OMB No. 0925-0001 and 0925-0002 (Rev. 10/15 Approved Through 10/31/2018)

BIOGRAPHICAL SKETCH

NAME: Xia, Xin POSITION TITLE: Postdoctoral Researcher

EDUCATION/TRAINING

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| INSTITUTION AND LOCATION | DEGREE | START  DATE  MM/YYYY | END DATE  MM/YYYY | FIELD OF STUDY |
| Jiangxi Medical College | M.D. | 09/1991 | 06/1996 | Medicine |
| Fudan University | Ph.D. | 09/1999 | 06/2004 | Ophthalmology |
| Bascom Palmer Eye Institute, Miller School of Medicine,University of Miami (Research Scholar) | n/a | 10/2009 | 03/2012 | Ophthalmology/  Neuroscience |
| University of California, San Diego (Postdoc) | n/a | 09/2014 | 11/2015 | Ophthalmology/  Stem cell biology |
| Stanford University (Postdoc) | n/a | 11/2015 | Present | Ophthalmology/  Stem cell biology |

# A. Personal Statement

I have dedicated myself to finding the mechanism and treatment of various sight-threatening diseases since my Ph.D. studying, including diabetic retinopathy, neuron degeneration and photoreceptor degeneration. I published 16 papers about diabetic retinopathy and got 3 grants and 6 awards about it. As Principal Investigator/Project Leader, I was funded by the *National Natural Science Foundation of China* in2011 to do research on macular edema. I used a laser photochemical reaction combined with a photosensitizer, and successfully established a rodent retinal edema model and retinal vascular occlusion model for use by scientists looking to find new drugs or new treatments. From 2009 to 2012, I performed research about neuroscience at the Bascom Palmer Eye Institute as a research scholar and published two papers about photoreceptors and retinal ganglion cells regeneration by oncostatin M. I demonstrated that OSM improves retinal ganglion cells survival together with their electrophysiological activity (function). My previous studies provide proof-of–concept for using neurotropic factors OSM and ciliary neurotrophic factor (CNTF) for retinal ganglion cell and photoreceptor degenerative diseases, such as glaucoma, acute optic nerve trauma or retinitis pigmentosa. These are all irreversible diseases, which cause blindness through progressive damage to the optic nerve. Since 2014, I participated in Dr. Goldberg’s lab and started doing differentiation of corneal endothelial cells (CECs) from human embryonic stem cells (hESCs) by two steps through neural crest induction. My clinical proficiency of eye diseases, anatomy and surgical skill are essential to our ongoing and future projects.

**B. Honors and Awards**

* National Natural Science Foundation of China, 2012-2014
* Science & Technology Progress Awards from the Ministry of Education of China, 2011
* China Medical Science and Technology Award, 2011
* National Science & Technology Progress Awards of China, 2008
* Science & Technology Progress Awards from the Ministry of Education of China, 2007
* Shanghai Medical Science & Technology Award, 2007
* Shanghai Science & Technology Award, 2007
* Natural Science Foundation for Young Scientists of Shanghai Municipal Health Bureau, 2005-2007
* Scientific Research Foundation of Graduate School of Fudan University, 2003-2004

**C. Publications (Since 2011~)**

1. McCabe KL, Kunzevitzky NJ, Chiswell BP, **Xia X**, Goldberg JL, Lanza R. Efficient generation of human embryonic stem cell-derived corneal endothelial cells by directed differentiation. PLoS ONE, 2015, 10 (12): e0145266;

2. Luo D, Zheng Z, Xu Y, Fan Y, Zhu B, Liu K, Wang F, Sun X, Zou H, **Xia X\***. Systematic review of various laser intervention strategies for proliferative diabetic rtinopathy. Expert Rev Med Devices. 2015, 12(1): 83-91;

3. **Xia X**, Wen R, Chou TH, Li Y, Wang Z, Porciatti V. Protection of pattern electroretinogram and retinal ganglion cells by Oncostatin M after optic nerve injury. PLoS One. 2014 Sep 22;9(9):e108524;

4. Chen W, Wu Y, Zheng M, Gu Q, Zheng Z, **Xia X\***. Establishing and experimental rat model of photodynamically-induced retinal vein occlusion using erythrosine B. Inter J Ophthal, 2014, 7(2): 232-8;

5. Shen Y, Wen Z, Wang N, Zheng Z, Liu K, **Xia X**, Gu Q, Shi Y, Xu X. Investigation of variants in UCP2 in Chinese type 2 diabetes and diabetic retinopathy. PLoS One. 2014 Nov 14;9(11):e112670;

6. Yu Q, Liu K, Su L, **Xia X**, Xu X. Perfluorocarbon liquid: its application in vitreoretinal surgery and related ocular inflammation. Biomed Res Int. 2014, 250323;

7. Zheng M, Wu Y, Chen W, Gu Q, **Xia X\***. A novel rodent model of retinal edema induced by photochemical reaction. Progress in Modern Biomedicine of China, 2013, 13(19): 3601-7;

8. Li Y, Huang D, **Xia X**, Wang Z, Luo L, Wen R. What is the role of CCR3 in choroidal neovascularization? Adv Exp Med Biol, 2012, 723:279-84; (Book Chapter)

9. **Xia X**, Li Y, Huang D, Wang Z, Luo L, Song Y, Zhao L, Wen R. Oncostatin M protects rod and cone photoreceptors and promotes regeneration of cone outer segment in a rat model of retinal degeneration. PLoS ONE, 2011, 6(3): e18282;