

Curriculum Vitae

Jeremy R Payne, MD, PhD

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Education

PhD 05/2000 University of Illinois at Urbana-Champaign
Neuroscience (Computational Neurophysiology)
Neuronal Pattern Analysis Group, Neuroscience Program, Department of
Physiology
MD 05/2000 University of Illinois at Urbana-Champaign
BS 06/1990 University of California, Los Angeles
Major: Bioengineering

Medical Licenses and Certification

08/2005 Board Certified, American Board of Internal Medicine
01/2008 Board Certified (Neurology), American Board of Psychiatry and Neurology
License Arizona: 35163

Professional Experience

02/01/2009– Phoenix Neurological Associates, Medical Director Banner Good-Samaritan Stroke Center
09/2007–1/2009 Stroke Center Medical Director, University Medical Center
09/2007–1/2009 Faculty, UA College of Medicine Neuroscience Course
07/2006–1/2009 Assistant Professor of Neurology, University of Arizona
07/05-06/06 Fellow, Cerebrovascular Neurology, University of Arizona
07/04-06/05 Chief Resident, Department of Neurology, University of Arizona
07/02-06/05 Member, Organization of Resident Representatives to the American Association of Medical Colleges
07/01-06/05 Resident, Neurology, University of Arizona
07/00-06/05 Resident, Internal Medicine, University of Arizona
1993, 1995 Teaching Assistant, Physiology 416 (Graduate Neurophysiology Lab), University of Illinois, Department of Physiology
1994 Teaching Assistant, Biology 101 (Introductory Biology Lab), University of Illinois, Department of Biology
1989-1990 Program Coordinator, UCLA Emergency Medical Services
1988-1990 Clinical instructor, UCLA Emergency Medical Services
1988-1989 EMT-1A, Campus Rescue Ambulance, UCLA Emergency Medical Services

Research Experience

- 2003-present Clinical Stroke Program, UA
- SPS3: Secondary Prevention of Small Subcortical Strokes
 - EOSIDS: Pilot study of enhanced oxidative stress in leukocytes of diabetic acute stroke patients
 - ALIAS: Albumin in Acute Stroke Trial
 - AbESTT-II: Abciximab in Emergent Stroke Treatment Trial - II
 - THISS: Treatment of Hyperglycemia in Ischemic Stroke
 - PRoFESS: Prevention Regimen For Effectively avoiding Second Strokes
 - IRIS: Insulin Resistance Intervention After Stroke Trial
 - Everest: Safety and effectiveness of cortical stimulation in the treatment of upper extremity hemiparesis
 - CREST: Carotid Endarterectomy vs. Stenting Trial
- 2002-2005 Sub-Investigator, UA
- POET: Parkinson's disease or essential tremor. Evaluation of the Efficacy and Safety of Altoprane for Differentiating Parkinsonian syndromes from non-Parkinsonian syndromes in patients with tremors.
 - ONO-2506: A double-blind, phase II, safety and efficacy evaluation of ONO-2506PO in patients with mild to moderate Alzheimer's disease.
 - VITAL: Vitamins to slow Alzheimer's disease. High dose supplements to reduce homocysteine and slow the rate of cognitive decline in Alzheimer's disease.
 - CLASP: Cholesterol Lowering Agent to Slow the Progression of Alzheimer's Disease. A multi-center, randomized, double-blind, placebo-controlled trial of simvastatin to slow the progression of Alzheimer's disease.
- 1991-2000 Neuroscience Program, Neuronal Pattern Analysis Group, UIUC
- Studied the physiology of electrosensory afferents and computations that take place in the electrosensory lateral line lobe of weakly electric fish with Mark Nelson, PhD
 - Developed a UNIX-based data acquisition system and analysis software for neurophysiologic data with Mark Nelson, PhD
 - Developed and managed a comprehensive database and analysis system for general time-series datasets, as part of NSF's Neuronal Database Initiative, with Mark Nelson, PhD, and Michael Gabriel, PhD
- 1990-1991 Department of Physiology, UIUC
- Developed models of chemosensory avoidance behavior in marine invertebrates with Raynor Gillette, PhD
 - Studied the physiology of motor networks in ganglia of *Pleurobranchaea* with Raynor Gillette, PhD
- 1987-1990 Department of Kinesiology, UCLA
- Explored nonlinear dynamics of biological systems, with particular emphasis on cardiac arrhythmias with Alan Garfinkel, PhD
 - Developed techniques and software to reconstruct three-dimensional motor-unit architecture with Alan Garfinkel, PhD, Reginald Edgerton, PhD, and Arthur Toga, PhD.

Technical Experience

CS experience with multiple projects since 1990:

- Database design and management; Sybase, MySQL.
- Systems and network administration and supervision; SunOS, Solaris, Linux, Windows, Exchange.
- Software development; C, C++, Perl, Ruby, Matlab.
- Web application development and design; Apache, Rails, PHP.

Publications and Presented Research

- Payne JR**, Ritter L, Brenner D, Coull BM (2008). Utilization patterns of antithrombotic medications in stroke prevention. (*in preparation*)
- Payne JR**, Roskey T, Ritter L, Coull BM (2006). Antithrombotic medication use in stroke prevention: Significant missed opportunities. American Academy of Neurology Annual Meeting.
- Payne JR**, Coull BM (2005). Antithrombotic therapy for stroke in young adults. *J Thromb Thrombolysis*. 20(2):127-32.
- Payne JR** (2000). Adaptive gain in the electrosensory system of *Apteronotus leptorhynchus*, and supporting informatics. PhD Thesis. University of Illinois at Urbana Champaign.
- Payne JR**, Hanlon J, Cantey J, Mungnirun K, Duvel A, Smith D, Gimbel K, Nelson ME, Gabriel M (1999). High-resolution digital brain atlases for behavioral neuroscience. Society for Neuroscience Annual Meeting, 25. Miami Beach.
- Nelson ME, Xu Z, **Payne JR** (1997). Characterization and modeling of P-type electrosensory afferent responses to amplitude modulations in a wave-type electric fish. *J. Comp. Physiol. A*. 181:532-544.
- Payne JR**, Nelson ME (1997). Effectiveness of shunting conductances as a gain control mechanism in models of electrosensory pyramidal neurons. Society for Neuroscience Annual Meeting, 23. New Orleans.
- Payne JR**, Nelson ME (1996). Gain control in two classes of neuronal membrane models. Computation in Neural Systems Annual Meeting. Washington, DC.
- Xu Z, **Payne JR**, Nelson ME (1996). Logarithmic time course of sensory adaptation in electrosensory afferent nerve fibers in a weakly electric fish. *J. Neurophys.* 76:2020-2032.
- Payne JR**, Quinn SJ, Wolske M, Gabriel M, Nelson ME (1995). An information system for neuronal pattern analysis. Society for Neuroscience Annual Meeting, 21. San Diego.
- Roy RR, Garfinkel A, Ounjian M, **Payne JR**, Hirahara A, Hsu E, Edgerton VR (1995). Three-dimensional structure of cat tibialis anterior motor units. *Muscle and Nerve*. 18:1187-1195.
- Xu Z, **Payne JR**, Nelson ME (1995) Logarithmic time course of sensory adaptation in electrosensory afferents of *Apteronotus leptorhynchus*. Society for Neuroscience Annual Meeting, 21. San Diego.
- Payne JR**, Xu Z, Nelson ME (1994). A network model of automatic gain control in the electrosensory system. In *Computation in Neurons and Neural Systems* (Eeckman F, ed), 203-208. Kluwer Academic Press.

- Xu Z, **Payne JR**, Nelson ME (1994). System identification and modeling of primary electrosensory afferent response dynamics. In *Computation in Neurons and Neural Systems* (Eeckman F, ed), 197-202. Kluwer Academic Press.
- Nelson ME, **Payne JR**, Xu Z (1993). Modeling and simulation of primary electrosensory afferent response dynamics in the weakly electric fish *Apteronotus leptorhynchus*. *J. Comp. Physiol. A*. 173:161.
- Nelson ME, **Payne JR**, Xu Z (1992). Information coding by primary electrosensory afferents in *Apteronotus*. Society for Neuroscience Annual Meeting, 18. Los Angeles.
- Ounjian M, Roy RR, Eldred E, Garfinkel A, **Payne JR**, Armstrong A, Toga AW, Edgerton VR (1991). Physiological and developmental implications of motor unit anatomy. *J. Neurobiol.* 22:547-559.
- Payne JR**, Gillette R (1991). A network model of aversive discriminative chemosensory conditioning in *Pleurobranchaea*. Society for Neuroscience Annual Meeting, 17. New Orleans.

Honors and Awards

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| 2008 | UA College of Medicine “Vernon & Virginia Furrow Award for Excellence in Basic Science Teaching for Medical Students |
| 2008 | UA College of Medicine “Outstanding Teacher in a Block–Year I” |
| 2008 | University Medical Center Mentor/Educator of the Year |
| 2008 | AOA Honor Medical Society |
| 2007 | UA College of Medicine Clinical Science Educator of the Year |
| 2007 | UA Neurology Department Residency Educator of the Year |
| 1999-2000 | UIUC Medical Scholars Program Fellowship |
| 1998-1999 | UIUC Medical Scholars Program Fellowship |
| 1990-1991 | UIUC Neuroscience Program Fellowship |
| 1988 | UCLA Dean’s List |

Professional Memberships

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| 2005-present | American Stroke Association |
| 2001-present | American Academy of Neurology |
| 1998-2002 | American Medical Association |
| 1998-2000 | Illinois State Medical Society |
| 1995-2000 | American Medical Student Association |
| 1991-2001 | Society for Neuroscience |

Professional References

Bruce Coull, MD
Chairman & Professor, Department of Neurology
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