

## **Biographical Sketch – Richard Shingles**

### **(a) Professional Preparation**

University of Toronto (Toronto, ONT), Ontario Teaching Certificate, 1988  
University of Toronto (Toronto, ONT), Science and Environmental Science, B.Ed., 1988  
Guelph University (Guelph, ONT) Horticultural Sciences, Ph.D., 1986  
University of Manitoba (Winnipeg, MAN), Plant Sciences, M.Sc., 1981  
Carleton University (Ottawa, ONT), Biology with Honours, B.Sc., 1979

### **(b) Appointments - Instructional**

2007- Director of TA Training Institute  
2011 Johns Hopkins University

2004- Science Curriculum Design Consultant  
2011 Center for Educational Resources, Johns Hopkins University

2009- Instructor for Advanced Seminar in Molecular/Cell Biology,  
2010 Department of Biology Johns Hopkins University

2008- Instructor for Advanced Biochemistry,  
2010 Advanced Academic Programs, Johns Hopkins University

2008- Instructor for Preparation for University Teaching  
2011 Interdisciplinary Studies, Johns Hopkins University

2007- Instructor for Curriculum Leadership Course  
2009 School of Education, Johns Hopkins University

2005- Lecturer for General Biology  
2011 Department of Biology, Johns Hopkins University

2005- Instructor for Mentoring in Biology  
2011 Department of Biology, Johns Hopkins University

2007- Instructor for Tropical Biology  
2009 Department of Psychological & Brain Sciences, Ecuador and Galapagos Islands

2001- Instructor for MCAT Biology/Biochemistry Review Course  
2011 SPSBE & KSAS, Johns Hopkins University

1997- Instructor for Introduction to Biological Molecules  
2008 Department of Biology, Johns Hopkins University

### **(b) Appointments – Scientific**

1997- Johns Hopkins University (Baltimore MD) Associate Research Scientist,  
2004 Department of Biology, Johns Hopkins University

1994- Johns Hopkins University (Baltimore, MD), Postdoctoral Research Scientist  
1997 Department of Biology, Johns Hopkins University

### **(c) Publications**

1. Maldarelli, G.A., Hartmann, E., Cummings, P.J., Horner, R.D., Obom, K.M., Shingles, R., and Pearlman, R.S. (2009) Virtual Lab Demonstrations Improve Students' Mastery of Basic Biology Laboratory Techniques. *JMBE* **10**: 51-56
2. Sandra G. Porter, Joseph Day, Richard E. McCarty, Allen Shearn, Richard Shingles, Charlotte Mulvihill, Linnea Fletcher, Stephanie Murphy and Rebecca Pearlman (2007) *Exploring DNA Structure With Cn3D*. *CBE-Life Sciences Education* **6** 65-73
3. Richard Shingles, Theron Feist and Rae Brosnan (2006) *The Biomes of Homewood: Interactive Map Software*. *Bioscene* **31**: 17-34
4. Fambrough D.M., R. Pearlman, R. Shingles and R. Brosnan (2005) *Points of View: A Survey of Survey Courses: Are They Effective?* *Cell Biology Education* **4**: 123-137
5. Selected Scientific Publications  
[http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=search&db=pubmed&term=Shingles\\_R](http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=search&db=pubmed&term=Shingles_R)

### **(d) Synergistic Activities (5 maximum)**

Development of an educational multimedia authoring tool “Interactive Image Map Tool” – conducted needs assessment from faculty interviews, designed and constructed the user interface, managed development team in creating the necessary functionality and components, lead program testing and conducted user testing and focus groups, trained and introduced interested faculty to the program, developed programmatical documentation and tutorials.

Provide faculty support through training on software ranging from WebCT/Blackboard, In-Class Voting, Interactive Map Tool, communication and collaboration programs.

Provide pedagogical support to faculty in their instructional appointments, provide expertise in curriculum design to aid teaching.

Introduce new technology into courses. Provide workshops for the faculty and TA's to train them in the use of the technology.

Direct the general training of all Homewood TA's at Johns Hopkins to prepare them for their immediate TA responsibilities.

### **(e) Collaborators**

Rebecca Pearlman, Department of Biology, Johns Hopkins University

Richard E. McCarty, Department of Biology, Johns Hopkins University