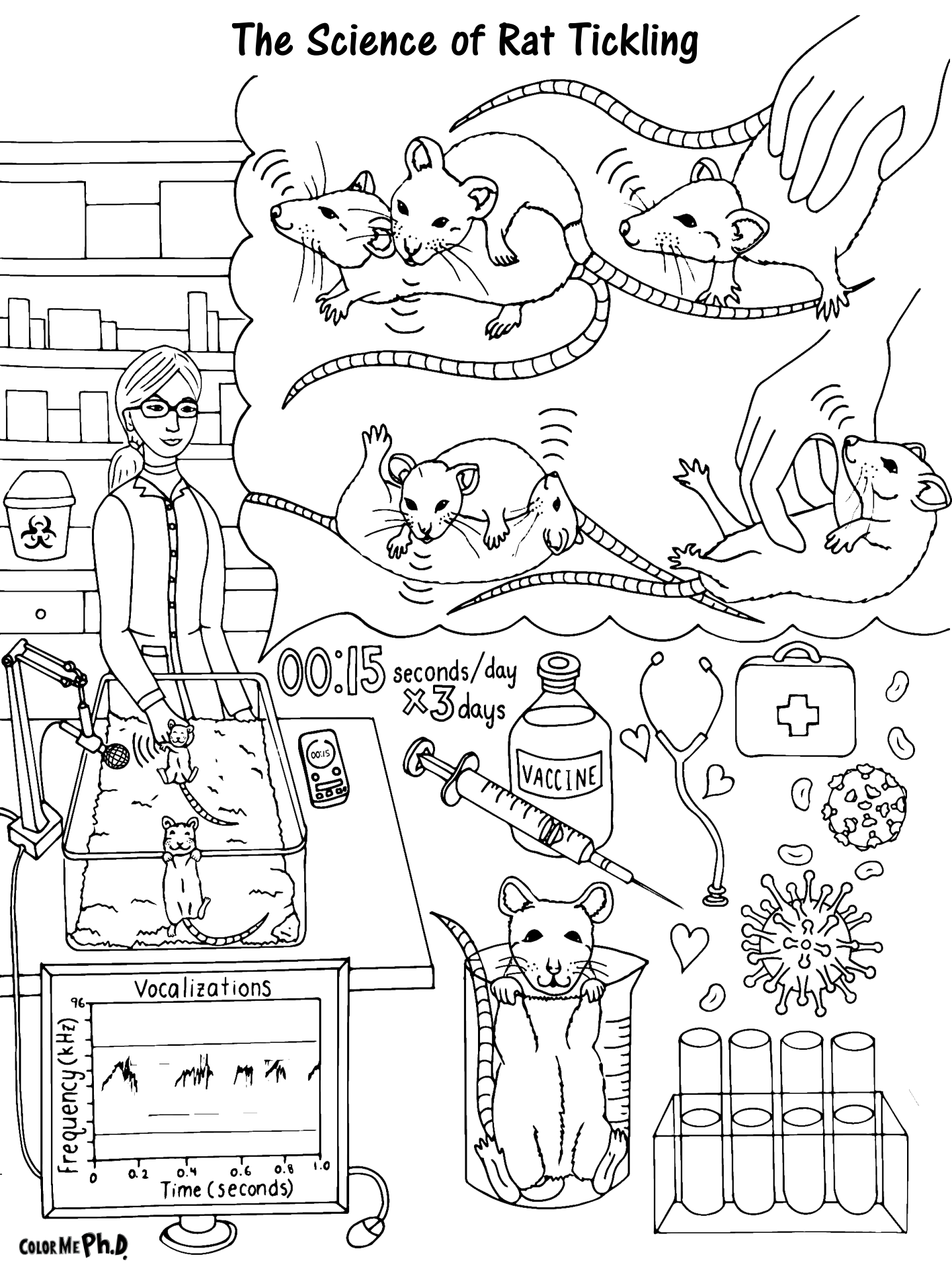
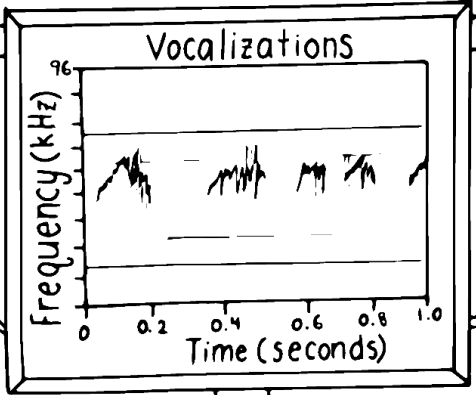
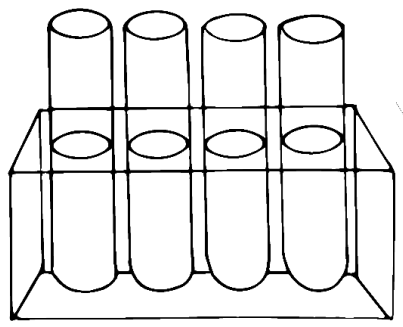
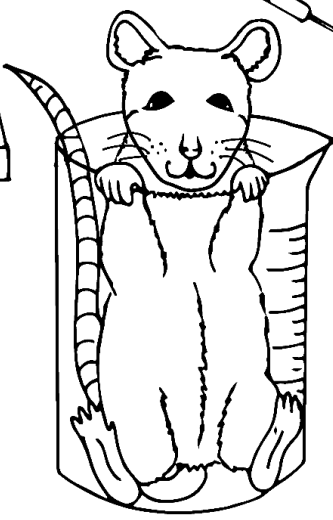
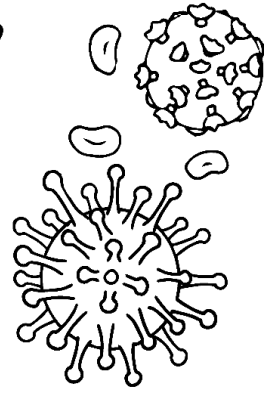
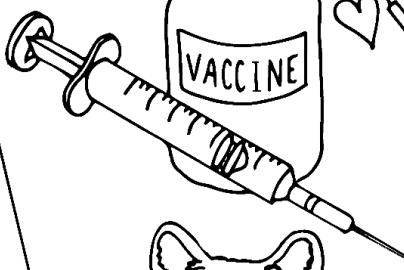


The Science of Rat Tickling



00:15 seconds/day
x 3 days



The Science of Rat Tickling

- 1** Did you know that rats like being tickled? Yes, rats! Specifically, rats that are an essential part of scientific research. These rats play a huge role in helping improve human health such as developing treatments for heart disease, diabetes, and cancer.
- 2** Unfortunately, when rats first interact with humans, they're afraid of them. After all, we are a lot bigger than a little rat, so the rat might think we are predators. In many research studies, these rats need to be restrained or get injections to study a new drug. This causes them stress which changes their behavior, hormones, and even brain structure. And that's not good for rat welfare or scientific quality.
- 3** Luckily a solution to these problems can come in the form of rat tickling. What is rat tickling? Well, when rats are young, they actually play in a very similar way to puppies. In the picture, you can see rats playing on the top left. On the top right, one hand is used to mimic aspects of rat rough-and-tumble play. That is rat tickling!
- 4** Does this really work? Research reviewing over 50 rat tickling experiments shows that it does. Rats are happier, less afraid of people, and less stressed after tickling. They even make ultrasonic vocalizations (meaning you cannot hear them without special equipment) during tickling. These vocalizations are a gold-standard measure of positive emotions in rats. Some scientists have even compared them to human laughter.
- 5** Unfortunately, research also shows that this great technique is rarely used. Often this is because laboratory animal personnel think it takes too long. Fortunately, in their research, Megan and Brianna found that just 45 seconds (15 seconds per day for 3 days) is effective in increasing positive vocalizations and rat behaviors such as play. This is 1000% less time than what scientists thought was needed before! The overall goal of this research is to promote positive human-animal interactions in the laboratory by addressing common barriers and ultimately improve laboratory animal welfare.

Dr. Megan LaFollette is a recent Ph.D. graduate of the Animal Behavior & Well-Being program at Purdue University. Prior to her Ph.D. she earned her Master's at Purdue University and her Bachelor's at Truman State University in Missouri. She currently holds a position as a 3Rs Fellow at The North American 3Rs Collaborative. Her research focuses on the intersection of animal welfare and human-animal interaction, particularly for laboratory and companion animals.

Dr. Brianna Gaskill is an Assistant Professor of Animal Welfare at Purdue University. She earned her B.S. from Kansas State University and her Ph.D. at Purdue University before completing a post-doctoral role at Charles River Laboratories. Her research interests focus on laboratory animal welfare and how better welfare can translate into better science.



- References:** 1. LaFollette MR, O'Haire ME, Cloutier S, Blankenberger WB, Gaskill BN (2017) Rat tickling: A systematic review of applications, outcomes, and moderators. PLoS ONE, 12(4), e0175320.
2. LaFollette, MR, O'Haire, ME, Cloutier, S, & Gaskill, BN (2018) Practical rat tickling: Determining an efficient and effective dosage of heterospecific play. Applied animal behaviour science, 208, 82-91.