Jennifer L. Garrison, Ph.D.

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EDUCATION

University of California, San Francisco 2007
Ph.D. in Chemistry and Chemical Biology
Thesis advisor: Dr. Jack Taunton
"Small molecule modulation of protein secretion"

University of California, Berkeley 1998
B.A. in Molecular Cell Biology

APPOINTMENTS AND RESEARCH EXPERIENCE

Assistant Professor, **Buck Institute for Research on Aging** 2014-
Assistant Professor in Residence, **Cellular and Molecular Pharmacology, UCSF** 2014-
Assistant Adjunct Professor, **Leonard Davis School of Gerontology, USC** 2014-

Postdoctoral Fellow, The Rockefeller University 2007 – 2013
Laboratory of Neural Circuits and Behavior
Advisor: Dr. Cornelia Bargmann
Exploring neuromodulatory signaling and behavior in *C. elegans*.

Graduate Fellow, University of California, San Francisco 2001 - 2007
Department of Cellular and Molecular Pharmacology
Advisor: Dr. Jack Taunton
Defining the mechanism of action of a small molecule inhibitor of protein biogenesis.

Research Associate, University of California, San Francisco 1998 – 2001
Advisor: Dr. James Marks
Developing internalizing antibodies against EGFR family members.

Undergraduate Research Assistant, University of California, San Francisco 1996 – 1998
Advisor: Dr. Cara Marks
Determining the X-ray structure of two oncogenic receptors, HER2 and uPAR.

Undergraduate Research Assistant, NASA Ames Research Center 1994 - 1996
Design, fabrication, and testing of miniature implantable biosensors.

HONORS AND AWARDS

ARCS Foundation Northern California Chapter Alumni Scholar of the Year Award 2019
Dorothy Dillon Eweson Lecture Series on Advances in Aging Research Travel Award 2018
Faculty Instructor, MBL Woods Hole Neurobiology Advanced Training Course 2017 - 18
Maximizing Investigators' Research Award (MIRA) for Early Stage Investigators (5 years) 2016
Finalist, McKnight Technological Innovations in Neuroscience Award 2016
American Federation of Aging Research Grant for Junior Faculty 2016
Allen Institute for Brain Science Next Generation Leaders Advisory Council (3 year tenure) 2015
Alfred P. Sloan Foundation Research Fellowship in Neuroscience 2014

Glenn Foundation Award for Research in Biological Mechanisms of Aging	2014
Summer NIA Training Course in Experimental Aging	2014
R00 Pathway to Independence Award (NIH NIGMS R00GM092859)	2013
K99 Pathway to Independence Award (NIH NIGMS K99GM92859)	2010
Helen Hay Whitney Postdoctoral Fellowship	2008
Harvey Karp Discovery Award, The Rockefeller University	2007
Andrew Braisted Poster Award, Chemical Biology in the Bay Area Symposium	2006
Achievement Rewards for College Scientists (ARCS) Predoctoral Fellowship	2005
National Science Foundation Predoctoral Fellowship	2002

PUBLICATIONS

Chen Y, Jang H, Spratt P, Taylor DE, Essner R, Bai L, Kosar S, Leib DE, Kuo T, Lin Y, Patel M, Subkhangulova A, Kato S, Feinberg EH, Bender KJ, Knight ZA, **Garrison JL**. Soma-targeted imaging of neural circuits by ribosome tethering. *Neuron*, **107**(3):454 (2020).

Garrison JL and Knight ZA, Linking smell to metabolism and aging. *Science* **358***,* 718 (2017).

Garrison JL, Macosko EZ, Bernstein S, Pokala N, Albrecht DR, Bargmann CI, An ancient role for oxytocin/vasopressin-related peptides in reproductive behavior. *Science* **338***,* 540 (2012).

Knight ZA, Tan K, Birsoy K, Schmidt S, **Garrison JL**, Wysocki RW, Emiliano A, Ekstrand MI, Friedman JM, Molecular profiling of activated neurons by phosphorylated ribosome capture. *Cell* **151**,1126 (2012).

Lakkaraju AK, Thankappan R, Mary C, **Garrison JL**, Taunton J, Strub K, Efficient secretion of small proteins in mammalian cells relies on Sec62-dependent posttranslational translocation. *Mol Biol Cell* **14**, 2712 (2012).

McGrath PT, Xu Y, Ailion M, **Garrison JL**, Butcher RA, and Bargmann CI, Parallel evolution of domesticated *Caenorhabditis* species targets pheromone receptor genes. *Nature* **477**, 321 (2011).

Maifeld SV, MacKinnon AL, **Garrison JL**, Sharma A, Kunkel EJ, Hegde RS, and Taunton J, Secretory protein profiling reveals TNF-α inactivation by selective and promiscuous Sec61 modulators. *Chemistry and Biology* **18**, 1082 (2011).

Bautista DM, Sigal YM, Milstein AD, **Garrison JL**, Zorn JA, Tsuruda PR, Nicoll RA, and Julius D, Pungent agents from Szechuan peppers excite sensory neurons by inhibiting two-pore potassium channels. *Nature Neuroscience* **11**, 772 (2008).

MacKinnon AL, **Garrison JL**, Hegde RS, and Taunton J, Photo-leucine incorporation reveals the target of a cyclodepsipeptide inhibitor of cotranslational translocation. *J Am Chem Soc* **129**, 14560 (2007).

Knight ZA, **Garrison JL**, Chan K, King DS, and Shokat KM, A remodelled protease that cleaves phosphotyrosine substrates. *J Am Chem Soc* **129**, 11672 (2007).

Rutkowski DT, Kang SW, Goodman AG, **Garrison JL**, Taunton J, Katze MG, Kaufman RJ, and Hegde RS, The role of p58IPK in protecting the stressed endoplasmic reticulum. *Mol Biol Cell* **18**, 3681 (2007).

Kang SW, Rane NS, Kim SJ, **Garrison JL**, Taunton J, and Hegde RS, Substrate-specific attenuation of protein translocation during acute ER stress defines a pathway of pre-emptive quality control. *Cell* **127**, 999 (2006).

Oyadomari S, Yun C, Fisher EA, Kreglinger N, Krebich G, Oyadomari M, Harding HP, Goodman AG, Harant H, **Garrison JL**, Taunton J, Katze MG, and Ron D, Co-translocational degradation protects the stressed endoplasmic reticulum from protein overload. *Cell* **126**, 727 (2006).

Garrison JL, Kunkel EJ, Hegde RS, and Taunton J, A substrate-specific inhibitor of protein translocation into the endoplasmic reticulum. *Nature* **436**, 285 (2005).

Horak E, Heitner T, Robinson MK, Simmons HH, **Garrison JL**, Russeva M, Furmanova P, Lou J, Zhou Y, Yuan QA, Weiner LM, Adams GP, and Marks JD, Isolation of scFvs to *in vitro* produced extracellular domains of EGFR family members. *Cancer Biotherapy and Radiopharmaceuticals* **20**, 603 (2005).

Heitner T, Moor A, **Garrison JL**, Marks CB, Hasan T, and Marks JD, Selection of cell binding and internalizing epidermal growth factor receptor antibodies from a phage display library. *J Immunological Methods* **248**, 17 (2001).
Somps CJ, **Garrison JL**, Madou MJ, Hines JW, Gibbs DL, and Harrison MR, Electrochemical performance of an ion selective, polymeric membrane following chronic implantation in rat subcutaneous tissue. *Sensors and Actuators B* **35-36**, 222 (1996).

INVITED TALKS

2020 Mechanisms of Aging, CSHL Meeting (Virtual)
2020 School of Neuroscience Seminar Series, Virginia Tech, Blacksburg, VA.
2019 Neuroscience Seminar Series, Michigan State University, East Lansing, MI
2019 Developmental Biology Seminar Series, Washington University, St Louis, MO.
2019 American Aging Association (AGE) Annual Meeting, South San Francisco, CA.
2019 *World Congress on Neurohypophyseal Hormones 2019*, Ein Gedi, Israel
2019 *MyAgeGroup Meeting*, Birmingham, AL.
2018 *Neuropeptide Signaling Minisymposium*, Society for Neuroscience Meeting, San Diego, CA.
2018 *Frontiers in Biology Seminar Series*, Stanford University, Palo Alto, CA.
2018 Department of Neurobiology, University of Wisconsin, Madison, WI.
2018 MBL Advanced Training Course in Neurobiology, Cell Biology Section, Woods Hole, MA.
2018 Department of Physiology & Pharmacology, OHSU, Portland, OR.
2018 *MyAgeGroup Meeting,* Austin TX.
2018 *Young Investigators Symposium*, LKC Medicine, NTU Singapore
2017 KU Leuven Department of Biology Seminar Series, Leuven, Belgium
2017 MBL Advanced Training Course in Neurobiology, Cell Biology Section, Woods Hole, MA.
2017 Neuroscience and Behavior Seminar Series, University of California, Santa Barbara
2016 Keynote Speaker, Leibniz Institute on Aging Annual Retreat, Luisenthal, Germany
2015 *Showcase Symposium 2015*, Allen Institute for Brain Science, Seattle, WA.
2014 *Cellular Function in Aging Meeting*, Biomedical Neurosciences Institute (BNI), Santiago Chile
2014 *Bay Area Worm Meeting*, Stanford University
2013 Departments of Chemistry and Molecular & Cell Biology, UC Berkeley
2013 Cardiovascular Research Institute, UCSF
2013 Division of Biology, California Institute of Technology
2013 Division of Chemistry and Chemical Engineering, California Institute of Technology
2012 Institute for Neurodegenerative Disease, UCSF
2012 Department of Systems Biology, Harvard Medical School

SERVICE

2021 - Board of Directors, ARCS Foundation Northern California Chapter

2020 American Aging Association (AGE) Board of Directors Member-elect (4 year term)
2020 Academic Editorial Board, Frontiers in Genetics
2020 Co-Organizer, *Neuropeptide Signaling: Bridging Cell Biology, Neurophysiology, and Behavior* Conference, HHMI Janelia Farm (postponed to 2022)
2019 - Faculty Director, Global Consortium for Reproductive Longevity and Equality
2019 - Co-Director, Biology of Aging PhD Program, Buck Institute/USC
2019 elected Co-Vice Chair, *Biology of Aging Gordon Research Conference* 2023 (co-Chair 2025)
2019 - Academic Editorial Board, PLOS Biology
2019 - Faculty Advisor, Buck Council for Women's Health
2018 - Chair, Center for Female Reproductive Longevity and Equality Steering Committee
2018 Organizer, *Neuropeptide Signaling Minisymposium* Society for Neuroscience Annual Meeting
2018 - Academic Editorial Board, PLOS One
2017 - Scientific Advisory Board Member, Systems1 Bioscience, Inc.
2017 - Glenn Center Executive Committee, Buck Institute
2017 - 19 Biology of Aging PhD Program Committee
2017 Lead Organizer, Bay Area Worm Meeting 2017
2017 Faculty Advisor, Buck *Double X's* group for the advancement of women in science
2017 Poster Judge, *C. elegans* International Meeting 2017
2016 - Formal Research Seminar Selection Committee, Buck Institute
2015 - Alzheimer's Association Research Grant (AARG) Peer Reviewer
2015 American Federation for Aging Research Grant for Junior Faculty Selection Committee
2014 - Referee for peer-reviewed journals: PLOS Biology, Nature Communications, Aging Cell, PLOS Genetics, Scientific Reports, eNeuro, EMBO Reports

TEACHING EXPERIENCE

Lecturer, Buck/USC Biology of Aging PhD Program
GERO601, 2016, 2017, 2018, 2019, 2020 (ongoing)
Responsibilities: Developed course content and taught sessions on the Aging Brain for PhD students.

Faculty Instructor, Neuronal Cell Biology
MBL Woods Hole Neurobiology Advanced Training Course, summer 2017
Responsibilities: Developed course content and taught hands-on experiments using ribosomal profiling of mouse neurons.

Visiting Assistant Professor, Bard College
Research Design and Methods, spring 2008
Responsibilities: Developed course content and taught all sessions of the Research Design and Methods Course for undergraduate students in the Bard-Rockefeller Semester in Science program.

Laboratory Mentor, Rockefeller Summer Science Outreach Program, summer 2009, 2010, 2011
Responsibilities: Trained and supervised a high school student participating in the Rockefeller Summer Science Program to work full time in the laboratory and conduct experiments.

Graduate Student Instructor, University of California, San Francisco
Advanced Organic Chemistry (PC113), fall 2003
Responsibilities: Taught periodic lectures and a weekly problem solving session in advanced organic chemistry for a class of 120 pharmacy school students.

Volunteer Instructor for the TRIAD Alliance for Gender Equitable Teaching, 1998-1999
Luther Burbank Middle School, with the UCSF Science & Health Education Partnership (SEP).
Responsibilities: Developed and conducted an after-school science club for junior high school students designed to encourage girls to explore science through hands-on experimentation.