

Matthew D. Shirley

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Education

- Dec. 2012 (anticipated) **Ph.D. Biochemistry, Cellular, Molecular Biology,**
Johns Hopkins School of Medicine, Baltimore, MD
Thesis: A molecular basis for Sturge-Weber syndrome and non-syndromic port-wine stain
Advisor: Dr. Jonathan Pevsner
- May 2008 **B.S. Biochemistry,** University of Missouri, Columbia, MO
Thesis: Method for sequencing transposon mutant libraries in sulfate-reducing bacteria.
Advisor: Dr. Judy Wall

Research Experience

- 2008-present **Ph.D. candidate,** Department of Biochemistry, Cellular, and Molecular Biology, 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, University of Missouri Chapter
- 2007 Chancellor's Award for Excellence in Undergraduate Research

Peer-Reviewed Publications

Shirley MD, Tang H, Gallione CJ, Baugher JD, Frelin LP, Cohen B, North PE, Marchuk DA, Comi A, Pevsner J. *A Somatic Mosaic Activating Mutation in <gene name> is Associated with Sturge-Weber Syndrome and Non-syndromic Port-wine Stains.* New England Journal of Medicine. Under Review.

Baugher JD, **Shirley MD**, Baugher BD, Pevsner J. *Sensitive and specific detection of mosaic chromosomal abnormalities using parent-of-origin analysis.* BMC Genomics. Under Review.

Stevens EL, Baugher JD, **Shirley MD**, Frelin LP, Pevsner J. *Unexpected relationships and inbreeding in HapMap phase III populations.* PLoS ONE. 2012 Nov 19.

Shirley MD, Baugher JD, Stevens EL, Tang Z, Gerry N, Beiswanger CM, Berlin DS, Pevsner J. *Chromosomal variation in lymphoblastoid cell lines.* Human Mutation. 2012 Feb 28.

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**, Hu S, Hwang W, Jeong JS, Wu G, Lin J, Ni Q, Goel R, Xia S, Ji HK, Dalby KN, Birnbaum MJ, Cole PA, Knapp S, Ryazanov AG, Zack DJ, Blackshaw S, Pawson T, Gingras AC, Desiderio S, Pandey A, Turk BE, Zhang J, Qian J, Zhu H. *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, Johns Hopkins School of Medicine GSA. 2012

Shirley MD, Wall JD. *Studying Metal Reduction by a Sulfate-Reducing Bacterium*, Poster, Missouri Capital Research Day. 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