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**Project Summary 2016**

Rats are initially afraid of humans, which leads to negative affect, poor welfare, and difficult handling. These negative effects may be reinforced in pet store rats by high-levels of novelty and human interactions that may be infrequent, inconsistent, and aversive. Playful handling, or “tickling,” is a positive handling technique that mimics rat play to reduce fear. During tickling some rats consistently produce more positive vocalizations (**high-callers**) and react differently to novelty than rats that vocalize less (**low-callers**). We hypothesized that tickling pet store rats would improve rat welfare and human-rat interactions, particularly for high-callers, as compared to controls (standard, minimal handling) or low-callers.

In my experimental design, I compared control rats to tickled high-callers and low-callers. Tickled rats received 14 minutes of tickling across 7 days. We evaluated the impacts of our procedures and individual differences by assessing rats in a 3-part unfamiliar approach and restraint test; fecal corticosterone; and play behavior in cage.

My results showed that short-term tickling improves ease of restraint with an unfamiliar handler. High-calling rate is associated with reduced fear in an unfamiliar approach test, in comparison to a low-calling rate. Overall, our results suggest that applying tickling to pet store rats, especially high-callers, may improve some human-rat interactions and rat welfare.

The Center for Animal Welfare Science facilitated the oral presentation of this work at the 50<sup>th</sup> International Society for Applied Ethology Congress. While presenting my research in the Humans and Animals Section, I gained valuable feedback from audience members and made connections with leading researchers in ethology. Additionally, while participating in a unique Measuring Animal Emotion Workshop at the conference, I learned highly relevant research techniques that are certain to be key parts of future projects.

**LaFollette, M.R.**, Cloutier, S., O’Haire, M.E., Gaskill, B.N. 2016. Tickling pet store rats: impacts on human-animal interactions. *Proceedings of the 50<sup>th</sup> Congress of the international society for applied ethology*. July 12 – 16, Edinburgh, United Kingdom.