

# Matthew D. Shirley

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## Education:

- 2013 Ph.D. **Biochemistry, Cellular and Molecular Biology**,  
 Johns Hopkins School of Medicine, Baltimore, Maryland  
 Thesis: "A survey of human genetic variation reveals a basis for Sturge-Weber syndrome and non-syndromic port-wine stain"  
 Advisor: Dr. Jonathan Pevsner
- 2008 B.S. **Biochemistry**, University of Missouri, Columbia, Missouri  
 Advisor: Dr. Judy Wall

## Research Experience:

- 2010-2012 **Ph.D. candidate**, Department of Neuroscience, Johns Hopkins School of Medicine  
 2008-2010 **Ph.D. candidate**, Department of Pharmacology, Johns Hopkins School of Medicine  
 2006-2008 **Undergraduate research**, Department of Biochemistry, University of Missouri

## Awards, Honors and Affiliations:

- 2012 American Society for Biochemistry and Molecular Biology Capitol Hill Day, Washington DC  
 2008 Alpha Chi Sigma Chemistry Society, Delta Chapter  
 2007 Chancellor's Award for Excellence in Undergraduate Research

## Peer-Reviewed Publications:

- Shirley MD**, et al. "A GNAQ Somatic Mutation Causes Sturge-Weber Syndrome and Port-wine Stains". New England Journal of Medicine. In Press.
- Baughner JD, **Shirley MD**, Baughner BD, Pevsner J. "Sensitive and specific detection of mosaic chromosomal abnormalities using parent-of-origin analysis". Under Review.
- Stevens EL, Baughner JD, **Shirley MD**, Frelin LP, Pevsner J. "Unexpected relationships and inbreeding in HapMap phase III populations". PLoS ONE. 2012. PMID 23185369.
- Shirley MD**, Baughner JD, Stevens EL, Tang Z, Gerry N, Beiswanger CM, Berlin DS, Pevsner J. "Chromosomal variation in lymphoblastoid cell lines". Human Mutation. 2012. PMID 22374857.

### Teaching Experience:

Invited Presentation, Galaxy for NGS Analysis, Bioinformatic Analysis of Next Generation Sequencing Data, Biotrac 45, Foundation for Advanced Education in the Sciences, Bethesda, MD, October 9 2012.

### Abstracts:

Rho HS, Newman RH, Hu J, Xie Z, Woodard C, Neiswinger J, Cooper C, **Shirley M** et al. “Activity-Based Phosphorylation Networks in Humans”, Poster, Human Proteome Organization, Boston MA. 2012

**Shirley MD**, Baugher JD, Stevens EL, Tang Z, Gerry N, Beiswanger CM, Berlin DS, Pevsner J. “Chromosomal variation in lymphoblastoid cell lines”, Poster, JHMI GSA. 2012

**Shirley MD**, Wall JD. “Studying Metal Reduction by a Sulfate-Reducing Bacterium”, Poster, Jefferson City, MO. 2008

**Shirley MD**, Ringbauer JA, Wall JD. “Rapid Automated Characterization of Transposon Insertion Mutants in *Desulfovibrio vulgaris* Hildenborough by srnPCR”, Poster, Virtual Institute for Microbial Stress and Response, UC Berkeley. 2007