

# JENNIFER L. ESSLER

Postdoctoral Fellow

School of Veterinary Medicine, University of Pennsylvania

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## EDUCATION

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- 2017 Ph.D. in Comparative Cognition  
Veterinary Medical School of Vienna, Austria
- 2013 M.Sc. in Animal Behavior  
Bucknell university
- 2011 B.A. in Psychology  
Magna Cum Laude, graduate of the Honors Program (with thesis)  
Georgia State University

## PROFESSIONAL APPOINTMENTS

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- 2020-Pres. Postdoctoral Fellow, School of Veterinary Medicine  
University of Pennsylvania
- 2017-2020 Postdoctoral Fellow, Penn Vet Working Dog Center, School of Veterinary Medicine  
University of Pennsylvania

## PUBLICATIONS

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### PEER-REVIEWED JOURNAL ARTICLES

**Essler, J.L.**, Smith, P.G., Ruge, C.E., Darling, T.A., Barr, C., Otto, C.M. (Accepted). The first responder exposure to contaminating powder on dog fur during intranasal and intramuscular naloxone administration. *Journal of Veterinary Emergency and Critical Care*.

**Essler, J.L.**, Wilson, C., Verta, A., Feuer, R., Otto, C.M. (2020). Differences in the search behavior of cancer detection dogs trained to have either a sit or stand-stare final response. *Frontiers in Veterinary Science*.

**Essler, J.L.**, Smith, P.G., Berger, D., Gregorio, E., Pennington, M.R., McGuire, A., Furton, K.G., Otto, C.M. (2019). A randomized cross-over trial comparing the effect of intramuscular versus intranasal naloxone reversal of intravenous fentanyl on odor detection in working dogs. *Animals*.

Muraka, M., Vesley-Gross, Z.I., **Essler, J.L.**, Smith, P.G., Hooda, J., Drapkin, R., Otto, C.M. (2019). Testing ovarian cancer cell lines to train dogs to detect ovarian cancer from blood plasma: a pilot study. *Journal of Veterinary Behavior*, 32, 42-48.

Cafazzo, S., Marshall-Pescini, S., **Essler, J.L.**, Virányi, Z., Kotrschal, K., Range, F. (2018). In wolves, play behaviour reflects the partners' affiliative and dominance relationship. *Animal Behaviour*, 141, 137-150.

Talbot, C.F., Parrish, A.E., Watzek, J., **Essler, J.L.**, Leverett, K.L., Paukner, A., Brosnan, S.F. (2018). The influence of reward quality and quantity and spatial proximity on the responses to inequity and contrast in capuchin monkeys (*Cebus [Sapajus] apella*). *Journal of Comparative Psychology*, 131(1), 75-87.

**Essler, J.L.**, Marshall-Pescini, S., Range, F. (2017). Domestication does not explain the presence of inequity aversion in dogs. *Current Biology*, 27(12), 1861-1862.e3.

**Essler, J.L.**, Schwartz, L.P., Rossettie, M.S., Judge, P.G. (2017). Capuchin monkeys' use of human and conspecific cues to solve a hidden object-choice task. *Animal Cognition*, 20(5), 985-998.

Brucks, D., Marshall-Pescini, S., **Essler, J.L.**, McGetrick, J., Huber, L., Range, F. (2017). What are the ingredients for an inequity paradigm? Manipulating the experimenter's involvement in an inequity task with dogs. *Frontiers in Psychology*, 8:270.

Robinson, L.M., Morton, F.B., Gartner, M.C., Widness, J., Paukner, A., **Essler, J.L.**, Brosnan, S.F., Weiss, A. (2016). Divergent personality structures of brown (*Sapajus apella*) and white-faced capuchins (*Cebus capucinus*). *Journal of Comparative Psychology*, 130(4), 305-312.

**Essler, J.L.**, Cafazzo, S., Marshall-Pescini, S., Virányi, Z., Kotrschal, K., Range, F. (2016). Play behavior in wolves: using the '50:50' rule to test for egalitarian play styles. *PLoS ONE*, 11(5), e0154150.

Brucks, D., **Essler, J.L.**, Marshall-Pescini, S., Range, F. (2016). Inequity aversion negatively affects tolerance and contact-seeking behaviours towards partner and experimenter. *PLoS ONE*, 11(4), e0153799.

Brosnan, S.F., Talbot, C.F., **Essler, J.L.**, Leverett, K.L., Flemming, T., Dougall, P., Heyler, C., Zak, P.J. (2015). Oxytocin reduces food sharing in capuchin monkeys by modulating social distance. *Behaviour*, 152, 941-961.

Morton, F.B., Lee, P.C., Buchanan-Smith, H.M., Brosnan, S.F., Thierry, B., Paukner, A., de Waal, F.B., Widness, J., **Essler, J.L.**, Weiss, A. (2013). Personality structure in brown capuchin monkeys (*Sapajus apella*): comparisons with chimpanzees (*Pan troglodytes*), orangutans (*Pongo spp.*), and rhesus macaques (*Macaca mulatta*). *Journal of Comparative Psychology*, 127(3), 282-298.

Judge, P.G. & **Essler, J.L.** (2013). Capuchin monkeys exercise self-control by choosing token exchange over an immediate reward. *International Journal of Comparative Psychology*, 26(4), 256-266.

Salwiczek, L.H., Prétôt, L., Demarta, L., Proctor, D., **Essler, J.L.**, Pinto, A.I., Wismer, S., Stoinski, T., Brosnan, S.F., Bshary, R. (2012). Adult cleaner wrasse outperform capuchin monkeys, chimpanzees and orangutans in a complex foraging task that derived from cleaner-client reef fish cooperation. *PLoS One*, 7(11), e49068.

## IN PREPERATION

**Essler, J.L.**, Kane, S.A., Nolan, P., Akaho, E.H., Berna, A.Z., DeAngelo, A., Berk, R.A., Kaynaroglu, P., Plymouth, V.L., Frank, I.D., Weiss, S.R., Odom John, A.R., Otto, C.M. (Submitted). Discrimination of SARS-CoV-2 infected patient samples by detection dogs.

**Essler, J.L.**, Kane, S.A., Collins, A., Ryder, K., DeAngelo, A., Kaynaroglu, P., Otto, C.M. (Submitted). Egg masses as a training aid for spotted lanternfly (*Lycorma delicatula*) detection dogs.

Morton, F.B., Buchanan-Smith, H.M., Brosnan, S.F., Thierry, B., Paukner, A., **Essler, J.L.**, Marcum, C.S., Lee, P.C. (Submitted). Understanding the evolution of animal innovation at the individual level: A ratings-based assessment of capuchin monkey (*Sapajus [Cebus] sp.*).

Reineke, R.A., **Essler, J.L.**, Kaynaroglu, P., Feuer, R., Gillespie, J., Otto, C.M. (Article In Prep). The effects of intranasal and oral *Bordetella bronchiseptica* vaccine administration on the olfactory capabilities of detection dogs.

Bell, S., Yu, L., Byosiere, S.E., Essler, J.L., Lucas, A., Otto, C.M. (Article In Prep). A comparative assessment of working and pet dog performance during a visual discrimination reversal learning task.

Essler, J.L. & Siracusa, C. (Book Chapter Submitted) Preventative Behaviour Modification and Environmental Enrichment.

## **GRANTS**

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2018-Pres. Red Arch Cultural Heritage Law & Policy Research  
Role: Co-Investigator Amount: \$70,000

2018-2019 APDT Foundation Small Grant  
Role: Primary Investigator Amount: \$1,500

2018-2022 Austrian Science Fund (FWF)  
Role: Co-Investigator Amount: €400,000

## **CONFERENCE PARTICIPATION**

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### **ORAL PRESENTATIONS**

2020 **Essler, J.L.**, & Kane, S.A. Exploring the possible use of behavioral testing in puppy and young dog aptitude in various working careers. Penn Vet Working Dog Conference. Online.

2019 **Essler, J.L.**, Lindsay, J., Byosiere, S.E., Inman, B., Gillespie, J., Monastra, C., Otto, C.M. What can working dogs' performance on the detour task tell us about their future career placement? Canine Science Forum. 18 October. Phoenix, AZ, USA.

2019 **Essler, J.L.**, Lee, Y.E., Preti, G., Gillespie, J., Eades, J., Vesley-Gross, Z., Smith, P.G., Tsang, J., Tanyi, J., Piltz Seymour, J., Johnson, A.T.C., Otto, C.M. A pilot study for training canines to recognize volatile organic compounds from cancer-positive plasma samples collected using micro-preparative gas chromatography. Behavior. 26 July. Chicago, IL, USA.

2018 **Essler, J.L.** & DeAngelo, A. Using an artificial odor, the Universal Detector Calibrant (UDC), to imprint and train working dogs for scent detection. Penn Vet Working Dog Conference. 22 April. Philadelphia, PA, USA.

- 2018 **Essler, J.L.** & Kaynaroglu, P. Evaluating the tools used to predict and assess the career paths of working dogs. Penn Vet Working Dog Conference. 22 April. Philadelphia, PA, USA.
- 2018 **Essler, J.L.** Starting from scratch: what we've learned developing puppies into detection dogs. SF SPCA Canine Science Symposium. 14 April. San Francisco, CA, USA.
- 2016 **Essler, J.L.**, Marshall-Pescini, S., & Range, F. Captive wolves and pack-living dogs show similar responses to inequity. Allee Symposium, Animal Behavior. 2 August. Columbia, MO, USA.
- 2015 **Essler, J.E.**, Marshall-Pescini, S., Range, F. Inequity aversion in dogs and wolves. CogCom Workshop. 2 July 2015. Vienna, Austria.
- 2013 **Essler, J.E.**, Vining, A., Judge, P.G. Bartering up as self-control in capuchin monkeys (*Cebus apella*). Meeting of the American Society of Primatologists. 16 November. Austin, TX, USA.

## POSTER PRESENTATIONS

- 2016 **Essler, J.L.**, Marshall-Pescini, S., Range, F. Testing inequity aversion in wolves and dogs. European Conference on Behavioural Biology. 12-15 July. Vienna, Austria.
- 2015 **Essler, J.L.**, Marshall-Pescini, S., Range, F. Inequity aversion in dogs and wolves – a buzzer-task paradigm. 37<sup>th</sup> International Workshop: Social Relationships and Cognitive Competences in the Domestic Dog: Bridging Science and Education. 16 November. Erice, Sicily, Italy.

## CAMPUS TALKS

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- 2018 Training dogs to detect malignant ovarian cancer – and using them to help produce an early-detection system. CPHI Seminar at the University of Pennsylvania, Philadelphia, PA, USA. 19 April.
- 2015 Human Urbanization: Coexisting with Wolves. Wildlife Disease Seminar, University of Veterinary Medicine, Vienna, Austria. 3 June.

## TEACHING EXPERIENCE

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- 2020 Delaware Valley University  
Instructor of Record, Introduction to Primatology (Hybrid Online & In-Person)
- 2018- University of Pennsylvania  
2019 Graduate Certificate in Animal Behavior  
Course: Fundamentals of Animal Behavior (Module I)  
Lecture: VISR699 – Exploring the Human-Animal Bond
- 2015 University of Veterinary Medicine, Vienna, Austria  
Teaching Assistant: Intro to Animal Behavior, Intro to Cognitive Biology
- 2012- Bucknell University  
2013 Teaching Assistant: Intro to Psychology, Intro to Animal Behavior, Primate Laboratory Course

## **COMMUNITY OUTREACH**

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### **PUBLIC LECTURES**

2020 Skype-A-Scientist (5 Presentations)

2020 Starting from scratch: what we've learned developing puppies into detection dogs. Optimist Club of Ft. Bend, TX. Online. 16 June.

2018 What the nose knows: using dogs for odor detection research. Wagner Institute of Science, Philadelphia, PA. 27 September.