pardoll, D.M., Brem, H. Intracranial paracrine interleukin-2 therapy stimulates prolonged antitumor immunity which extends outside the central nervous system. *Journal of Immunotherapy* 23(4): 438-48, 2000.

12. Schievink, W.I., **Thompson, R.C.**, Lavine, S., Yu, J.S. Superficial temporal artery to middle cerebral artery bypass and external carotid artery reconstruction for carotid restenosis after angioplasty and stent placement. *Mayo Clinic Proceedings* 75: 1087-1090, 2000.

13. Yu, J.S., Wheeler, C.J., Zeltzer, P., Ying, H., Finger, D.N., Lee, P.K., Yong, W.H., Incardona, F., **Thompson, R.C**., Riedinger, M.S., Zhang, W., Prins, R.M., Black, K.L. Vaccination of malignant glioma patients with peptide-pulsed dendritic cells elicits systemic cytotoxicity and intracranial t-cell infiltration. *Cancer Research* 61: 842-847, 2001.

14. Schievink, W.I., **Thompson, R.C.**, Loh, C.T., Maya, M.M. Spontaneous retroclival hematoma presenting as a thunderclap headache: Case report. *Journal of Neurosurgery* 95(3): 522-4, 2001.

15. Liu, Y., Ehtesham, M., Samoto, K., Wheeler, C.J., **Thompson, R.C.**, Villarreal, L.P., Black, K.L., Yu, J.S. *In situ* adenoviral interleukin 12 gene transfer confers potent and long lasting cytotoxic immunity in glioma. *Cancer Gene Therapy* 9(1): 9-15, 2002.

16. Papaioannou, T., **Thompson, R.C.**, Kateb, B., Sorokoumov, O., Grundfest, W.S., Black, K.L. Thermal imaging of brain tumors in a rat glioma model. Proc. SPIE Vol. 4615, pp. 32-35, Biomedical Diagnostic, Guidance, and Surgical-Assist Systems IV, Tuan Vo-Dinh; David A. Benaron; Warren S. Grundfest; eds., 2002.

17. Schievink, W.I., **Thompson, R.C.**, Yong, W. A syndrome of spontaneous cerebral and cervical artery dissections with angiolipomatosis. *Journal of Neurosurgery* 98: 1124-1127, 2003.

18. Soukiasian, H.J., Hui, T., Avital, I., Eby, J., **Thompson, R.C.**, Kleisli, T., Margulies, D.R., Cunneen, S. Decompressive craniectomy in trauma patients with severe brain injury. *The American Surgeon* 68(12): 1066-71, 2002.

19. Marcu, L., Jo, J.A., Butte, P.V., Yong, W.H., Pikul, B.K., Black, K.L., **Thompson, R.C.** Fluorescence lifetime spectroscopy of glioblastoma multiforme. *Photochemistry and Photobiology* 80: 98-103, 2004.

20. Manning, HC, Goebel, T, **Thompson, RC**, Price, RR, Lee, H, Bornhop, DJ. Targeted Molecular Imaging Agents for Cellular-Scale Bimodal Imaging. *Bioconjugate Chemistry* 15 (6): 1488-1495, 2004.

21. Sinha, T.K., Dawant, B.M., Duay, V., Cash, D.M., Weil, R.J., **Thompson, R.C.**, Weaver, K.D., Miga, M.I. A Method to Track Cortical Surface Deformations Using a Laser Range Scanner. *IEEE Transactions on Medical Imaging* 24 (6): 767-781, 2005.

22. Jarquin-Valdivia, A.A., Rich, A.T., Yarbrough, J.L., **Thompson, R.C.** Intraventricular colloid cyst, hydrocephalus and neurogenic stunned myocardium. *Clinical Neurology and Neurosurgery* 107 (5): 361-5, 2005.

23. Schwartz, S.A., Weil, R.J., **Thompson, R.C.**, Shyr, Y., Moore, J.H., Toms, S.A., Johnson, M.D., Caprioli, R.M., Proteomic-Based Prognosis of Brain Tumor Patients Using Direct-Tissue Matrix-Assisted Laser Desorption Ionization Mass Spectrometry. *Cancer Research* 65: 7674-7681, 2005.

24. Ehtesham M, Stevenson CB, **Thompson RC.** Stem cell therapies for malignant glioma. *Neurosurgical Focus* 19(3): 2005.

25. Stevenson CB, Johnson MD, **Thompson RC**. Cystic cavernous malformation of the cerebellopontine angle. Case illustration. *Journal of Neurosurgery* 102(5): 931, 2005.

26. Ehtesham M, Winston J A, Kabos P, **Thompson RC**. CXCR4 expression mediates glioma cell invasiveness. *Oncogene* 25: 2801–2806, 2006.

27. Becher MW, Abel TW, **Thompson RC**, Weaver KD, Davis LE. Immunohistochemical analysis of metastatic neoplasms of the central nervous system. *Journal of Neuropathology and Experimental Neurology* 65(10): 935-44, 2006.

28. Mapara KY, Stevenson CB, **Thompson RC**, Ehtesham M. Stem cells as vehicles for the treatment of brain cancer. *Neurosurgery Clinics of North America* 18(1): 71-80, 2007.

29. Dumpuri, P., **Thompson, R.C.** Dawant, B.M., Cao, A. Miga, M. I. An atlas-based method to compensate for brain shift: Preliminary Results. Medical Image Analysis 11:128-145, 2007.

30. Johnson M.D., Stevenson C.B., **Thompson R.C.**, Atkinson J and Boyer P. 31 year old

woman with hemiparesis, *Brain Pathology*: 17(2): 255-257, 2007.

31. Turner S., Pandharipande P., Matthews L., **Thompson R.C.**, Dolasetron-induced torsades de pointes. Case report. *Journal of Clinical Anesthesia* 19: 622-625, 2007.

32. Ehtesham M., Sarangi A., Valadez J.G., Chanthaphaychith S., Becher M.W., Abel T.W., **Thompson R.C.,** Cooper M.K. Ligand-dependent activation of the hedgehog pathway in glioma progenitor cells. *Oncogene* 23; 26 (39): 5752-61, 2007.

33. Gebhart S.C., **Thompson R.C.**, Mahadevan-Jansen A., Liquid-crystal tunable filter spectral imaging for brain tumor demarcation. *Appl Opt*. 46(10): 1896-910, 2007.

34. Cao A., **Thompson RC,** Dumpuri P, Dawant BM, Galloway RL, Ding S, Miga MI.: Laser range scanning for image-guided neurosurgery: Investigation of image-to-physical space registrations, *Medical Physics* 35(4):1593-605. 2008.

35. Stevenson, C.B., Ehtesham, M., McMillan, K.M., Valadez, G.J., Edgeworth, M.L. Price, R.R. Abel, T.W. Mapara, K.Y., Weaver, K.D., Pierce, L. . Kuttesch, J.F. **Thompson, R.C.** CXCR4 expression is elevated in glioblastoma multiforme and correlates with an increase in intensity and extent of peri-tumoral T2-weighted MRI signal abnormalities. *Neurosurgery*, 63 (3), 2008.

36. Ehtesham M, Stevenson CB, **Thompson RC,** Preferential expression of chemokine receptor CXCR4 by highly malignant human gliomas and its association with poor patient survival. *Neurosurgery,* 63(4), 2008.

37. Ehtesham M, Mapara KY, Stevenson CB, **Thompson RC**, CXCR4 mediates the proliferation of glioblastoma progenitor cells. *Cancer Lett*, 2008.

B. Submitted / In Review/In Press

Dumpuri, P., **Thompson**, **R. C.,** Cao, A., Ding, S., Garg, I., Dawant, B. M., Miga, M. I. A fast and efficient method to compensate for brain shift during surgery *Neurosurgery*, (in review), 2008.

Ding, S., Miga, M. I., Noble, J. H., Cao, A., Dumpuri, P. **Thompson**, **R. C.,** Dawant, B. M. Semi-automatic registration of pre- and post-resection laser range scanner images, *IEEE Transactions on Biomedical Engineering*, (in review), 2008.

Edgeworth M.L., Mi, D., Schwartz, S.A., Frappier,S.L., **Thompson, R.C.**, Caprioli, R.M., Mass Spectrometry Proteomic Signature Predicts Response to Chemotherapy in Patients with Malignant Glioma. *Neuro-Oncology*, (in review), 2008

S.Ding, M.I.Miga, J.H. Noble, A.Cao, P. Dumpuri, **R.C. Thompson**, B.M. Dawant, Semi-automatic registration of pre-and post-brain tumor resection laser range data: Method and validation, *IEEE Transactions on Biomedical Engineering*, (in press), 2008

Chapters

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Book Review

1. **Thompson, Reid** (2004) Book Review: Brain Tumors: Leaving the Garden of Eden: *A Survival Guide to Diagnosis, Learning the Basics, Getting Organized, and Finding Your Medical Team*. Neuro-Oncology, 2005, Vol. 7, Issue 4.

GRANT AWARDS:

CURRENT:

NIH/NINDS 5R01 NS051557-03 12/01/2005-11/30/2009
Principal Investigator: Moneeb Ehtesham, M.D. $1,502,103
"Neural precursor cell therapy for disseminated glioma."
Role: Co-Investigator (5.0% effort)
The focus of this project is to definitively identify fundamental mechanisms that govern the ability of neural precursor cells to migrate towards sites of neoplastic infiltration in the brain.

MacroMed/Protherics (Thompson, Reid C.) 2/01/2007-1/31/2010
"A Phase ½ Dose Escalation Study of Locally-Administered OncoGel in Subjects with Recurrent Giloma"
Role: Principal Investigator
The primary objective of this project is to evaluate the safety and tolerability of OncoGel as an adjuvant treatment delivered intracranially at the tumor site following tumor resection in subjects with recurrent glioma.

NIH/NINDS 1R01 NS045888-01A2 12/01/2004-11/30/2009
Principal Investigator: Charles P. Lin, Ph.D. $1,000,000
"Vascular Maintenance and Brain Tumors"
2004-2009
Role: Co – Investigator (5.0 % effort). Dr. Thompson is responsible for in-vivo investigations of novel anti-angiogenic agents.

NIH R01 CA116174-01A2 12/01/2004 – 11/30/2009
Principal Investigator: Kathleen Egan, Ph.D. $4,191,375
"Southeast Region Case-Control Study of Adult Glioma"
2007-2011
Role: Co-Principal Investigator (3.0% effort). This is a multicenter, case control study of the epidemiology of adult human glioma. Dr. Thompson is responsible for recruitment and enrollment of cases and controls at Vanderbilt University Medical Center.

NIH/NINDS 2R01NS049251-04A1 (Miga, Michael) 01/15/2009-12/31/2012
"Multimodal Registration of the Brain's Cortical Surface"
2009-2012
Role: Co – Investigator
The goal of this project is to develop a clinically translatable strategy for documenting brain shift which could be pivotal in developing affordable image-guided platforms capable of compensating for soft tissue deformation in patients with brain tumors.

COMPLETED:

Sention 22018 (Principal Investigator)
"A randomized, double-blind, placebo-controlled, parallel-group study of c105 to improve memory in subjects with a treated anterior communicating artery aneurysm"
2002-2004

The overall objective of this research is to evaluate the role of c105 to improve memory in patients with a previously treated anterior communicating artery aneurysm.

American Brain Tumor Association (Co – Principal Investigator)
"Invasive Proteome: Analysis of the Proteins in the Invasive Margin and Infiltrating Tumor Cells in Malignant Gliomas Using Laser Capture Microdissection."
2004-2005

The objective of this study is to identify the unique proteomic signature of infiltrating human glioma cells.

NIH/NCI 5R01 CA85989-04 (Co- Investigator)
PI: Anita Mahadevan-Jansen., Ph. D.
"Brain Tumor/Tumor Margin ID by Optical Spectroscopy"
2004-2005

The main objective of this project is to develop a technique based on optical spectroscopy that enables intra-operative identification of brain tumor margins, such that tumor removal is maximized with minimum sacrifice to normal tissue.

National Science Foundation BES-0323067 (Principal Investigator)
"Collaborative proposal for in-vitro diagnostics using a PBR targeted molecular imaging agent"
2003-2006

The overall objective of this research is to perform the fundamental studies of a novel optical reporter for further definition of its interaction with cells and their internal organelles.