Curriculum Vitae
Christopher Kessler

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EDUCATION

2003 **Bachelor of Science,** Neurobiology, Physiology, and Behavior, University of California, Davis.

PROFESSIONAL POSITIONS

2005 - Present Center for Neuroscience, UC Davis

Senior Research Associate III

- Performed highly technical physiological data acquisition
- Implemented custom relational lab, data, and subject databases
- Refined and highly optimized analysis routines
- Repaired and maintained custom recording apparatuses
- Built custom recording apparatus and published paper on results of collected data
- Implemented highly efficient analysis and cataloging routines for acquired data
- Guided graduate and undergraduate students on laboratory procedures

2002 - 2004 Dept. of Neurobiology, University of California, Davis

Laboratory Assistant

- Programmed data acquisition routines in MATLAB

TECHNICAL JOURNALISM

2014 - Present Blog author and technical writer, MacIssues.com

2014 - Present Contributing technical writer, MacWorld, Inc.

2008 - 2014 Contributing technical writer, CNET, Inc.

PROFESSIONAL ASSOCIATIONS

2013 - 2014 Association for Research in Vision and Ophthalmology (ARVO) Member

PRESENTATIONS

2013 ARVO Poster presentation (Ft. Lauderdale, FL), Rhodopsin regeneration kinetics in the mouse eye

SKILLS AND EXPERIENCE

Laboratory:

- Expert at designing scientific measurements, analyzing numerical data, and presenting results.
- Guidance and instruction for graduate and undergraduate students on equipment and lab procedures.
- Extensive experience with laboratory procedures.
- Basic Skills: genotyping, Western blotting, pipetting, and solution preparation and sample handling
- Intermediate Skills: cryopreservation, aseptic and sterile technique, neuronal cell harvesting and culture

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- Advanced Skills: suction electrode electrophysiology, *in-vivo* and *in-vitro* electroretinography (ERG), patch clamping, fetal ocular injection and electroporation, *in-virtro* immunofluorescence and staining, microdissection, custom recording chamber fabrication, isoflurane anesthetic setup and delivery, laboratory layout and design.

Data Analysis:

- Database development with Filemaker Pro, MySQL, and Sqlite3.
- Data parsing, management, and analysis scripting in Igor Pro

Programming:

- Experience using Igor Pro, Python, BASH, Javascript, CSS, HTML, XML, some Objective-C, PHP, and MATLAB.
- Ability to quickly learn new programming languages, data management, and analysis environments.

IT Support:

- Experienced with OS X, Windows and UNIX/Linux environments.
- Open Directory domain administration, IP networking and VPN experience.
- Website development, deployment, and content maintenance on Apache-based servers.
- Expertise with troubleshooting Mac OS X systems
- Communication and teaching for solutions to non-technical clientele.

Personal Interests:

- Statistical data analysis
- Relational database design
- MapReduce algorithms with Hadoop streaming
- Data management and analysis

PROJECTS

- Characterizing photoreceptor transduction cascade activation and deactivation regulation mechanisms
- Built custom ERG apparatus and characterized rhodopsin regeneration kinetics
- Helped build two-photon confocal microscope systems
- Aided in designing a new photoreceptor physiology laboratory
- Developed full relational laboratory projects and subjects database
- Researched, developed and maintained ongoing technical troubleshooting articles.

ACADEMIC PUBLICATIONS

Kessler C, Tillman M, Burns ME, Pugh EN Jr., “Rhodopsin in the rod surface membrane regenerates more rapidly than bulk rhodopsin in the disc membranes in vivo.” J Physiol. 2014 Jul 1;592(Pt 13):2785-97.

Fortenbach CR, **Kessler C**, Peinado Allina G, Burns ME., “Speeding rod recovery improves temporal resolution in the retina.” Vision Res. 2015 May;110(Pt A):57-67.

Gospe SM 3rd, Baker SA, **Kessler C**, Brucato MF, Winter JR, Burns ME, Arshavsky VY., “Membrane attachment is key to protecting transducin GTPase-activating complex from intracellular proteolysis in photoreceptors.” J Neurosci. 2011 Oct 12;31(41):14660-8.

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Herrmann R, Lobanova ES, Hammond T, **Kessler C**, Burns ME, Frishman LJ, Arshavsky VY., “Phosducin regulates transmission at the photoreceptor-to-ON-bipolar cell synapse.” J Neurosci. 2010 Mar 3;30(9):3239-53.

Lobanova ES, Finkelstein S, Herrmann R, Chen YM, **Kessler C**, Michaud NA, Trieu LH, Strissel KJ, Burns ME, Arshavsky VY., “Transducin gamma-subunit sets expression levels of alpha- and beta-subunits and is crucial for rod viability.” J Neurosci. 2008 Mar 26;28(13):3510-20.

Cohen MX, Young J, Baek JM, **Kessler C**, Ranganath C., “Individual differences in extraversion and dopamine genetics predict neural reward responses.” Brain Res Cogn Brain Res. 2005 Dec;25(3):851-61.

JOURNALISM PUBLICATIONS

CNET: http://www.cnet.com/profiles/tkessler/

MacWorld: http://www.macworld.com/author/Topher-Kessler/

MacIssues: http://www.macissues.com