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## Volunteer Work

2006 & 2007	Interviewer for pre-med/dent mock interviews
2006-2008	Science Olympiad State Competition Proctored and Scored Experimental Design event

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## Research Interests and Activities at Eastern Washington University

### **Interests:**

Sperm injection  
Endangered Species cryobiology  
Inducing out-of-season seasonal breeding animals to produce eggs or sperm at any time  
Non-lethal sperm and egg collection  
Time release hormone delivery  
Artificial breeding technologies

### **Activities:**

Micromanipulation  
Microsurgical techniques  
Microscopy (Hoffman's, Normarski)  
Microscope videography  
Fluorescent microscopy  
Live/dead cell staining  
PCR sex determination  
Embryo splitting/biopsies  
Artificial insemination  
Instrumental Insemination of honey bees  
Cryobiology (spermatozoa/embryos)  
Embryo culture  
Sperm collection  
Incubation technique  
Sperm nuclei isolation  
Oviductal flushing

Uterine flushing  
Superovulation  
Hormonal induction in frogs  
Design and construction of micropipettes  
Design and construction of novel cryopreservation chambers

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## Refereed Publications

- Hopkins, B.K. (2008). Factors effecting successful cryopreservation of honey bee (*Apis mellifera*) spermatozoa. M.S. Thesis, Eastern Washington University, Cheney, WA.
- Hopkins B.K., Herr, C. (2008) Cryopreservation of frog (*Rana pipiens*) sperm cells collected by non-lethal methods. *Reproduction, Fertility and Development* 20 (1): 120
- Stucky, M., Hopkins, B.K., and Herr, C. (2008) Cryopreservation of honey bee spermatozoa. *Reproduction, Fertility and Development* 20 (1): 127-128
- Talarico, C., Freiburger, D., Jones, T., Hopkins, B., Herr, C., Koh, M. and Rodriguez-Marek, E. (2008) A Hybrid Approach for Modeling and Assessing Performance of Embedded Systems in a Biologically Critical Application. *15th Annual IEEE International Conference and Workshop on the Engineering of Computer Based Systems: 227-232*
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## Presentations

- 2008 Hopkins B.K., Herr, C. Cryopreservation of frog (*Rana pipiens*) sperm cells collected by non-lethal methods. *34<sup>th</sup> Int'l Embryo Transfer Soc.* (Denver, CO).
- 2008 Stucky, M., Hopkins, B.K., and Herr, C. Cryopreservation of honey bee spermatozoa. *34<sup>th</sup> Int'l Embryo Transfer Soc.* (Denver, CO).
- 2006 Hopkins, B.K. Isolation of sperm nuclei for intracytoplasmic injection. Eastern Washington University Graduate Symposium (Cheney, WA)
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## Grants

2006	Eastern Washington University Graduate Mini-Grant (\$500)
2007	Powerful Teaching and Learning Gates MSP Grant (\$800)
2008	Eastern Washington University Graduate Travel Grant (\$300)
2008	Microsoft Matching Gifts Foundation (\$1600)