

Akina Hoshino, Ph.D.

CAREER OBJECTIVE

Detail-oriented, punctual, and diligent neuroscientist with over ten years of experience in writing and editing life science-related articles. Fluent in both English and Japanese.

SKILL SUMMARY

Subject Matter Expertise	Editing Skills	Communication Skills	Leadership and Collaboration
Retinal development Developmental neuroscience Biochemistry Stem cell biology Molecular biology	Edited scientific manuscripts, abstracts, and PowerPoints prepared by both native and non-native English speakers	Clear communication of scientific concepts to diverse audiences	Conscientious Collaborator Currently overseeing collaborative projects between three laboratories to meet deadlines and grant milestones
Human and mouse embryonic stem cell culture, Stem cell retinal differentiation Next Generation Sequencing miRNA biology	Substantive editing, copyediting, formatting, and proofreading of abstracts, manuscripts, PowerPoint presentations, and grants	Successfully obtained a competitive NIH Grant	Design and oversee projects for rotating graduate, undergraduate, and high school students
Histology, Confocal microscopy, Protein biochemistry, Protein purification, Big Data analysis, R programming language	Confirmed edited samples against original Japanese articles to ensure proper translation and preservation of content	Published 9 scientific manuscripts and an E-book	Thoughtful development and mentoring of early stage scientists

EDUCATION

Postdoctoral Fellow	Retinal development and embryonic stem cell research – University of Washington	2012–present
Ph.D.	Neuroscience – University of Maryland-Baltimore, School of Medicine	2006–2012
B.A.	Biology and Chinese double major with honors – Vassar College	2002–2006

EDITING and WRITING EXPERIENCE

Enago Academy – Consultant **Apr 2018–present**

- Offer guidance on topics related to academic publishing

Enago – Freelance editor (> 200,000 words edited) **Jan 2017–present**

- Provide copyediting and substantive editing services for scientific manuscripts written by ESL research scientists

Freelance editor for non-native English scientists in Japan **Feb 2016–present**

- Provide extensive abstract, manuscript, and PowerPoint editing, as well as oral presentation preparation services
- Offer rapid turnaround — 48–72 hour response time upon request

RESEARCH EXPERIENCE

- Continually employed in biomedical research (2006–present)
- Funded on personal grant (2015–present)

University of Washington, Dept. of Biological Structure – Postdoctoral fellow May 2012–present

- **Responsible for editing grants, manuscripts, abstracts (at least 5/year), posters (at least 3/year), figures, and presentations for colleagues from both the US and abroad (Japan, China, Germany, France, and Spain)**
- **Published 4 manuscripts in the fields of development and stem cell biology**
- **Awarded NRSA-NEI F32 Individual Postdoctoral Fellowship (2015–2018)**
- Responsible for mentoring and training postdoctoral fellows, research technicians, and graduate, undergraduate, and high school students in histology, stem cell culture, and molecular biology
- Present and participate regularly in the departmental Developmental Neuroscience Journal Club

- Characterized the development of the human retina using Next Generation Sequencing and immunohistochemistry
- Elucidate the role of miRNAs during retinal differentiation of embryonic stem cells

Associated Achievements

- 4 presentations at international conferences
- Awarded the Knights Templar Eye Foundation Travel Award to attend the 2016 International Society for Eye Research Conference in Tokyo, Japan
- Oral presentations at UW Program Project Grants and research update meetings

University of Maryland-Baltimore, Dept. of Neurobiology and Anatomy – Doctoral Thesis Sep 2006–Apr 2012

- **Edited grants, manuscripts, abstracts, posters, figures, and emails for colleagues, many of whom were mostly non-native English speakers (from Japan, Germany, Italy, China, India, and Argentina)**
- **Published an E-book and 5 articles**
- Identified a novel neural anti-aggregant function for proSAAS
- Developed cell death assays using Neuro2a cells to investigate the effects of proSAAS on A β ₁₋₄₂-induced cytotoxicity
- Demonstrated additional modes of regulation — including self-association and peptide binding — of the peptide hormone processing enzyme, prohormone convertase 1/3,

Associated Achievements

- Received Young Investigator Scholarships to attend the Alzheimer's Drug Discovery Foundation conferences in 2009 and 2011
- Oral and poster presentations at international conferences, NIH, UW, St. Jude Children's Hospital, and UMB
- Representative of the Neuroscience program and the Graduate Council in the Graduate Student Association

Vassar College, Dept. of Psychology – Research Assistant Sep 2004–Dec 2004

- Analyzed data and publications to initiate research project on autism and other pervasive developmental disorders

Yokohama City University, Dept. of Medical Science and Cardiorenal Medicine – Research Assistant May 2004–Aug 2004

- **Edited emails and discussed how to improve presentation skills in English to Japanese physician-clinicians**
- Investigated the effects of angiotensin-converting enzyme polymorphisms in hypertension

PUBLICATIONS

E-book:

Akina Hoshino and Iris Lindberg. "Peptide Biosynthesis: Prohormone Convertases 1/3 and 2." (L.D. Fricker & L. Devi, Eds). New Jersey: Morgan & Claypool Life Sciences Publishers. 2012

Peer-Reviewed Journals :

Nathaniel McVicar, **Akina Hoshino**, Anna La Torre, Thomas A. Reh, Walter L. Ruzzo, Scott Hauck. "FPGA acceleration of short read alignment." *Bioinformatics (In submission)*.

Chi Zhang, Wan-Qing Yu, **Akina Hoshino**, Jing Huang, Fred Rieke, Thomas A. Reh, Rachel O.L. Wong. "Development of ON and OFF cholinergic amacrine cells in the human fetal retina." *The Journal of Comparative Neurology*. 2018 Feb 6.

Akina Hoshino*, Rinki Ratnapriya*, Matthew J. Brooks, Vijender Chaitankar, Matthew S. Wilken, Chi Zhang, Margaret R. Starostik, Linn Gieser, Anna La Torre, Mario Nishio, *et al.* "Molecular Anatomy of the Developing Human Retina." *Developmental Cell*. 2017 Dec 18;43(6):763-779. (* indicates equal contribution)

Jennifer R. Chao, Deepak A. Lamba, Todd R. Klesert, Anna La Torre, **Akina Hoshino**, Russell Taylor, Anu Jayabalu, Abbi L. Engel, Thomas Khuu, Ruikang K. Wang, *et al.* "Transplantation of Human Embryonic Stem Cell-Derived Retinal Cells into the Subretinal Space of a Non-Human Primate." *Translational Vision Science & Technology*. 2017 May 16; 6(3):4.

Anna La Torre, **Akina Hoshino**, Christopher Cavanaugh, Carol B. Ware and Thomas A. Reh. "The GIPC1-Akt1 pathway is required for the specification of the eye field in mouse embryonic stem cells." *Stem Cells* 2015 Sep; 33(9):2674-85.

Akina Hoshino, Michael Helwig, Sina Rezaei, Casey Berridge, Jason L. Eriksen, and Iris Lindberg. "A novel function for proSAAS as an amyloid anti-aggregant in Alzheimer's disease." *Journal of Neurochemistry* 2014 Feb;128(3):419-30.

Michael Helwig, **Akina Hoshino**, Casey Berridge, Sang-Nam Lee, Nikolai Lorenzen, Daniel E. Otzen, Jason L. Eriksen, and Iris Lindberg. "The neuroendocrine protein 7B2 suppresses the aggregation of neurodegenerative disease-related proteins." *The Journal of Biological Chemistry* 2013 Jan; 288:1114-1124

Akina Hoshino, Dorota Kowalska, François Jean, Claude Lazure, and Iris Lindberg. "Modulation of PC1/3 activity by self-interaction and substrate binding." *Endocrinology* 2011 Apr; 152(4):1402-11

Leonardo Tonelli, Morgan Katz, Colleen Kovacsics, Todd Gould, Belzora Joppy, **Akina Hoshino**, Gloria Hoffman, Hirsh Komarow, and Teodor Postolache. "Allergic rhinitis induces anxiety-like behavior and altered social interaction in rodents." *Brain, Behavior, and Immunity* 2009 Aug; 23(6):784-793

Leonardo Tonelli, **Akina Hoshino**, Morgan Katz, and Teodor Postolache. "Acute stress promotes aggressive-like behavior in rats made allergic to tree pollen." *International Journal of Child Health and Human Development* 2008 Vol.1 305-311

PRESENTATIONS

Invited presentations:

Akina Hoshino. "Using heterochronic cultures to speed up development." University of Washington Institute for Stem Cell and Regenerative Medicine, Seattle, WA, December 2013

Akina Hoshino. "Regulation of prohormone convertase 1/3 and a novel function for proSAAS as a secretory chaperone." National Institutes of Health, Bethesda, MD. September 2011

Akina Hoshino. "Regulation of prohormone convertase 1/3 and a novel function for proSAAS as a secretory chaperone." University of Washington, Seattle, WA. September 2011

Akina Hoshino. "Regulation of prohormone convertase 1/3 and a novel function for proSAAS as a secretory chaperone." St. Jude Children's Hospital, Memphis, TN. August 2011

Akina Hoshino. "Regulation of the peptide hormone-synthesizing enzyme, prohormone convertase 1/3 (PC1/3)." University of Maryland-Baltimore, Baltimore, MD. Protease Interest Group. March 2011

Posters:

Akina Hoshino, Chi Zhang, Rinki Ratnapriya, Raunak Sinha, Zhou Yu, Dennis M. Dacey, Olivia Bermingham-McDonogh, Anand Swaroop, Fred Rieke, Rachel O.L. Wong, and Thomas A. Reh. "Characterization of human fetal retinal development: from genes to function." Allen Frontiers Symposium. San Francisco, CA. October 2017

Akina Hoshino, Rinki Ratnapriya, Chi Zhang, Rachel O.L. Wong, Anand Swaroop, and Thomas A. Reh. "Immunohistochemical and transcriptome analyses of the developing human fetal retina." Biennial Meeting of the International Society for Eye Research. Tokyo, Japan. September 2016

Chi Zhang, **Akina Hoshino**, Thomas Reh, Rachel Wong, and Dennis Dacey. "Connectomic reconstruction suggests refinement of foveal midretinal circuitry in the developing human retina." FASEB Conference on Retinal Neurobiology and Visual Processing. Keystone, CO. July 2016

Akina Hoshino, Chi Zhang, Rachel Wong, and Thomas A. Reh. "Characterization of inner retinal neuron development in the human fetal fovea." Annual Meeting of the Association for Research in Vision and Ophthalmology. Seattle, WA. May 2016

Chi Zhang, Wan-Qing Yu, **Akina Hoshino**, Thomas A. Reh. And Rachel O. L. Wong. "Topographic distributions and maturation of starburst amacrine cells in the fetal human retina." Annual Meeting of the Association for Research in Vision and Ophthalmology. Seattle, WA. May 2016

Akina Hoshino, Anna La Torre, Lauren E. Hood, and Thomas A. Reh. "The role of miRNAs in the developmental timing of human fetal retina and embryonic stem cell-derived retina." Society for Neuroscience Annual meeting. Washington DC, November 2014
Anna La Torre, **Akina Hoshino**, Lauren E. Hood, Thomas A. Reh. "MicroRNAs play essential roles during stem cell differentiation into retinal populations." 5th NIGMS Workshop in pluripotent stem cell research. National Institutes of Health, Bethesda, MD. March 2014

Akina Hoshino, Michael Helwig, Casey Berridge, Jason Eriksen, and Iris Lindberg. "Structure-function analysis of proSAAS as an Aβ₁₋₄₂ anti-aggregant." Program in Neuroscience Annual Retreat. Baltimore, MD. June 2011

Akina Hoshino, Michael Helwig, Sang-Nam Lee, and Iris Lindberg. "The neuroendocrine proteins proSAAS and 7B2 prevent A β ₁₋₄₂ aggregation." Society for Neuroscience Annual meeting. San Diego, CA. November 2010

Iris Lindberg, Dorota Kowalska, and **Akina Hoshino**. "Prohormone convertase 1/3 activity and stability is affected by self-interaction." Gordon Conference, Proteolytic Enzymes and Their Inhibitors. Lucca, Italy. May 2010

Akina Hoshino, Dorota Kowalska, and Iris Lindberg. "Self-aggregation and interaction with binding proteins affect prohormone convertase 1/3 stability." Society for Neuroscience Annual meeting. Chicago, IL. October 2009

Akina Hoshino, Dorota Kowalska, and Iris Lindberg. "Stabilizing factors of Prohormone Convertase 1." Graduate Research Conference. Baltimore, MD. April 2009

Akihiko Ozawa, Ernestine Lee, **Akina Hoshino**, Robert Halenbeck, Joseph Miceli, Tracy Mandichak, Srinivas Kothakota, and Iris Lindberg. "Validation of novel peptide hormones using prohormone convertase screening." ASBMB New Orleans, LA. March 2009

AWARDS AND SCHOLARSHIP

Knights Templar Eye Foundation Travel Award for International Society for Eye Research Conference	Sept 2016
NRSA-NEI F32 Individual Postdoctoral Fellowship	Sept 2015–present
12 th Alzheimer's Drug Discovery Foundation (ADDF) Young Investigator Scholarship	Sept 2011
10 th Alzheimer's Drug Discovery Foundation (ADDF) Young Investigator Scholarship	Sept 2009
Professor Anita Zerzoli Scholarship Endowment	2005–2006

LANGUAGES

Fluent in English and Japanese

MEMBERSHIP AND SERVICES

International Society for Eye Research	2016–present
Association for Research in Vision and Ophthalmology	2015–present
Society for Neuroscience	2009–present
Graduate Student Association – Graduate Council Representative	2010–2011
Graduate Student Association – Program in Neuroscience Representative	2008–2011