

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel in the order listed for Form Page 2.  
Follow the sample format on for each person. (See attached sample). **DO NOT EXCEED FOUR PAGES.**

NAME		POSITION TITLE	
Jeffry R. Alger, Ph.D.		Professor-in-Residence	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Washington State University	B.S.	1975	Chemistry
Yale University, New Haven, CT	M.S.	1977	Chemistry
Yale University, New Haven, CT	M.Phil.	1978	Chemistry
Yale University, New Haven, CT	Ph.D.	1979	Chemistry

**A. Positions and Honors.****Positions and Employment**

1979 – 1981	Postdoctoral Associate, Department of Molecular Biophysics and Biochemistry, Yale University
1982 – 1983	Research Associate, Department of Molecular Biophysics and Biochemistry, Yale University
1982 – 1986	Technical Director, Topical Magnetic Resonance Laboratory, Yale University
1984 – 1986	Assistant Professor, Department of Diagnostic Imaging, Yale School of Medicine
1985 – 1986	Lecturer, Department of Molecular Biophysics and Biochemistry, Yale University
1986 – 1990	Special Expert, Neuroimaging Section, NINDS/NIH
1987 – 1994	Faculty Member, Foundation for the Advanced Education in the Sciences (an NIH-affiliated graduate school)
1990 – 1994	Research Chemist, Neuroimaging Branch, NINDS/NIH
1990 – 1994	Chief, Magnetic Resonance Spectroscopy Section, NB, NINDS/NIH
1994 – 2000	Associate Professor (in Residence), Department of Radiological Sciences, UCLA
2000 – Present	Professor (in Residence), Department of Radiological Sciences, UCLA

**Honors**

1992 NIH Merit Award (for Intramural Research)

**B. Selected peer-reviewed publications (in chronological order).**

- Pierpaoli C, Righini A, Linfante I, Chang S, **Alger JR**, Di Chiro G. Histopathological correlates of abnormal water diffusion in cerebral ischemia: A diffusion-weighted MRI, light and electron microscopy study. *Radiology* 1993;189:439-448.
- Tedeschi G, Righini A, Barnett A, **Alger JR**. Cerebral white matter in the centrum semiovale exhibits a larger N-acetyl signal than does gray matter in long echo time 1H-magnetic resonance spectroscopic imaging. *Magn Reson Med* 1995;33:127-133.
- Hwang J-H, Grahm GD, Behar KL, **Alger JR**, Prichard JW, Rothman DL. Short echo time magnetic resonance spectroscopic imaging of macromolecules and metabolites in the human brain. *Magn Reson Med* 1996;35:633-639.
- Lazareff JA, Bockhorst KHJ, Olmsted C, **Alger JR**. Proton magnetic resonance spectroscopic imaging of pediatric low grade astrocytomas. *Child's Nervous System* 1996;12:130-135.
- Pierpaoli C, **Alger JR**, Righini A, Mattiello J, Dickerson R, Des Pres D, Barnett A, Di Chiro G. High temporal resolution apparent diffusion coefficient magnetic resonance imaging in global cerebral ischemia and reperfusion. *J Cereb Blood Flow Metab* 1996;16:892-905.
- Bizzi A, Righini A, Turner R, Le Bihan D, Bockhorst KHJ, **Alger JR**. Imaging focal reperfusion injury following global ischemia with diffusion-weighted magnetic resonance imaging and 1H-magnetic resonance spectroscopy. *Magn Reson Imaging* 1996;14:581-592.
- Tedeschi G, Lundbom N, Raman R, Bonavita S, Duyn JH, **Alger JR**, Di Chiro G. Increased choline signal coincides with malignant degeneration of cerebral gliomas: a serial proton magnetic resonance spectroscopic imaging study. *J Neurosurg* 1997;87:516-24.

8. Lazareff JA, Bockhorst KHJ, Olmstead C, Curran JG, **Alger JR**. Pediatric low grade astrocytoma: Prognosis with proton magnetic resonance spectroscopic imaging. *Neurosurgery* 1998;43:809-816.
9. Gupta RK, Sinha U, Cloughesy TF, **Alger JR**. Inverse correlation between the choline magnetic resonance spectroscopy signal intensity and the apparent diffusion coefficient in human glioma. *Magn Reson Med* 1999;41:2-7.
10. Kidwell CS, **Alger JR**, Di Salle F, Starkman S, Villablanca P, Bentson J, Saver JL. Diffusion magnetic resonance imaging in patients with transient ischemic attacks. *Stroke* 1999;30:1174-1180.
11. Lazareff J, Gupta R, **Alger J**. Variation of post treatment choline signal intensity in pediatric gliomas. *J Neurooncol* 1999;41:291-298.
12. Lee L, Kidwell C, **Alger JR**, Starkman S, Saver JL. Impact upon stroke subtype diagnosis of early diffusion weighted MRI and MR angiography. *Stroke* 2000;31:1081-1089.
13. Kidwell CS, Saver JL, Mattiello J, Starkman S, Vinuela F, Duckwiler G, Gobin YP, Jahan R, Vespa P, Kalafut M, **Alger JR**. Thrombolytic reversal of acute human cerebral ischemic injury shown by diffusion/perfusion magnetic resonance imaging. *Ann Neurol* 2000;47:462-9.
14. Harper RM, Bandler R, Spriggs D, **Alger JR**. Lateralized and widespread brain activation during transient blood pressure elevation revealed by magnetic resonance imaging. *J Comp Neurol* 2000;417: 195-204.
15. Gupta RK, Cloughesy TF, Sinha U, Garakian J, Lazareff J, Rubino G, Rubino L, Becker DP, Vinters HV, **Alger JR**. Glioma MRS, diffusion MRI and histology: Choline and ADC correlate with cell density. *J Neurooncol* 2000;50:215-226.
16. Haney S, Thompson PM, Cloughesy TF, **Alger JR**, Toga AW. Tracking tumor growth rates in patients with malignant gliomas. A test of two algorithms. *Am J Neuroradiol* 2001;22:73-82.
17. Haney S, Thompson PM, Cloughesy TF, **Alger JR**, Frew A, Torres-Trejo A, Mazziotta JC, Toga, AW. Mapping therapeutic response in a patient with malignant glioma. *J Comput Assist Tomogr* 2001;25:529-36.
18. **Alger JR**, Harreld JH, Chen S, Mintorovitch J, Lu DS. Time-to-echo optimization for spin echo magnetic resonance imaging of liver metastasis using superparamagnetic iron oxide particles. *J Magn Reson Imaging* 2001;14:586-94.
19. Kidwell CS, Saver JL, Mattiello J, Warach S, Liebeskind DS, Starkman S, Vespa PM, Villablanca JP, Martin NA, Frazee J, **Alger JR**. Diffusion-perfusion MR evaluation of perihematomal injury in hyperacute intracerebral hemorrhage. *Neurology* 2001;57:1611-7.
20. Kidwell CS, Saver JL, Mattiello J, Starkman S, Vinuela F, Duckwiler G, Gobin YP, Jahan R, Vespa P, Villablanca JP, Liebeskind DS, Woods RP, **Alger JR**. Diffusion-perfusion MRI characterization of post-recanalization hyperperfusion in humans. *Neurology* 2001;11:2015-21.
21. Kidwell CS, Saver JL, Villablanca JP, Duckwiler G, Fredieu A, Gough K, Leary MC, Starkman S, Gobin YP, Jahan R, Vespa P, Liebeskind DS, **Alger JR**, Vinuela F. Magnetic resonance imaging detection of microbleeds before thrombolysis: an emerging application. *Stroke* 2002;33:95-8.
22. **Alger JR**, Frew AJ, Cloughesy TF, del Vecchio W, Villablanca JP, Curran JG. Novel methodology for archival and interactive reading of clinical magnetic resonance spectroscopic imaging. *Magn Reson Med* 2002;48:411-418.
23. Macey PM, Henderson LA, Macey KE, **Alger JR**, Frysinger RC, Woo MA, Harper RK, Yan-Go FL, Harper RM. Brain morphology associated with obstructive sleep apnea. *Am J Respir Crit Care Med* 2002;166:1382-7.
24. Henderson LA, Macey PM, Macey KE, Frysinger RC, Woo, MA, Harper RK, **Alger JR**, Yan-Go FL, Harper RM. Brain responses to the Valsalva maneuver revealed by functional magnetic resonance imaging. *J Neurophysiol* 2002;88:3477-86.
25. Kidwell CS, Saver JL, Starkman S, Duckwiler G, Jahan R, Vespa P, Villablanca JP, Liebeskind DS, Gobin YP, Vinuela F, **Alger JR**. Late secondary ischemic injury in patients receiving intraarterial thrombolysis. *Ann Neurol* 2002;52:698-703.
26. Henderson LA, Woo MA, Macey PM, Macey KE, Frysinger RC, **Alger JR**, Yan-Go F, Harper RM. Neural responses during Valsalva maneuvers in obstructive sleep apnea syndrome. *J Appl Physiol* 2003;94:1063-1074.
27. Harper RM, Macey PM, Henderson LA, Woo MA, Macey KE, Frysinger RC, **Alger JR**, Nguyen KP, Yan-Go FL. fMRI responses to cold pressor challenges in control and obstructive sleep apnea subjects. *J Appl Physiol* 2003;94:1583-1595.
28. Chu A, **Alger JR**, Moore GJ, Posse S. Proton-echo-planar-spectroscopic-imaging with highly effective outer volume suppression using combined presaturation and spatially selective echo dephasing: COMPRESSED-PEPSI. *Magn Reson Med* 2003;49:817-21.
29. Macey PM, Macey KE, Henderson LA, **Alger JR**, Frysinger RC, Woo MA, Yan-Go F, Harper RM. Functional magnetic resonance neural responses to resistive expiratory loading in obstructive sleep apnea. *Am J Physiol* 2003. (In Press)

## C. Research Support

### Ongoing Research Support

RO1 NS39498 Alger (PI)

7/01/2000 – 6/30/2004

NIH

Validation of Magnetic Resonance Perfusion Imaging

To validate bolus passage MRI perfusion scanning using O-15 water PET in ischemic stroke patients.

Role: PI

R01 HL60296 Siegel (PI)

9/1/1998 – 8/31/2003

NIH

SCOR on the Neurobiology of Sleep and Sleep Apnea – Project 1 – Neural Sites Mediating Obstructive Sleep Apnea

Project 1 Director: Ronald M. Harper, PhD

To determine, using functional magnetic resonance techniques, the location and time course of activation of brain structures activated during obstructive sleep apnea.

Role: Investigator

HL22418 Harper (PI)

4/1/2001 – 2/28/2005

NIH

Neural Control of Respiratory Function

The major goals of this project are to examine control of breathing associated with sleep and waking states in adult animals by assessing brainstem and forebrain regional neural activity during different states following ventilatory and pressor challenges.

Role: Investigator

RO1 NS92315 McCracken (PI)

9/30/1999 – 3/31/2006

NIH

Pediatric Study Center for a MRI study of normal brain development

This is a multicenter study that seeks to create a database of imaging and neuropsychological information related to normal human development.

Role: Investigator

NS02088 Kidwell (PI)

4/1/1999 – 3/31/2004

NIH

MR assessment of Magnesium in Acute Stroke - Clinical Trial

This is a K-23 award to provide research training to Dr. Kidwell. The study will evaluate the efficacy of magnesium ion as a neuroprotective agent for acute stroke.

Role: Mentor

Kidwell (PI)

1/1/2001 – 12/31/2004

American Heart Association Bugher Foundation Award

Characterizing the Ischemic Penumbra and Response to Intra-arterial Thrombolytic Therapy in Humans Using Diffusion/Perfusion MRI

The general aim of this project is to characterize the physiologic evolution of tissue and blood flow states in patients treated with intra-arterial (IA) thrombolytic therapy and to identify pretreatment diffusion/perfusion MRI signatures of infarction, hemorrhage, and penumbral tissue that can be used to improve patient selection for thrombolytic treatment.

Role: Investigator

EB00822 Maudsley/Alger (PI)

7/1/2002 – 6/30/2006

NIH

Partnership for MR Spectroscopic Imaging Data Processing

Principal Investigator/Program Director (Last, First, Middle):

The biomedical research partnership mechanism will be used by investigators at four institutions to develop an integrated set of data processing tools to be used for clinical magnetic resonance spectroscopic imaging in order to address current technical limitations to the use of magnetic resonance spectroscopic imaging as a clinical tool.

Role: UCLA Subcontract Principal Investigator

**Completed Research Support**

NIH R21 CA76524 Alger (PI)

12/1/1997 – 11/30/2000

Pediatric Low Grade Astrocytoma: Treatment Guidance

The goals of this project are to demonstrate Pediatric Low grade astrocytoma choline signal levels measured by non-invasive Proton Magnetic Resonance Spectroscopic Imaging (1H-MRSI) provide an indication of the tumor's proliferation index, are predictive of future tumor growth rate and, therefore, may be used in target planning for focal image guided radiotherapy

Role: Principal Investigator

Alger (PI)

10/1/1997 – 7/30/2001

Berlex Pharmaceuticals (Contract)

Optimization of Time-to-Echo for Magnetic Resonance Imaging of Liver Metastasis using Feridex I.V.

A study designed to define the optimal TE for liver MR scanning

Role: Principal Investigator

RR13065 Alger (PI)

4/1/1999 – 3/30/2003

NIH (NIH Shared Instrumentation Program)

Research Animal Magnetic Resonance Imaging Scanner

To procure a research animal magnetic resonance imaging scanner

Role: Principal Investigator without salary

HD22695 Harper (PI)

7/1/1999 – 6/30/2003

NIH

Physiological Development in SIDS

The major goals of this project are to examine signal changes in the brain of control and congenital central hypoventilation patients to ventilatory, thermal, passive movement and state challenges.

Role: Investigator