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JANET K. BESTER-MEREDITH

EDUCATION

1995-2001	University of Wisconsin Ph.D., Biological Psychology Dissertation Title: "The Effects of the Social Environment During Development on Arginine Vasopressin, Aggression, and Paternal Behavior"	Madison, WI
1997	University of Wisconsin M.S., Biological Psychology	Madison, WI
1991-1995	Pomona College B.A., Biology, <i>cum laude</i>	Claremont, CA
1993	University College, Oxford University Tutorial in Mammalian Social Behavior	Oxford, England

PROFESSIONAL EXPERIENCE

2013-present	Associate Professor with tenure , Department of Biology, Seattle Pacific University. Courses include Pre-Professional Health Science advising courses, Animal Behavior, Anatomy & Physiology, Introductory Biology for non-majors, University Seminar, Natural Sciences Capstone course, Women in Science Seminar, and Scientific Literature. Other responsibilities include pre-health advising, mentoring research students and a Washington Achievers Scholar, serving on and chairing the Institutional Animal Care and Use Committee, and participation in the Summer Science Institute.
2012-2013	Associate Professor (tenure track) , Department of Biology, Seattle Pacific University.
2010-2012	Assistant Professor (tenure track) , Department of Biology, Seattle Pacific University.
2007-2010	Assistant Professor (non-tenure track) , Department of Biology, Seattle Pacific University. Other responsibilities include serving as a member of the university's first Institutional Animal Care and Use Committee, developing a research program, writing and coordinating the re-evaluation of an exit exam for students in our non-majors courses, and developing and administering a survey to graduating seniors to assess curricular strengths and weaknesses. Mentored two undergraduate research students.
2003-2007	Visiting Assistant Professor , Department of Biology, Seattle Pacific University. Courses include Animal Behavior, Introductory Biology for majors, Introductory Biology for non-majors, Ecology.
2001-2003	Postdoctoral Researcher , University of Wisconsin.
1999-2001	NRSA Predoctoral Fellow , University of Wisconsin.
1997-1998	Research assistant , University of Wisconsin.
Fall, 1997, 1998	Teaching assistant for Animal Behavior, University of Wisconsin.
Spring, 1997	Teaching assistant for Honors Behavioral Neuroscience lecture and laboratory, University of Wisconsin.
Fall, 1996	Teaching assistant for Animal Behavior and Introduction to Psychology, University of Wisconsin.
1995-1996	Wisconsin Alumni Research Fellow , University of Wisconsin

1994-1995 **Student research assistant**, Department of Biology, Pomona College.

AWARDS & GRANTS

2013 **Principal Investigator**, Murdock Foundation Grant, How Sensory Cues Influence the Brain and Behavior in *Peromyscus* Mice. 4/1/2013-4/1/2015, \$39,000.

2011 **Principal Investigator**, Murdock Foundation Grant, The Social Brain and Vasopressin: Regulation of Maternal Behavior and Aggression in the California Mouse (*Peromyscus californicus*), 4/1/2011-4/1/2013, \$40,000.

2011 **Principal Investigator**, Faculty Research Grant, Seattle Pacific University: Vasopressin, Maternal Behavior, and Maternal Aggression in the California Mouse, 7/1/2011-7/1/2012, \$4312.

2010 **Advisory Team Member**, Open Course Library Project to develop online resources for Anatomy and Physiology, 6/1/2010-6/1/2011, \$32,000.

2010 Selected as a finalist for the “Best Teaching Idea” competition at Seattle Pacific University

2008 Selected as one of 100 delegates to the Epigenetics and Behavior conference sponsored by The Fondation IPSEN (France), Nature Neuroscience and Nature Genetics in Houston, Texas

2000-2001 **Vilas Graduate Fellowship**, University of Wisconsin

1999-2001 **NIMH Predoctoral Fellowship**

1999 **Vilas Professional Development Fellowship**, University of Wisconsin

1999 **Sigma Xi Grant in Aid of Research**

1996-98,2000 **Travel awards** from Department of Psychology, University of Wisconsin

1995-1996 **WARF Fellowship**, University of Wisconsin

1995 **Sigma Xi**, Pomona College

1995 **Phi Beta Kappa**, Pomona College

1994-1995 **Los Angeles Philanthropic Scholarship**

1991-1995 **National Merit Scholarship**

1991-1992 **TRW Foundation Scholarship**

PUBLICATIONS

Bester-Meredith, J.K., & C.A. Marler. 2012. Naturally occurring variation in vasopressin immunoreactivity is associated with maternal behavior in female *Peromyscus* mice. *Brain, Behavior, and Evolution*. **80**: 244-253.

Marler, C.A., Trainor, B.C., Gleason, E., Bester-Meredith, J.K., & E. Becker. 2008. The effects of paternal behavior on offspring aggression and hormones in the biparental California mouse. IN: *Neurobiology of the Parental Brain*. (Ed. by R. Bridges). Academic press.

Bester-Meredith, J.K. & C.A. Marler. 2007. Social experience during development and female offspring aggression in *Peromyscus* mice. *Ethology*. **113**: 889-900.

Bester-Meredith, J.K., Martin, P.A., & C.A. Marler. 2005. Manipulations of vasopressin alter aggression differently across testing conditions in monogamous and non-monogamous *Peromyscus* mice. *Aggressive Behavior*. **31**: 189-199.

Bester-Meredith, J.K., & C.A. Marler. 2003b. The association between male offspring aggression and paternal and maternal behaviour of unrelated *Peromyscus* mice. *Ethology*. **109**: 797-808.

Bester-Meredith, J. K., & C.A. Marler. 2003a. Vasopressin and the transmission of paternal behavior across generations in mated cross-fostered *Peromyscus* mice. *Behavioral Neuroscience*. **117**: 455-463.

Marler, C.A., Bester-Meredith, J.K., & B.C. Trainor. 2003. Paternal behavior and aggression: Endocrine mechanisms and nongenomic transmission of behavior. *Advances in the Study of Behavior*. **32**: 263-323.

Bester-Meredith, J.K., & C.A. Marler. 2001. Vasopressin and aggression in cross-fostered California mice (*Peromyscus californicus*) and white-footed mice (*Peromyscus leucopus*). *Hormones and Behavior*. **40**: 51-64.

- Bester-Meredith, J.K., Young, L. & C.A. Marler. 1999. Species differences in paternal behavior and aggression in *Peromyscus* and their associations with vasopressin immunoreactivity and receptors. *Hormones and Behavior*. **36**: 25-38.
- Levin, R.N., Paris, T.I. & J.K. Bester-Meredith. Social influences on the development of sex-specific song in a tropical wren. In preparation.
- Levin, R. N., Bester-Meredith, J.K., Roth, J. & J. Hamamura. Sex differences in the development of song in a duetting wren, *Thryothorus nigricapillus*. In preparation.

STUDENT RESEARCH PRESENTATIONS

*indicates undergraduate research co-author

- *Garcia, A. M., *Rowe, M.E., *Mammarella, G.E., *Mannen, M.C., *Megrath, B.A., and J.K. Bester-Meredith. 2013. Intracerebroventricular injections of arginine vasopressin in female *Peromyscus californicus* alter aggressive behavior. Presented at the twenty second regional conference on undergraduate research of the Murdock College Science Research Program in Vancouver, Washington.
- *Mammarella, G.E., *Garcia, A.M., *Rowe, M.E., *Megrath, B.A., and J.K. Bester-Meredith. 2013. Olfactory disruptions and resident-intruder aggression in *Peromyscus californicus* mice. Presented at the twenty second regional conference on undergraduate research of the Murdock College Science Research Program in Vancouver, Washington.
- *Rowe, M.E., *Mammarella, G.E., *Garcia, A.M., *Yepson, H.R. *Megrath, B.A., *Gregg, J.R., *Swanson, S., *Eisenreich, B. R., and J.K. Bester-Meredith. 2013. Arginine vasopressin in the brain and its correlation with anxiety and maternal aggression in female California mice (*Peromyscus californicus*). Presented at the twenty second regional conference on undergraduate research of the Murdock College Science Research Program in Vancouver, Washington.
- *Mannen, M.C., & J.K. Bester-Meredith. 2013. The effects of intracerebroventricular injections of arginine vasopressin and its antagonists on maternal aggression and anxiety in *Peromyscus californicus*. Presented at the Erickson Conference in Seattle, Washington.
- *Swanson, S., & J.K. Bester-Meredith. 2013. AVP and maternal behavior in *Peromyscus californicus*. Presented to Bio/Chem/Phys 4899: Natural Sciences Capstone Course at Seattle Pacific University.
- *Megrath, B.A., *Yepson, H.R., *Eisenreich, B.R., *Swanson, S., *Gregg, J.R., and J.K. Bester-Meredith. 2012. Maternal behavior and offspring survival predicts vasopressin in *Peromyscus californicus*. Presented at the twenty-first regional conference on undergraduate research of the Murdock College Science Research Program in Walla Walla, Washington.
- *Yepson, H.R., *Megrath, B.A., *Gregg, J.R., *Swanson, S., and J.K. Bester-Meredith. 2012. Relationship between arginine vasopressin and maternal stressors in *Peromyscus californicus*. Presented at the twenty-first regional conference on undergraduate research of the Murdock College Science Research Program in Walla Walla, Washington.
- Bester-Meredith, J.K., *Megrath, B.A., *Yepson, H.R., *Gregg, J.L., & B.R. Eisenreich*. 2012. Natural variation in vasopressin predicts offspring survival and maternal behavior shown by *Peromyscus californicus* mothers. Presented with Brett Megrath and Haylee Yepson at the international meeting of the Society for Behavioral Neuroendocrinology in Madison, Wisconsin.
- *Megrath, B.A., & J.K. Bester-Meredith. 2012. Vasopressin, maternal behavior, and maternal experience in *Peromyscus californicus*. Presented at the Erickson Conference in Seattle, Washington.
- *Gregg, J.L., & J.K. Bester-Meredith. 2012. Anxiety and aggression in female *Peromyscus californicus*. Presented at the Erickson Conference in Seattle, Washington.
- *Yepson, H., & J.K. Bester-Meredith. 2012. Higher maternal anxiety expressed by multiparous *Peromyscus californicus* mothers. Presented at the Erickson conference in Seattle, Washington.
- *Yepson, H., *Gregg, J., & J.K. Bester-Meredith. 2011. Vasopressinergic cell counts within the bed nucleus of the stria terminalis are associated with increased maternal behaviors in *Peromyscus californicus*. Presented at the twentieth regional conference on undergraduate research of the Murdock College Science Research Program in Seattle, Washington.

- *Megrath, B.A., & J.K. Bester-Meredith. 2011. The influence of maternal behavior on maternal experience and pup health in *Peromyscus californicus*. Presented at the twentieth regional conference on undergraduate research of the Murdock College Science Research Program in Seattle, Washington.
- *Yepson, H., *Gregg, J., & J.K. Bester-Meredith. 2011. Exploring vasopressin and its relationship to maternal behavior in *Peromyscus californicus*. Presented at the Summer Science Institute program, Seattle Pacific University.
- *Megrath, B.A., & J.K. Bester-Meredith. 2011. Maternal behavior and vasopressin. Presented at the Summer Science Institute program, Seattle Pacific University.
- *Eisenreich, B.R., & J.K. Bester-Meredith. 2011. Vasopressin and motherhood: a possible neural correlate. Presented at the West Coast Biological Sciences Undergraduate Research Conference, Pacific Lutheran University, Tacoma, Washington.
- *Eisenreich, B.R., Bester-Meredith, J.K., & B.B. Craft. 2011. Risk sensitivity in *Peromyscus californicus*. Presented at the School of Psychology, Family, and Community Undergraduate Research Conference, Seattle, Washington.
- *Eisenreich, B.R., Bester-Meredith, J.K., & B.B. Craft. 2011. Theoretical extensions of risk-sensitive foraging theory. Presented at the Erickson conference in Seattle, Washington.
- *Borcherding, J.C., *Megrath, B.A., & J.K. Bester-Meredith. 2011. Maternal behavior: does experience matter? Presented at the Erickson conference in Seattle, Washington.
- *Borcherding, J.C., *Eisenreich, B.R., *Megrath, B.A., & J.K. Bester-Meredith. 2011. Vasopressin and maternal behavior: from mice to humans. Presented at Brain Awareness Week, Museum of History and Industry, sponsored by the University of Washington.
- *Mitchell, H.E., *Borcherding, J.C., *Eisenreich, B.R., & J.K. Bester-Meredith. 2010. Associations between maternal experience, maternal behavior, and arginine vasopressin in *Peromyscus californicus*. Presented at the Summer Science Institute program, Seattle Pacific University.
- *Eisenreich, B.R. & J.K. Bester-Meredith. 2010. Vasopressin and maternal behavior in *Peromyscus californicus*. Presented at the nineteenth regional conference on undergraduate research of the Murdock College Science Research Program in Linfield, Oregon.
- *Mitchell, H.E., *Borcherding, J.C., & J. K. Bester-Meredith. 2010. Associations between maternal experience and maternal behavior in *Peromyscus californicus*. Presented at the nineteenth regional conference on undergraduate research of the Murdock College Science Research Program in Linfield, Oregon.
- *Cole, E. & J.K. Bester-Meredith. 2009. Effects of vasopressin on behavior in female California mice (*Peromyscus californicus*). Presented at the Erickson conference in Seattle, Washington.
- *Hinton, J.M. & J.K. Bester-Meredith. 2009. Comparison of parental behavior in inexperienced and experienced *Peromyscus californicus* mothers. Presented at the Erickson conference in Seattle, Washington. ***Awarded the prize for top poster presentation.***

ORAL PRESENTATIONS

- Bester-Meredith, J.K. 2013. How do brain chemical shape your behavior? Presentation for elementary school students at Lincoln Elementary, Seattle, Washington.
- Bester-Meredith, J.K. 2013. Panel about academic careers in the sciences. Association for Women in Science, Fred Hutchinson Cancer Research Center, Seattle, Washington.
- Bester-Meredith, J.K. 2011. Being a science professor. Presentation for preschool students, Villa Academy, Seattle, Washington.
- Bester-Meredith, J.K. 2009. Parental care, aggression, and the brain. Presentation for the middle school programs for college and career readiness, Seattle Public Schools. Presented at Seattle Pacific University.
- Bester-Meredith, J.K. 2009. Proteins, paternal care, and aggression. Presentation for elementary school students at Lowell Elementary, Seattle, Washington.
- Bester-Meredith, J.K. 2007. Ethograms and animal behavior. Presentation for elementary school students at Lowell Elementary, Seattle, Washington.

- Bester-Meredith, J.K. 2001. The effects of the social environment during development on arginine vasopressin, aggression, and paternal behavior. Invited seminar, University of Washington.
- Bester-Meredith, J.K. 2001. A role for parenting: cross-fostering, aggression, parental care and vasopressin in *Peromyscus* mice. Behavioral Interdisciplinary Seminar, University of Wisconsin.
- Bester-Meredith, J.K. & C.A. Marler. 2000. Cross-fostering alters patterns of aggression in *Peromyscus* mice. Presented at the national meeting of the Animal Behavior Society in Atlanta, Georgia.
- Bester-Meredith, J.K. 1997. The effects of cross-fostering on aggression, parental care, and brain vasopressin in two species of *Peromyscus*. Behavioral Interdisciplinary Seminar, University of Wisconsin.

POSTER PRESENTATIONS AT SCIENTIFIC MEETINGS

*indicates undergraduate research co-author

- Bester-Meredith, J.K., *Megrath, B.A., *Yepson, H.R., *Gregg, J.L., & B.R. Eisenreich*. 2012. Natural variation in vasopressin predicts offspring survival and maternal behavior shown by *Peromyscus californicus* mothers. Presented with Brett Megrath and Haylee Yepson at the international meeting of the Society for Behavioral Neuroendocrinology in Madison, Wisconsin.
- Bester-Meredith, J.K., *Cole, E., & J.M. Hinton*. 2010. Vasopressin influences olfactory processing in maternal *Peromyscus californicus*. Presented at the international meeting of the Society for Neuroscience in San Diego, California.
- Bester-Meredith, J.K. & C.A. Marler. 2008. Associations between arginine vasopressin and maternal behavior in female *Peromyscus*. Presented at the international meeting of the Society for Behavioral Neuroendocrinology in Groningen, The Netherlands.
- Bester-Meredith, J.K. & C.A. Marler. 2000. Cross-fostering alters vasopressin-immunoreactive staining in *Peromyscus* mice. Presented at the international meeting of the Society for Neuroscience in New Orleans, Louisiana.
- Bester-Meredith, J.K. & C.A. Marler. 1998. Developmental influences on adult patterns of vasopressin-immunoreactive staining, aggression, and parental care in *Peromyscus* mice. Presented at the international meeting of the Society for Neuroscience in Los Angeles, California.
- Bester-Meredith, J.K., Young, L.J., & C.A. Marler. 1998. Cross-fostering and vasopressin: social influences during development on adult patterns of aggression, parental care, and vasopressin. Presented at the international meeting of the Society for Behavioral Neuroendocrinology in Atlanta, Georgia.
- Bester, J.K. & C.A. Marler. 1997. Behavioral plasticity in response to changes in the postnatal social environment and correlating changes in arginine vasopressin in *Peromyscus*. Presented at the international meeting of the Society for Neuroscience in New Orleans, Louisiana.
- Bester, J.K. & C.A. Marler. 1996. Comparisons of arginine vasopressin immunoreactive staining in two species of *Peromyscus* with different levels of parental care. Presented at the international meeting of the Society for Neuroscience in Washington, D.C.
- Levin, R.N., Paris, T., & J. Bester. 1996. Social versus innate influences on the development of sex-specific song in a tropical duetting wren. Presented at the national meeting of the Society for Integrative and Comparative Biology in Albuquerque, New Mexico.
- Levin, R.N., Paris, T., & J. Bester. 1996. The origin of sex differences in song in a tropical duetting wren. Presented at the national meeting of the Animal Behavior Society.
- Bester, J.K. & C.A. Marler. 1996. The association between arginine vasopressin immunoreactive staining and parental care in two species of *Peromyscus* with different levels of parental care. Presented at the Midwest Endocrinology Conference in Madison, Wisconsin.
- Levin, R.N., Paris, T. & J. Bester. 1995. Social influences on the development of sex-specific song in a tropical duetting wren. Presented at the national meeting of the American Ornithologist Union in Cincinnati, Ohio.

PUBLISHED ABSTRACTS

- Bester-Meredith, J.K., *Cole, E., & J.M. Hinton*. 2010. Vasopressin influences olfactory processing in maternal *Peromyscus californicus*. *Soc. Neurosci. Abstr.*
- Bester-Meredith, J.K. & C.A. Marler. 2000. Cross-fostering alters vasopressin-immunoreactive staining in *Peromyscus* mice. *Soc. Neurosci. Abstr.* 26: 760.9
- Bester-Meredith, J.K. & C.A. Marler. 1998. Developmental influences on adult patterns of vasopressin-immunoreactive staining, aggression, and parental care in *Peromyscus* mice. *Soc. Neurosci. Abstr.* 24: 1441.
- Bester, J.K. & C.A. Marler. 1997. Behavioral plasticity in response to changes in the postnatal social environment and correlating changes in arginine vasopressin in *Peromyscus*. *Soc. Neurosci. Abstr.* 23: 1088.
- Bester, J.K. & C.A. Marler. 1996. Comparisons of arginine vasopressin immunoreactive staining in two species of *Peromyscus* with different levels of parental care. *Soc. Neurosci. Abstr.* 22: 1150.
- Levin, R.N., Paris, T.I. & J.K. Bester. 1996. Social versus innate influences on the development of sex-specific song in a tropical duetting wren. *American Zoologist.* 36(5): 92A

GUEST LECTURES

- Bester-Meredith, J.K. 2012. Panel on women in science, Biology 4899: Natural Sciences Capstone Seminar, Seattle Pacific University.
- Bester-Meredith, J.K. 2011-2013. Neuroscience and Consciousness guest lecture, Psychology 1180: General Psychology, Seattle Pacific University.
- Bester-Meredith, J.K. 2010. Behavioral Ecology, Biology 3310: Ecology, Seattle Pacific University.
- Bester-Meredith, J.K. 2009. Panel on faith and evolution, Biology 3432: Vertebrate Biology, Seattle Pacific University.
- Bester-Meredith, J.K. 2008-present. Presented yearly research talks to Biology 1859: Biology Cornerstone Seminar, Seattle Pacific University
- Bester-Meredith, J.K. 2008-2010. Presented yearly research talks to Biology 4899: Natural Sciences Capstone Seminar, Seattle Pacific University
- Bester-Meredith, J.K. 2004. Influences of the social environment during development on aggression, parental care and AVP in *Peromyscus* mice. Guest seminar for Chemistry 4363: Biochemistry, Seattle Pacific University.
- Bester-Meredith, J. K. 2004. The genetics of behavior. Guest lecture for Biology 1100, Seattle Pacific University.
- Bester-Meredith, J.K. 1995-2000. Guest Lectures: "Comparative Neuroanatomy," "Hormones and Behavior," and "Neuroanatomy Overview," Psychology 484-Honors Behavioral Neuroscience. "Territoriality and Aggression," Psychology 449-Animal Behavior. "Biological Psychology," Psychology 202-Introduction to Psychology. "AVP and Aggression," Psychology 556-Hormones and Behavior. "Evolutionary Neurobiology," Zoology 545-Evolutionary Physiology.

COMMITTEE AND OTHER UNIVERSITY SERVICE

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|--------------|---|
| 2012-present | Chair, Animal Care and Use Committee (official faculty committee) |
| 2007-2011 | Animal Care and Use Committee. Contributed to the development of institutional animal care protocols as a member of Seattle Pacific University's first Animal Care and Use Committee. |
| 2007-present | Pre-health advising, participated in task force related to pre-health advising; served on interview committees for job candidates in the School of Theology, School of Health Sciences, and the Biology department; led a Day of Common Learning afternoon session; led devotions in Faculty Senate; participated in admissions activities including calling newly admitted students, interviewing candidates for SPU Scholars, and representing my department during New Student Advising, Meet the Professors, Urban Preview, and Department Information Sessions during Summer Visit Days. |

2007-present Participated in departmental committees involved in establishing a Bio 1100 exit exam, creating a survey for graduation seniors, and a departmental policy for conscientious objectors.

SERVICE TO PROFESSION

2011 Selected as an Early Career Reviewer for the National Institutes of Health
2011 Reviewer for **The American Journal of Primatology**
2011 Presented research findings to the Washington Junior Science and Humanities Symposium
2010-present Mentor for Washington Achiever Scholars Program.
2010 Reviewer for **Behavioral Ecology**
2010 Reviewer for Anatomy & Physiology Laboratory Manual: 7th Edition by Kevin T. Patton
2007 Reviewer for Biology: Science for Life by Colleen Belk & Virginia Borden
2006 Reviewer for the third edition of Biological Science by Scott Freeman (chap. 7-11)
2005 Reviewer for the College Board Validity Study
1999-2004 Reviewer for **The Journal of Comparative Psychology**
2000 Reviewer for **Hormones and Behavior**
1998-2000 Biological psychology representative for the American Psychological Association Science Student Council. **Chair**, 1999-2000.
1998 Abstract reviewer for the American Psychological Society.
1997 Evaluated talks at the Psi Chi Undergraduate Psychology Conference, University of Wisconsin.
1996-1997 Organized journal club for graduate students at the University of Wisconsin.
1996 Participated in "Expanding Your Horizons: A conference to encourage career explorations in science, engineering, and mathematics for young women in grades 7&8."
1995-2001 Mentored 11 undergraduates working on research projects at the University of Wisconsin.

SERVICE TO FAITH COMMUNITY

2012-present Parish council, St. Bridget Church, Seattle
2010-present Volunteer, Second Sunday Dinners for homeless
2009-present Coordinated giving tree, St. Bridget Church, Seattle
2009-present Eucharistic minister, St. Bridget Church, Seattle
2003-2010 Sunday School teacher/assistant teacher, St. Bridget Church, Seattle

SOCIETY MEMBERSHIPS

Society for Behavioral Neuroendocrinology
Society for Neuroscience
National Association of Advisors for the Health Professions