

# Lauren Petrullo, Ph.D.

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## EDUCATION

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- 2015—2020 Ph.D., Anthropological Sciences, Stony Brook University  
2013—2015 M.A., Biological Anthropology, New York University  
2008—2012 B.A., Biological Anthropology, New York University

## PROFESSIONAL APPOINTMENTS

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- Fall 2023 Incoming Assistant Professor, Department of Ecology & Evolutionary Biology, University of Arizona  
2020—2023 Postdoctoral Research Fellow, Department of Psychology, University of Michigan  
2015 Full Instructor, Department of Anthropology, Fordham College at Lincoln Center

## GRANTS, FELLOWSHIPS, & AWARDS

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- 2020—2023 National Science Foundation Postdoctoral Research Fellowship in Biology, *Integrative Research Investigating the Rules of Life Governing Interactions Between Genomes, Environment and Phenotypes* (\$207,000)  
2015—2020 AGEPT FRAME Diversity Fellowship, Stony Brook University  
2015—2020 Dr. W. Burghardt Turner Diversity Fellowship, Stony Brook University (\$50,000)  
2019 Best Podium Talk (*runner up*), Northeastern Evolutionary Primatologists Meeting  
2018 Turner Fellowship Summer Research Grant, Stony Brook University (\$4,400)  
2018 IDPAS Research Grant, Stony Brook University (\$497)  
2017 Feasibility Grant, NIH Clinical and Translational Science Award, Primate Signature Program at Wake Forest University (\$7,460)  
2017 Turner Fellowship Academic Year Research Grant, Stony Brook University (\$2,800)  
2017 AGEPT FRAME Research Grant, Stony Brook University (\$3,500)  
2017 Turner Fellowship Summer Research Grant, Stony Brook University (\$5,000)  
2016 Grants-In-Aid of Research, Sigma Xi (\$1,000)  
2016 Turner Fellowship Summer Research Grant, Stony Brook University (\$3,500)

## PEER-REVIEWED PUBLICATIONS

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- In revision* **Petrullo, L.**, Boutin, S., Lane, J.E., McAdam, A.G., Dantzer, B. Error Management Theory explains phenotype-environment mismatch in a wild mammal. *Science*.
- In revision* Sabol, A., Close, W.L., **Petrullo, L.**, Lambert, C.T., Keane, B., Solomon, N.G., Schloss, P.D., Dantzer, B. Sociality does not predict oral microbiome composition or diversity in free-living prairie voles. *Animal Behavior*.
- In review* Spear, J.K., Grabowski, M., Sekhavati, Y., Costa, C.E., Goldstein, D.M., **Petrullo, L.**, Peterson, A.L., Lee, A.B., Shattuck, M.R., Gomez-Olivencia, A., Williams, S.A. The evolution of the vertebral column in primates, with a focus on hominoids and the last common ancestor of hominins and panins. *Journal of Human Evolution*.
- 2022 Baniel, A., **Petrullo, L.**, Mercer, A., Reitsema, L., Sams, S., Beehner, J.C., Bergman, T.J., Snyder-Mackler, N., Lu, A. Maternal effects on early-life gut microbiome maturation in a wild nonhuman primate. *Current Biology* 32, 4508-4520.e6.  
[doi:10.1101/2021.11.06.467515](https://doi.org/10.1101/2021.11.06.467515)

- 2022 **Petrullo, L.**, Delaney, D., Boutin S., McAdam, A.G., Lane, J.E., Boonstra, R., Palme, R., Dantzer, B. The glucocorticoid response to environmental change is not specific to agents of natural selection in wild red squirrels. *Hormones and Behavior* 146, 105262. [doi:10.1016/j.yhbeh.2022.105262](https://doi.org/10.1016/j.yhbeh.2022.105262)
- 2022 Sen, S., Carrera, S.C., Heistermann, M., Potter, C.B., Baniel, A., DeLacey, P.M., **Petrullo, L.**, Lu, A., Beehner, J. Social correlates of androgen levels and dispersal age in juvenile male geladas. *Hormones and Behavior* 146, 105264. [doi:10.1016/j.yhbeh.2022.105264](https://doi.org/10.1016/j.yhbeh.2022.105264)
- 2022 **Petrullo, L.**, Baniel, A., Jorgensen, M., Sams, S., Snyder-Mackler, N., Lu, A. Early life gut microbiome dynamics mediate maternal effects on infant growth in vervet monkeys. *iScience* 25, 103948. [doi:10.1101/2021.05.11.443657](https://doi.org/10.1101/2021.05.11.443657)
- 2022 **Petrullo, L.**, Ren, T., Wu, M., Boonstra, R., Palme, R., Boutin S., McAdam, A.G., Dantzer, B. Glucocorticoids coordinate changes in gut microbiome composition in wild North American red squirrels. *Scientific Reports* 12, 2605. [doi:10.1038/s41598-022-06359-5](https://doi.org/10.1038/s41598-022-06359-5)
- 2021 Baniel, A., Amato K.R., Beehner, J.C., Bergman, T.J., Mercer, A., Perlman, R., **Petrullo, L.**, Reitsema, L., Sams, S., Lu, A., Snyder-Mackler, N. Seasonal shifts in the gut microbiome suggest plastic responses to host dietary needs in wild gelada monkeys. *Microbiome* 9, 1-20. [doi:10.1101/2020.07.07.192336](https://doi.org/10.1101/2020.07.07.192336)
- 2019 **Petrullo, L.**, Hinde, K., Lu, A. Steroid hormone concentrations in milk predict sex-specific offspring growth in a non-human primate. *American Journal of Human Biology*, e23315. [doi:10.1002/ajhb.23315](https://doi.org/10.1002/ajhb.23315)
- 2019 Lu, A., **Petrullo, L.**, Carrera, S., Feder, J., Schneider-Crease, I., Snyder-Mackler, N. Developmental responses to early life adversity: evolutionary and mechanistic perspectives. *Evolutionary Anthropology*, 28(5), 249-266. [doi:10.1002/evan.21791](https://doi.org/10.1002/evan.21791)
- 2019 Williams, S.A., Spear, J.K., **Petrullo, L.**, Goldstein, D.M., Lee, A.B., Peterson, A.L., Miano, D.A., Kaczmarek, E., Shattuck, M.R. Increased variation in numbers of presacral vertebrae in suspensory animals. *Nature Ecology and Evolution*, 3, 949-956. [doi:10.1038/s41559-019-0894-2](https://doi.org/10.1038/s41559-019-0894-2)
- 2019 **Petrullo, L.**, Jorgensen, M., Snyder-Mackler, N., Lu, A. Composition and stability of the vervet monkey milk microbiome. *American Journal of Primatology*, e22982. [doi:10.1002/ajp.22982](https://doi.org/10.1002/ajp.22982)
- 2019 **Petrullo, L.**, Lu, A. Natural variation in fetal cortisol exposure predicts neonatal body mass in captive vervet monkeys (*Chlorocebus aethiops*). *American Journal of Primatology*, 81, e22943. [doi:10.1002/ajp.22943](https://doi.org/10.1002/ajp.22943)
- 2017 Mandalaywala, T.M., **Petrullo, L.A.**, Parker, K.J., Maestriperi, D., Higham, J.P. Vigilance for threat in infancy modifies effects of early life adversity on cortisol/salivary alpha- amylase asymmetry in juvenile rhesus macaques. *Developmental Psychobiology*, 59, 1031- 1038. [doi:10.1002/dev.21572](https://doi.org/10.1002/dev.21572)
- 2016 **Petrullo, L.A.**, Mandalaywala, T. M., Parker, K. J., Maestriperi, D., & Higham, J. P. Effects of early life adversity on cortisol/salivary alpha-amylase symmetry in free-ranging juvenile rhesus macaques. *Hormones and Behavior*, 86, 78-84. [doi:10.1016/j.yhbeh.2016.05.004](https://doi.org/10.1016/j.yhbeh.2016.05.004)

## **OTHER PUBLICATIONS**

- 2021 **Petrullo, L.**, Baniel, A., Sweeny A. R. Establishing a virtual network in mammalian microbiome research. *Evolutionary Anthropology*, [doi:10.1002/evan.21889](https://doi.org/10.1002/evan.21889)

## **SELECTED PRESENTATIONS**

- 2022 Baniel, A., **Petrullo, L.** Mercer, A., Reitsema, L., Sams, S., Beehner, J.C., Bergman, T.J., Snyder-Mackler, N., Lu, A. Maternal effects on early-life gut microbiota maturation in wild geladas. *Animal Behavior*.
- 2022 **Petrullo, L.**, Boutin, S., Lane, J. E., McAdam, A.G., Dantzer, B. Costs of environmental mismatching in a small mammal. *Society for Integrative and Comparative Biology*.
- 2021 Baniel, A., Beehner, J.C., Bergman, T.J., Mercer, A., **Petrullo, L.**, Reitsema, L., Sams, S., Snyder-Mackler, N., Lu, A. Maturation and stabilization of the infant gut microbiome in wild geladas. *Animal Behavior*.
- 2021 **Petrullo, L.**, Ren, T., Wu, M., Boonstra, R., Palme, R., Boutin S., McAdam, A.G., Dantzer, B. Understanding the link between glucocorticoids and gut microbiome diversity in wild red squirrels. *Animal Behavior*.
- 2020 **Petrullo, L.**, Jorgensen, M., Snyder-Mackler, N., & Lu, A. Postnatal vertical transmission is associated with maternal parity and offspring growth in captive vervet monkeys (*Chlorocebus aethiops sabaeus*). *American Journal of Physical Anthropology* 171, S69:216.
- 2020 Baniel, A., Beehner, J. C., Bergman, T. J., Mercer, A., **Petrullo, L.**, Reitsema, L., Sams, S., Snyder-Mackler, N., Lu, A. Maturation and stabilization of the infant gut microbiome in wild geladas. *American Journal of Physical Anthropology*, 171, S69:17.
- 2019 **Petrullo, L.**, Snyder-Mackler, N., Lu, A. Maturation of the vervet monkey infant gut microbiome. Northeastern Evolutionary Primatologists, University of Massachusetts-Amherst, Amherst, NY.
- 2018 **Petrullo, L.**, Hinde, K., Lu, A. Steroid hormone concentrations in milk predict postnatal infant growth in rhesus macaques (*Macaca mulatta*). *American Journal of Physical Anthropology*, 165, 206.
- 2018 **Petrullo, L.**, Snyder-Mackler, N., Lu, A. Investigating vervet monkey milk microbiome (*Chlorocebus aethiops sabaeus*). Northeastern Evolutionary Primatologists, Canisius College, Buffalo, NY.
- 2016 Shattuck, M.R., **Petrullo, L.**, Peterson, A., Lee, A.B., Kaczmarek, E., Goldstein, D.M., Williams, S.A. Pronograde, not fast speed specifically, acts as a constraint on vertebral formula in mammals. *American Journal of Physical Anthropology*, S64, 357.
- 2016 Mandalaywala, T.M., **Petrullo, L.**, Parker, K.J., Maestriperieri, D., Higham, J.P. Vigilance for threat in infancy modifies effects of early life adversity on salivary alpha-amylase/cortisol asymmetry in juvenile rhesus macaques. IPS/ASP. Chicago, IL, USA.
- 2015 **Petrullo, L.**, Mandalaywala, T.M., Maestriperieri, D., Higham, J.P. Effects of early life experience on cortisol/salivary alpha-amylase symmetry in free-ranging juvenile rhesus monkeys. *American Journal of Physical Anthropology*, S60, 252.
- 2014 **Petrullo, L.**, Goldstein, D.M., Lee, A.B., Williams, S.A. Suspension, brachiation, and the evolution of short torsos in atelines and hominoids. *American Journal of Physical Anthropology*, S58, 207.
- 2013 **Petrullo, L.**, Shattuck, M.R., Williams, S.A. Extensive convergence between giant panda and hominoid vertebral formulae. *American Journal of Physical Anthropology*, S56, 221.

#### **INVITED TALKS & SEMINARS**

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- 2022 Department of Biology, University of Massachusetts Amherst.
- 2022 Department of Ecology & Evolutionary Biology, University of Arizona.
- 2022 Department of Anthropology & Huck Institutes of Life Sciences, Penn State University.
- 2020 Long-Term Animal Research Seminar Series, Duke University.

#### **TEACHING**

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## **Courses**

- 2016—2019 How We Eat, Teaching Assistant, Stony Brook University  
2018 Human Anatomy, Teaching Assistant, Stony Brook University  
2018 Research Skills in the Biological Sciences, *Instructor*, Stony Brook University  
2017 Hormones and Behavior, Teaching Assistant, Stony Brook University  
2016 Archaeology of Human Dispersals, Teaching Assistant, Stony Brook University  
2015 Controversies in Human Biology, Teaching Assistant, Stony Brook University  
2015 Introduction to Biological Anthropology, *Full Instructor*, Fordham College

## **Guest Lectures**

- 2022 “*Sociality and the Microbiome*”, Mammalian Social Behavior, University of Michigan.  
2021 “*Evolutionary hypotheses and proximate mechanisms of developmental plasticity*”,  
Evolution & Behavior, University of Michigan.  
2018 “*The autonomic nervous system*”, Human Anatomy, Stony Brook University.  
2017 “*Microbial contributions to early life nutrition*”, How We Eat, Stony Brook University.  
2017 “*Endocrinology of stress*”, Hormones and Behavior, Stony Brook University.  
2016 “*Environmental endocrinology*”, How We Eat, Stony Brook University.

## **Certificates & workshops**

- 2021 Postdoctoral Short Course on College Teaching in Science and Engineering, *Certificate*,  
Center for Research on Learning and Teaching, University of Michigan  
2020 Developing A Teaching Philosophy, Center for Research on Learning and Teaching,  
University of Michigan  
2020 Teaching for Accessibility, Center for Research on Learning and Teaching, University of  
Michigan

## **MENTORSHIP**

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(\*denotes program with a focus on advancing Justice, Equity, Diversity & Inclusion in STEM)

- 2021 Mentor, *Virtual Mentoring Program*, Animal Behavior Society (5 students)  
2020—2021 \*Mentor, *1,000 Girls 1,000 Futures*, New York Academy of Sciences (12 students)  
2017—2020 Graduate Student Advisor, Lu Lab, Stony Brook University  
2018 \*Mentor, Community of Student Mentors Program, Center for Inclusive Education,  
Stony Brook University (2 students)  
2017 \*Mentor, Women in Science and Engineering, Stony Brook University (1 student)  
2016—2018 \*Mentor, Educational Opportunity Program-Advancement on Individual Merit, Center  
for Inclusive Education, Stony Brook University (2 students)  
2015—2016 \*Tutor, Educational Opportunity Program/Advancement on Individual Merit, Center for  
Inclusive Education, Stony Brook University (2 students)

## **OUTREACH**

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(\*denotes program with a focus on advancing Justice, Equity, Diversity & Inclusion in STEM)

- 2021—2023 Science Communication Fellow, Museum of Natural History, University of Michigan  
2022 Meet a Scientist, FEMMES, Museum of Natural History, University of Michigan  
2021 \*Panelist, “Life of a (first-generation) Doctor”, STAR Scholars, University of Michigan  
2021 Twitter Takeover, Animal Behavior Society.  
2020 “Ask a Scientist” Q & A, Presbyterian Middle School (6<sup>th</sup> grade), Houston, TX; Logan  
Township Elementary School (5<sup>th</sup> grade) Logan Township, NJ  
2018—2020 \*Bookworm Biology, Central Islip Public Library, Central Islip, NY  
2016 Contributing Author/Illustrator, “Guide to New York Mammals: A Coloring Book”

2015-2016 Shutterbug Science, Stony Brook, NY

**DEPARTMENTAL & SCIENTIFIC SERVICE**

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2021— Grants Reviewer: *The Leakey Foundation* (x2)  
2018— Journal Reviewer: *Animal Microbiome* (x4), *Molecular Ecology*, *Gut Microbes*, *Ecology & Evolution*, *Biology Letters*, *Mammal Review*, *Urban Ecosystems*, *American Journal of Primatology*, *Frontiers in Microbiology*, *Developmental Psychobiology*, *Primates*  
2021— Peer coach, Weaving the Future of Animal Behavior, Animal Behavior Society  
2020— Founder & Co-Organizer, [Animal Microbiome Research Group](#)  
2020—2021 Co-organizer, Early Life Adversity Research Group  
2016—2019 Vice President, *Behavioral Ecology Group (BEG)*, Stony Brook University  
2015—2017 Student Publications Manager, IDPAS, Stony Brook University

**PROFESSIONAL AFFILIATIONS**

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New York Academy of Sciences, Society for Integrative & Comparative Biology, American Society of Mammologists, Animal Behavior Society, Sigma Xi Scientific Research Society