

Table of Contents

EDITORIAL INTRODUCTION

Issues in Neuroscience Education: Making Connections

Kimberly D. Tanner 85

FEATURES

From Faculty for Undergraduate Neuroscience: Encouraging Innovation in Undergraduate Neuroscience Education by Supporting Student Research and Faculty Development

Jean C. Hardwick, Michael Kerchner, Barbara Lom, Julio J. Ramirez, and Eric P. Wiertelak 86–90

Strategy for Engaging the Society for Neuroscience in Science Education

William E. Cameron and Colleen D. McNerney 91–93

WWW: Neuroscience Web Sites

Dennis Liu 94–98

Video Views and Reviews: Neurulation and the Fashioning of the Vertebrate Central Nervous System

Christopher Watters 99–103

Points of View: On the Implications of Neuroscience Research for Science Teaching and Learning: Are There Any? A Skeptical Theme and Variations: *The Primacy of Psychology in the Science of Learning*

John T. Bruer 104–110

Points of View: On the Implications of Neuroscience Research for Science Teaching and Learning: Are There Any?

Anton E. Lawson 111–117

BrainLink: A Review of a Model Curriculum Integrating Science, Reading, and Cooperative Learning Groups for Middle School Students

Carrie MacNabb 118–122

Learning the Hard Way

David G. Wells, Michael McEvoy, and Mitchell Kundel 123–125

A New Formula for Better Learning: A Cup of Common Sense and a Dash of Neuroscience?

Andrea M. Zardetto-Smith 126–127

ARTICLES

Neuroscience Workshops for Fifth-Grade School Children by Undergraduate Students: A University–School Partnership

Judith G. Foy, Marissa Feldman, Edward Lin, Margaret Mahoney, and Chelsea Sjoblom 128–136

An Online, Interactive Approach to Teaching Neuroscience to Adolescents

Leslie Miller, Janette Moreno, Irmgard Willcockson, Donna Smith, and Janice Mayes 137–143

Neuroscience in Middle Schools: A Professional Development and Resource Program That Models Inquiry-based Strategies and Engages Teachers in Classroom Implementation

Carrie MacNabb, Lee Schmitt, Michael Michlin, Ilene Harris, Larry Thomas, David Chittendon, Timothy J. Ebner, and Janet M. Dubinsky 144–157

Brains Rule!: A Model Program for Developing Professional Stewardship among Neuroscientists

Andrea M. Zardetto-Smith, Keli Mu, Laura L. Carruth, and Kyle J. Frantz 158–166

Using Literature and Innovative Assessments to Ignite Interest and Cultivate Critical Thinking Skills in an Undergraduate Neuroscience Course

Eileen Lynd-Balta 167–174

Routes to Research for Novice Undergraduate Neuroscientists

Kyle J. Frantz, Robert L. DeHaan, Melissa K. Demetrikopoulos, and Laura L. Carruth 175–187

Development of a Neuroscience-oriented “Methods” Course for Graduate Students of Pharmacology and Toxicology

Christopher K. Surratt, Paula A. Witt-Enderby, David A. Johnson, Carl A. Anderson, J. Douglas Bricker, Vicki L. Davis, Steven M. Firestone, and Wilson S. Meng 188–196

On the Cover

Highlighting the focus of this special issue on neuroscience education, the cover features images of a human brain and three types of neurons, all courtesy of contributing authors. Top, this glowing brain is an enhanced image of a human right cerebral hemisphere (David Wells, Yale University). Bottom left, green fluorescent protein (GFP) expressed in a rat hippocampal neuron grown in cell culture gives this neuron its green glow. In the background are neurons, not expressing GFP, that are forming synapses with this hippocampal neuron (David Wells, Yale University). Bottom middle, the Golgi-Cox stain was used to visualize the morphology of cells in the hippocampal formation in a human brain specimen procured during surgery from a patient suffering from intractable temporal lobe epilepsy (Eileen Lynd-Balta, St. John Fisher College). Bottom right, this Purkinje neuron from the cerebellum of a mouse was filled with a dye called lucifer yellow, revealing its elaborate dendritic structure (David Wells, Yale University).

A goal of CBE is to stimulate dialogue; therefore, readers are invited to submit comments on these articles to cbe@ascb.org.