

Dr. Michael Spinetta's Interdisciplinary Life Sciences Laboratory
Ph.D. Behavioral Neuroscience (The University of Texas at Austin)
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Overview: I am engaged in basic research with both *human* and *animal* models to increase our understanding of human behavior.

- My **animal model research** explores learning and memory and psychopharmacology, with an emphasis on the consolidation and reconsolidation of emotionally salient events and the effects that drugs of abuse and therapeutic drugs have on the learning process, including the formation, storage and retrieval of memories.
- My **human research** explores the effects of overall well-being on gratitude.

There are two current projects with opportunities for student involvement.

- I. **Odor and Object Recognition Memory:** Rats have a natural preference for novelty and readily explore novel odors and objects. Taking advantage of this preference, it is possible to explore the effects of alcohol on memory after learning has occurred. Disruption of memory in this fashion is known as retrograde amnesia and can occur as a result of a single acute alcohol binge. We examine both this phenomenon and the effects of drugs such as caffeine, and non-drug interventions such as exercise, on memory for objects and odors in rodents.
 - Duties: Tasks include animal care and maintenance, performing the object and odor recognition tasks in rodents, gathering and reviewing the relevant literature, data collection, and data analysis.
 - Requirements: Ideally students should have completed the Statistics and Research Methods sequence; however, students in process will be considered.
 - Recruitment and time commitment: Dr. Spinetta prefers to recruit students through his courses who have demonstrated the motivation to gain research experience. The time commitment is flexible and will be determined based on meeting with Dr. Spinetta. Students may participate via the Psychology Practicum Program or may volunteer.
- II. **Gratitude and Well-being:** Gratitude has been defined as “a sense of thankfulness and joy in response to receiving a gift, whether the gift be a tangible benefit from a specific other or a moment of peaceful bliss evoked by natural beauty”. However, the relationships between gratitude and factors related to overall well-being needs to be further explored in the undergraduate population (population of young adults). Importantly, it is possible that even a very brief focus on gratitude, or the act of thinking about gratitude could yield an increase in overall well-being. To educate the whole person, as Seattle University aims to do, my collaborators and I explore ways to enhance gratitude and potentially increase well-being as a result. There are many factors that can affect an individual's gratitude. We examine the relationships between gratitude, development (ego development and emotional intelligence) and overall well-being (happiness, spirituality, anxiety, and stress).
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Recent publications and presentations: *Indicates undergraduate student collaborators.

Maynard, M. E., Chung, C., Comer, A., Nelson, K., Tran, J., Werries, N., Barton, E. A., Spinetta, M. J., & Leasure, J. L. (2016). Ambient temperature influences the neural benefits of exercise. *Behavioural Brain Research, 299*, 27-31.

Spinetta, M. J., Wooden, J. I., Maynard, M. E., *O'Leary, C. I., & Leasure, J. L. (2015, July). *A novel object recognition task that leads to a lasting expression of memory*. Poster presented at the annual International Behavioral Neuroscience Society conference, Victoria BC.

Leasure, J. L., Maynard, M. E., Chung, C., Comer, A., Nelson, K., Tran, J., Werries, N., Barton, E. A., & Spinetta, M. J. (2015, July). *"Ambient temperature influences the neural benefits of exercise"*. Symposia presented at the annual International Behavioral Neuroscience Society conference, Victoria BC.