

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors. Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Bartlett, Edward Lee		POSITION TITLE Assistant Professor of Biological Sciences and Biomedical Engineering	
eRA COMMONS USER NAME EBARTLETT			
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
Haverford College, Haverford, PA	B.A.	1988-1992	Physics
University of Wisconsin-Madison, Madison, WI	Ph.D.	1993-1999	Neuroscience
Marine Biological Laboratory, Woods Hole, MA	none	2000	Comput. Neurosci.
Johns Hopkins University, Baltimore, MD	Post-doc	2000-2003	Auditory Neurophys.
Johns Hopkins University, Baltimore, MD	Research Associate	2003-2006	Auditory Neurophys.

A. PERSONAL STATEMENT

B. POSITIONS AND HONORS

PROFESSIONAL EXPERIENCE

2006-Present Assistant Professor of Biological Sciences and Biomedical Engineering, Purdue University
2007-Present Courtesy Appointment, Speech, Language, and Hearing Sciences, Purdue University
2009-Present Faculty Associate, Center for Aging and the Life Course, Purdue University

HONORS AND AWARDS

1999 Jerzy Rose Award, Best Graduate Thesis in Neuroscience, University of Wisconsin
2000-2003 Biomedical Engineering Whitaker Distinguished Postdoctoral Fellowship, Johns Hopkins University
2010-2011 Teaching for Tomorrow Faculty Award, Purdue University

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

1993-Present Member, Society for Neuroscience
2001-Present Member, Association for Research in Otolaryngology
2009-Present Member, Biomedical Engineering Society
2007-Present NSF Review Panel Member and Panel Chair, Transforming Undergraduate Education in Science (previously known as CCLI)

C. PEER-REVIEWED PUBLICATIONS

Peruzzi, D., **Bartlett, E.**, Smith, P.H. and Oliver, D.L. (1997) A monosynaptic GABAergic input from the inferior colliculus to the medial geniculate body in the rat. *J. Neuroscience*, 17: 3766-3777.

Bartlett, E. L. and Smith, P.H. (1999) Anatomic, intrinsic, and synaptic properties of dorsal and ventral division neurons in the rat medial geniculate body. *J. Neurophysiology*, 81(5): 1999-2016.

Bartlett, E. L., Stark, J.M., Smith, P.H., and Guillery, R.W. (2000) Comparison of the fine structure of cortical and

collicular terminals in the rat medial geniculate body. *Neuroscience*, 100(4):811-28.

Bartlett E.L. and Smith, P.H. (2002) Effects of paired-pulse and repetitive stimulation on thalamocortical neurons in the rat medial geniculate body. *Neuroscience*, 113(4):957-974.

Bartlett, E.L. and Wang, X. (2005) Long-lasting modulation by stimulus context in primate auditory cortex. *J. Neurophys.* 94(1):83-104.

Smith, P.H., **Bartlett, E.L.** and Kowalkowski, A. (2006) Unique anatomy and physiology of cells in the rat paralamina thalamic nuclei adjacent to the medial geniculate body. *J. Comp. Neurol.*, 496(3):314-34.

Bartlett, E. L., and X. Wang. (2007). Neural representations of temporally modulated signals in the auditory thalamus of awake primates. *J Neurophysiol* 97:1005-1017.

Smith, P. H., **E. L. Bartlett**, and A. Kowalkowski. (2007). Cortical and collicular inputs to cells in the rat paralamina thalamic nuclei adjacent to the medial geniculate body. *J Neurophysiol* 98: 681-695.

Elman A, **Bartlett E**, Kong N, and KJ Otto. (2008) Applying data mining techniques to studying complex sensory stimuli in the thalamocortical loop. *Proceedings of the 3rd INFORMS Workshop on Data Mining and Health Informatics*, DM-HI 2008.

Wang, X., Lu, T., Bendor, D, and **Bartlett, E.** (2008) Neural coding of temporal information in auditory thalamus and cortex. *Neuroscience*, 154: 294-303.

Parthasarathy, A., Cunningham, P, and **Bartlett, E.L.** (2010) Age-related differences in auditory processing as assessed by amplitude-modulation following responses in quiet and in noise. *Frontiers in Aging Neuro*, 2:152.

D. EDUCATION RESEARCH SUPPORT

Source: National Science Foundation

Title: "Purdue Scholarship Program in Quantitative Physiology"

Role: Principal Investigator

Award Period: 1/01/08-12/31/11

Source: Howard Hughes Medical Institute

Title: "Deviating from the Standard: Injecting statistical and quantitative techniques into the life sciences curriculum"

Role: co-Principal Investigator (Dennis Minchella, PI)

Award Period: 9/01/09-8/31/13

E. RESEARCH SUPPORT

Source: American Federation for Aging Research

Title: "Assessment of age-related changes in hearing using the amplitude-modulation following response"

Role: Principal Investigator

Award Period: 7/01/10-6/30/12

Source: National Organization for Hearing Research

Title: "Age-Related Deficits in Central Auditory Processing"

Role: Principal Investigator

Award Period: 1/01/09-12/31/09

The goal of this project was to compare electrophysiologically the auditory processing abilities of young versus aged rats. Much of the preliminary data for Aims 1 and 2 in the proposal were collected during the grant period.

Source: Departmental Start-Up Grant, Purdue University

Role: Principal Investigator

Award Period: 9/1/06-present

These funds have covered the setup of all equipment necessary to carry out the proposal. They have also supported 3 graduate students in the collection of preliminary data for the aims in this proposal.

Source: Deafness Research Foundation

Title: "Cellular bases of central auditory temporal processing"

Role: Principal Investigator

Award Period: 1/01/10-12/31/10

The goal of this project is to understand transformations of temporally modulated inputs in the central auditory system, especially the inferior colliculus and medial geniculate body, using electrophysiological measurements in brain slices.

Source: International Dyslexia Association

Title: "Intracellular electrophysiology and cellular morphology of auditory thalamus neurons in a rat model of dyslexia"

Role: Principal Investigator

Award Period: 1/01/09-12/31/09

The goal of this project was to compare the intrinsic, synaptic, and morphological properties of auditory thalamic neurons between control animals and animals with induced microgyria which mimic many dyslexic symptoms.

Source: NIDCD R03-DC06357,

Title: "Feature Selectivity in Awake Primate Thalamus"

Role: Principal Investigator

Award Period: 8/1/03-7/31/06.

The goal of this project was to determine the temporal and spectral selectivity of auditory thalamic neurons in awake marmosets.