

Curriculum Vitae

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Citizenship: USA

Spouse: Linda

Children: James, Angelina

Medical Licenses:

1999- California
2005- Wisconsin

Education:

1985	H.S. Diploma Regents Honors	The Bronx High School of Science Bronx, New York
1989	A.B. in Biology <i>summa cum laude</i>	Harvard College Cambridge, Massachusetts
1998	M.D.	Harvard Medical School Harvard-MIT Division of Health Sciences and Technology Boston, Massachusetts
1998	Ph.D.	Massachusetts Institute of Technology Cambridge, Massachusetts

Professional Appointments:

7/2004-6/2005	Clinical Instructor and Resident Supervisor Dept. of Neurological Surgery, USC-Affiliated Hospitals Los Angeles, California
10/2005 – present	Assistant Professor of Neurological Surgery Director of Comprehensive Brain Tumor Program University of Wisconsin School of Medicine and Public Health University of Wisconsin Hospital and Clinics Madison, Wisconsin

- 2006 - present Member, University of Wisconsin Paul P. Carbone Comprehensive Cancer Center
Madison, Wisconsin
- 2006 - present Faculty, University of Wisconsin Stem Cell Research Training Program, Madison, Wisconsin
- 2006 - present Faculty, University of Wisconsin Cell and Molecular Biology graduate training program, Madison, Wisconsin
- 2006 - present Faculty, University of Wisconsin Neuroscience graduate training program, Madison, Wisconsin
- 2006 - present Faculty, University of Wisconsin MD-PhD Training program,, Madison, Wisconsin
- 2007 - present Faculty, University of Wisconsin Stem Cell and Regenerative Medicine Center, Madison, Wisconsin
- 2009 – present Faculty, University of Wisconsin Celular and Molecular Pathology graduate training program, Madison, Wisconsin

Postdoctoral Training:

- 6/1998-6/1999 Intern in Neurological Surgery
USC-Affiliated Hospitals, Los Angeles, California
- 7/1999-6/2003 Resident in Neurological Surgery
USC-Affiliated Hospitals, Los Angeles, California
- 1/2002-6/2002 Fellow, Neurosurgery/Orthopedic Spine Trauma
LAC-USC Medical Center, Los Angeles, California
- 1/2002-6/2002 Chief Resident, Pediatric Neurosurgery Service
LAC-USC Medical Center, Los Angeles, California
- 7/2002-12/2002 Chief Resident, Neurosurgery Service
USC University Hospital, Los Angeles, California
- 1/2003-6/2003 Fellow, Stereotactic Radiosurgery
USC University Hospital, USC Norris Comprehensive Cancer Center and Hospital, Los Angeles, California
- 7/2003-6/2004 NREF-ABTA Postdoctoral Research Fellow

Division of Neurosurgery, University of Toronto, The Hospital for Sick Children and The Arthur and Sonia Labatt Brain Tumour Research Centre, Toronto, Ontario, Canada

Awards and Honors:

- 1984 Rensselaer Medal for Math and Science
- 1984 Arista – National Honor Society
- 1985 Biology Research Prize
- 1985 Bausch and Lomb Science Prize
- 1985 Governor’s Citation for Academic Excellence
- 1985 American Academy of Achievements Citation
- 1985 International Chemistry Olympiad Nominee
- 1985 Fifth Place – National Westinghouse Science Talent Search
- 1985 National Merit Scholar
- 1985 Admitted with Advanced Sophomore Standing, Harvard College
- 1985-6 Harvard College Scholarship
- 1985-9 Harvard National Scholar
- 1985-9 Dean’s Lists
- 1986-9 John Harvard Scholarship
- 1986-9 Frank Tarr Memorial National Scholarship
- 1987-9 William Burden Memorial National Scholarship
- 1987-9 Francis M. Weld Memorial National Scholarship
- 1989 Phi Beta Kappa
- 1994 Yaichi Ayukawa Travel Prize – MIT Japan Program
- 1998 Sigma Xi - The Scientific Research Society of North America
- 2003-4 Neurosurgery Research and Education Foundation Research Fellowship, American Association of Neurological Surgeons
- 2003-4 American Brain Tumor Association Research Fellowship
- 2007-8 Citation for Excellence in Medical Student Teaching, University of Wisconsin
- 2008-9 Young Clinician Investigator Award, Neurosurgery Research and Education Foundation, American Association of Neurological Surgeons
- 2008-11 HEADRUSH Brain Tumor Research Professorship award, first recipient

Research Funding:

- 1983-4 Minority Research Fellowship, Dept. of Biology, City College of New York, New York, New York.
- 1986 New York City Dept. of Health Summer Fellowship, New York, New York.
- 1987-9 Ford Foundation Undergraduate Research Fellowship, Harvard and Radcliffe Colleges, Cambridge, Massachusetts.
- 1989-93 National Institutes of Health Medical Scientist Training Program (MSTP) Fellowship, Harvard Medical School, Boston, Massachusetts
- 1990 Public Health Service (PHS) Summer Research Fellowship, Harvard Medical School, Boston, Massachusetts.

- 1993-4 PHS Training Grant in Development and Cancer Biology, Whitehead Institute for Biomedical Research, Cambridge, Massachusetts.
- 1997-8 National Institutes of Health MSTP Fellowship, Harvard Medical School, Boston, Massachusetts.
- 2003-4 Neurosurgery Research and Education Foundation Research Fellowship, American Association of Neurological Surgeons, Chicago, Illinois.
- 2003-4 American Brain Tumor Association Research Fellowship.
- 2005-8 University of Wisconsin-Madison Start-up Research Grant. “Molecular biology of brain tumor stem cells.”
- 2005-7 Neopharm PRECISE Phase III clinical trial for IL13PEI-301 (IL13-PE38QQR) convection-enhanced delivery for glioblastoma, UW Principal Investigator.
- 2007- NCI funded North American Brain Tumor Consortium, Phase II clinical trial of “VEGF trap in patients with temozolomide-resistant malignant gliomas” (Co-investigator).
- 2007- NIH R01 (PI: M. Elizabeth Meyerand PhD): “Treatment Planning Using Physiologic MRI Data” (Co-investigator)
- 2007- Mentor for Dr. Paul A. Clark, 2007 University of Wisconsin Stem Cell Research Program Postdoctoral Research Fellowship “Developmental signaling pathways in brain tumor stem-like cells.”
- 2008- Bradmer 301: A Phase III Randomized study of neuradiab in combination with external beam radiation and temozolomide versus external beam radiation and temozolomide in patients with newly diagnosed glioblastoma multiforme” UW Principal investigator (pending).
- 2008-9 NIH R41 SBIR grant, “Predictive efficacy screening in cancer stem cells using metabolomics.” Consultant for Stemina Biomarker Discovery, Inc, Madison Wisconsin.
- 2008-9 Young Clinician Investigator Award, “Identifying molecules that regulate the blood-brain barrier using stem cells.” Neurosurgery Research and Education Foundation, American Association of Neurological Surgeons
- 2008-11 HEADRUSH Brain Tumor Research Professorship Research Award, “Determining GBM cancer stem cell-specific cell surface antigens.”
- 2009-11 UW Medical Education and Research Committee/ Wisconsin Partnership Program Collaborative Health Sciences Program proposal “Human induced pluripotent stem cell models for cardiac and neurological diseases” co-investigator with Tim Kamp, MD PhD (PI), James A. Thomson VMD PhD, Clive Svendsen PhD.
- 2009-10 University of Wisconsin Paul P. Carbone Comprehensive Cancer Center interdisciplinary grant, “Molecular targeted therapy for glioblastoma”. Co-investigator with Kevin Kozak, MD PhD, Deric Wheeler, PhD, Robert Jeraj PhD.
- 2009 NIH K08 Mentored Clinician Scientist Career Development Award, “Molecular biology of human glioblastoma cancer stem cells” (pending)
- 2009 NIH R41 grant (STTR), “Mitochondria-targeted antioxidant for treatment of malignant glioma” (pending).

Bibliography:

Peer-reviewed Articles:

1. Bender, J, **Kuo J**, Kleckner N “Genetic evidence against intramolecular rejoining of the donor molecule following IS10 transposition.” *Genetics* 128: 687-694 (1991).
2. **Kuo JS**, Veale R, Maxwell B, Sive H “Translational inhibition by 5’-polycytidine tracts in *Xenopus* embryos and in vitro.” *Gene* 176: 17-21 (1996).
3. **Kuo JS**, Patel M, Gamse J, Merzdorf C, Liu X, Apekin V, Sive H “*Opl*: a zinc finger protein that regulates neural determination and patterning in *Xenopus*.” *Development* 125 (15): 2867-2882 (1998).
4. **Kuo JS** “Cloning and functional analysis of early neural determination genes in *Xenopus*.” PhD thesis, Dept. of Biology, Massachusetts Institute of Technology (1998).
5. **Kuo JS**, Yu C, Petrovich Z, Apuzzo MLJ “The CyberKnife stereotactic radiosurgery system: description, installation and an initial evaluation of use and functionality.” *Neurosurgery* 53 (5): 1235-1239 (2003).
6. **Kuo JS** and Rutka JT “Advances in understanding the molecular biology of brain tumors.” *Journal of Korean Neurosurgical Society* 35 (1): 1-11 (2004).
7. Yokota N, Mainprize TG, Taylor MD, Kohata T, Loreto M, Ueda S, Dura W, Grajkowska W, **Kuo JS**, Rutka JT “Identification of differentially expressed and developmentally regulated genes in medulloblastoma using suppression subtraction hybridization.” *Oncogene* 23: 3444-3453 (2004).
8. **Kuo JS**, Chen JCT, Yu C, Giannotta SL, Zelman V, Petrovich Z, MacPherson D, Apuzzo MLJ “Gamma knife radiosurgery of benign cavernous sinus tumors: quantitative analysis of outcomes.” *Neurosurgery* 54 (6): 1385-1394 (2004).
9. **Kuo JS**, Yu C, Giannotta SL, Petrovich Z, Apuzzo MLJ “The Leksell Gamma Knife Model U versus Model C: a quantitative comparison of radiosurgical treatment parameters.” *Neurosurgery* 55 (1): 168-173 (2004).
10. Rutka JT, **Kuo JS**, Carter M, Ray A, Ueda S, Mainprize TG “Advances in the surgical treatment of pediatric brain tumors.” *Expert Reviews in Neurotherapeutics* 4 (5): 879-893 (2004).
11. Rutka JT and **Kuo JS** “Pediatric surgical neuro-oncology: current best care practices and strategies.” *AANS/CNS Section on Tumors, 20th Anniversary Special Issue, Journal of Neuro-oncology* 69 (1-3): 139-150 (2004).
12. **Kuo JS** and Tu C “Convection-enhanced delivery: an emerging technique for outwitting the blood-brain barrier in CNS therapy.” *Formosan Journal of Surgery* 39:216-221 (2006).
13. **Kuo JS**, Gonzalez-Gomez I, McComb JG “Unexpected myxopapillary ependymoma within a filum terminale tethering the spinal cord: a case report.” (*Pediatric Neurosurgery* 43 (4): 309-311 (2007).
14. Ghia A, Tomé WA, Thomas S, Cannon G, Khuntia D, **Kuo JS**, Mehta MP “Distribution of brain metastases in relation to the hippocampus: implications for neurocognitive functional preservation” *Int J Rad Onc Bio Phys* 68 (4): 971-977 (2007).
15. Clark PA, Treisman D, Ebben J, **Kuo JS** “Developmental signaling pathways in brain tumor stem cells” *Developmental Dynamics* 236 (12): 3297-3308 (2007).

16. Rocque BG, Baskaya MK, **Kuo JS** "Letter to the editor in response to: Vernooij et al., Incidental findings on brain MRI in the general population." *New England Journal of Medicine* 358 (8): 853-855 (2008).
17. Ebben J, Rocque BG, **Kuo JS** "Tumor Vaccine Approaches for CNS Malignancies: Progress to Date" - Leading Review, *Drugs* 69 (3):1-9 (2009).
18. Rocque BG, Herold KAG, Salamat MS, Shenker Y, **Kuo JS** "Symptomatic hyperprolactinemia from an ectopic pituitary adenoma located in the clivus." *Endocrine Practice* 15 (2):143-148 (2009).
19. Kulstad R, **Kuo JS**, Shenker Y "Giant prolactinoma" *Endocrine Practice* 15 (2):174 (2009).
20. Gutiérrez AN, Tomé WA, Ghia A, Thomas S, Cannon G, Khuntia D, **Kuo JS**, Mehta MP "Simultaneously integrated boost to multiple brain metastases during whole brain radiation therapy – hippocampal avoidance (WBRT-HA)." *Proceedings for the 8th Bi-annual Congress of the International Stereotactic Radiosurgery Society (in press)*.
21. **Kuo JS**, Hawkins C, Rutka JT, Weiss MH "A pilot study of fat allograft transplantation in immunocompetent rabbits for potential neurosurgical applications." (*submitted*)
22. Miranpuri A, Rajpal S, Salamat S, **Kuo JS** "Intramedullary spinal metastasis originating from ovarian carcinoma – case report and review of literature" (*submitted*).
23. Ebben J, Clark PA, Treisman D, **Kuo JS** "The cancer stem cell paradigm: a new understanding of tumor development and treatment" (*in preparation*).
24. Clark PA, Kalluri H, Treisman D, Raca G, **Kuo JS** "Optimization of growth conditions for GBM stem-like cells." (*in preparation*).

Book Chapters and Published Comments:

1. **Kuo JS**, Licholai GP Woodard EJ "Chapter 145: Anterior Cervical Vertebral Resection and Stabilization." in Kaye AH and Black PM, eds. *Operative Neurosurgery*. London: Churchill Livingstone (2000), pp. 1803-16.
2. **Kuo JS** on Roitberg B et al., "Human recombinant factor VII for emergency reversal of coagulopathy in neurosurgical patients: a retrospective comparative study." *Neurosurgery* 57 (5): 832-836 (2005).
3. **Kuo JS** on Simon M et al., "Variant of the *CHEK2* gene as a prognostic marker in glioblastoma multiforme." *Neurosurgery* 59 (5): 1078-1085 (2006).
4. Mehta MP, Robins HI, **Kuo JS**, Rowley H, Salamat S, Hayes L, O'Connor N "Case study 5: Newly diagnosed glioblastoma treated with surgical resection and concomitant chemoradiotherapy." (Wedgewood Communications, Schering-Plough Corp, May, 2007).
5. **Kuo JS** on Cahill J et al., "p53 may play an orchestrating role in apoptotic cell death after experimental subarachnoid hemorrhage." *Neurosurgery* 60 (3): 531-545 (2007).
6. **Kuo JS** on Bian X et al., "Preferential expression of the chemokine receptor CXCR4 by more highly malignant human gliomas and association with poor patient survival." *Neurosurgery* 61 (2): 570-579 (2007).
7. **Kuo JS** on Lefranc F et al., "Targeting the $\alpha 1$ subunit of the sodium pump to combat glioblastoma cells." *Neurosurgery* 62 (1): 211-222 (2008).

8. **Kuo JS** on Kobayashi K et al., “Enhanced tumor growth elicited by L-type amino acid transporter 1 in human malignant glioma cells.” *Neurosurgery* 62 (2): 493-504 (2008).
9. Ebben J and **Kuo JS** “University of Wisconsin-Madison” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
10. Ebben J and **Kuo JS** “Whitehead Institute” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
11. Ebben J and **Kuo JS** “International laws relating to stem cell research” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
12. Ebben J and **Kuo JS** “Federal guidelines relating to stem cell research” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
13. Ebben J and **Kuo JS** “Massachusetts Institute of Technology” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
14. Ebben J and **Kuo JS** “Wisconsin Alumni Research Foundation” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
15. Ebben J and **Kuo JS** “Wisconsin” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, 2008. edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
16. Rackman A and **Kuo JS** “James Thomson” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Thousand Oaks, CA: Sage Publications Inc, August 2008.
17. Bauer A and **Kuo JS** “Missouri” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
18. Bauer A and **Kuo JS** “Nancy Reagan” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
19. Rocque BG and **Kuo JS** “University of Georgia” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Thousand Oaks, CA: Sage Publications Inc, August 2008.
20. Agrawal B and **Kuo JS** “Wicell” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
21. Lake W and **Kuo JS** “Kentucky” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
22. Nickele C and **Kuo JS** “Illinois” for *Encyclopedia of Stem Cell Research*, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.

23. Davidson L and **Kuo JS** “University of Southern California” for Encyclopedia of Stem Cell Research, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
24. Zorniak M and **Kuo JS** “Robert Lanza” for Encyclopedia of Stem Cell Research, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
25. Treisman DM and **Kuo JS** “Fetal cells” for Encyclopedia of Stem Cell Research, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
26. Clark PA and **Kuo JS** “Bone diseases” for Encyclopedia of Stem Cell Research, edited by Svendsen CN and Ebert AD, Thousand Oaks, CA: Sage Publications Inc, August 2008.
27. **Kuo JS** edited “Evidence based therapy for gliomas” by Minesh P. Mehta, for CNS University of Neurosurgery.
28. Zorniak M and **Kuo JS** Review of “Neuro-oncology – the Essentials” 2nd edition, by Berger M. and Bernstein M. (Neurosurgery, *in press*).
29. Clark PA and **Kuo JS** on Jeng LB et al., “Large scale bicortical cranial bone regeneration using ex vivo replication defective adenoviral-mediated BMP-2 gene-transferred bone marrow stromal cell and composite biomaterials.” (Neurosurgery, *in press*).

Invited Oral Presentations:

1. **Kuo JS** “Neural induction in *Xenopus laevis*.” Vertebrate Development, MIT Dept. of Biology and Whitehead Institute for Biomedical Research, Cambridge, Massachusetts, May 1994.
2. **Kuo JS** and Sive H “Anterior-posterior ectodermal patterning in *Xenopus laevis*.” Institute of Brain Research, Dept. of Neuroscience, University of Tokyo School of Medicine, Tokyo, Japan, December 16, 1994.
3. **Kuo JS** and Sive H “Anterior-posterior ectodermal patterning in *Xenopus laevis*.” Division of Biology, Dept. of Pharmacology, Hokkaido University, Sapporo, Japan, December 19, 1994.
4. **Kuo JS**, Patel M, Sive H “Opl is an early novel neural-specific transcription factor.” Vertebrate Development, MIT Dept. of Biology and Whitehead Institute for Biomedical Research, Cambridge, Massachusetts, March, 1997.
5. **Kuo JS** “Novel approaches to the study of brain tumors.” Neurosurgical conference, LAC-USC Medical Center, Los Angeles, California, August 2000.
6. **Kuo JS** “Inherited neurosurgical diseases.” Neurosurgical conference, LAC-USC Medical Center, Los Angeles, California, December 2000.
7. **Kuo JS**, Patel M, Aruga J, Sive H “Cloning and functional analysis of *Opl*: a novel medulloblastoma-specific gene.” Neuroscience seminar, Childrens Hospital Los Angeles, Los Angeles, California, December, 2000.
8. **Kuo JS** “Slit ventricle syndrome: or the ‘non-compliant’ brain.” Neuroscience seminar, Childrens Hospital Los Angeles, Los Angeles, California, March 2001.
9. **Kuo JS** “Brain tumors: an introduction.” Neuroscience Nursing Complex Lectures, LAC-USC Medical Center, Los Angeles, California, May 2001.

10. **Kuo JS** “Surgical anatomy of the middle fossa approach.” Neurosurgical conference, LAC-USC Medical Center, October 2001.
11. **Kuo JS** and Apuzzo MLJ “The CyberKnife stereotactic radiosurgery system: description, installation and an initial evaluation of use and functionality.” Annual Meeting of the Society of University Neurosurgeons, The Neurological Institute, Columbia-Presbyterian Medical Center, Columbia University, New York, New York, June, 2003.
12. Yu C, Kumar P, Giannotta SL, Streeter O, Gruen JP, **Kuo JS**, McNatt S, Apuzzo MLJ “The Initial Technical Experience with the CyberKnife Stereotactic Radiosurgery (SRS) System at the University of Southern California.” 2nd Annual CyberKnife Society and Users’ Group Meeting, Half Moon Bay, California, November 2003.
13. **Kuo JS**, Chen JCT, Yu C, Giannotta SL, Zelman V, Petrovich Z, Apuzzo MLJ “Gamma knife radiosurgery of benign cavernous sinus tumors: Quantitative analysis of outcomes.” Scientific Session III, Annual Meeting of the American Association of Neurological Surgeons, Orlando, Florida, May 3, 2004.
14. **Kuo JS**, Chen JCT, Yu C, Giannotta SL, Zelman V, Petrovich Z, Apuzzo MLJ “Gamma knife radiosurgery of benign cavernous sinus tumors: Quantitative analysis of outcomes.” 11th Biennial Canadian Neuro-Oncology Meeting, Toronto, Ontario, Canada, May 29, 2004.
15. **Kuo JS** “Stem cells, embryos and brain tumors: Disordered embryogenesis as a possible mechanism for tumor formation.” Section of Neurosurgery, Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire, November 17, 2004.
16. **Kuo JS** “Stem cells, embryos and brain tumors: Disordered embryogenesis as a possible mechanism for tumor formation.” Department of Neurological Surgery, University Hospitals of Cleveland, Case Western Reserve University School of Medicine, Cleveland, Ohio, January 12, 2005.
17. **Kuo JS** “A brief introduction to brain tumors.” Grand Rounds, Department of Psychiatry, Keck School of Medicine, University of Southern California, Los Angeles, California, February 1, 2005.
18. **Kuo JS** “Stem cells, embryos and brain tumors: Disordered embryogenesis as a possible mechanism for tumor formation.” Howard Hughes Medical Institute, University of Michigan Comprehensive Cancer Center, Ann Arbor, Michigan, March 25, 2005.
19. **Kuo JS** “Stem cells, embryos and brain tumors: Disordered embryogenesis as a possible mechanism for tumor formation.” Department of Neurological Surgery and the Waisman Center, University of Wisconsin-Madison, Madison, Wisconsin, May 13, 2005.
20. **Kuo JS** “Frontiers in brain tumor therapy.” Brain Tumor Support Group, University of Wisconsin Hospital, Madison, Wisconsin, January 17, 2006.
21. **Kuo JS** “Intracranial pressure management: concepts and management.” Clinical Neuroscience course, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, every six weeks starting March 6, 2006.
22. **Kuo JS** “A primer on brain tumors.” Clinical Neuroscience course, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, for 3rd and 4th year medical students, every six weeks starting March 6, 2006.

23. **Kuo JS** “From bench to bedside: multidisciplinary approach to brain tumors.” Brain Tumor symposium, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, August 3, 2006.
24. **Kuo JS** “Molecular biology of brain tumor stem cells.” Dept. of Neurological Surgery Research symposium, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, September 8, 2006.
25. **Kuo JS** “Multidisciplinary management of pituitary tumors.” American Association of Neuroscience Nurses, Brain Tumor conference, Chapter meeting, October 18, 2006.
26. **Kuo JS** “Stem-like cells derived from brain tumors.” University of Wisconsin Cytogenetics Service, Madison, Wisconsin, March 27, 2007.
27. Tomé WA, Ghia A, Thomas S, Cannon G, Khuntia D, **Kuo JS**, Mehta MP “Distribution of brain metastases in relation to the hippocampus: implications for neurocognitive functional preservation.” 8th Bi-annual Congress of the International Stereotactic Radiosurgery Society, San Francisco, California, June 25, 2007.
28. **Kuo JS**, Robins HI, Salamat S, Howard S, Rowley H “Mock Tumor Board.” Brain Tumor Support Group, University of Wisconsin Hospital, Madison, Wisconsin, August 21, 2007.
29. **Kuo JS** “The origins and evolution of modern pituitary surgery.” Endocrinology Grand Rounds, Dept. of Medicine, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, September 27, 2007.
30. **Kuo JS** “Update on brain tumor stem cell biology.” Dept. of Neurological Surgery Research symposium, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, October 19, 2007.
31. Clark PA, Kalluri H, Treisman DM, Hospod F, Raca G, **Kuo JS** “Normal neural and glioma-derived stem cells exhibit differential growth dependence in vitro.” Annual meeting, Society for Physical Regulation in Biology and Medicine, Miami, Florida, January 2008.
32. **Kuo JS** “Multidisciplinary approach to brain tumor therapies.” Neuroscience student interest group, UW School of Medicine and Public Health, March 6, 2008.
33. **Kuo JS** “Brain cancer stem cells: Tales from the dark side.” Society for Stem Cell Research, University of Wisconsin, Madison Wisconsin, April 2, 2008.
34. **Kuo JS** “Glioblastoma stem cells exhibit decreased dependence on exogenous growth factors for proliferation and survival.” American Academy of Neurological Surgeons, Sedona, Arizona, September 9-13, 2008.
35. **Kuo JS** “Personalized therapy for individual brain tumor patients.” General Scientific Session I, Annual Meeting of the Congress of Neurological Surgeons, Orlando, Florida, September 22, 2008 (Platform presentation).
36. **Kuo JS** “Glioblastoma cancer stem cells and EGF signaling.” Dept. of Neurological Surgery Research symposium, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, November 13, 2008.
37. **Kuo JS** “Introduction to trans-sphenoidal surgery.” Wisconsin Skull Base Surgery course, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, February 7, 2009.

38. **Kuo JS** “Molecular biology of glioblastoma cancer stem cells.” Dept. of Human Oncology Research seminar, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, February 19, 2009.
39. **Kuo JS** “Glioblastoma cancer stem cell biology.” 3rd Annual Wisconsin Stem Cell Symposium: Cancer, Stem cells, and Cancer stem cells. Madison, Wisconsin, April 15, 2009.

Abstracts and Posters:

1. Sive H, Bradley L, Higley S, Gammill L, Kolm P, **Kuo J**, Maxwell B, Nocente-McGrath C, Patel M “Anteroposterior ectodermal patterning in *Xenopus laevis*.” Fifth International *Xenopus laevis* conference, Denver, Colorado, 1994.
2. **Kuo JS**, Patel M, Gamse J, Apekin V, Sive H “Subtraction cloning and characterization of ectodermal patterning genes in *Xenopus laevis*.” HST Jubilee Research Symposium, Harvard Medical School, Boston, Massachusetts, 1995.
3. **Kuo JS**, Patel M, Apekin V, Sive H “Cloning and analysis of *Opl*, a very early neural-specific gene.” Soma Weiss Research Assembly, Harvard Medical School, Boston, Massachusetts, 1996.
4. Sive H, Gammill L, Gamse J, Grinblat Y, Kao B, Kolm P, **Kuo JS**, Lane ME, Patel M, Sagerstrom C “Neural patterning in frogs and fish.” Pattern Formation during Development, LXII Cold Spring Harbor Laboratory Symposium on Quantitative Biology, Cold Spring Harbor Laboratory, New York, May 28 - June 2, 1997.
5. **Kuo JS**, Patel M, Sive H “*Opl*: a highly conserved neural-specific transcription factor that modulates neural fate.” Gordon Research Conference: Developmental Biology, Andover, New Hampshire, June 22-27, 1997.
6. Sive H, Gammill L, Gamse J, Grinblat Y, **Kuo J**, Patel M “Neural patterning in frogs and fish.” 13th International Congress of Developmental Biology/Society for Developmental Biology, Snowbird, Utah, July, 1997.
7. Gamse J, **Kuo J**, Patel M, Sive H “Patterning the ectoderm of the *Xenopus* blastula and gastrula.” 13th International Congress of Developmental Biology/Society for Developmental Biology, Snowbird, Utah, July, 1997.
8. **Kuo JS**, Patel M, Sive H, Aruga J “Cloning and functional analysis of *Opl*: a novel medulloblastoma-specific gene.” Annual Meeting of the Congress of Neurological Surgeons, San Diego, California, September 2001.
9. **Kuo JS**, Chen JCT, Giannotta SL, Yu C, Zelman V, Petrovich Z, Apuzzo MLJ “Radiosurgical management of benign cavernous sinus tumors.” Annual Meeting of the Congress of Neurological Surgeons, Denver, Colorado, October 2003.
10. **Kuo JS**, Ray A, Mainprize TG, Ueda S, Yokota N, Aruga J, Bouffet ER, Hawkins CE, Rutka JT “High *Zic-1* expression is correlated with a good clinical outcome for medulloblastomas.” Annual Meeting of the American Association of Neurological Surgeons, New Orleans, Louisiana, April 2005.
11. **Kuo JS**, Zhao Y, Yu C, Giannotta SL, Apuzzo MLJ, Zee CS “Magnetic resonance imaging characteristics associated with clinical outcome after gamma knife radiosurgery for meningiomas.” Annual Meeting of the American Society of Neuro-Radiology, Toronto, Ontario, Canada, May 2005.
12. Davidson L, Salim A, Ottocchian M, Oncel D, Inaba K, Gruen JP, Rhee P, **Kuo JS** “Can neurosurgery residents accurately predict ICP based on initial head CT

- findings.” American College of Surgeons, Southern California Chapter Trauma meeting, Los Angeles, California, January, 2007.
13. Ghia AJ, Tome WA, Thomas S, Cannon G, Mehta M, **Kuo JS** “Distribution of brain metastases in relation to the hippocampus.” Annual Meeting of the American Association of Neurological Surgeons, Washington, D.C., April, 2007.
 14. Ghia A, Tome WA, Thomas S, Cannon G, Mehta MP, **Kuo JS** “Distribution of brain metastases in relation to the hippocampus.” AANS/CNS Tumor Satellite Symposium, Washington, D.C., April, 2007.
 15. Davidson L, Salim A, Ottochian M, Oncel D, Gruen JP, **Kuo JS** “The relationship between initial head CT and intracranial pressure in head injured trauma patients.” Annual Meeting of the Congress of Neurological Surgeons, San Diego, California, September, 2007.
 16. Clark PA, Kalluri H, Treisman D, Hospod F, Raca G, **Kuo JS** “Optimization of growth conditions for normal neural and tumor-derived progenitor cells.” Annual Meeting of the Society for Neuro-Oncology, Dallas, Texas, November, 2007.
 17. Gordon O, Clark PA, **Kuo JS** “Developmental signaling pathways are conserved in neural and brain-tumor derived stem-like cells.” 2007 Annual Biomedical Research Conference for Minority Students, Austin, Texas, November, 2007.
 18. Clark PA, Kalluri H, Treisman DM, Hospod F, Raca G, **Kuo JS** “Glioblastoma multiforme cancer stem cells exhibit decreased dependence on exogenous growth factors in vitro.” For “The role of cancer stem cells in the initiation and propagation of tumorigenesis” American Association for Cancer Research special conference, Los Angeles, California, February 12-15, 2008.
 19. **Kuo JS**, Clark PA, Rackman A, Treisman D, Raca G, Kalluri H “Growth factor independence and radioresistance of GBM-derived stem-like cells.” Annual Meeting of the American Association of Neurological Surgeons, Chicago, Illinois, April, 2008.
 20. **Kuo JS**, Clark PA, Treisman D, Basu H “CPC-410 is a novel anti-oxidant molecule that exhibits selective activity against GBM-derived stem and tumor cells.” Chosen as Select Abstract, Annual Meeting of the Congress of Neurological Surgeons, Orlando, Florida, September 2008.
 21. Kuty R, Zorniak M, **Kuo JS** “Induced pluripotent stem cells and personalized medicine: present and future” 2008 World Stem Cell Summit, Madison WI, September 2008.
 22. Clark PA, Kalluri H, Treisman DM, Ezhilan S, **Kuo JS** “Glioblastoma multiforme cancer stem cells exhibit decreased dependence on exogenous growth factors in vitro.” McArdle Symposium on Cancer, University of Wisconsin-Madison, Madison, Wisconsin, November 8, 2008.
 23. Clark PA, Basu H, Treisman D, **Kuo JS** “Reduction of oxidative stress within GBM tumor and stem-like cells halts propagation and cell division.” Annual Meeting of the Society for Neuro-Oncology, Las Vegas Resorts, Nevada, November 20-23, 2008.
 24. Thomas SR, Kaur S, **Kuo JS**, Robins HI, Mehta MP, Khuntia D “Driving Restrictions for Patients with Primary and Metastatic Brain Tumors: Results of a Multi-Institutional Survey.” Annual Meeting of the Society for Neuro-Oncology, Las Vegas Resorts, Nevada, November 20-23, 2008.

25. Clark PA, Kalluri H, Treisman DM, Hospod F, Raca G, **Kuo JS** “Glioblastoma multiforme cancer stem cells exhibit decreased dependence on exogenous growth factors in vitro.” University of Wisconsin Neuroscience Poster Fair, Madison, Wisconsin, December 10, 2008.
26. Clark PA, Iida M, Wheeler DL, **Kuo JS** “Compensatory activation of EGFR family member receptors in glioblastoma cancer stem cells may mediate resistance to anti-EGF therapies” (accepted for American Association for Cancer Research annual meeting, April 18-22, 2009).
27. Gondi V, Tome W, Marsh J, Struck A, Ghia A, Turian JV, Bentzen S, **Kuo JS**, Khuntia D, Mehta M “Estimated risk of peri-hippocampal disease progression after hippocampal avoidance during whole brain radiotherapy: comprehensive multi-institution review of 371 patients with 1133 brain metastases.” (submitted for 2009 American Society for Therapeutic Radiology and Oncology meeting, November 1-5, 2009).

Teaching Experience:

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|---------|--|
| 1985-88 | Tutor Award Supervisor, Bureau of Study Counsel, Harvard University. Tutor in Chinese, calculus, chemistry, economics, genetics and molecular biology. |
| 1994 | Teaching Assistant, Introductory Biology (7.013), Dept. of Biology, MIT. Profs. Robert Weinberg and David Page. Highest-rated Teaching Assistant. |
| 1995 | Teaching Assistant, Cell Biology (7.06), Dept. of Biology, MIT. Profs. Richard Young and Tyler Jacks. Highest-rated Teaching Assistant. |
| 2004-5 | Neurosurgical Teaching Conferences, University of Southern California |
| 2004-5 | Neurosurgery Board Review, University of Southern California |
| 2004-5 | Resident Supervisor, Dr. L. Davidson, University of Southern California. |
| 2004-5 | Resident Supervisor, Dr. A. Farin, University of Southern California. |
| 2004- | Research mentor, Dr. L. Davidson, University of Southern California |
| 2005- | Faculty Mentor, Dr. B. Rocque, University of Wisconsin-Madison |
| 2005-6 | Research Mentor, Dr. R. Moftakhar, University of Wisconsin-Madison |
| 2005- | Lecturer, Clinical Neuroscience Course, 3rd and 4 th year medical students, University of Wisconsin School of Medicine and Public Health. |
| 2006- | Faculty mentor, Neuroscience Student Interest Group, University of Wisconsin School of Medicine and Public Health |
| 2006- | Research Mentor, Dr. N. Patel, University of Wisconsin-Madison |
| 2006-7 | Research Mentor, Dr. A. Ghia, University of Wisconsin-Madison |
| 2006-7 | Research Mentor, Dr. S. Rajpal, University of Wisconsin-Madison |
| 2006- | Postdoctoral Research Mentor, Dr. P. Clark, University of Wisconsin-Madison |
| 2006 | Research Mentor, J. Wildenberg, MD PhD rotation student, University of Wisconsin-Madison |
| 2006- | Faculty and Research Mentor, Dr. A. Bauer, University of Wisconsin-Madison |
| 2006- | Research Mentor, D. Treisman, undergraduate research scholar, University of Wisconsin-Madison |

- 2006- Research Mentor, Dr. B. Agrawal, University of Wisconsin-Madison
- 2006- Research Mentor, Dr. A. Miranpuri, University of Wisconsin-Madison
- 2007 Research Mentor, O. Gordon, undergraduate research scholar, University of Wisconsin CMB Minority Summer Research Opportunities program
- 2007 Research Mentor, A. Rackman, undergraduate research scholar, University of Wisconsin-Madison
- 2007- Research Mentor, J. Ebben, undergraduate research scholar, Marquette University
- 2006 Lecturer, Neuroscience 675: Molecular mechanisms of brain damage, seminar course for advanced undergraduates and graduate students, University of Wisconsin-Madison
- 2007 Lecturer, Neuroscience 500 research seminar for advanced undergraduates, University of Wisconsin-Madison
- 2007- Lecturer, Medical Neuroscience Course, 2nd year medical students, University of Wisconsin School of Medicine and Public Health.
- 2007- Research mentor for A. Struck, University of Wisconsin School of Medicine and Public Health
- 2007- Research mentor for M. Jones, Undergraduate researcher, University of Wisconsin-Madison
- 2007- Research mentor for M. Zorniak, Neuroscience PhD student, University of Wisconsin-Madison
- 2007- Ph.D. thesis advisory committee, Joe Wildenberg, Neuroscience PhD student, University of Wisconsin-Madison
- 2007- Ph.D. thesis advisory committee, W. Potter, Neuroscience PhD student, University of Wisconsin-Madison
- 2007- Neurosurgery mentor, J. Wildenberg, MD PhD student, University of Wisconsin-Madison 2008
- 2007- Research Mentor, J. Hadac, undergraduate research scholar, University of Wisconsin CMB Minority Summer Research Opportunities program
- 2008- Neurosurgery mentor, B. Ozer, MD PhD student, University of Wisconsin
- 2008- Ph.D. thesis advisory committee, B. Ozer, MD PhD student in Biological Chemistry, University of Wisconsin-Madison
- 2008- Ph.D. thesis advisory committee, C. Curran, Comparative Biomedical Science PhD student, University of Wisconsin-Madison
- 2008- Research mentor for R. Kutty, Undergraduate researcher, University of Wisconsin-Madison

Peer Review, Study Section, and Editorial Board Service:

- 2004-5 In-Training Liaison, Spokesperson and Editorial Board member to address the needs and concerns of individuals in-training globally, as they relate to journal content and perspective for *Neurosurgery*
- 2004- Reviewer for *Neurosurgery*, official journal of the Congress of Neurological Surgeons
- 2004- Reviewer, *Expert Review of Medical Devices*
- 2005- Reviewer, *Clinical Neurology and Neurosurgery*

- 2006- Reviewer, *FEBS Letters*
- 2007 Congress of Neurological Surgeons - University of Neurosurgery course director (Advances and Controversies in Glioma Therapies)
- 2008- Reviewer for *Cancer Letters*
- 2008- Reviewer for *Journal of Cancer Research and Therapeutics*
- 2008 Reviewer for 2008 Singapore National Science and Technology Awards
- 2008 Reviewer for Czechoslovakia Science Institute
- 2008 Study section member, Stem cell characterization panel, New York Stem Cell Research Program, October 12-14, 2008
- 2008 Reviewer for *Journal of Experimental and Clinical Cancer Research*
- 2008 Editorial Board, *Open Gene Therapy Journal*
- 2008 Editorial Board, *Open Neurosurgery Journal*
- 2009 Study section reviewer for Molecular and Cellular Medicine Board, Medical Research Council, United Kingdom

Professional Associations and Committees:

International and Regional

- 1989-93 American Medical Students Association
- 1989-96 American Association for the Advancement of Science
- 1998 Society for Developmental Biology
- 1989-98 Massachusetts Medical Society
- 1998- American Medical Association
- 1998-2005 California Association of Neurological Surgeons
- 2000- American Association of Neurological Surgeons
- 2002- AANS/CNS Joint Section on Tumors
- 2003- Congress of Neurological Surgeons
- 2005- Wisconsin Medical Society
- 2006- Society of Neuro-Oncology
- 2006- American Society of Clinical Oncology
- 2007- Congress of Neurological Surgeons Education Committee
- 2007- Congress of Neurological Surgeons - University of Neurosurgery course director (Advances and Controversies in Glioma Therapies)
- 2007- Congress of Neurological Surgeons 2008 Annual meeting Scientific Program Committee, General Scientific Session
- 2007- The Pituitary Society
- 2007- American Association of Cancer Research

University of Wisconsin-Madison

- 2005- CNS Disease-Oriented Working Group, Paul C. Carbone Comprehensive Cancer Center, University of Wisconsin
- 2005- Brain Bank Executive Committee, University of Wisconsin
- 2005- Brain Bank Tissue Allocation Committee, University of Wisconsin
- 2005- Intraoperative MRI Proposal Committee, University of Wisconsin Hospital and Clinics
- 2005- Adaptive Helical Tomotherapy Program Project Grant Committee
- 2005- Resident Selection Committee, Dept. of Neurological Surgery

- 2005- Faculty Search Committees, Dept. of Neurological Surgery
- 2007- Admissions Interviewer, Medical Scientist Training Program
- 2007- Admissions Interviewer, Neuroscience Graduate Training Program
- 2007- Faculty Search Interviewer, Dept. of Human Oncology
- 2007- Faculty Search Interviewer, Dept. of Radiology, Neuroradiology section
- 2007- Faculty Search Interviewer, UW Comprehensive Cancer Center
- 2007- Faculty Search Interviewer, Dept. of Pediatrics
- 2007- Lead neurosurgeon, UW Hospital Health-Link, Inpatient evidence-based craniotomy order set development
- 2008- Multidisciplinary Brain Tumor Program Steering Committee
- 2008- Chair, CNS Disease-Oriented Working Group, Paul C. Carbone Comprehensive Cancer Center, University of Wisconsin
- 2008 Faculty Search, Stem cell program cluster hire initiative, Dept. of Neurological Surgery and Wisconsin Center for Stem and Regenerative Medicine
- 2008 Faculty Search, Stem cell program cluster hire initiative, Dept. of Human Oncology and Wisconsin Center for Stem and Regenerative Medicine
- 2008-9 Co-organizer, Annual Wisconsin Stem Cell Symposium “Cancer and Stem Cells”, April 15, 2009.

University of Southern California

- 2004-5 Quality Assurance Committee, Dept. of Neurological Surgery
- 2004-5 Curriculum Committee, Dept. of Neurological Surgery
- 2004-5 Resident Evaluation Committee, Dept. of Neurological Surgery
- 2004-5 Resident Selection Committee, Dept. of Neurological Surgery

MIT

- 1992-4 Dept. of Biology Graduate Student Hosts
- 1993-4 Dept. of Biology Colloquia Committee
- 1996-7 Dept. of Biology Pre-Medical Advisory Panel

Harvard Medical School

- 1989-90 Pre-Clinical Curriculum Committee
- 1989-90 HST Curriculum Review Committee
- 1994 HST Irving London Teaching Award Selection Committee

Harvard and Radcliffe Colleges

- 1989-98 Alumni Interviewer, Harvard-Radcliffe Undergraduate Admissions
- 1990-4 Tutor, Premedical Advisory Committee, Lowell House
- 1995-6 Science and Premedical Tutor Search Committees, Kirkland House
- 1994-7 Co-Chair, Premedical Advisory Committee, Kirkland House