
BIOGRAPHICAL SKETCH

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NAME Jennifer L. Simpson, M.D.		POSITION TITLE Associate Clinical Professor	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Kenyon College, Gambier, Ohio	B.Sc.	1984-1988	Biology
University of Michigan, Ann Arbor, Michigan	M.D.	1989-1993	Medicine
Saint Joseph Mercy Hospital, Ann Arbor, MI		1993-1994	Internship
University of Iowa, Iowa City, Iowa		1994-1998	Ophthalmology Residency
University of Michigan, Ann Arbor, Michigan		1998-1999	Pediatric Ophthalmology & Adult Strabismus Fellowship

A. Personal Statement.

My initial interest in cystinosis began as a pediatric ophthalmology fellow at the University of Michigan, when I participated in a clinical trial testing a new topical formulation for corneal cystinosis. This experience of caring for children with ocular cystinosis allowed me to offer a regional expertise in Southern California at the University of California Irvine, where a number of affected families reside. Over the next several years, I saw firsthand how the ocular manifestations of the disease were often the most problematic, prompting me to pursue research that could lead to better treatments. After becoming acquainted with an animal model for systemic cystinosis, I was able to obtain foundation support to develop tools that could eventually be used to investigate potential novel ocular therapeutic strategies. Our team has now successfully published non-invasive methods to assess disease progression, further characterize pathophysiology and evaluate novel treatment strategies. Based on this progress, I sought and received substantial dedicated research time to focus on this research. As summarized in the letter from my chairman, Roger Steinert (Please see letter of support), I will be able to dedicate 50% effort to the current proposal to further our understanding of the disease, as well as to offer the potential for a long-term cure for this and similar conditions. As Principle Investigator, I will be responsible for the design and supervision of all experiments. I will also analyze all data, interpret results and be primarily responsible for writing of manuscripts.

B. Positions and Honors.

PROFESSIONAL EXPERIENCE:

Assistant Clinical Professor, University of Michigan (February 1999-Oct 2000)

Assistant Clinical Professor, University of California, Irvine (1999-2006)

Associate Clinical Professor, University of California, Irvine (2006-present)

Residency Director, Department of Ophthalmology, University of California, Irvine (July 2001-October 2008)

HONORS AND AWARDS:

Phi Beta Kappa (1988)

Summa Cum Laude (1988)

Alpha Omega Alpha (1993)

C. Publications (Selected peer-reviewed publications (in chronological order)).

1. Silverstein, FS, **Simpson, J**, Gordon, K, Hypoglycemia alters striatal amino acid efflux in perinatal rats: an *in vivo* microdialysis. *Stroke*, 1991; 22:928-32.
2. Gordon, K, **Simpson, J**, Statsman, D, Silverstein, FS. Effects of perinatal stroke on striatal amino acid efflux in rat studies with *in vivo* microdialysis. *Stroke*, 1991; 22:932.
3. Silverstein F.S., Naik, B, **Simpson, J**, Hypoxia-ischemia stimulates hippocampal glutamate efflux in perinatal rat brain: an *in vivo* microdialysis study. *Pediatric Research*, 1991; 30:587-90.
4. **Simpson J**, Alford M, Keech R, Carter K. Metastatic rhabdomyosarcoma presenting as an isolated lateral rectus restriction". *Journal of Pediatric Ophthal and Strabismu*.1999;4:90-91
5. Brooks BP, **Simpson JL**, Leber SM, Robertson PL, Archer SM. Infantile spasms as a cause of acquired perinatal visual loss. *Journal of the American Association for Pediatric Ophthalmology and Strabismus*. 2002;6:385-8.
6. McCulley TJ, Mayer K, Dahr SS, **Simpson J**, Holland EJ. Aniridia and Optic Nerve Hypoplasia. *Eye*. 2005 Jul; 19(7): 762-4
7. Syres K, Harrison F, Jester JV, **Simpson J**, Roy S, Salomen D, Cherqui S. Successful treatment of the murine model of cystinosis using bone marrow cell transplantation. *Blood First Edition Paper*, pre-published online June 8, 2009; DOI 10.1182/blood-2009-03-213934
8. **Simpson JL**, Nien CJ, Flynn K, Cherqui S, Jester JV. Quantative *in vivo* and *ex vivo* confocal microscopy analysis of corneal cystine crystals in th Ctns-/- Knockout Mouse. *Molecular Vision* 2011;17:2212-2220. [PMCID: PMC 3209421](#).
9. **Simpson JL**, Nien CJ, Flynn KJ, Jester JV. Evaluation of topical cysteamine therapy in the Ctns-/- mouse using *in vivo* confocal microscopy. *Molecular Vision* 2011;17:2649-2654. [PMCID:PMC 3164685](#).
10. **Simpson JL**, Melia M, Yang MB, Buffin AN, Cjiang, MF, Lambert SR. Current role of cryotherapy in retinopathy of prematurity. *Ophthalmology*. In Press.

C. Research Support

List selected ongoing or completed (during the last three years) research projects (federal and non-federal support). Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and responsibilities of principal investigator identified above.

- Knight's Templar Eye Foundation Grant: Wavefront Aberrometry: Applications to Pathogenesis and Therapy of Amblyopia. Grant Award: \$30,000. 2002-2003
- Clinical X Research Grant, University of California, Irvine. \$60,000: "Wavefront Aberrometry: Applications to Pathogenesis and Therapy of Amblyopia." 2001-2002.
- Cystinosis Research Foundation Grant: "Evaluation of Novel Corneal Imaging and Therapeutics in the CTNS Knockout (Cystinosis) Mouse Model" Grant Award: \$89,399.00. June 2008 -June 2010.
- Cystinosis Research Foundation Grant: "Novel Treatment Modalities for Corneal Cystinosis" Grant Award: \$180,000. August 2010 to August, 2012.