Updated: November 15, 2026

Curriculum Vitae

Emily Elizabeth Bray, MA, PhD, CAAB

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PROFESSIONAL EXPERIENCE

Assistant Professor, University of Arizona, Tucson, AZ — **May 2023 – Present**
College of Veterinary Medicine (*primary appointment*)
Cognitive Science Graduate Interdisciplinary Program *(faculty member)*
Psychology (*joint appointment*)

Research Scientist, Canine Companions for Independence®, Santa Rosa, CA — **May 2023 – May 2024**

Postdoctoral Research Associate (Supervisors: Dr. Evan MacLean and Dr. Brenda Kennedy)
Focus: Longitudinal cognitive and behavioral studies in assistance dogs
University of Arizona, School of Anthropology, Tucson, AZ — **May 2017 – Oct 2022**
University of Arizona, College of Veterinary Medicine, Tucson, AZ, — **Oct 2022 – Apr 2023**
and Canine Companions for Independence®, Santa Rosa, CA — **May 2017 – Apr 2023**

EDUCATION

University of Pennsylvania, Philadelphia, PA — **May 2017**
PhD in Psychology (concentration: Animal Learning & Behavior); Teaching Certificate in College & University Teaching
Dissertation: "A longitudinal study of maternal style, young adult temperament and cognition, and program outcome in a population of guide dogs"
Advisors: Dr. Robert Seyfarth, Dr. Dorothy Cheney, and Dr. James Serpell (committee chair: Dr. Angela Duckworth)

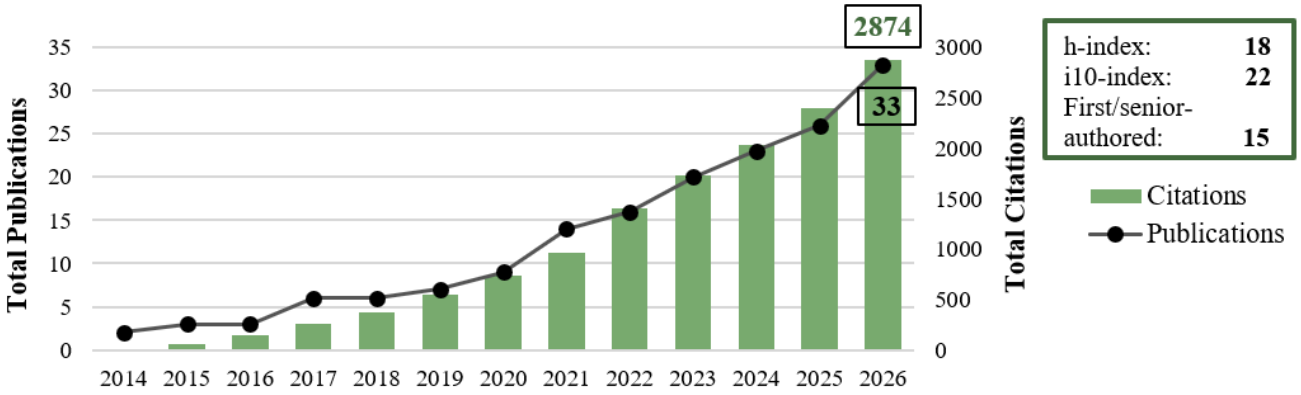
University of Pennsylvania, Philadelphia, PA — **May 2013**
MA in Psychology
Thesis: "Dogs as a model system for understanding problem-solving: Exploring the affective and cognitive mechanisms that impact inhibitory control"
Advisors: Dr. Robert Seyfarth, Dr. Dorothy Cheney, and Dr. James Serpell

Duke University, Durham, NC — **May 2012**
BA in Cognitive Psychology and English (*summa cum laude*), Graduation with Distinction in Psychology
Thesis (distinction): "Factors Affecting Inhibitory Control in Dogs"
Advisors: Dr. Brian Hare and Dr. Stephen Mitroff

CERTIFICATIONS

Certified Applied Animal Behaviorist (CAAB), credentialed by the Animal Behavior Society — **Jan 2023 – Present**

VITAE SUMMARY



PEER-REVIEWED PUBLICATIONS *[S]denotes trainee or mentee*

33 peer-reviewed publications, including 15 first- or senior-authored

33. Gnanadesikan, G.E.[S], **Bray, E.E.,** Snyder-Mackler, N., Switzer, L.R., Stetson, N.W.[S], Toll, M., Hargrave, S.H.[S], Horschler, D.J., Douglas, L.E.L.C., Block, T.A., Kennedy, B.S., Levy, K.M., Watowich, M.M., & MacLean, E.L. (in press). Genetic architecture of cognitive and behavioral traits in dogs reveals broad polygenicity and conserved links to human psychological traits. *PLOS Genetics.* doi: 10.1371/journal.pgen.1012368.

32. Hargrave, S.H.[S], **Bray, E.E.**, Switzer, L.R., McGrath, S., Alexander, G.E., Block, T.A., Carranza, E., Chao, N., Douglas, L.E.L.C., Galante, J., Hilyard, E., Jonkoski, D.S.[S], Kennedy, B.S., Kristal, E., Moreno, J.A., Promislow, D.E.L., Raichlen, D.A., Stetson, N.W.[S], Tereso, K., Vogel, N., Dog Aging Project Consortium, & MacLean, E.L. (2026). Cognitive Assessment for Neuropsychological Impairments in Dogs (CANID): An efficient, repeatable, and sensitive evaluation for studies of cognitive aging. *Animal Cognition.* doi: 10.1007/s10071-026-02112-x.

31. Jonkoski, D.S.[S], Lorig, N.M.[S], Delzio, M.C.[S], Klensin, A.M.[S], Marsters, A.[S], Li, H., Bernal, A.M., Mehl, M.R., Rodriguez, K.E., & **Bray, E.E.** (2026). Cross-species conversations: The development of the AURAL-Pet coding system to capture how people talk to pets in daily life. *Frontiers in Psychiatry,* 17:1881870. doi: 10.3389/fpsyt.2026.1881870.

30. **Bray, E.E.,** Douglas, L.E.L.C., Levy, K.M., Gnanadesikan, G.E.[S], Horschler, D.J., Kennedy, B.S., & MacLean, E.L. (2026). Maternal care and early rearing environment influence puppy behaviour and cognition. *Animal Behaviour, 237,* 123609. doi: 10.1016/j.anbehav.2026.123609.

29. Gnanadesikan, G.E.[S], **Bray, E.E.,** Levy, K.M., Horschler, D.J., Hargrave, S.H.[S], Douglas, L.E.L.C., Kennedy, B.S., Watowich, M.M., Snyder-Mackler, N., & MacLean, E.L. (2026). Characterizing the heritability of cognitive and behavioral traits across development in domestic dogs. *Royal Society Open Science,* 13(2), 241918. doi: 10.1098/rsos.241918.

28. Salomons, H., Ferrans, M., Cusato, C., Moore, K., Woods, V., **Bray, E.E.,** Kennedy, B.S., Block, T.A., Douglas, L.E.L.C., Roberts, A., Gruen, M., & Hare, B. (2026). Longitudinal evidence for the emergence of multiple intelligences in assistance dog puppies. *Animal Behaviour, 232,* 123410. doi: 10.1016/j.anbehav.2025.123410. Preprint: https://biorxiv.org/cgi/content/short/2024.09.26.615218v1

27. Jonkoski, D.S.[S], Douglas, L.E.L.C., Horschler, D.J., Klensin, A.M.[S], Kennedy, B.S., MacLean, E.L., & **Bray, E.E.** (2026). Indiscriminate sociality: puppies do not preferentially re-engage a human partner after joint social play is interrupted. *Animal Behaviour, 231,* 123425. doi: 10.1016/j.anbehav.2025.123425.

26. Conrow, K.D., Haney, R.S.[S], Malek-Ahmadi, M.H., Albright, J.D., Kaplan, B.L.F., Snyder-Mackler, N., Kerr, K.F., Su, Y., Promislow, D.E.L., **Bray, E.E.**, Dog Aging Project Consortium, & Leung, M.C.K. (2025). Demographic features, health status, and behavioral changes associated with cannabidiol use in the Dog Aging Project. *Frontiers in Veterinary Science,* 12:1666663. doi: 10.3389/fvets.2025.1666663.

25. Hargrave, S.H.[S], Keyser, A.J., Kristal, E., Alexander, G.E., Block, T.A., **Bray, E.E.**, Douglas, L.E.L.C., Kennedy, B.S., Promislow, D.E.L., Raichlen, D.A., Dog Aging Project Consortium, & MacLean, E.L. (2025). Functional assessments of short-term spatial memory in the Dog Aging Project identify strong associations with age that are not moderated by body mass. *GeroScience, 48,* 1-16. doi: 10.1007/s11357-025-01867-4.

24. Amirhosseini, M.H., Serpell, J.A., **Bray, E.E.,** Block, T.A., Douglas, L.E.L.C., Kennedy, B.S., Evans, K.M., Freeberg, K., & Pettigrew, P. (2025). Prediction of Assistance Dog Training Outcomes Using Machine Learning and Deep Learning Models. *Applied Animal Behaviour Science, 287,* 106632. doi: 10.1016/j.applanim.2025.106632.

23. Gnanadesikan, G.E.[S], **Bray, E.E.,** Cook, E.N., Levy, K.M., Douglas, L.E.L.C., Kennedy, B.S., Tecot, S.R., & MacLean, E.L. (2024). Basal Plasma Oxytocin & Fecal Cortisol Concentrations are Highly Heritable and Associated with Individual Differences in Behavior & Cognition in Dog Puppies. *Hormones and Behavior, 165,* 105612. doi: 10.1016/j.yhbeh.2024.105612.

22. Hargrave, S.H. [S], **Bray, E.E.,** McGrath, S., Alexander, G.E., Block, T.A., Chao, N., Darvas, M., Douglas, L.E.L.C., Galante, J., Kennedy, B.S., Kusick, B., Moreno, J.A., Promislow, D.E.L., Raichlen, D.A., Switzer, L.R., Tees, L., Underwood Aguilar, M., Urfer, S.R., Dog Aging Project Consortium, & MacLean, E.L. (2024). Characterizing Dog Cognitive Aging Using Spontaneous Problem-Solving Measures: Development of a Battery of Tests from The Dog Aging Project. *GeroScience, 47,* 23–43. doi: 10.1007/s11357-024-01278-x.

21. Gnanadesikan, G.E. [S], Tandon, D., **Bray, E.E.,** Kennedy, B.S., Tennenbaum, S.R., MacLean, E.L., & vonHoldt, B.M. (2024). Transposons in the Williams-Beuren Syndrome critical region are associated with social behavior in assistance dogs. *Behavior Genetics, 54,* 196-211. doi: 10.1007/s10519-023-10166-7.

20. ManyDogs Project, Espinosa, J., Stevens, J.R., Alberghina, D., Alway, H.E., Barela, J.D., Bogese, M., **Bray, E.E.**, Buchsbaum, D., Byosiere, S.E., Byrne, M., Cavalli, C.M., Chaudoir, L.M., Collins-Pisano, C., DeBoer, H.J., Douglas, L.E.L.C., Dror, S., Dzik, M.V., Ferguson, B., Fisher, L., Fitzpatrick, H.C., Freeman, M.S., Frinton, S.N., Glover, M.K., Gnanadesikan, G.E.[S], Goacher, J.E.P., Golańska, M., Guran, A., Hare, E., Hare, B., Hickey, M., Horschler, D.J., Huber, L., Jim, H., Johnston, A.M., Kaminski, J., Kelly, D.M., Kuhlmeier, V.A., Lassiter, L., Lazarowski, L., Leighton-Birch, J., MacLean, E.L., Maliszewska, K., Marra, V., Montgomery, L.I., Murray, M.S., Nelson, E.K., Ostojić, L., Palermo, S.G., Parks Russell, A.E., Pelgrim, M.H., Pellowe, S.D., Reinholz, A., Rial, L.A., Richards, E.M., Ross, M.A., Rothkoff, L.G., Salomons, H., Sanger, J.K., Santos, L., Schirle, A.R.[S], Shearer, S.J., Silver, Z.A., Silverman, J.M., Sommese, A., Srdoc, T., St. John-Mosse, H., Vega, A.C., Vékony, K., Völter, C.J., Walsh, C.J., Worth, Y.A., Zipperling, L.M.I., Żołędziewska, B., & Zylberfuden, S.G. (2023). ManyDogs 1: A multi-lab replication study of dogs' pointing comprehension. *Animal Behavior and Cognition, 10(3),* 232-286. doi: 10.26451/abc.10.03.03.2023.

19. ManyDogs Project, Alberghina, D., **Bray, E.E.**, Buchsbaum, D., Byosiere, S.E., Espinosa, J., Gnanadesikan, G.E. [S], Guran, A., Hare, E., Horschler, D.J., Huber, L., Kuhlmeier, V.A., MacLean, E.L., Pelgrim, M.H., Perez, B., Ravid-Schurr, D., Rothkoff, L., Sexton, C.L., Silver, Z.A., & Stevens, J.R. (2023). ManyDogs Project: A Big Team Science Approach to Investigating Canine Behavior and Cognition. *Comparative Cognition & Behavior Reviews, 18,* 59-77. doi: 10.3819/CCBR.2023.180004.

18. Salomons, H., Smith, K., Callahan-Beckel, M., Callahan, M., Levy, K.M., Kennedy, B.S., **Bray, E.E**., Gnanadesikan, G.E. [S], Horschler, D., Gruen, M., Tan, J., White, P., vonHoldt, B., MacLean, E.L., & Hare, B. (2023). Response to Hansen Wheat et al.: Additional analysis further supports the early emergence of cooperative communication in dogs compared to wolves raised with more human exposure. *Learning & Behavior, 51(2),* 131-134. doi: 10.3758/s13420-023-00576-2.

17. **Bray, E.E.,** Raichlen, D.A., Forsyth, K., Promislow, D.E.L., Alexander, G.E., MacLean, E.L., & Dog Aging Project Consortium (2023). Associations between physical activity and cognitive dysfunction in older companion dogs: Results from the Dog Aging Project. *GeroScience, 45,* 645-661. doi: 10.1007/s11357-022-00655-8.

16. **Bray, E.E.,** Zheng, Z., Tolbert, M.K., McCoy, B., Dog Aging Project Consortium, Kaeberlein, M., & Kerr, K.F. (2022). Once-daily feeding is associated with better health in companion dogs: Results from the Dog Aging Project. *GeroScience, 44,* 1779-1790. doi: 10.1007/s11357-022-00575-7.

15. Horschler, D.J., **Bray, E.E.,** Gnanadesikan, G.E. [S], Byrne, M., Levy, K.M., Kennedy, B.S., & MacLean, E.L. (2022). Dogs re-engage human partners when joint social play is interrupted: A behavioral signature of shared intentionality? *Animal Behaviour, 183,* 159-168. doi: 10.1016/j.anbehav.2021.11.007.

14. **Bray, E.E.,** Gnanadesikan, G.E. [S], Horschler, D.J., Levy, K.M., Kennedy, B.S., Famula, T.R., & MacLean, E.L. (2021). Early-emerging and highly heritable sensitivity to human communication in dogs. *Current Biology, 31(14),* 3132-3136. doi: 10.1016/j.cub.2021.04.055.

13. Hall, N.J., Johnston, A.M., **Bray, E.E.**, Otto, C.M., MacLean, E.L., & Udell, M.A.R. (2021). Working dog training for the twenty-first century. *Frontiers in Veterinary Science*, 8:646022. doi: 10.3389/fvets.2021.646022.

12. Salomons, H., Smith, K., Callahan-Beckel, M., Callahan, M., Levy, K.M., Kennedy, B.S., **Bray, E.E.**, Gnanadesikan, G.E. [S], Horschler, D., Gruen, M., Tan, J., White, P., MacLean, E.L., & Hare, B. (2021). Cooperative communication with humans evolved to emerge early in domestic dogs. *Current Biology, 31(14),* 3137-3144. doi: 10.1016/j.cub.2021.06.051.

11. **Bray, E.E.,** Otto, C.M., Udell, M.A.R., Hall, N.J., Johnston, A.M., & MacLean, E.L. (2021). Enhancing the selection and performance of working dogs. *Frontiers in Veterinary Science,* 8:644431. doi: 10.3389/fvets.2021.644431.

10. **Bray, E.E.,** Gruen, M.E., Gnanadesikan, G.E. [S], Horschler, D.J., Levy, K.M., Kennedy, B.S., Hare, B.A., & MacLean, E.L. (2021). Dog cognitive development: a longitudinal study across the first 2 years of life. *Animal Cognition, 24,* 311-328. doi: 10.1007/s10071-020-01443-7.

9. **Bray, E.E.,** Gruen, M.E., Gnanadesikan, G.E. [S], Horschler, D.J., Levy, K.M., Kennedy, B.S., Hare, B.A., & MacLean, E.L. (2020). Cognitive characteristics of 8- to 10-week-old assistance dog puppies. *Animal Behaviour, 166,* 193-206. doi: 10.1016/j.anbehav.2020.05.019.

8. Byrne, M., **Bray, E.E.,** MacLean, E.L., & Johnston, A.M. (2020). Evidence for win-stay-lose-shift in puppies and adult dogs. *Proceedings of the Cognitive Science Society.*

7. **Bray, E.E.,** Levy, K.M., Kennedy, B.S., Duffy, D.L., Serpell, J.A., & MacLean, E.L. (2019). Predictive models of assistance dog training outcomes using the Canine Behavioral Assessment and Research Questionnaire and a standardized temperament evaluation. *Frontiers in Veterinary Science,* 6:49. doi: 10.3389/fvets.2019.00049.

6. **Bray, E.E.,** Sammel, M.D., Cheney, D.L., Serpell, J.A., & Seyfarth, R.M. (2017). Effects of maternal investment, temperament, and cognition on guide dog success. *Proceedings of the National Academy of Sciences of the United States of America, 114*(34), 9128-9133. doi: 10.1073/pnas.1704303114.

5. **Bray, E.E.,** Sammel, M.D., Seyfarth, R.M., Serpell, J.A., & Cheney, D.L. (2017). Temperament and problem solving in a population of adolescent guide dogs. *Animal Cognition, 20*(5), 923-939. doi: 10.1007/s10071-017-1112-8.

4. **Bray, E.E.,** Sammel, M.D., Cheney, D.L., Serpell, J.A., & Seyfarth, R.M. (2017). Characterizing early maternal style in a population of guide dogs. *Frontiers in Psychology*, *8*, 175. doi: 10.3389/fpsyg.2017.00175.

3. **Bray, E.E.,** MacLean, E.L., & Hare, B.A. (2015). Increasing arousal enhances inhibitory control in calm but not excitable dogs. *Animal Cognition, 18*(6)*,* 1317-1329. doi: 10.1007/s10071-015-0901-1.

2. MacLean, E.L., Hare, B., Nunn, C.L., Addessi, E., Amici, F., Anderson, R.C., Aureli, F., Baker, J.M., Bania, A.E., Barnard, A.M., Boogert, N.J., Brannon, E.M., **Bray, E.E.,** Bray, J., Brent, L.J.N., Burkart, J.M., Call, J., Cantlon, J.F., Cheke, L.G., Clayton, N.S., Delgado, M.M., DiVincenti, L.J., Fujita, K., Herrmann, E., Hiramatsu, C., Jacobs, L.F., Jordan, K.E., Laude, J.R., Leimgruber, K.L., Messer, E.J.E., Moura, A.C.deA., Ostojić, L., Picard, A., Platt, M.L., Plotnik, J.M., Range, F., Reader, S.M., Reddy, R.B., Sandel, A.A., Santos, L.R., Schumann, K., Seed, A.M., Sewall, K.B., Shaw, R.C., Slocombe, K.E., Su, Y., Takimoto, A., Tan, J., Tao, R., van Schaik, C.P., Virányi, Z., Visalberghi, E., Wade, J.C., Watanabe, A., Widness, J., Young, J.K., Zentall, T.R., & Zhao, Y. (2014). The Evolution of Self-Control. *Proceedings of the National Academy of Sciences of the United States of America, 111*(20), E2140-E2148. doi: 10.1073/pnas.1323533111.

1. **Bray, E.E.,** MacLean, E.L., & Hare, B.A. (2014). Context specificity of inhibitory control in dogs. *Animal Cognition, 17*(1), 15-31. doi: 10.1007/s10071-013-0633-z.

MANUSCRIPTS – SUBMITTED, UNDER REVIEW & IN REVISION *[S]denotes trainee or mentee*

5. Hargrave, S.H.S, Raichlen, D.A., Alexander, G.E., Sayre, M.K., Block, T.A., Douglas, L.E.L.C., Kennedy, B.S., Switzer, L.R., Chao, N., Promislow, D.E.L., Dog Aging Project Consortium, **Bray, E.E.,** & MacLean, E.L. (in revision). Ahead of the pack: higher levels of objectively measured physical activity are associated with better memory in companion dogs.

4. Leighton, S.C., Rodriguez, K.E., & **Bray, E.E.** (under review). Service Dog Puppy Raising on Campus: A National Mixed-Methods Survey of College Club Leadership.

3. Leighton, S.C., O'Haire, M.E., Jensen, C.L., Bristol, S., Nieforth, L.O., Ashbeck, E.L., Bedrick, E.J., vanMarle, K., MacLean, E.L., **Bray, E.E.,** Campbell, R.L., Davis, L.W., Taylor, D.K., Brown, E.A., & Rodriguez, K.E. (under review). The Service Dog and Veteran Experiences Study (SERVES): a randomized clinical trial protocol.

2. Lorig, N.M.[S], Delzio, M.C.[S], Jonkoski, D.S.[S], Andrews, E.S., Andrews-Hanna, J.R., Grilli, M.D., Li, H., Bedrick, E.J., **Bray, E.E.**, & Rodriguez, K.E. (submitted). Using ecological momentary assessment to evaluate the influence of pet presence on human thought patterns and mood.

1. Hecht, E.E., Andics, A., Bowen, J., Boyko, A., **Bray, E.E.**, Fatjó, J., Head, E., Hekman, J.P., Huson, H., Jiménez, A.G., Johnson, P., Kukekova, A., Larson, G., Leeb, T., Lesch, R., Loftus, J., Lohi, H., MacLean, E.L., Mason, N., Miklosi, A., Mills, D., O'Neil, D., Otto, C., Prugh, L., Range, F., Ruple, A., Udell, M., Urfer, S., Vite, C., vonHoldt, B., Wirsing, A., & Wynne, C. (under review). Modeling Biology in the Real World: Lessons from the Domestic Dog.

OTHER PUBLICATIONS

[S]denotes trainee or mentee

2. MacLean, E.L., Hargrave, S.H.[S], & **Bray, E.E.** (2025). Cognitive Assessment for Neuropsychological Impairments in Dogs (CANID). *OSF.* https://doi.org/10.17605/OSF.IO/N7JT9

1. Gnanadesikan, G.E.[S], **Bray, E.E.,** Levy, K.M., Horschler, D.J., Gruen, M.E., Kennedy, B.S., Hare, B., & MacLean, E.L. (2023). Dog Cognitive Development Battery Methods. *OSF.* https://doi.org/10.17605/OSF.IO/CSK3A

RESEARCH GRANTS: CURRENT SUPPORT

Co-I	$178,618 **Mae Philanthropies** (PI: K. Rodriguez) *"Mapping the Landscape: A Survey of Facility Dog Teams Across the United States"*	**2027-2029**
Co-applicant	$2,500,000 CAD **Social Sciences and Humanities Research Council of Canada** Partnership Grant, Stage 2 (PI: C. Dell, University of Saskatchewan) *"Establishing a Network for Human-Animal Connections Research and Collaboration"*	**2026-2031**
Co-I	$191,081 **AKC Canine Health Foundation** (PI: E. MacLean) *"Protective Role for Insulin-like Growth Factor 1 (IGF-1) in Canine Cognitive Dysfunction"*	**2026-2029**
PI	$770,624 **Mae Philanthropies** (PI: **E. Bray**) *"ACTIVE aging: Assessing how Cognitive Trajectories are Impacted by Varied Enrichment"* (2025 initial award $200,000; 2026 expansion $570,624)	**2025-2031**
Co-PI	$200,000 **Mae Philanthropies** (PIs: **E. Bray**, M. O'Haire, S. Leighton, & E. MacLean) *"Pilot Study on Service Dog Welfare"*	**2025-2030**
PI	$150,000 **Mae Philanthropies & R.K. Mellon Family Foundation** (PI: **E. Bray**) *"Bridging Futures: Empowering Communities through an Innovative Joint Service Dog Raising Program"* (Mae Philanthropies $100,000; R.K. Mellon Family Foundation $50,000)	**2025-2027**
Co-I	$8,435,410 **Department of Defense** HT9425-24-1-0178 (PI: M. O'Haire) *"Psychiatric service dogs and prolonged exposure therapy for military-connected PTSD: a randomized clinical trial"*	**2024-2029**
MPI	$552,815 **Waltham Petcare Science Institute** (MPIs: K. Rodriguez & **E. Bray**) *"Personalized Approaches to Evaluating the Impacts of Pets on Human Mental Health and Wellbeing in Geographically Diverse and Older Adult Populations"*	**2024-2027**

Co-I	$3,315,541 **National Institutes of Health** R01 HD106413 (PI: M. O'Haire) *"Multi-site, longitudinal trial evaluating the efficacy, mechanisms, and moderators of service dogs for military veterans with PTSD"*	**2022-2026**

RESEARCH GRANTS: PREVIOUS SUPPORT

Co-applicant	$20,000 CAD **Social Sciences and Humanities Research Council of Canada** Partnership Grant, Stage 1 (PI: C. Dell, University of Saskatchewan) *"Building a Centre for Human-Animal Connections & Collaboration (CHAC2)"*	**2025-2026**
Postdoctoral Scholar/Key Personnel	$765,293 **Office of Naval Research** (PI: E. MacLean) *"Developmental and Genetic Influences on Working Dog Cognition"*	**2020-2025**
MPI	$25,000 **University of Arizona Foundation, Board of Trustees Small Grant Committee** (MPIs: **E. Bray** & K. Rodriguez) *"Pilot Funding for a UArizona College of Veterinary Medicine Veterinary Summer Scholars Research Program"*	**2024**
Postdoctoral Scholar/Key Personnel	$300,577 **National Institute on Aging** (PI: E. MacLean) *"Development of Cognitive and Physical Activity Biomarkers for a Companion Dog Model of Alzheimer's Disease"*	**2020-2022**
Co-PI	$105,949 **AKC Canine Health Foundation** (PIs: **E. Bray** & E. MacLean) *"The Effects of Early Life Experience on Working Dog Temperament and Cognition"*	**2018-2021**
Postdoctoral Scholar/Key Personnel	$451,920 **Office of Naval Research** (PI: E. MacLean) *"Ontogeny and Heritability of Cognitive and Behavioral Traits Linked to Military Working Dog Success"*	**2017-2019**
Fellow	$32,000/year **National Science Foundation** *Graduate Research Fellowship Program*	**2013-2016**
Fellow	$27,615/year **University of Pennsylvania** *Benjamin Franklin Fellowship*	**2012-2013, 2016-2017**

HONORS AND AWARDS

Wallis Annenberg PetSpace Leadership Institute 10th Anniversary Fellow, Class of 2026	**2026**
Animal Behavior Society 2026: Caregiver Grant ($405)	**2026**
Research, Innovation & Impact George H. Davis Travel Fellowship ($2,500)	**2025**
2024 GeroScience Outstanding Original Research Paper Award, Fourth Prize	**2024**
University of Arizona: 2022 Outstanding Postdoctoral Scholar Award	**2022**
Wallis Annenberg PetSpace Leadership Institute Fellow, Class of 2020	**2020**
McDonogh School Young Alumni Award Recipient	**2019**
University of Arizona Sursum Fellow: Postdoctoral Research Development Grant ($1,083)	**2018-2019**
School of Arts & Sciences Dean's Travel Subvention ($500)	**Spring 2017**
Norman Anderson Graduate Student Fund, Dept. of Psychology ($2,490)	**Winter 2017**
School of Arts & Sciences Dean's Travel Subvention ($500)	**Summer 2016**
Norman Anderson Graduate Student Fund, Dept. of Psychology ($3,000)	**Summer 2015**
School of Arts & Sciences Dean's Travel Subvention ($300)	**Summer 2014**
Norman Anderson Graduate Student Fund, Dept. of Psychology ($2,750)	**Summer 2014**
Teece Fellowship, University of Pennsylvania ($2,000)	**Summer 2013**
Phi Beta Kappa, Duke University	**Spring 2013**
Karl E. Zener Award for Outstanding Performance in Psychology, Duke University	**Spring 2012**
Undergraduate Research Support Office Independent Study Grant ($400)	**Fall 2011**
Vertical Integration Program in Psychology Stipend ($3,000)	**Summer 2011**
Student Marshal	**Spring 2011**
Winfred Quinton Holton Prize for Innovative Work in the Field of Education	**Spring 2011**
Psi Chi Honor Society Inductee	**Spring 2010**

ACADEMIC INVITED TALKS

Canine Science Forum, Keynote Speaker, University of Warsaw, Warsaw, Poland	**Forthcoming 2027**
Society for Companion Animal Studies (SCAS) Webinar Series, Virtual	**2026**
Sci Scent Conference (opening speaker on both days), Sulhamstead, United Kingdom	**2026**
10th Annual International Courthouse Dogs Conference, Closing Keynote, Orlando, Florida	**2025**
Inaugural Duffield Institute Service Dog Symposium, Cornell University	**2025**
Duke Canine Cognition Center, Duke University	**2025**
Joint Symposium for Working K9s, Plenary Talk, Atlanta, Georgia	**2025**
The Origins Conference (The Functional Dog Collaborative & IAABC Foundation)	**2025**
20th Annual College of Science Lecture Series, Opening Lecture, University of Arizona	**2025**
Human Animal Interaction Section of American Psychological Association Webinar	**2025**
Cognitive Science Colloquium Series, University of Arizona	**2025**
Science of Medicine Grand Rounds, Mayo Clinic, Scottsdale, Arizona	**2024**
Research Series on Human-Animal Relationships, University of Arizona	**2024**
Comparative Medicine Symposium, Arizona State University	**2023**
Faculty Research Blitz, Fall 2023 Colloquium Series, University of Arizona Department of Psychology	**2023**
Animal Behavior Graduate Group Winter 2023 Seminar Series, UC Davis	**2023**
Evolution of Social Complexity Colloquium, Arizona State University	**2021**
Lunch & Learn, Penn Vet Working Dog Center	**2021**
Biology Department Colloquium Speaker Series, Sonoma State University	**2020**
Wallis Annenberg PetSpace Leadership Institute Retreat, Wallis Annenberg PetSpace	**2020**
1st Annual Darwin Dogs Day, Duke Canine Cognition Center, Duke University	**2019**
Evolutionary Anthropology Talk Series, Duke University	**2019**
Canine Science Symposium, San Francisco SPCA	**2018**
Centre for Research in Animal Behaviour, University of Exeter	**2016**
Clever Dog Lab, Messerli Research Institute, University of Veterinary Medicine Vienna	**2013**
Family Dog Project, Eötvös Loránd University Department of Ethology	**2013**

OUTREACH INVITED TALKS

Canine Companions Heritage Society and Empower Independence Society Event, 15 Years of Research, Virtual	**2026**
Paws to Connect, Forum hosted by Courthouse Dogs Foundation, Virtual	**2026**
Animal Behavior Society 2026 Public Day Program, Keynote Address, Cincinnati, Ohio	**2026**
Pennsylvania State University Canine Extension Webinar, Virtual	**2026**
Canine Companions All Staff Town Hall, Santa Rosa, California	**2026**
Canine Companions Empower Independence Society, Santa Rosa, California	**2026**
Federal Correctional Complex, Tucson, Arizona	**2025**
Waltham Petcare Science Institute, Virtual	**2025**
Courthouse Dogs Foundation, Q&A on Inside the Mind of a Dog, Orlando, Florida	**2025**
Disability Resource Center, University of Arizona, Tucson, Arizona	**2025**
Liberty Dogs™, Reno, Nevada	**2025**
K9s for Warriors, Virtual	**2024**
Canine Companions Heritage Society Arizona Stakeholder Event, Tucson, Arizona	**2024**
Lunch & Learn with K9s for Warriors and Senate Mental Health Caucus, Dirksen Senate Office Building	**2024**
Futures Council Inaugural Meeting, University of Arizona College of Veterinary Medicine, Oro Valley, Arizona	**2024**
Assistance Dogs International Members Forum Presentation, Virtual	**2023**
Good Dog Good Breeder Community, Virtual	**2022**
Lagotto Romagnolo Club of America, Virtual	**2022**
Petminded Workshop Series, Virtual	**2021**
Canine Companions Breeder Caretaker Seminar, Santa Rosa, California	**2021**
Canine Companions Virtual Heritage Society Donor Events, Northwest, Southwest, Northeast, Southeast, and South Central Regions	**2020**
VetVine Continuing Education Webinar Series sponsored by AKC Canine Health Foundation, Virtual	**2019**
Canine Companions Breeder Caretaker Seminar, Santa Rosa, California	**2018**
Canine Companions TEAM Volunteer Leadership Conference, Santa Rosa, California	**2018**
Canine Companions Research Update, National Board Meeting, Santa Rosa, California	**2018**
Canine Companions National Board Meeting Reception, Santa Rosa, California	**2017**

The Seeing Eye, Morristown, New Jersey **2015, 2017**

PANELS AND SYMPOSIA

"Developing and applying a coding scheme to observations of human–animal interactions: A case study using AURAL-Pet" workshop, *contributor*
International Society for Anthrozoology (ISAZ) Conference, Paris, France **2026**

"Turning Evidence into Action" panel, *panelist*
Duffield Institute Service Dog Symposium, Cornell University College of Veterinary Medicine **2025**

"Pets and Human Mental Health and Wellbeing: Embracing complexity, context, and collaboration through an innovative HAI research program" symposium, *panelist in moderated panel discussion following the symposium talks*
34th International Society for Anthrozoology Conference, Saskatoon, Canada **2025**

ORAL PRESENTATIONS **denotes presenter [S]denotes trainee or mentee*

Buelna, R.*[S], Stetson, N.W.[S], Rodriguez, K.E., Lorig, N.M. [S], **Bray, E.E.,** & MacLean, E.L. (2026 September). Development and Reliability of Qualitative Behavioral Assessment for Evaluating Future Service Dogs. 3rd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Hirabayashi, C.*[S], Marsters, A.[S], Jonkoski, D.S.[S], Lorig, N.M.[S], Delzio, M.[S], Bernal, A., Mehl, M., Rodriguez, K.E., & **Bray, E.E.** (2026 September). Developing the AURAL-Pet Ethogram to Quantify Human-Animal Interactions in Relation to Human-Animal Wellness. 3rd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Lorig, N.M. *[S], Jonkoski, D.S.[S], Andrews, E., Andrews-Hanna, J., Grilli, M., Li, H., Bedrick, E., MacLean, E.L., **Bray, E.E.,** & Rodriguez, K.E. (2026 September). Developing the AURAL-Pet Ethogram to Quantify Human-Animal Interactions in Relation to Human-Animal Wellness. 3rd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Gnanadesikan, G.E.*[S], **Bray, E.E.**, Snyder-Mackler, N., Switzer, L., Stetson, N.W.[S], Toll, M., Hargrave, S.[S], Horschler, D.J., Douglas, L.E.L.C., Block, T.A., Kennedy, B.S., Levy, K.M., Watowich, M.M., & MacLean, E.L (2026 July). Genetic Architecture of Canine Behavior in a Population of Retrievers (*Canis lupus familiaris*). Animal Behavior Society 2026 Meeting, Cincinnati, Ohio.

Jonkoski, D.S.*[S], Lorig, N.[S], Delzio, M.C.[S], Li, H., Bernal, A.M., Mehl, M.R., Rodriguez, K.E., & **Bray, E.E.** (2026 July). I'm all EARs: The creation of the AURAL-Pet coding system to explore daily human-pet interactions. 35th International Society for Anthrozoology Conference, Paris, France. *Presented within the symposium "Pets and Human Mental Health and Wellbeing: Embracing complexity, context, and collaboration through an innovative HAI research program"*.

Lorig, N.*[S], Jonkoski, D.S.[S], Andrews, E., Andrews-Hanna, J., Grilli, M., Li, H., Bedrick, E., MacLean, E.L., **Bray, E.E.,** & Rodriguez, K.E. (2026 July). Using ecological momentary assessment to evaluate the impact of pet presence on human thought patterns and affect. 35th International Society for Anthrozoology Conference, Paris, France.

Bray, E.E.*, Jonkoski, D.S.[S], Lorig, N.[S], Delzio, M.C.[S], Bernal, A.M., Mehl, M.R., & Rodriguez, K.E. (2026 June). The Creation of AURAL-Pet: Audio-based Understanding of Relational Animal-directed Language. Canine Science Conference, Vancouver, B.C., Canada.

Jonkoski, D.S.*[S], Douglas, L.E.L.C., Horschler, D.J., Klensin, A.M.[S], Kennedy, B.S., MacLean, E.L., & **Bray, E.E.** (2026 June). Investigating Markers of Joint Intentionality in Domestic Dog Puppies. Canine Science Conference, Vancouver, B.C., Canada.

Stetson, N.W.*[S], **Bray, E.E.**, Douglas, L.E.L.C., Block, T., Kennedy, B.S., & MacLean, E.L. (2026 June). Sex differences in cognition and temperament in service dogs in training. Canine Science Conference, Vancouver, B.C., Canada.

MacLean, E.L., Gnanadesikan, G.E.[S], Snyder-Mackler, N., Switzer, L., Stetson, N.W.[S], Toll, M., Hargrave, S.[S], Horschler, D.J., Douglas, L.E.L.C., Block, T.A., Kennedy, B.S., Levy, K.M., Watowich, M.M., & **Bray, E.E.** (2026 June). Genetic Architecture of Cognitive and Behavioral Traits in a Population of Labrador and Golden Retrievers. Canine Science Conference, Vancouver, B.C., Canada.

Jonkoski, D.S.*[S], Delzio, M.[S], Bernal, A., Mehl, M., Rodriguez, K.E., & **Bray, E.E.** (2025 September). Cross-species conversations: The development of a coding system to capture verbal communication between people and their pets. 2nd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Jonkoski, D.S.[S], Delzio, M.[S], Bernal, A., Mehl, M., Rodriguez, K.E., & **Bray, E.E**.* (2025 June). Cross-species conversations: The development of a coding system to capture verbal communication between people and their pets. 34th International Society for Anthrozoology Conference. Saskatoon, Canada.

Houle, A.N.*[S], MacLean, E.L, & **Bray, E.E.** (2024 September). Can service dog success be predicted at 8 weeks of age? First Annual University of Arizona College of Veterinary Medicine Research Day, Tucson, Arizona.

Gnanadesikan, G.E.*[S], **Bray, E.E.**, Levy, K.M., Douglas, L.E.L.C., Horschler, D.J., Hargrave, S.[S], Kennedy, B.S., Watowich, M.M., Snyder-Mackler, N., & MacLean, E.L (2024 June). Characterizing the Heritability of Cognitive and Behavioral Traits across Development in Domestic Dogs. Animal Behavior Society 2024 Meeting, Warder Clyde Allee Competition Symposium, London, Ontario, Canada.

Bray, E.E.*, Zheng, Z., Tolbert, M.K., McCoy, B.M., Kaeberlein, M., Kerr, K.F., Raichlen, D.A., Forsyth, K.K., Promislow, D.E.L., Alexander, G.E., MacLean, E.L., & Dog Aging Project Consortium (2024 June). Associations between lifestyle factors and canine cognitive function: Results from the Dog Aging Project. The 4th Canine Science Conference, Seattle, Washington.

Hargrave, S.*[S], **Bray, E.E.,** McGrath, S., Alexander, G.E., Block, T.A., Chao, N., Darvas, M., Douglas, L.E.L.C., Galante, J., Kennedy, B.S., Kusick, B., Moreno, J.A., Promislow, D.E.L., Raichlen, D.A., Switzer, L.R., Tees, L., Underwood Aguilar, M., Urfer, S.R., Dog Aging Project Consortium, & MacLean, E.L. (2024 June). Characterizing Dog Cognitive Aging Using Spontaneous Problem Solving Measures: Development of a Battery of Tests from the Dog Aging Project. The 4th Canine Science Conference, Seattle, Washington.

Bray, E.E.*, Douglas, L.E.L.C., Gnanadesikan, G.E.[S], Horschler, D.J., Kennedy, B.S., Levy, K.M., & MacLean, E.L. (2024 April). Mothers matter: How early life experiences influence canine cognition and behavior. The 31st Annual International Conference On Comparative Cognition, Albuquerque, New Mexico.

Gnanadesikan, G.E.*[S], **Bray, E.E.,** Levy, K.M., Horschler, D.J., Hargrave, S.[S], Douglas, L.E.L.C., Kennedy, B.S., Watowich, M.M., Snyder-Mackler, N., & MacLean, E.L. (2024 April). Characterizing the heritability of Cognitive and Behavioral Traits Across Development in Domestic Dogs (*Canis lupus familiaris*). The 31st Annual International Conference On Comparative Cognition, Albuquerque, New Mexico.

Hargrave, S.*[S], **Bray, E.E.,** McGrath, S., Alexander, G.E., Block, T.A., Chao, N., Darvas, M., Douglas, L.E.L.C., Galante, J., Kennedy, B.S., Kusick, B., Moreno, J.A., Promislow, D.E.L., Raichlen, D.A., Switzer, L.R., Tees, L., Underwood Aguilar, M., Urfer, S.R., Dog Aging Project Consortium, & MacLean, E.L. (2024 April). Characterizing Dog Cognitive Aging Using Spontaneous Problem Solving Measures: A Battery of Tests from the Dog Aging Project. The 31st Annual International Conference On Comparative Cognition, Albuquerque, New Mexico.

Gnanadesikan, G.E.*[S], **Bray, E.E.,** Levy, K.M., Douglas, L.E.L.C., Horschler, D.J., Hargrave, S.[S], Kennedy, B.S., & MacLean, E.L. (2023 October). Characterizing the heritability of cognitive and behavioral traits across development in a population of assistance dogs. South Eastern Evolution and Human Behavior 2023 Meeting. Stone Mountain, Georgia.

Bray, E.E.*, Douglas, L.E.L.C., Gnanadesikan, G.E.[S], Horschler, D.J., Kennedy, B.S., Levy, K.M., & MacLean, E.L. (2023 January). Effects of early maternal care on puppy behavior and training outcome. #AnimBehav2023 Animal Behaviour Twitter Conference. https://twitter.com/DrEmilyBray/status/1616146051735629824

Bray, E.E.* & ManyDogs (2023 January). ManyDogs Project: Leveraging big team science to understand canine behavior and cognition. #AnimBehav2023 Animal Behaviour Twitter Conference. https://twitter.com/ManyDogsProject/status/1616163665442664453

Bray, E.E.*, Douglas, L., Gnanadesikan, G.E.[S], Horschler, D.J., Levy, K.M., Kennedy, B.S., & MacLean, E.L. (2022 October). Effects of early rearing environment on working dog puppy behavior and outcome. Canine Science Conference, Colgate University, Hamilton, New York.

Gnanadesikan, G.E.*[S], Tandon, D., **Bray, E.E.**, MacLean, E.L., & vonHoldt, B.M. (2022 October). Do dogs have Williams-Beuren Syndrome? Transposons, behavior & training success in assistance dogs. Canine Science Conference, Colgate University, Hamilton, New York.

Bray, E.E.*, Raichlen, D.A., Forsyth, K., Promislow, D.E.L., Alexander, G.E., & MacLean, E.L. (2022 September). Associations between physical activity and cognitive dysfunction in older companion dogs: results from the Dog Aging Project. Dog Aging Project Annual Meeting, Seattle, Washington.

Gnanadesikan, G.E.*[S], Tandon, D., **Bray, E.E.**, MacLean, E.L., & vonHoldt, B.M. (2022 July). Do dogs have Williams-Beuren Syndrome? Transposons, behavior & training success in assistance dogs. Animal Behavior Society 2022, San Jose, Costa Rica.

Bray, E.E.*, Raichlen, D.A., Forsyth, K., Promislow, D.E.L., Alexander, G.E., MacLean, E.L., & Dog Aging Project Consortium (2022 June). Physical activity is associated with better cognitive function: Results from the Dog Aging Project. American College of Veterinary Internal Medicine Forum, Austin, Texas.

Bray, E.E.* (2022 April). The effect of maternal care on the outcomes of working dog puppies. 2022 Penn Vet Working Dog Conference (Virtual meeting).

Bray, E.E.*, Gnanadesikan, G.E.*[S], Horschler, D.J., Levy, K.M., Kennedy, B.S., Famula, T.R., & MacLean, E.L. (2021 October). Development and heritability of cognitive traits in Canine Companions dogs. International Working Dog Conference 2021 (Virtual meeting).

Bray, E.E.*, Levy, K.M., Kennedy, B.S., & MacLean, E.L. (2021 October). The effect of maternal style on later puppy Behavior in Canine Companions dogs. International Working Dog Conference 2021 (Virtual meeting).

Bray, E.E.* (2021 September). Making the Grade: Development of Cognition and Temperament in Assistance Dogs. 2021 Assistance Dogs International Virtual Conference.

Bray, E.E.* (2021 July). RStudio Projects and RMarkdown. Dog Aging Project, Trainees Research in Project (TRIP) Meeting.

Bray, E.E.* (2021 April). Continuing to explore the effects of mothering style in future assistance dogs. East Coast Canine Cognition Workshop, Yale University.

Gnanadesikan, G.E.*[S], **Bray, E.E.,** MacLean, E.L., & vonHoldt, B.M (2021 April). Williams-Beuren Syndrome in Dogs? Genetic Variation, Social Behavior, and Assistance Dog Success. East Coast Canine Cognition Workshop, Yale University.

Horschler, D.J., **Bray, E.E.*,** & MacLean, E.L. (2021 April). Interpreting dogs' re-engagement behaviors after disrupted joint activities. East Coast Canine Cognition Workshop, Yale University.

Horschler, D.J., **Bray, E.E.*,** & MacLean, E.L. (2021 Feb). Do dogs form joint intentions with humans in social play? The Society for Personality and Social Psychology's Origins of the Social Mind Preconference.

Bray, E.E.*, Gnanadesikan, G.E.*[S], Horschler, D.J., & MacLean, E.L. (2021 Jan). Heritable variation in dog social cognition. #AnimBehav2021 Animal Behaviour Twitter Conference. https://twitter.com/DrEmilyBray/status/1354554832749645826

Gnanadesikan, G.E.*[S], Espinosa, J.H., & **ManyDogs** (2021 Jan). ManyDogs 1: An International Collaborative Approach to Pointing Comprehension in Domestic Dogs. #AnimBehav2021 Animal Behaviour Twitter Conference. https://twitter.com/ManyDogsProject/status/1354550089918767105

Bray, E.E.* & MacLean, E.L. (2020 July). Early ontogeny of social cognition in domestic dogs. Animal Behavior Society 2020 Virtual Conference.

Bray, E.E.*, Gnanadesikan, G.E.*[S], Horschler, D.J., & MacLean, E.L. (2020 Feb). Early development and longitudinal stability of cognitive traits in working dogs. East Coast Canine Cognition Workshop, Yale University, New Haven, Connecticut.

Byrne, M.*, **Bray, E.E.,** MacLean, E.L., & Johnston, A.M. (2020 Feb). Evidence for win-stay-lose-shift in puppies and adult dogs. East Coast Canine Cognition Workshop, Yale University, New Haven, Connecticut.

Horschler, D.J.*, **Bray, E.E**., & MacLean, E.L. (2020 Feb). Do dogs re-engage humans when joint experiences end? East Coast Canine Cognition Workshop, Yale University, New Haven, Connecticut.

MacLean, E.L.*, Gnanadesikan, G.E.[S], **Bray, E.E.,** & Snyder-Mackler, N. (2020 Jan). Dog diversity as a natural experiment in cognitive evolution. The Society for Integrative & Comparative Biology Annual Meeting, Austin, Texas.

MacLean, E.L.*, **Bray, E.E.,** Gnanadesikan, G.E.[S], & Horschler, D.J. (2019 Oct). Ontogeny and heritability of cognitive and temperamental traits in an assistance dog population. International Canine Science Conference, Tempe, Arizona.

Bray, E.E.*, Gnanadesikan, G.[S], Horschler, D., & MacLean, E. (2019 April). Early emerging cognition in 9-week-old puppies. The 26th International Conference On Comparative Cognition, Melbourne Beach, Florida.

MacLean, E.*, **Bray, E.E.,** Gnanadesikan, G.[S], & Horschler, D. (2019 April). Heritability of Cognitive Traits in a Pedigreed Dog Population. The 26th International Conference On Comparative Cognition, Melbourne Beach, Florida.

Bray, E.E.* (2018 Nov). How mothers matter: The impact of maternal style on later behavior and outcome in assistance dogs. East Coast Canine Cognition Workshop, Yale University, New Haven, Connecticut.

Bray, E.E.*, Sammel, M., Cheney, D., Serpell, J., & Seyfarth, R. (2017 Oct). The effects of maternal investment, temperament, & cognition on guide dog success. Canine Science Conference, Tempe, Arizona.

Bray, E.E.*, Sammel, M., Cheney, D., Serpell, J., & Seyfarth, R (2017 June). Puppies that succeed as guide dogs get tough love. 54th Annual Conference of the Animal Behavior Society, Toronto, Ontario.

Bray, E.E.*, Sammel, M., Cheney, D., Serpell, J., & Seyfarth, R (2016 Aug). Cognitive and temperament predictors of guide dog success. 53rd Annual Conference of the Animal Behavior Society, Columbia, Missouri.

Bray, E.E.* (2014 Aug). The effect of arousal on inhibitory control in dogs. 51st Annual Conference of the Animal Behavior Society, Princeton, New Jersey.

Bray, E.E.* (2013 Aug). Dogs as a model system for understanding the effect of arousal on inhibitory control. University of Pennsylvania, 699 presentations to the Department of Psychology. Philadelphia, Pennsylvania.

Bray, E.E.* (2012 Sept). What are the factors affecting inhibitory control in dogs? IGERT Common Ground Seminar. Philadelphia, Pennsylvania.

Bray, E.E.*, MacLean, E.L, & Hare, B.A. (2012 April). Factors Affecting Inhibitory Control in Dogs. 7th Annual ACC Meeting of the Minds Conference, Blacksburg, Virginia.

POSTERS **denotes presenter [S]denotes trainee or mentee*

Volpe, J.*[S], Lorig, N.M.[S], **Bray, E.E.,** & Rodriguez, K.E. (2026 September). Setting the Standards and Matching the Mission: A Comparative Analysis of Guidelines and Matching Standards for Facility Dog Placement. 3rd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

- ❖ *Awarded First Place, Best Student Poster Presentation*

Bootier, A.*[S], Lorig, N.M.[S], Rodriguez, K.E., MacLean, E.L., & **Bray, E.E.** (2026 September). Reliability of photo-based Body Condition Scoring in cats and dogs. 3rd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Fenton, J.*[S], Leighton, S.C., Lorig, N.M.[S], **Bray, E.E.,** & Rodriguez, K.E. (2026 September). More Than Puppy Love: Exploring How Campus Future Service Dog Raising Clubs Shape Students' Academic Success and Wellbeing. 3rd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Stetson, N.W.*[S], MacLean, E.L, **Bray, E.E.,** Block, T.A., Douglas, L.E.L.C, & Kennedy, B.S. (2026 September). Sex differences in cognition and temperament in service dogs in-training. 3rd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Jonkoski, D.S.*[S], Block, T.A., Douglas, L.E.L.C., Kennedy, B.S., MacLean, E.L., & **Bray, E.E.** (2026 September). Investigating the association between trainer ratings and independent assessments of service dog behavior. 3rd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Bootier, A.*[S], Lorig, N.M.[S], Rodriguez, K.E., MacLean, E.L., & **Bray, E.E.** (2026 August). Reliability of photo-based Body Condition Scoring. 2026 Veterinary Scholars Symposium, Raleigh, North Carolina.

Volpe, J.*[S], Lorig, N.M.[S], **Bray, E.E**., & Rodriguez, K.E. (2026 August). Setting the Standards and Matching the Mission: A Comparative Analysis of Guidelines and Matching Standards for Facility Dog Placement. 2026 Veterinary Scholars Symposium, Raleigh, North Carolina.

Fenton, J.*[S], Leighton, S.C., Lorig, N.M.[S], **Bray, E.E.**, & Rodriguez, K.E. (2026 August). More Than Puppy Love: Exploring How Campus Future Service Dog Raising Clubs Shape Students' Academic Success and Wellbeing. 2026 Veterinary Scholars Symposium, Raleigh, North Carolina.

Buelna, R.*[S], Stetson, N.W.[S], Rodriguez, K.E., Lorig, N.M.[S], **Bray, E.E**., & MacLean, E.L. (2026 August). Development and Reliability of Qualitative Behavioral Assessment for Evaluating Future Service Dogs. 2026 Veterinary Scholars Symposium, Raleigh, North Carolina.

Jonkoski, D.S.*[S], Block, T.A., Douglas, L.E.L.C., Kennedy, B.S., MacLean, E.L., & **Bray, E.E.** (2026 April). Investigating the association between trainer ratings and independent assessments of service dog behavior. Annual Psychology Masters and Honors Research Forum. Tucson, AZ, USA.

Bryant, J.*[S], MacLean, E.L., Leighton, S., Rodriguez, K.E., & **Bray, E.E.** (2026 April). The Effects of Different Raising Models on Service Dog Behavior and Outcome. Annual Psychology Masters and Honors Research Forum. Tucson, AZ, USA.

Bryant, J.*[S], MacLean, E.L., Leighton, S., Rodriguez, K.E., & **Bray, E.E.** (2026 April). The Effects of Different Raising Models on Service Dog Behavior and Outcome. Franke Honors Pinnacle. Tucson, AZ, USA.

Hirabayashi, C.*[S], Marsters, A.*[S], Jonkoski, D.S.[S], Lorig, N.[S], Delzio, M.C.[S], Bernal, A.M., Mehl, M.R., Rodriguez, K.E., & **Bray, E.E.** (2026 March). Developing the AURAL-Pet Ethogram to Quantify Human-Animal Interactions in Relation to Human-Animal Wellness. University of Arizona Animal & Comparative Biomedical Sciences (ACBS) Poster Session. Tucson, AZ, USA.

Hirabayashi, C.*[S], Marsters, A.*[S], Jonkoski, D.S.[S], Lorig, N.[S], Delzio, M.C.[S], Bernal, A.M., Mehl, M.R., Rodriguez, K.E., & **Bray, E.E.** (2026 March). Developing the AURAL-Pet Ethogram to Quantify Human-Animal Interactions in Relation to Human-Animal Wellness. Graduate & Professional Student Council Student Showcase. Tucson, AZ, USA.

- ❖ *Awarded First Place in the Innovation, Technology, and Design for Impact Category*

Santiago, M.*[S], Stetson, N.W.[S], MacLean, E.L., & **Bray, E.E.** (2025 September). Implementation of Ethogram and Qualitative Behavior Assessment Techniques in Coding Dog Temperament for SERVES. 2nd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Hugyetz, V.*[S], Lorig, N.[S], Garcia, A., Reich-Fuehrer, M., Rodriguez, K., Andrews-Hanna, J., Mehl, M., Grilli, M., MacLean, E.L., & **Bray, E.E.** (2025 September). Strengthening the bond?: Implications of pet talk frequency among older adults. 2nd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Murray, K.*[S], Hugyetz, V.[S], Hargrave, S.[S], **Bray, E.E.**, & MacLean, E.L. (2025 September). Identifying risk factors for cognitive decline in senior dogs. 2nd Annual Research Day at the University of Arizona College of Veterinary Medicine. Oro Valley, Arizona.

Hugyetz, V.*[S], Lorig, N.[S], Garcia, A., Reich-Fuehrer, M., Rodriguez, K., Andrews-Hanna, J., Mehl, M., Grilli, M., MacLean, E.L., & **Bray, E.E.** (2025 August). Strengthening the bond?: Implications of pet talk frequency among older adults. Boehringer Ingelheim Veterinary Scholars Symposium, Spokane, Washington.

Murray, K.*[S], Hugyetz, V.[S], Hargrave, S.[S], **Bray, E.E.**, & MacLean, E.L. (2025 August). Identifying risk factors for cognitive decline in senior dogs. Boehringer Ingelheim Veterinary Scholars Symposium, Spokane, Washington.

Jonkoski, D.S.*[S], Block, T.A., Kennedy, B.S., MacLean, E.L., & **Bray, E.E.** (2025 June). Investigating the association between trainer ratings and independent assessments of desirable dog behavior. 34th International Society for Anthrozoology Conference. Saskatoon, Canada.

- ❖ *Awarded Second Place, Best Student Poster Presentation*

Jonkoski, D.S.*[S], & **Bray, E.E.** (2025 February). Investigating the association between trainer ratings and independent assessments of dog behavior. University of Arizona Psychology Virtual Interview Day Poster Session. Virtual.

Conrow, K.D.*, Haney, R.[S], Malek-Ahmadi, M., Snyder-Mackler, N., Kerr, K., Su, Y., Albright, J., Promislow, D., **Bray, E.E.,** Dog Aging Project Consortium, & Leung, M.C.K. (2024 September). Demography and Behavioral Changes of Dogs with Cannabidiol and Hemp Use in the Dog Aging Project. Environmental Mutagenesis and Genomics Society, Palm Springs, CA.

George, N.M.*[S], **Bray, E.E.,** & MacLean, E.L. (2024 September). Cognitive and Behavioral Predictors of Success in a Service Dog Training Program. First Annual University of Arizona College of Veterinary Medicine Research Day, Tucson, Arizona.

Houle, A.N.*[S], MacLean, E.L, & **Bray, E.E.** (2024 August). Can service dog success be predicted at 8 weeks of age? Boehringer Ingelheim Veterinary Scholars Symposium, St. Paul, Minnesota.

George, N.M.*[S], **Bray, E.E.,** & MacLean, E.L. (2024 August). Are various behavioral tasks associated with a domestic canine's successful outcome in a service dog program? Boehringer Ingelheim Veterinary Scholars Symposium, St. Paul, Minnesota.

Vogel, N.*, Hargrave, S.[S], Stetson, N.W.[S], Switzer, L., **Bray, E.E.,** & MacLean, E.L. (2024 August). Qualitative Behavioral Assessment in Service Dog Candidates. Undergraduate Research Opportunities Consortium's (UROC) Poster Session, Tucson, Arizona.

Leung, M.C.K.*, Conrow, K.D., Haney, R.[S], Su, Y., Snyder-Mackler, N., Kerr, K.F., Promislow, D., Albright, J., & **Bray, E.E.** (2024 July). Demography and Health History of Dogs with Cannabidiol and Hemp Use in the Dog Aging Project. Poster presented at the Research Society of Marijuana 8th Annual Scientific Meeting, Toronto, Ontario, Canada.

Persoon-Hilby, E.*, Tseng, A., Norton, E., Block, T., **Bray, E.E.**, Kennedy, B.S., Mickelson, J., Jacob, S., & McCue, M. (2024 June). Heritability of impactful assistance dog behaviors for children with autism informed by family needs. 12th International Conference of Canine and Feline Genetics and Genomics 2024, Little Finlandia, Helsinki, Finland.

Leung, M.C.K.*, Conrow, K.D., Haney, R.[S], Su, Y., Snyder-Mackler, N., Kerr, K.F., Promislow, D., & **Bray, E.E.** (2024 March). Demography and Health History of Dogs with Cannabidiol and Hemp Use in the Dog Aging Project. Poster presented at Society of Toxicology Annual Meeting, Salt Lake City, Utah.

Leung, M.C.K.*, Conrow, K.D., Haney, R.[S], Snyder-Mackler, N., Kerr, K.F., Promislow, D., & **Bray, E.E.** (2023 September). Demography of Dogs with Cannabidiol and Hemp Use in the Dog Aging Project. Poster presented at Environmental Mutagenesis & Genomics Society Meeting, Chicago, Illinois.

Bray, E.E.*, Zheng, Z., Tolbert, M.K., McCoy, B., Dog Aging Project Consortium, Kaeberlein, M., & Kerr, K.F. (2021 December). Once-daily feeding is associated with better cognitive function and health in companion dogs: Results from the Dog Aging Project. Poster presented at The Role of Companion Animals as Sentinels for Predicting Environmental Exposure Effects on Aging and Cancer Susceptibility in Humans: A Hybrid Workshop, Washington, D.C. & Virtual.

Bray, E.E.*, Zheng, Z., Tolbert, M.K., McCoy, B., Dog Aging Project Consortium, Kaeberlein, M., & Kerr, K.F. (2021 November). Once-daily feeding is associated with better cognitive function and health in companion dogs: Results from the Dog Aging Project. Poster presented at Dog Aging Project Semi-Annual Meeting, Virtual.

Byrne, M.*, **Bray, E.E.,** MacLean, E.L., & Johnston, A.M. (2020 July). Evidence for win-stay-lose-shift in puppies and adult dogs. Poster presented at the 42nd Annual Meeting of the Cognitive Science Society, Virtual.

Kennedy, B.S.*, Levy, K.M., **Bray, E.E.,** & MacLean, E.L. (2019 September). Maternal style: How early experiences are associated with future outcomes of assistance dogs. Poster presented at 11th International Working Dog Conference, Stockholm, Sweden.

Humphrey, E.*[S], **Bray, E.E.,** & Crocker, D. (2019 April). Cortisol and its tie to behavior in service dogs. Poster presented at Sonoma State University Science Symposium: Science, Technology, and Environmental Inquiry, Rohnert Park, California.

Seely, A.*[S], **Bray, E.E.,** & Seyfarth, R. (2014 September). Flexible Attention in Seeing Eye® Puppies. Poster presented at Center for Undergraduate Research & Fellowships Open House and Research Expo, Philadelphia, Pennsylvania.

MacLean, E.L.*, Rainey, C., **Bray, E.E.,** Duffy, K., & Hare, B. (2012 July). Cognitive & Temperamental Traits of Successful Assistance Dogs. Poster presented at 21st Annual Conference of the International Society of Anthrozoology, Cambridge, United Kingdom.

Bray, E.E.*, MacLean, E.L, & Hare, B.A. (2012 June). Factors Affecting Inhibitory Control in Dogs. Poster presented at 49th Annual Conference of the Animal Behavior Society, Albuquerque, New Mexico.

Bray, E.E.*, MacLean, E.L, & Hare, B.A. (2012 April). Factors Affecting Inhibitory Control in Dogs. Poster presented at Duke's Visible Thinking Day, Durham, North Carolina.

Bray, E.E.* (2011 April). Recommendations for an English Language Learner Literacy Intervention in Durham Public Schools for Communities in Schools of Durham. Poster presented at Duke School Research Partnership End-of-Semester gathering poster presentation. Durham, North Carolina.

RESEARCH EXPERIENCE

University of Arizona, Behavioral Research Across Years (BRAY) Lab, Tucson, AZ
Director **May 2023–Present**
University of Arizona, Arizona Canine Cognition Center, Tucson, AZ
Affiliated faculty **May 2023–Present**
Postdoctoral researcher **May 2017–April 2023**
Canine Companions for Independence, Santa Rosa, CA
Research collaborator, off-site supervisor **May 2023–Present**
Project coordinator, postdoctoral researcher, on-site supervisor **May 2017–April 2023**
Project Co-Manager, Associate in Research in Evolutionary Anthropology **July 2012**
Undergraduate researcher **August 2011**
The Seeing Eye, Inc., Morristown, NJ
Project coordinator, researcher, *on-site supervisor* **2014–2016**
Michigan State University Masai Mara Spotted Hyena Project, Kenya
Researcher **Summer 2013**
K2 Solutions, Pinehurst, NC
Associate in Research in Evolutionary Anthropology **June 2012**
Duke University, School Research Partnership Office, Durham, NC
Independent study student **Spring 2011**
Duke University, Duke Canine Cognition Center, Durham, NC
Undergraduate researcher and thesis student **2010–2012**

MENTORING EXPERIENCE

Undergraduate Honors Theses Supervised

Jenna Bryant	University of Arizona	*The Effects of Different Raising Models on Service Dog Behavior and Outcomes*	**2025 - 2026**
Chandler From	University of Arizona	*The Effect of Vertical Nursing on Cognitive Test Scores in 8-week-old puppies*	**2020**
Camden Olson	Princeton University	*Service Dog Tales: A Tri-fold Study Investigating Diabetic Alert Dog Accuracy, the Use of Animal-Assisted Therapy to Address Executive Functioning Skills, and the Function of Calming Signals in Service Dog Puppies*	**2018**
Sarah Frommer	University of Pennsylvania	*Does Kennel Acclimation Reliably Indicate Stable Traits Related to Stress Reactivity In Young Seeing Eye® Dogs?*	**2016**
Molly Ream	University of Pennsylvania	*Stability of Behavioral Traits in Canines*	**2016**

Master's Projects Supervised

Dara Jonkoski	University of Arizona	*Investigating the Associations Between Trainer Ratings and Independent Assessments of Desirable Dog Behavior*	**2025 – 2026**
Kali Kirkpatrick	Colorado State University	*From Perception to Performance: Understanding Physical Activity and Cognitive Health in Aging Dogs*	**2025 – 2026**
Chandler From	Unity College	*The Dog Aging Project: A Pilot Study on Cognitive Aging in Companion Dogs*	**2022**

Master's Committee Member

Molly Delzio	University of Arizona	*Systematic Literature Review and Meta-analysis of Animal-Assisted Interventions for Post-traumatic Stress*	**2025 – 2026**
Richard Haney	Arizona State University	*Demographics and health status with cannabidiol use: Cross-sectional analyses in the Dog Aging Project*	**2025**

Dissertation Committee Member

Grace Phillips	Virginia Tech		**2026 -**
Stephanie Hargrave	University of Arizona		**2024 -**
Courtney Sexton	George Washington University	*What is Written on a Dog's Face? Implications of Phenotype Diversity in Human-directed Canine Communication*	**2023**

Comprehensive/Qualifying Exam Committees

Stephanie Hargrave	University of Arizona	Major Advisor	**2025**

External Examiner

PhD Thesis Examination, School of Animal & Veterinary Sciences, Adelaide University, Australia **2026**
PhD Viva Voce Examination, Department of Zoology, Ecology and Plant Science, University College Cork, Ireland **2025**
PhD Thesis Examination, School of Psychology and Public Health, La Trobe University, Australia **2023**

Graduate Students and Postdoctoral Associates in the BRAY Lab: Mentor

Noah Stetson (PhD student, co-mentor) **2025 – Present**
Nicole Lorig (Postdoctoral associate, co-mentor) **2025 – Present**
Dara Jonkoski (PhD student, primary mentor) **2024 – Present**

Graduate Students: Research Mentor (as a Postdoctoral Researcher, MacLean Lab)

Gitanjali Gnanadesikan (PhD student, University of Arizona) **2017 – 2023**

Visiting Scholars (J-1) in the BRAY Lab: Mentor

Yichen Bai **2026**

University of Arizona Undergraduate Research Assistants in the BRAY Lab: Mentor

Meredith Gerkin, *Ecology and Evolutionary Biology* **Fall 2026**
Angela Rodriguez, *Animal and Comparative Biomedical Sciences* **Spring 2026**
Caitlin Hirabayashi, *Psychological Sciences* **Spring 2026, Fall 2026**
Caitlin Hirabayashi, *Animal and Comparative Biomedical Sciences* **Fall 2025**
Abigail Marsters, *Psychological Sciences* **Spring 2025, Summer 2025, Fall 2025**
Jenna Bryant, *Psychology* **Spring 2025, Fall 2025, Spring 2026**
Minho Lee, *Psychological Sciences* **Spring 2025**
Minho Lee, *Animal & Comparative Biomedical Sciences* **Fall 2024**
Alyssa Klensin, *Psychological Sciences* **Fall 2024, Spring 2025**

University of Arizona Veterinary Summer Scholars Research Program: Mentor

Ariana Bootier (primary mentor), Raymundo Buelna (co-mentor) **Summer 2026**
Vivien Hugyetz (primary mentor), Katie Murray (co-mentor) **Summer 2025**
Alyssa Houle (primary mentor), Natasha George (co-mentor) **Summer 2024**

University of Arizona College of Veterinary Medicine: Research Mentor

Kaitlin Ito **2026**
Melanie Santiago **2025**
Jamie Dunaisky **2020 - 2021**

Canine Companions Research Interns: Mentor and on-site supervisor

Christina Cawood (Hamilton College) **Summer 2023**
Angelina Schirle **Fall 2022 – Spring 2023**
Kayla Gilbert, Alessandra Ostheimer, and Angelina Schirle **Spring/Summer 2022**
Theresa Hatcher (Sonoma State University) **Spring 2020**
Kyla Guinon, Erin Hardin, and Emily Humphrey (Sonoma State University) **Spring 2019**

Alexzia Clark, Emily Humphrey, Facundo Ortega, and Camila Risueno-Pena (Sonoma State University) **Fall 2018**
Alexzia Clark, Emily Humphrey, and Amber Robello (Sonoma State University) **Spring 2018**
Mia Wesselkamper (Analy High School) **2018 - 2020**
Holland Smith (Saint Helena High School) **2017 – 2018**

Undergraduate Research Assistants: Mentor and on-site supervisor
Rachel Shaberman (UC Davis) **2021**
Camden Olson (Princeton) **2018**
Mary Chiang (Franklin & Marshall) **2017**
Lindsey Lang (University of Arizona) **2017**
Sarah Frommer (University of Pennsylvania) **2015-2016**
Molly Ream (University of Pennsylvania) **2015-2016**
Rebecca Schwartz (University of Pennsylvania) **2015-2016**
Leonie Cohen (Swarthmore College) **2015**
Marie Torres (University of Pennsylvania) **2014**
Stephanie Bartner (Franklin & Marshall) **2014**
Ashleigh Seely (University of Pennsylvania) **2014**

University of Pennsylvania Mentoring
The Graduate School Mentoring Initiative **2014 - 2015**
The Penn Mentoring Program **2013 - 2014**

TEACHING EXPERIENCE

Courses Developed
Canine Cognition: Inside the Mind of a Dog (VETM 817, SEL 030) **2026**
College of Veterinary Medicine, University of Arizona

Canine Cognition (VETM 817, SEL 030) **2024**
College of Veterinary Medicine, University of Arizona

Courses Taught
Canine Cognition: Inside the Mind of a Dog (VETM 817, SEL 030) **Summer 2026**
College of Veterinary Medicine, University of Arizona

Research Selective (VETM 817) **Summer 2026**
College of Veterinary Medicine, University of Arizona

Canine Cognition (VETM 817, SEL 030) **Summer 2025**
College of Veterinary Medicine, University of Arizona

Guest Lectures
Animal Behavior and Welfare (CVM 5281) **2026**
Texas Tech School of Veterinary Medicine
"Behavior, Welfare, and Assessment in Dogs: What We Can Learn from a Longitudinal, Multi-Generational Research Program"

Professional Skills, Year 1 (VETM 802B) **2026**
University of Arizona College of Veterinary Medicine
Led session on research methods

Repriorment Lecture Series **2025**
Splendido at Rancho Vistoso Life Plan Community
"The Making of a Mind: Studying behavior and cognition in assistance dogs across the lifespan"

Spiritual and Scientific Approaches to Consciousness (SBS 395C) **2025**
University of Arizona College of Social & Behavioral Sciences
Co-led session on animal consciousness

Animal Behavior Club invited lecture **2024**
Lincoln Memorial University College of Veterinary Medicine
"Ontogeny and heritability of behavioral and cognitive traits in dogs"

Psychology Honors Proseminar (PSYS 396H) **2024**
University of Arizona
"Setting the dog-human relationship up for success: Understanding behavioral and cognitive traits in dogs"

Professional Skills, Year 1 (VETM 802C) **2024, 2025, 2026**
University of Arizona College of Veterinary Medicine
Co-led session on the human-animal bond

Veterinary Summer Student Research Program (VSSRP) Orientation **2024, 2025, 2026**
University of Arizona College of Veterinary Medicine
"Experimental and Non-Experimental Study Design: How to ask a research question"

Canine Cognition Seminar **2024**
Barnard College, Psychology
Invited guest speaker

Psychology Lecture Series **2024**
The University of Arizona Osher Lifelong Learning Institute
"Setting the dog-human relationship up for success: Understanding behavioral and cognitive traits in dogs"

Applied Companion Animal Behavior in Practice (ACBS 482/582) **2023, 2024**
University of Arizona, Animal & Biomedical Sciences
"Development and heritability of behavioral and cognitive traits in dogs"

Introduction to Animal Science **2021**
Oregon State University, Department of Animal and Rangeland Science
"From puppies to assistance dogs"

Human-Animal Bond Class **2021**
University of Pennsylvania, School of Veterinary Medicine
"Ontogeny and heritability of behavioral and cognitive traits in dogs"

Field Studies in Animal Behavior: Dog Cognition and Behavior **2020**
Hunter College, Psychology Department
"Research methods to study canine behavior and cognition"

Animal Cognition Seminar **2014**
University of Pennsylvania, Psychology Department
"How can dog research help us to understand inhibitory control?"

Animal Behavior **2013, 2014**
University of Pennsylvania, Psychology Department
"How can dog research help us to understand inhibitory control?"

Teaching assistant
Animal Behavior, Drs. Seyfarth and Cheney, University of Pennsylvania **Fall 2013, Fall 2014**

Alumni community reader for the Duke Reader Project
Psy 202: Research Methods **Fall 2020**
Bio 329L: Principles of Animal Physiology **Spring 2020**
Psy 301: Research Methods **Spring 2017**

Tutoring experience
Thompson Writing Program: The Writing Studio, Durham, NC **2010 - 2012**
Undergraduate Writing Tutor following completion of a semester-long course

PROFESSIONAL SERVICE, DEVELOPMENT, AND AFFILIATIONS

Advisory positions
Scientific Advisory Board Member,
Morris Animal Foundation's FY27 Mae Philanthropies Service Dogs Scientific Advisory Board **2026-2027**
Research Committee Member, Courthouse Dogs Foundation Research Committee **2025 -**
Scientific Advisory Board Member,
Morris Animal Foundation's FY25 Canine Scientific Advisory Board **2024-2025**
Member, Morris Animal Foundation Animal Health Advisory Council **2024 - Present**
Scientific Committee Member, Canine Science Conference Scientific Committee **2024, 2026**
Speaker application review panelist, Penn Vet Working Dog Conference **2022**

Conference and Event Organization
Organizer, The CoLabradory: University of Arizona – Canine Companions Research Conference, Tucson, AZ **2026 –**

Invited grant and awards reviewer
Morris Animal Foundation **2026**
Swiss National Science Foundation **2026**
Research Council of Hungary **2025**
Morris Animal Foundation **2024**
American Kennel Club Canine Health Foundation grants **2022**
The Leakey Foundation grants **2021**
University of Arizona Postdoctoral Research Development grants **2020**
Animal Behavior Society student research grants **2019**

Ad Hoc reviewer (see Publons for verified peer reviews) **2014 – Present**
Animal Behavior and Cognition
Animal Behaviour
Animal Cognition
Applied Animal Behaviour Science
Behaviour
Behavioural Processes
Discover Animals
Frontiers in Aging Neuroscience | Neurocognitive Aging and Behavior
GeroScience
Hormones and Behavior
Journal of Applied Animal Welfare Science
Journal of Comparative Psychology
Journal of Ethology
Journal of Veterinary Behavior: Clinical Applications and Research
Learning & Behavior
PLOS One
PNAS Nexus
Proceedings of the Royal Society B: Biological Sciences
Royal Society Open Science
Science
Scientific Reports
Veterinary Record

Big Team Science contributions

Dog Aging Project
- *Research Team member* **2020 – Present**
- *Science Seminar Committee member* **2022 – 2023**

ManyDogs consortium *(founding member)*
- *ManyDogs2: Team Captain* **2025 - 2026**
- *Assistant Director: Communications & Community Building* **2022 – 2026**
- *ManyDogs1: Methods Development Committee; Team Captain* **2019 – 2022**

University and College Service

Lead nominator and organizer, successful nomination of Canine Companions for the University of Arizona 2026 Convergence Award for Distinguished Partner in Research **2026**

Elected Member, College of Veterinary Medicine Annual Performance Evaluation Committee **2025 – Present**

Founding Faculty advisor, Student Chapter for Human Animal Bond at the University of Arizona College of Veterinary Medicine **2025 – Present**

Founding Faculty advisor, Canine Companions Collar Scholars at the University of Arizona **2024 – Present**

Reviewer, University of Arizona Outstanding Postdoctoral Scholar Awards **2024**

Departmental service

Search Committee Chair, Research Technician II (multi-position search, including a position in the MacLean lab) **2026**

Judge, 2nd Annual University of Arizona College of Veterinary Medicine Research Day **2025**

Search Committee Member, Postdoctoral Research Associate I (shared position, Bray and Rodriguez labs) **2025**

Search Committee Member, Laboratory Coordinator I (Rodriguez lab) **2025**

Interviewer, Multiple Mini Interviews, College of Veterinary Medicine Admissions **2024, 2025**

Search Committee Member, Research Technician I (MacLean lab) **2023**

Search Committee Chair, BRAY Lab research technician searches (5) **2023-2026**

Organizer, "Topics in Animal Behavior" graduate seminar, University of Pennsylvania **2014, 2015, 2016**

Society membership

American Association for the Advancement of Science (AAAS) **2025 - Present**

Canine Science Society **2024 - Present**

American Psychological Association **2021 - Present**

Comparative Cognition Society **2020 - Present**

The International Society of Anthrozoology **2017 - Present**

Animal Behavior Society **2012 - Present**

PUBLIC SCIENTIFIC ENGAGEMENT (SELECTED EXAMPLES)

Associated Press Campus Insights. "How Dogs Think: What Canine Cognition Reveals about the Human-Animal Bond." **Nov 2026**

Reddit r/AskScience AMA Series, co-hosted by the University of Arizona. "Ask me anything about how dogs think!" Live public Q&A with graduate students Dara Jonkoski and Noah Stetson. https://bit.ly/4sJgpuQ **Oct 2026**

KGUN9. "UA studies how–and how much–we talk to our pets." https://bit.ly/3SWw1Od **Sept 2026**

KOLD 13 Tucson Now. "Talk to your dog, it's good for you!" https://bit.ly/3UNMXac **Sept 2026**

Longevity for Dogs Podcast. "Feeding Frequency and the Canine Brain with Dr. Emily Bray." https://bit.ly/4finWu4 **July 2026**

Behind the Bond LinkedIn Series by Mars. Dr. Emily Bray. https://bit.ly/4vwp8Bz **April 2026**

Science Podcast (AAAS). "Building better working dogs, and watching a black hole form." **Feb 2026**
https://bit.ly/3MJ1gZK

AZPM Arizona Science Podcast. "Revealing the non-verbal world of communication between dogs and humans." **Feb 2025**
https://bit.ly/4iivixG

AZPM Arizona Science Podcast. "Why is our connection with canines so strong?" **Nov 2024**
https://bit.ly/3V8SNjs

Joint Symposium for Working K9s Podcast. "JSWK9 Invited Speaker Dr. Emily Bray." **Sept 2024**
https://bit.ly/3N3Sp1u

Dog Aging Project Blog. Scientific Results: Characterizing dog cognitive aging using spontaneous problem-solving measures: development of a battery of tests from the Dog Aging Project. https://bit.ly/3TNA8ZZ **Sept 2024**

Seeking a Scientist, National Public Radio. "Dogs are talking – are you listening?"
https://bit.ly/3AiAnVY **July 2024**

Research Bites Podcast. #10 - Emily Bray – "Cognitive development, puppies, service dogs."
http://bit.ly/41kUY42 **March 2023**

Dog Aging Project Blog. Scientific Results: Associations between physical activity and cognitive dysfunction in older companion dogs. https://bit.ly/3D50a2N **Oct 2022**

PetAbility Podcast. "Canine Cognition with Emily Bray, PhD." https://bit.ly/3Lv51wV **Sept 2022**

Dog Aging Project Blog. Scientific Results: Once-daily feeding is associated with better health in companion dogs. https://bit.ly/3Q9YiK3 **June 2022**

Dog Aging Project April Pack Event: Canine Cognition. https://bit.ly/3xNGXAp **April 2022**

Dog Aging Project Blog. Meet Dr. Emily Bray, Canine Cognition Expert and Puppy Wrangler!
https://bit.ly/3zKzDX5 **March 2022**

Spaces Unleashed Sci-Chat with Dr. Emily Bray, Puppy Researcher. https://bit.ly/3rWfed4 **Feb 2022**

Dogged Justice Podcast. "Cognitive Research With Puppies featuring Guest Emily Bray."
https://apple.co/3B3ZyXe **Oct 2021**

The Animal Behavior Podcast. Two-Minute Takeaway (Season 1, Episode 9). https://bit.ly/3FFtY5m **Oct 2021**

The Science Pawdcast. "Puppy Pointing with Dr. Emily Bray." https://apple.co/3iPO6IN **Aug 2021**

Quirks and Quarks, CBC Radio. "New study shows puppies are born able to understand and communicate with humans." https://bit.ly/3zkTfyH **June 2021**

Scientific American 60-Second Science Podcast. "Puppies Understand You Even at a Young Age, Most Adorable Study of the Year Confirms." https://bit.ly/3g6QNmB **June 2021**

K9s Talking Scents Podcast. "The mind of a puppy with Dr. Emily Bray." https://bit.ly/48yQ3Cd **March 2021**

The Functional Breeding Podcast. "Maternal Care in Dogs." http://bit.ly/36jTjlh **Jan 2021**

Top of Mind with Julie Rose, BYU Radio. "What dogs teach us about parenting." https://bit.ly/3nDuQkc **Sept 2017**

All Things Considered, National Public Radio. "Coddled puppies make poor guide dogs, study suggests." http://n.pr/2uA1vrS **Aug 2017**

Quirks and Quarks, CBC Radio. "Puppies that get tough love succeed as guide dogs." http://bit.ly/2i7oTMC **Aug 2017**

AAAS Science Update. "Guide Dog Success." http://bit.ly/2uQpa8n **Aug 2017**

POPULAR MEDIA COVERAGE (SELECTED EXAMPLES)

Kase, C (10/9/2026). A link between gait and cognitive dysfunction in dogs. AAHA Trends Magazine. https://bit.ly/4yvT6FT

Grieco, M (9/24/2026). Coding system quantifies human-pet interactions to assess how pets affect well-being. ***Healio.*** https://bit.ly/4xMJV3I

Laws, J (9/3/2026). How You Talk to Your Pet May Affect Your Wellbeing–Researchers Ask Why. ***Newsweek.*** https://bit.ly/4idkMLm

Rajalakshmi, N (8/31/2026). New U of A tool decodes pet talk and may help explain how pets affect our well-being. ***University of Arizona News.*** https://bit.ly/4zNA9k3

Spivack, E (7/10/2026). How Often Should You Feed Your Dog? ***The Farmer's Dog.*** https://bit.ly/4h1SnWj

O'Connell, L (6/1/2026). The 4 traits to look out for in mom dog when choosing a puppy. ***Newsweek.*** https://bit.ly/4yC1fKq

Burch-Buus, L (3/31/2026). New U of A study will investigate growth hormones and cognitive aging in dogs. ***University of Arizona News.*** https://bit.ly/48VbJJp

60 Minutes: "The Dog Aging Project" (3/22/2026). ***CBS News.*** https://bit.ly/3Oteniw *(featured CANID cognitive assessment, co-developed by Bray)*

Grimm, D (2/12/2026). Building a better working dog. ***Science.*** https://bit.ly/4anA0HW

Johnstone, G (2/28/2025). Can feeding your dog once daily benefit their health? ***American Kennel Club.*** https://bit.ly/4io2T9z

Cimons, M (11/9/2024). They're all good boys and girls, but only some can be service dogs. ***The Washington Post.*** https://bit.ly/3ACu547

Burch-Buus, L (9/6/2024). 'Who's a good dog? Canine researcher is featured in Netflix documentary'. ***University of Arizona News.*** https://bit.ly/4i6Akhi

Inside the Mind of a Dog (8/9/2024). ***Netflix.*** https://bit.ly/3SGYwMk *(featured researcher)*

Page, S (8/8/2024). Dogs can smell human stress, and it bums them out, study shows. ***The Washington Post.*** https://wapo.st/3WWStFW

Burch-Buus, L (8/7/2024). U of A researcher featured in Netflix film 'Inside the Mind of a Dog'. ***University of Arizona News.*** https://bit.ly/3WXo76k

Cimons, M (2/11/2024). My pets have stolen my heart again and again. I know I'm not alone. ***The Washington Post.*** https://bit.ly/4bOWnWN

Bennet, M (2/7/2024). Why Do Dogs Wag Their Tails? It Might Be Because Humans Love Rhythm. ***Discover Magazine.*** https://bit.ly/3W4g4Vf

Coleman, J (1/16/2024). Some mysteries remain about why dogs wag their tails. ***ScienceNews.*** https://bit.ly/4319T5O

Pappas, S (8/22/2023). Can dogs use language? ***Scientific American.*** https://bit.ly/45Sg5gm

Ogden, LE (7/26/2022). Inside the brains of aging dogs. ***Knowable Magazine.*** https://bit.ly/3zTRESZ

Osborne, H (11/16/2021). Dogs Fed Once Per Day Appear to Have Better Health and Cognitive Function, Study Finds. ***Newsweek.*** https://bit.ly/3oRxIJo

The World According to Jeff Goldblum (11/12/2021). S02 E01: Dogs. ***Disney+.***

Woodward, A (9/16/2021). Recent discoveries reveal how dogs are hardwired to understand and communicate with people — even at birth. ***Business Insider***. https://bit.ly/3kjpokJ

Carroll, L (6/4/2021). Pup's looking at you, kid: Puppies can understand human cues from very young age. ***NBC News.*** https://nbcnews.to/3zaUQHo

LaMotte, S (6/3/2021). Puppies are born ready to interact with people, study finds. ***CNN.*** https://cnn.it/3vT7Wqz

Fox, A (6/3/2021). Puppies Are Born Ready to Communicate With Humans. ***Smithsonian Magazine.*** https://bit.ly/3w1Gp6c

Grimm, D (3/17/2021). These adorable puppies may help explain why dogs understand our body language. ***Science.*** https://bit.ly/3kWFVLv

Perez, G (8/9/2017). "Tough love" from mom makes a better guide dog, study finds. ***CBS This Morning.*** *http://cbsn.ws/2wHOyhe*

Woodward, A (8/7/2017). Over-mothered puppies more likely to fail guide dog training. ***New Scientist.*** https://bit.ly/3CDr5PV

Wilhelm, M (8/7/2017). Pick Better Guide Dogs By Watching Hours of Cute Puppy Videos. ***Wired.*** https://bit.ly/32mquWq

Guglielmi, G (8/7/2017). Coddled puppies make poor guide dogs, as this adorable video shows. ***Science.*** https://bit.ly/2uQh7sr

Casey, M (7/22/2015). Too much stress sends some dogs into a tailspin. ***CBS News.*** https://cbsn.ws/3nADwb0

OTHER COMMUNITY SCIENCE OUTREACH

Students as Peers participant with Animal Cognition and Behaviour course (University of Rijeka) **March 2021**
- Corresponded with students and answered questions about one of my first-author papers.

Canine Companions for Independence, National Puppy Program Workshop **Oct 2020**
- Presented research involving assistance dogs and participated in a Q + A with Canine Companions puppy raisers

American Association of University Women (AAUW) Girls in Engineering, Math, and Science (GEMS) **Jan 2019**
- Presented my research to and participated in a panel discussion for the local AAUW GEMS group.

Interactive research presentations to elementary school children
- Penn Alexander School (3rd grade; part of "Women in Science" unit) **March 2017**
- Ashley Park PreK-8 School (2nd grade) **Jan 2014**
- Central Park School for Children (1st grade) **Aug 2012**