

## Amy Keywick

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### EDUCATION

Masters of Science *December 2007*  
Emphasis in Pathology  
College of Medicine  
University of California, Los Angeles

Bachelor of Science *September 2002*  
University of California, Santa Barbara  
Major: Genetics

### RESEARCH EXPERIENCE

**University of California, Los Angeles** *September 2005 – December 2007*  
*Graduate Student*

**Baxter Inc., One Hundred Oaks, CA** *December 2002 – September 2005*  
*Senior Associate*

Assisted Scientists and other Associates in the Toxicogenomics and In Vitro groups of the Toxicology Department, performing experiments, organizing data and preparing to analyze results while managing deadlines.

Primarily operated the PatchXpress automated patch-clamp robot for cardio toxicity screening. Managed and maintained hERG ion channel transfected HEK cells in vitro for use in the PatchXpress. Assisted in assay development with sodium channel transfected CHO cells.

Optimized both quality and high throughput efficiency for specific duties including the collection of tissues for studies in rats, isolation of total RNA from these tissues, as well as from formalin-fixed paraffin embedded tissues, using manual and automated procedures, and submission of the RNA samples for microarray analysis on various platforms such as cDNA in-house, Affymetrix and Agilent microarray chips to support safety assessment of pre-clinical drug development treating inflammation, muscle degeneration, cancer-related diseases, and pain associated with human ailments. Analyzed genomic biomarkers as indicators for potential toxic effects of various compounds.

Used sensitive high-technology equipment: Zymark SciClone Robot, Agilent Bioanalyzer, Eppendorf Biophotometer, Applied Biosystems Sequence Detection System (TaqMan) as well as completed essential laboratory safety courses. Performed as a liaison between own group and in-vivo group, as well as with the microarray group. Trained new staff members in particular techniques and has contributed to studies outside scope of job description. Collaborated with outside suppliers as well as with FDA for specific projects.

**New Jersey Regional Research Center** *June 2000 - June 2002*  
*Undergraduate Researcher*

Assisted graduate-level project resulting in the development of monoclonal antibodies as a reagent for detecting specific subtypes of Immunoglobulin G in Rhesus Macaques executing Western blots and PCR. Exemplary work and contributions recognized by receiving financial interest (% of sales) in marketable product. Studied viral genetic variability of envelope domain for certain Rhesus Macaque monkey that improved health after the initial decrease of CD4 cells when inoculated with SHIV 89.6 (Simian HIV). Collected necessary data, organized and maintained laboratory DNA clone bank.

**University of California, Santa Barbara** *September 1999 to March 2000*  
*Undergraduate Research Intern*

Assisted post-doctorate project in the Department of Plant Biology to identify a conserved gene between plant species. Discovered homolog gene in tomato and corn applying plaque assays and DNA in situ hybridization.

#### PUBLICATION and ABSTRACTS

W. Wang, **A. M. Keywick**, J. Y. Chong. 2007. The p65 isoform of Nrf1 is a dominant negative inhibitor of ARE-mediated transcription. *J Biol Chem* 282, 24670-8.

Cambridge Healthtech Institute qPCR Conference. 2005.  
 Gene expression of Trefoil Factor 2 from formalin fixed paraffin embedded stomach tissues of rats.

**A. Keywick**, J. Pretorius, M.E. Cosenza, C. A. Afshari, H. Hamadeh.

Society of Toxicology Meeting. 2005.  
 Utilization of Multiple Endpoints to Investigate Differential Toxicity Produced by Topoisomerase II Inhibitors, Doxorubicin and Etoposide  
 R.T. Dunn, II, E.S. Galambos, L. Healy, R. Morgan, J. Yamada, H. Hamadeh,  
**A. Keywick**, M.E. Cosenza, and C. Afshari

#### TECHNICAL SKILLS

- PatchXpress automated patch-clamp
- TaqMan/ RT-PCR
- Total RNA isolation from fresh frozen and FFPE animal tissues: manual and automated
- Total DNA/RNA isolation from animal cells/tissues
- Collecting/preserving tissues from live animals
- Handling blood and serum samples
- *Ex vivo* experience with liver slices

- Mammalian cell culture: HEK, 293T, primary cells
- Spectrophotometry
- Restriction Enzyme Digests/Ligations
- Western Blots
- Polymerase Chain Reaction
- Protein Purification
- DNA Cloning
- ELISA
- Plaque Assays
- DNA in situ Hybridization
- Primer/Probe Design
- Experience with BLAST, PHRED, Decade DDMS
- Writing final reports and assay reports for official documentation
- Extensive experience with Word, EXCEL, Power Point and Outlook
- Ability to keep accurate updated electronic freezer inventory and laboratory notebook records
- Dual-Luciferase Assay
- Responsible for handling, breeding, and executing relevant experiments with transgenic mouse line

## TRAINING

- Lab Animal Resources
- Radiation Safety for Users
- Blood Borne Pathogen
- Safety Plan
- Spill Kit
- Chemical Hygiene
- Potent Compound
- Lab Hazard Waste and Bio-waste Management
- Electronic freezer database inventory systems

## CONTINUING EDUCATION COURSES

- Target Organ Toxicity: American College of Toxicology Meeting 2003
- Tools for Functional Genomics: Society of Toxicology Meeting 2004
- Metabonomics: American College of Toxicology Meeting 2004
- Advance Applications, Experimental Design and Analyses Methods in Quantitative PCR: Cambridge Healthtech Institute qPCR Conference 2005

## ACTIVITIES AND AWARDS

- President, Treasurer, Secretary: Molecular and Cellular Biology Club
- Dean's List Spring 2000
- Transcript Notation: 9 quarters 2000-2002
- Baxtor Emergency Response Team Certified Member
- Baxtor Women's Interactive Network: Networking and Communications committee member
- Association for Women in Science Member
- NEMA Belly Dancing Troop
- Ninpo Tai Jutsu
- Member: Ski or Snowboard Club

- Intramural court volleyball

REFERENCES

Furnished upon request