



Rosemary Strasser, Ph.D.

Academic resume

RESEARCH STATEMENT

Social bonds are essential in regulating the physiological processes involved in stress coping. The pet-owner relationship is one type of social bond that exhibits many behavioral features of an attachment bond. By understanding social bond formation or the lack thereof, we can further learn more about the human-animal bond and its effect on mental health and well-being for both. My laboratory has focused on studying the human-animal bond in several different species and environments. Even in the best shelter environment, dogs and cats experience separation from familiar humans and environments that might be a source of stress. In our laboratory, we have examined the influence of stress on social cognition in shelter dogs, dogs' and their owners' synchronization of hormonal states, as well as the health and adoptability of shelter cats. We have recently begun examining the influence of early life stress and trauma on companion animals' physiology and psychological well-being. We are also interested in applied animal behavior questions that benefit the community partners, including local animal rescue groups and animals in zoological parks.

CONTACT DETAILS

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AREAS OF EXPERTISE

Animal behavior

Neuroendocrinology

Human-Animal interaction

Service-learning

Community engagement

ACADEMIC QUALIFICATIONS

Bowling Green State University, Bowling Green OH **1992 - 1998**
J. P. Scott Center for Neuroscience, Mind, and Behavior.
Psychology Department, emphasis Behavioral Neuroscience
M.A. and Ph.D.

Hiram College **1988 - 1992**
Major: Psychobiology and Psychology
Minor: Environmental Studies. B.A.

PERSONAL SUMMARY

"I feel that my greatest strengths are firstly, my ability to mentor and learn from students of all ages, from graduate students to grade schoolers. I have been fortunate to be able to combine my love for research into various classes and in a variety of different engaged learning formats. Secondly, my service learning classes have allowed my students and myself to become more engaged with our community by identifying and developing solutions to meaningful community-identified needs. This has allowed us to develop applied skills outside the classroom. In addition, these collaborations have evolved into lasting partnerships and has led to research projects and presentations at international conferences."

Rosemary Strasser

PROFESSIONAL EXPERIENCE

University of Nebraska Omaha **2002 – present**
Associate Professor of Psychology
Area Coordinator, Neuroscience & Behavior graduate program

Washington State University, Pullman WA **1998 – 2002**
National Institute of Child Health and Human Development
Postdoctoral Fellow
Research Scientist & Zoology Instructor

ACADEMIC AWARDS & DISTINCTIONS

University of Nebraska Omaha Service Learning Award **2014**
Outstanding faculty

Excellence in Community-Based Teaching and Scholarship **2013**
Nebraska Campus Compact

University of Nebraska Omaha Graduate Faculty fellow **2003**

Bowling Green State University Freeburne Award **1996**
Excellence in Graduate Teaching

Bowling Green State University Graduate College Award **1995**
Excellence in Graduate Teaching

TEACHING-RELATED GRANTS

UNO, Student Technology Project Proposal **2012**
Neuroscience EEG and fNIR laboratory (\$48,275)
R. Strasser & J. French

COURSES TAUGHT

**indicates Service-learning course*

Animal behavior

*Animal behavior laboratory**

Behavioral Neuroscience

Evolutionary Psychology
(Graduate)

Hormones and Behavior
(Graduate & Undergraduate)

Human-Animal Interactions

Introduction to Psychology
Thompson learning community

Introduction to Neuroscience

Learning

*Learning Laboratory**

Neuroscience laboratory

Research Methods

TEACHING EVALUATION

I have taught 12 new course preparations while at UNO while maintaining high standards and favourable student evaluations. Of the 23 undergraduate and graduate courses taught at UNO, my mean score for the question, "Overall, how do you rate the teaching in this course" is 1.58 (where 1 is "strongly agree" and 5 is "strongly disagree"; calculated from 2002-2010).

PEDAGOGICAL PRESENTATIONS & WORKSHOPS

□ Undergraduate students at UNO

■ Graduate students at UNO

1. Mueller, S. □, Cunningham, K. ■, Kanouse, S. ■, & **Strasser, R.** (2016). Behavior of zoo visitors and their attitudes towards zoo animals. [Poster & abstract] Animal Behavior Society Meeting, Columbia MO.
2. Darwish, Z. ■, Cunningham, K. ■, & **Strasser, R.** (2016). Biting the Hand That Feeds: Risk Factors Associated with Reported Animal Bites. [Poster & abstract] International Society for Anthrozoology, Saratoga Springs, NY
3. **Strasser, R.**, Nelson, C., (2014). A Service Learning Project with Students Working with Shelter Dogs. UNO Service Learning Seminar Alumni Salon.
4. **Strasser, R.**, Pratte, J. (2014). Service Learning Professional Development Opportunities for Animal Behavior Studies. UNO Service Learning Seminar Alumni Salon.
5. **Strasser, R.**, Nelson, C., Gurss, D., Buttner, A. P. ■ & Ashley, P. (2013). Reality Bites: A Service Learning Project with Students Working with Shelter Dogs. [Presentation] 13th International Association for Research on Service Learning and Community Engagement. Omaha, NE
6. **Strasser, R.**, Pratte, J., Wheeldon, M. □, Buttner, A. P. ■ & Ashley, P. (2013). Professional Development Opportunities for Students Interested in Animal Behavior. 13th International Association for Research on Service Learning and Community Engagement. Omaha, NE
7. **Strasser, R.** Pratte, J., Placzek, R. ■, & Buttner, A. P. ■ (2013). Service Learning as Professional Development Opportunities for Animal Behavior Students. [Poster & abstract] Animal Behavior Society Meeting. Boulder, CO.
8. **Strasser, R.** & Buttner, A. P. ■ (2013). Clicking Calm Behaviors: A Service Learning Project with Students Working with Shelter Dogs. [Poster & abstract] International Society for Anthrozoology. Chicago, IL
9. Campus Compact Heartland Conference (2013) on community based service learning practices in Tulsa, OK. [Conference attendance].
10. Inquiry Based learning workshop at UNO (2012). [Workshop attendance].
11. Dierberger, J., Sather, P., & **Strasser, R.** (2012). P-16 Service-Learning Initiative: Training and Collaboration with In-Service teachers. [Presentation] 3rd International Conference on Service Learning and Teacher Education, Duke University, North Carolina.
12. **Strasser, R.** & Brown, J. (2008). Teaching Evolution in the Psychology Classroom. [Presentation] Great Plains Psychology Conference, Vermillion, SD.
13. **Strasser, R.**, (2007). Going to the Dogs: Service Learning at an Animal Shelter. [Presentation] Midwest Consortium for Service Learning in Higher Education Conference. University of Nebraska-Kearney.
14. **Strasser, R.**, (2007). Psychology Goes to the Dogs: Service Learning at an Animal Shelter. [Presentation] Great Plains Psychology Conference, Vermillion, SD.
15. **Strasser, R.**, (2006) The Shaping Game: Applying Principles of Operant Conditioning in the Classroom and Community. [Presentation] Iowa Teaching of Psychology Conference, Central College.

STUDENT MENTORING

- I have been the committee chair of 5 completed psychology dissertation and 10 completed master thesis.
- I have been a dissertation and thesis committee member of over 30 other UNO psychology and biology students and well as students at UNMC.
- I have mentored various undergraduate students in research, honor projects, and Funds for Undergraduate Scholarly Experiences (FUSE grants).

RECENT FUNDED RESEARCH GRANTS

American Society for the Prevention of Cruelty to Animals grant (2021) "Precision Care of Canine Behavior Utilizing Non-Invasive Biological Markers of Psychological Trauma" (Strasser, Case)

American Society for the Prevention of Cruelty to Animals grant (2021) "Salivary α -Amylase as a Biomarker of Stress and a Previous History of Trauma in Pet Dogs" (Strasser, Duvall)

UCRCA grant from University of Nebraska Omaha (2011) "Animal-assisted reading programs with grade-school children"

National Institute of Child Health and Human Development R03 (2005-2008; \$141,000) "Long-term maternal effects on developing offspring"

National Institute of Child Health and Human Development Fellowship (2000-2002; \$117,696) "Maternal hormone exposure in the developing avian brain"

RECENT PRESS RELEASE

NPR interview "You might be stressing out your dog" (2019)

Discovery News, Wall Street Journal and Fox News covered our research published in *Physiology & Behavior* (May 2015)

Press release local Omaha TV stations regarding work with Nebraska Humane Society (Spring 2013).

Summer reading program with therapy dogs at Channel 3 news Omaha (2011).

School on Channel 3 news Omaha (Summer 2011).

RESEARCH PUBLICATIONS

□ Undergraduate students at UNO ■ Graduate students at UNO

1. Buttner, A. P. ■, & **Strasser, R.** (2022). Extreme life histories are associated with altered social behavior and cortisol levels in shelter dogs. *Applied Animal Behaviour Science*, 256, 105693.
2. Muller, S. L. □, Bissell, S. L. ■, Cunningham, K. M. ■, & **Strasser, R.** (2021). How do you behave at the zoo? A look at visitor perceptions of other visitors' behavior at the zoo. *Animal Behavior and Cognition*, 8(4), 619-631.
3. Buttner, A. P. ■, Thompson, B. □, **Strasser, R.**, & Santo, J. (2015) Evidence for a synchronization of hormonal states between humans and dogs during competition. *Physiology & Behavior*, 54-62.
4. Dybdall, K. ■, Strasser, R., (2014). Is there a Bias Against Stray Cats in Shelters? People's Perception of Shelter Cats and How It Influences Adoption Time. *Anthrozoös*, 4, 603-614.
5. Buttner, A. P. ■, & **Strasser, R.**, (2014). Understanding the Social-Cognitive and Physiological Processes that Underlie Contagious Yawning in Shelter Dogs. *Animal Cognition*, 1-10.
6. Schwabl, H., Holmes D., **Strasser, R.**, & Scheuerlein A. (2012) Embryonic exposure to maternal testosterone influences mortality patterns in a captive passerine bird. *AGE*, 34 (1), 87-94.
7. Dybdall, K. □, **Strasser, R.**, & Katz, T. (2007). Behavioral differences between owner surrender and stray domestic cats after entering an animal shelter. *Applied Animal Behavior Science*, 104, 85-94.
8. **Strasser, R.**, & Schwabl, H. (2004). Yolk testosterone organizes behavior and male plumage coloration in the house sparrow (*Passer domesticus*). *Behavioral Ecology and Sociobiology*, 56, 491-497.
9. **Strasser, R.**, Ehrlinger, J., & Bingman, V. P. (2004). Transitive behavior in hippocampal lesioned homing pigeons. *Brain, Behavior and Evolution*, 63, 169-180.
10. White, A. R., **Strasser, R.**, & Bingman, V. P. (2002). Hippocampus lesions impair landmark array spatial learning in homing pigeons: A laboratory study. *Neurobiology of Learning and Memory*, 78, 65-78.
11. **Strasser, R.** & Bingman, V. P. (1999). The effects of hippocampal lesions in homing pigeons on a one-trial food association task. *Journal of Comparative Physiology A*, 185 (6), 583-590.
12. **Strasser, R.**, Ioale, P., Casini, G., Bagnoli, P., & Bingman, V. P. (1998). The homing pigeon hippocampus and the development of landmark navigation. *Developmental Psychobiology*, 33 (4), 305- 315.
13. Bingman, V. P., **Strasser, R.**, Baker, C., & Ritters, L. V. (1998). Nonspatial, paired-associate learning is unaffected by hippocampal lesions in homing pigeons. *Behavioral Neuroscience*, 112, 533- 540.
14. Budzynski, C.A., **Strasser, R.**, & Bingman, V. P. (1998). The effects of zinc sulfate anosmia on homing pigeons, *Columba livia*, in a homing and non-homing experiment. *Ethology*, 104, 111- 118.
15. **Strasser, R.** & Bingman, V. P. (1997). Goal recognition and the homing pigeon, *Columba livia*, hippocampal formation. *Behavioral Neuroscience*, 111 (6), 1245-1256.
16. **Strasser, R.** & Bingman, V. P. (1996). The relative importance of location and feature cues for homing pigeon, *Columba livia*, goal recognition. *Journal of Comparative Psychology*, v110 (1), 77-87.

BOOK CHAPTERS

1. Bingman, V. P., Ritters, L. V., **Strasser, R.**, & Gagliardo, A. (1998). The Neuroethology of Avian Navigation. In: *Animal Cognition in Nature*. (Eds. Balda, R. P., Pepperburg, I. M., & Kamil, A. C.). Academic Press: New York, pp. 201- 226.
2. Bingman, V. P., Jones, T.-J., **Strasser, R.**, Gagliardo, A., & Ioale, P. (1995). Homing pigeons, hippocampus and spatial cognition. In: *NATO: ASI Behavioral brain research in naturalistic and semi-naturalistic settings: Possibilities and perspectives*. (Eds. Alleva, E., Fasolo, A., Lipp, H. P., Nadel, L., & Ricceri, L.). Kluwer Academic Publishers: Netherlands, pp.207- 223

CURRENT UNIVERSITY SERVICE

Faculty Senate

Graduate Program Committee
Psychology

Area Coordinator for the
Neuroscience and Behavior
Graduate program

COMMUNITY SERVICE

Community engagement and
service learning projects with
Nebraska Humane Society and
Henry Doorly Zoo

Nebraska Youth Correctional
Facility (I received the
Partnership Award from the NE
Governor in 2012)

University of Nebraska Life-
Long Learning

PROFESSIONAL SERVICE

Ad-hoc reviewer & Editorial
Review Board *Anthrozoös*
(2010- present)

Ad-hoc reviewer for *Animal
Behaviour*, *Animal Cognition*,
*Behavioral Ecology &
Sociobiology*, *Biology Letters*,
Brain, Behavior & Evolution,
*Journal of Animal Welfare
Science*, *Journal of Human-
Animal interactions*, *Physiology
& Behavior*, *Royal Society Open
Science*, *Scientific Reports*

NATIONAL RESEARCH CONFERENCES & SYMPOSIA (last 8 years)

▫ Undergraduate students at UNO ▫ Graduate students at UNO

1. **Strasser, R.** (2022) Behavioral and Biological Markers of Trauma in Dogs. [Talk] *Canine Science Conference, Colgate University, NY.*
2. Crawford, A. & **Strasser, R.** (2022) Does the Presence of a Dog in the Home Buffer the Effects of Stress in Older Adults? *UNL Symposium on Motivation.*
3. Dare, P. & **Strasser, R.** (2020) Ruff Morning: Difference in Effectiveness of Different Enrichment Purposes and Types on Acute Stress. [Online talk]. *Internationals Society for Applied Ethology*
4. **Strasser, R.** (2019) Cortisol Synchrony and Stress Buffering in Dog-Owner Dyads. [Symposium] Society for Social neuroscience, Chicago IL.
5. Bissell, S. ▫ Boghean, L., ▫ Klinkebiel, D. & **Strasser, R.** (2019) Cascading Effects of Early Life Stress: An Integrative Dog Model of the Hypomethylation of the Glucocorticoid Receptor (NR3C1). [Talk] *Canine Science Conference, Tempe AZ.*
6. Boghean, L., ▫ Bissell, S. ▫ Klinkebiel, D. & **Strasser, R.** (2019). Early Life Stress & DNA Methylation of the Oxytocin Receptor Gene (OXTR) Predict Dog Change in Cortisol & Affiliative Behavior During an Attachment Paradigm. [Talk] *Canine Science Conference, Tempe AZ.*
7. Cunningham, K. ▫ & **Strasser, R.** (2019). Effects of Oxytocin on Therapy Dogs' Behavior and Physiology. [Talk] *Canine Science Conference, Tempe AZ.*
8. Boghean, L., ▫ Buttner, A. P ▫, Li-Duhn, C. ▫ Bissell, S. ▫ & **Strasser, R.** (2019). Dog-Owner Engagement in Shared Activities Moderates Cortisol Synchrony Under Basal Conditions. [Poster & abstract] *Canine Science Conference, Tempe AZ.*
9. Dare, P. & **Strasser, R.** (2019). Ruff Morning? Enrichment Effects in Shelter Dogs. [Poster & abstract] *Canine Science Conference, Tempe AZ.*
10. Bissell, S. ▫ Boghean, L., ▫ & **Strasser, R.** (2019) Guide Dog Temperament and Behavior Assessment: Within-Litter Effects. [Poster & abstract] *Canine Science Conference, Tempe AZ.*
11. Bissell, S. ▫ Boghean, L., ▫ Klinkebiel, D. & **Strasser, R.** (2019) Cascading Effects of Early Life Stress: An Integrative Dog Model of Negative Behavioral Outcomes. [Talk] *Animal Behaviour Society, Chicago IL.*
12. Cunningham, K. ▫, Darwish, Z[▫], & **Strasser, R.** (2019). Physiological and Behavioral Effects of a Therapy Session on the Therapy Dog. [Talk] *Animal Behaviour Society, Chicago IL.*
13. Darwish, Z[▫], Cunningham, K. ▫, Dare, P. ▫, & **Strasser, R.** (2019). Regulation of Social Facilitation by Group Composition and Mesotocin. [Talk] *Animal Behaviour Society, Chicago IL.*
14. Darwish, Z[▫], Cunningham, K. ▫, **Strasser, R.** (2018) Influence of Rearing Condition on Adult Social Behavior in Zebra Finches. [Poster & abstract] *Society for Integrative and Comparative Biology, San Francisco CA.*
15. Kanouse, S. ▫ & **Strasser, R.** (2017). A Dam's Utero Environment is a Contributing Factor in Predicting the Sex Ratio of Her Own Litter and Potential Epigenetic Effect. [Poster & abstract] *Canine Science Conference, Tempe AZ.*
16. Buttner, A. P., Boghean, L. ▫, Kanouse, S. ▫ & **Strasser, R.** (2017). Attachment Influences Diurnal Cortisol Synchronization Between Dog and Owner. [Poster & abstract] *Canine Science Conference, Tempe AZ.*
17. Cunningham, K. ▫, Darwish, Z. ▫, Buttner, A. P., & **Strasser, R.** (2017). Hormonal Synchronization of Cortisol Levels and Emotional Contagion between Human Owners and Agility Dogs. [Poster & abstract] *Canine Science Conference, Tempe AZ.*
18. Darwish, Z[▫], Cunningham, K[▫], Strasser, R. (2016). Role of Breeding Experience and Rearing Condition in Altering Female Egg Investment in Zebra Finches. [Poster/abstract] *Animal Behaviour Society, Columbia MO.*
19. Buttner, A. P. ▫, & Strasser, R. (2016). Altered Behavioral, Hormonal, and Social-Cognitive Functioning in Shelter Dogs from Deprived Environments. [Poster/abstract] *Animal Behaviour Society, Columbia MO*

20. Muller, S. [□], Cunningham, K. [■], Kanouse, S. [■] & **Strasser, R.** (2016) Behavior of zoo visitors and their attitudes towards zoo animals. [Poster/abstract] *Animal Behaviour Society, Columbia MO.*
21. Cunningham, K. [■], Buttner, A. P. [■], Darwish, Z. [■], & **Strasser, R.** (2016) Sex Differences in the Synchronization of Hormonal State between Human Owners and Agility Dogs. [Poster/abstract] *Animal Behaviour Society, Columbia MO.*
22. Buttner, A. P. [■], & **Strasser, R.** (2015). The behavioral, social, and hormonal outcomes of dogs rescued from canine commercial breeding establishments. *International Society for Anthrozoology, Saratoga, NY*
23. Cunningham, K. [■], Darwish, Z. [■], & **Strasser, R.** (2015). Biting the hand that feeds: Risk factors associated with reported animal bites. [Poster & abstract] *International Society for Anthrozoology, Saratoga, NY.*
24. Snyder, K. [■], & **Strasser, R.** (2014). The Effects of Human Emotions on Dogs' Social Cognitive Performance and Hormone Levels. [Poster & abstract] *Society for Social Neuroscience, Washington D.C.*
25. Buttner, A. P. [■], & **Strasser, R.** (2014). Elevated cortisol concentrations in shelter dogs are associated with impaired performance on a social-cognitive task. [Poster & abstract] *Society for Social Neuroscience, Washington D.C.*
26. Buttner, A. P. [■], Thompson, B. [□], Snyder, K. [■] & **Strasser, R.** (2014). Human hormone levels and quality of social interactions predict dogs' cortisol levels following an agility competition: A study of interspecies hormonal interactions. [Poster & abstract] *Society for Social Neuroscience, Washington D.C.*
27. Buttner, A. P. [■], & **Strasser, R.** (2014). Elevated cortisol concentrations in shelter dogs are associated with impaired performance