

# **R. CHASE SOUTHARD**

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**chase.southard@gmail.com**

## **EDUCATION**

Biological Sciences, B.S., May 2001, University of Kentucky, Lexington, KY

Post-baccalaureate, August 2001 – May 2004, University of Kentucky

Coursework includes: General Biochemistry I (BCH 607) and Basic Statistical Analysis (STA 570), and Adv. Topics in Physiology: Physiological Genomics (PGY630)

## **SCHOLARSHIPS AND AWARDS**

Howard Hughes Medical Institute / University of Kentucky

Undergraduate Research Initiative Fellowship - 1998

National Science Foundation / University of Kentucky

Research Experience for Undergraduates Fellowship - 1999

Outstanding Undergraduate Poster Presenter Award

UK Bluegrass Society for Neuroscience - 2000

Outstanding Research in Biological Sciences Award

UK Department of Biology - 2001

## **PROFESSIONAL AWARDS AND NOMINATIONS**

Employee of the Year for Research Nominee 2009

University of Kentucky College of Medicine

## **EMPLOYMENT EXPERIENCE**

UK Chandler Medical Center (Lexington, KY)

College of Medicine

Department of Molecular and Biomedical Pharmacology

Research Analyst July 2003 – Present (Promotion)

Senior Laboratory Technician July 2001 – June 2003

Supervise the daily operations of a breast cancer research laboratory

Perform experiments under the direction of the principal investigator

Assist fellow researchers with experiments

Departmental Website design and maintenance

Maintain all laboratory computers and equipment

Maintain departmental Microarray Analysis Core Computing Facility

Provide departmental support for Microarray Analysis

Perform statistical analysis and data visualization

Provide support for bioinformatics and data mining

Provide ancillary laboratory support

UK Chandler Medical Center (Lexington, KY)  
UK Hospital, Department of Pathology and Laboratory Medicine  
Medical Laboratory Technician May 2000 – July 2001  
Operation of clinical laboratory specimen database  
Triage, organize, and process outpatient and inpatient specimens  
Operate multi-line phones  
Customer service  
Phlebotomist June 22, 1998 – May 2000  
Performed venipuncture on both inpatients and outpatients  
Transported irreplaceable specimens to the clinical and anatomical labs

## **SPECIAL SKILLS**

Strong understanding of HTML and CSS web markup languages  
Strong understanding of JavaScript, MySQL, PHP, Perl, R, and Ruby  
Strong understanding of the Rails Web Framework and Git source control  
Proficient with Adobe Illustrator, Adobe Photoshop, SPSS Sigma Plot 7.0

## **PROFESSIONAL AND SOCIAL ACTIVITIES**

Former Student Member, Society for Neuroscience – Bluegrass Chapter  
Former Student Member, Kentucky Academy of Sciences  
Former Student Member, American Physiological Society  
Former Student Member, American Association for the Advancement of Science

## **COMMUNITY SERVICE**

Coordinator, Kentucky Ruby User Group, 2009 – Present  
Founder, OpenLexington, May 2010  
Board Member, ProgressLex, January 2011 – Present

## **JOURNAL PUBLICATIONS**

Yekaterina Y. Zaytseva, Natalie K. Wallis, R. Chase Southard and Michael W. Kilgore (2011) The PPAR $\gamma$  Antagonist T0070907 Suppresses Breast Cancer Cell Proliferation and Motility via Both PPAR $\gamma$ -dependent and -independent Mechanisms. *Anticancer Research* 31: 813-824 (2011) PMID: 21498701

Al-Alem L., **Southard R.C.**, Kilgore M.W., and Curry T.E. (2011) Specific Thiazolidinediones Inhibit Ovarian Cancer Cell Line Proliferation and Cause Cell Cycle Arrest in a PPAR $\gamma$  Independent Manner. *PLoS One*. 2011 Jan 21;6(1):e16179. PMID: 21283708; doi: 10.1371/journal.pone.0016179

Zaytseva Y.Y., Wang X., **Southard R.C.**, Wallis N.K., and Kilgore M.W. (2008) Down-regulation of PPAR $\gamma$ 1 suppresses cell growth and induces apoptosis in MCF-7 breast cancer cells. *Molecular Cancer* 2008, 7:90 (5 December 2008) doi: 10.1186/1476-4598-7-90

Carmen, J.D., **Southard, R.C.**, and Sinai, A.P. (2008) The complexity of signaling in host-pathogen interactions revealed by the *Toxoplasma gondii*-dependent modulation of JNK phosphorylation. *Experimental Cell Research*. doi: 10.1016/j.yexcr.2008.09.019

Allred, C.D., Talbert, D.R., **Southard, R.C.**, Wang, X., and Kilgore, M.W. (2008) PPAR $\gamma$ 1 as a molecular target of eicosapentaenoic acid in colon cancer (HT-29) cells. *J. Nutr.* 138(2):250-6.

Wang, X., **Southard, R.C.**, Allred, C.D., Talbert, D.R., Wilson, M.E., and Kilgore, M.W. (2008) MAZ drives tumor specific expression of PPAR gamma 1 in breast cancer cells. *Breast Cancer Research and Treatment* 111:103-11 doi: 10.1007/s10549-007-9765-7

Wang, X., **Southard, R.C.**, and Kilgore, M.W. (2004) The increased expression of PPAR $\gamma$ 1 in human breast cancer is mediated by selective promoter usage. *Cancer Res.* 64(16):5592-96.

**Southard, R.C.**, Haggard, J., Crider, M.E., Whiteheart, S.W. and Cooper, R.L. (2000) Influence of serotonin on the kinetics of vesicular release. *Brain Res.* 871(1):16-28.

He, P., **Southard, R.C.**, Whiteheart, S.W. and Cooper, R.L. (1999) Role of  $\alpha$ -SNAP in promoting efficient neurotransmission at the crayfish neuromuscular junction. *J. Neurophysiol.* 82:3406-3416.

## CONTRIBUTIONS

Cooper, R.L., **Southard, R.C.**, He, P. and Whiteheart, S.W. (2000). Influence of neuromodulators and vesicle docking proteins on quantal release. [From the International Symposium, "Frontiers in Crustacean Neurobiology", Conference in Hamburg - Blankenese, Germany. July 8-11, 1999.] In, "The Crustacean Nervous System". Konrad Wiese (Ed.) Springer-Verlag, Heidelberg, Germany. Pp. 63-82.

## ABSTRACTS

**Southard, R.C.**, Talbert, D., Wang, X., and Kilgore, M.W. (2003).  
Microarray Analysis Reveals Selective Activation of PPAR $\gamma$ 1 in Normal Mammary Epithelia and in MCF-7 Breast Cancer Cells.  
Abst. Endo. Soc. 85: P1-156

Cooper, R.L., Li, H., and **Southard, R.C.** (2000).  
The non-genomic actions of 20-HE in *Drosophila* & crustaceans.  
Symposium "Ecdysone 2000" July 2000 in Rapperswil, Switzerland.

**Southard, R.C.**, Haggard, J., Whiteheart, S.W. and Cooper, R.L. (1999).  
Serotonin (5-HT) increases the rate of evoked neurotransmission at the crayfish NMJ. American Zoologist 39: 243A

**Southard, R.C.**, Whiteheart, S.W., Zolman, J.F., and Cooper, R.L. (1999).  
Serotonin (5-HT) increases the rate of evoked neurotransmission at the crayfish NMJ. Abst Soc. Neurosci.25: 792.10

**Southard, R.C.**, Winslow, J.L., He, P., Chen, D., Whiteheart, S.W., Porter, J.D., and Cooper, R.L. (1998). Influence of neuromodulators and vesicle docking related proteins on the kinetics of vesicular release. Abst Soc. Neurosci.24: 327.10.

## INVITED LECTURES

"Open Local Government", Open2.0: Transparency and Open Access to Information Symposium, University of Kentucky, October 19 – 20, 2010

## ORAL AND POSTER PRESENTATIONS

National Conference on Undergraduate Research – 2000  
University of Montana, Missoula, Montana

Society for Integrative and Comparative Biology Conference – 2000  
Atlanta, Georgia

Society for Neuroscience, Kentucky Chapter – Spring Neuroscience Day 2000  
University of Kentucky, Lexington, Kentucky

Society for Neuroscience, Kentucky Chapter – Spring Neuroscience Day 1999  
University of Kentucky, Lexington, Kentucky

Society for Neuroscience Meetings – 1999  
Miami, Florida

Kentucky Academy of Sciences Annual Meeting – 1999  
Eastern Kentucky University, Richmond, Kentucky

Society for Neuroscience Meetings – 1998  
Los Angeles, California

Undergraduate Research Presentations – 1998  
TH Morgan School of Biological Sciences, University of Kentucky,  
Lexington, Kentucky