



February 28, 2025

Sethuraman Panchanathan
Director
National Science Foundation

Via e-mail: bstone@nsf.gov

Dear Director Panchanathan:

Good morning. In light of the [widely reported staff reductions at the National Science Foundation](#), and [increased scrutiny by the Senate Commerce Committee](#) on the use of NSF grant funds, we urge you to **make cuts that minimize harm to the advancement of science and society.**

One clear example of a project that is both unnecessary and lacking in scientific merit is the \$1,050,077 project titled "[The Neurobiology of Neophobia in a Wild Songbird](#)," awarded to Louisiana State University's Christine Lattin. This project involves capturing house sparrows from the wild, subjecting them to invasive, stress-inducing procedures, and ultimately killing and dissecting them. The claimed objective of this research is to explore why some species thrive in human-altered environments while others do not. However, as detailed below, the experimental design chosen by Lattin and her team—coupled with the numerous confounds introduced by capturing and confining wild birds—ensures these experiments will yield negligible benefit for birds, humans, or any other species.

As you work to implement necessary cuts, we ask that this project be prioritized for defunding. Its immense suffering, combined with its scientific limitations, makes it an obvious candidate for cancellation. Please eliminate this grant to ensure taxpayer dollars are used for research that serves both ethical standards and meaningful scientific advancement.

Irreversible Harm

Lattin's experiments involve capturing wild house sparrows in mist nets, taking them from their natural habitats and social networks, and holding them captive in a laboratory until they are killed. They are subjected to repeated human handling, lengthy confinement, and extended social isolation. The experimental procedures used in this laboratory typically include surgically implanting hormone-releasing capsules, injection of radioactive ligands for neuroimaging, and placing the birds into deliberately stressful situations to assess their capacity to tolerate novel stimuli. The abstract for the current project (linked above) suggests that the birds will be subjected to major life surgeries in order to temporarily deactivate specific regions of the brain. It also suggests that the birds will be decapitated so that their brains can be removed, frozen, and analyzed for alterations in their gene expression caused by the various experimental manipulations.

PEOPLE FOR
THE ETHICAL
TREATMENT
OF ANIMALS

Washington
1536 16th St. N.W.
Washington, DC 20036
202-483-PETA

Los Angeles
2154 W. Sunset Blvd.
Los Angeles, CA 90026
323-644-PETA

Norfolk
501 Front St.
Norfolk, VA 23510
757-622-PETA

Info@peta.org
PETA.org

Entities:

- PETA Asia
- PETA India
- PETA France
- PETA Australia
- PETA Germany
- PETA Switzerland
- PETA Netherlands
- PETA Foundation (U.K.)

It's well established that birds captured from the wild and held captive in a laboratory setting develop a whole host of short- and long-term physiological and behavioral abnormalities that not only seriously compromise their welfare but also confound the data being collected. For example, wild-caught birds in laboratories exhibit increased levels of corticosterone,¹ increased heart rate, weight loss, feather loss and/or altered grooming, and changes in organ mass.²

Their immune systems are also seriously compromised: Wild-caught birds exhibit hyperinflammation,³ impaired immune system functioning and delayed wound healing,⁴ and aberrant gut microbiota.^{5,6} The acute and chronic stress of laboratory confinement also alters birds' gene expression,⁷ a measurement heavily relied on by this laboratory and (as the abstract indicates) for this project.

Sparrows specifically experience acute weight loss, cardiac dysfunction, behavioral abnormalities, DNA damage,⁸ and even stress-induced death when taken from their natural environment and imprisoned in a laboratory. It's not surprising that some birds already confined to this LSU laboratory lost 11% of their bodyweight within five days of capture,⁹ while others died of "unknown causes" after just two weeks in captivity.¹⁰

Problematic Paradigm

Experiments designed to assess "neophobia" in a laboratory environment are frequently called into question by the scientific community. Most animals experimented on for this purpose are social in nature, and in their natural setting they rely on a host of multisensory social cues from conspecifics to assess the safety of novel stimuli in their environment.^{11,12} These critical natural cues are disallowed in most laboratory-designed neophobic experiments, including Lattin's. Other factors that affect animals' responses to novel stimuli and that are not controlled for in Lattin's experiments include age, time of year, social status, early-life experience, reproductive state, and inherent predation risk.^{13,14,15,16,17}

Lattin recently pointed out several additional challenges to studying "neophobia" in a laboratory environment, including difficulties in selecting appropriate novel stimuli, the challenges of establishing and implementing a proper acclimation period, the inconsistent use of a food reward across paradigms, and the context-specificity of most test assays.¹⁸ These are not insignificant problems. In attempting to choose objects that are "novel" for animals, experimenters necessarily limit the ecological relevance of their studies. For example, rather than using novel stimuli that sparrows might actually encounter in the wild, Lattin uses objects such as pipe cleaners, cocktail umbrellas, and purple plastic eggs, which are not likely to pose challenges to these birds' survival in the wild and are not like naturally occurring threats.

Similarly, subjecting animals to food restriction and then testing their ability to bypass a novel stimulus to obtain a food reward introduces unnatural motivational confounds, affecting not only the animals' behaviors but also most likely the neural circuits supporting those behaviors. Additionally, rewarding a hungry bird for tolerating novelty might alter any inherent neophobic traits the animal might have. Lattin's use of food to lure birds to mist nets for capture likely also alters their inherent neophobic traits and their subsequent behavior in her experiments.

Lattin's own experiments have determined that birds displaying "neophobia" in one artificial laboratory context may not exhibit similar behaviors in another. In a recently published article, "Exploration of a Novel Environment Is Not Correlated With Object Neophobia in Wild-Caught

House Sparrows (*Passer domesticus*),”¹⁹ Lattin subjected wild-caught house sparrows to both novel environments and novel objects and found no relationship between responses to the novel stimuli across the two contexts. It seems unlikely that the behaviors measured in this laboratory would be ecologically relevant or would translate into strategies that could be used to enhance animals’ ability to survive alterations to their natural habitat.

Interfering With Animal Protection Laws

To conduct previous experiments on wild birds, it appears that Lattin and her collaborators violated local law. Specifically, the capture of wild house sparrows for Lattin’s experiments within Baton Rouge would have been in apparent violation of Section 14:401 of the Code of Ordinances of the City of Baton Rouge and Parish of East Baton Rouge, which states, “Within the corporate limits of the City it shall be unlawful to trap, hunt, shoot or molest in any manner any bird or wildfowl or to rob bird nests or wildfowl nests.” Lattin’s grant proposal to the Louisiana Board of Regents, for which she received funding from 2019 to 2022, indicates that she planned to capture birds at a location within the city limits.²⁰

In September 2018, PETA contacted Hilton Cole, then-director of Baton Rouge Animal Control, who stated that he subsequently met with Lattin and advised her that trapping birds in Baton Rouge violated the city’s ordinance. Nevertheless, Lattin evidently continued to seek locations to capture birds in Baton Rouge, writing in a query posted on an LSU listserv in October 2019 that “[i]n and around Baton Rouge is preferable.”²¹ Director Cole informed PETA that he once again met with Lattin and advised her of the ordinance.

Ultimately, rather than simply adhere to local bird protection laws, Lattin had this ordinance modified to include an exception for scientific collection, putting not only sparrows but also other previously protected wildlife at risk. *It is difficult to believe that anyone involved with this project has wildlife protection in mind.*

I hope you will consider this information carefully and terminate funding for this project, especially when so many worthier projects are currently at risk of losing their NSF support. I would be happy to meet with you to discuss these concerns in more detail at your earliest convenience.

Sincerely,



Katherine V. Roe, Ph.D.
Chief Scientist
Laboratory Investigations Department
KatherineR@peta.org

¹Fischer CP, Wright-Lichter J, Romero LM. Chronic stress and the introduction to captivity: How wild house sparrows (*Passer domesticus*) adjust to laboratory conditions. *Gen Comp Endocrinol.* 2018;259:85-92.
doi:10.1016/j.ygcen.2017.11.007

-
- ²Love AC, Lovern MB, DuRant SE. Captivity influences immune responses, stress endocrinology, and organ size in house sparrows (*Passer domesticus*). *Gen Comp Endocrinol*. 2017;252:18-26. doi:10.1016/j.ygcen.2017.07.014
- ³Martin LB, Kidd L, Liebl AL, Coon CA. Captivity induces hyper-inflammation in the house sparrow (*Passer domesticus*). *J Exp Biol*. 2011;214(Pt 15):2579-2585. doi:10.1242/jeb.057216
- ⁴Gao S, Sanchez C, Deviche PJ. Corticosterone rapidly suppresses innate immune activity in the house sparrow (*Passer domesticus*). *J Exp Biol*. 2017;220(Pt 2):322-327. doi:10.1242/jeb.144378
- ⁵Madden AA, Oliverio AM, Kearns PJ, et al. Chronic stress and captivity alter the cloacal microbiome of a wild songbird. *J Exp Biol*. 2022;225(7):jeb243176. doi:10.1242/jeb.243176
- ⁶Florkowski MR, Hamer SA, Yorzinski JL. Brief exposure to captivity in a songbird is associated with reduced diversity and altered composition of the gut microbiome. *FEMS Microbiol Ecol*. 2023;99(9):fiad096. doi:10.1093/femsec/fiad096
- ⁷DuRant S, Love AC, Belin B, et al. Captivity alters neuroendocrine regulators of stress and reproduction in the hypothalamus in response to acute stress. *Gen Comp Endocrinol*. 2020;295:113519. doi:10.1016/j.ygcen.2020.113519
- ⁸Beattie UK, Estrada RS, Gormally BMG, Reed JM, McVey M, Romero LM. Investigating the effects of acute and chronic stress on DNA damage. *J Exp Zool A Ecol Integr Physiol*. 2024;341(3):256-263. doi:10.1002/jez.2778
- ⁹Lattin CR, Bauer CM, de Bruijn R, Romero LM. Hypothalamus-pituitary-adrenal axis activity and the subsequent response to chronic stress differ depending upon life history stage. *Gen Comp Endocrinol*. 2012;178(3):494-501. doi:10.1016/j.ygcen.2012.07.013
- ¹⁰Lattin CR, Pechenenko AV, Carson RE. Experimentally reducing corticosterone mitigates rapid captivity effects on behavior, but not body composition, in a wild bird. *Horm Behav*. 2017;89:121-129. doi:10.1016/j.yhbeh.2016.12.016
- ¹¹Crane AL, Mathiron AG, Ferrari MC. Social learning in a high-risk environment: Incomplete disregard for the ‘minnow that cried pike’ results in culturally transmitted neophobia. *Proc Biol Sci*. 2015;282(1812):20150934. doi:10.1098/rspb.2015.0934
- ¹²Addessi E, Chiarotti F, Visalberghi E, Anzenberger G. Response to novel food and the role of social influences in common marmosets (*Callithrix jacchus*) and Goeldi's monkeys (*Callimico goeldii*). *Am J Primatol*. 2007;69(11):1210-1222. doi:10.1002/ajp.20429
- ¹³Biondi LM, Bó MS, Vassallo AI. Inter-individual and age differences in exploration, neophobia and problem-solving ability in a Neotropical raptor (*Milvago chimango*). *Anim Cogn*. 2010;13(5):701-710. doi:10.1007/s10071-010-0319-8
- ¹⁴Greggor AL, Jolles JW, Thornton A, Clayton NS. Seasonal changes in neophobia and its consistency in rooks: The effect of novelty type and dominance position. *Anim Behav*. 2016;121:11-20. doi:10.1016/j.anbehav.2016.08.010
- ¹⁵Lezana L, Hernández-Soto R, Díez-León M, Ríos M, Baquero E, Galicia D. The effect of early experiences in barn owl (*Tyto alba*) behaviour. Acquisition-expression time of neophobia and filial imprinting. Implications for management and conservation. *Behav Processes*. 2022;195:104569. doi:10.1016/j.beproc.2021.104569
- ¹⁶Biondi LM, Fuentes GM, Córdoba RS, et al. Variation in boldness and novelty response between rural and urban predatory birds: The Chimango Caracara, *Milvago chimango* as study case. *Behav Processes*. 2020;173:104064. doi:10.1016/j.beproc.2020.104064
- ¹⁷Li D, Wang G, Wingfield JC, Zhang Z, Ding C, Lei F. Seasonal changes in adrenocortical responses to acute stress in Eurasian tree sparrow (*Passer montanus*) on the Tibetan Plateau: Comparison with house sparrow (*P. domesticus*) in North America and with the migratory *P. domesticus* in Qinghai Province. *Gen Comp Endocrinol*. 2008;158(1):47-53. doi:10.1016/j.ygcen.2008.06.002
- ¹⁸Kimball MG, Lattin CR. The “seven deadly sins” of neophobia experimental design. *Integr Comp Biol*. Published online November 23, 2023. doi:10.1093/icb/icad127
- ¹⁹Kimball MG, Lattin CR. Exploration of a novel environment is not correlated with object neophobia in wild-caught house sparrows (*Passer domesticus*). *Behav Processes*. 2023;210:104913. doi:10.1016/j.beproc.2023.104913
- ²⁰Lattin C. The neurobiology of resilience to environmental challenges. Louisiana Board of Regents grant proposal. 7 Nov 2018. Obtained April 18, 2020, via public records request to Louisiana State University.
- ²¹Lattin C. House sparrows at your bird feeder? Posting on LABIRD-L@listserv.lsu.edu. October 1, 2019. Accessed October 7, 2019.