JMU Chemistry and Biochemistry Seminar

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The smell of success: pheromones in invasive snakes

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Sex pheromones are potent forces in sexual selection, especially in snakes where they determine multiple aspects of mate choice. Pheromones are sex-specific in snakes and can be dramatically manipulated in vivo using hormonal manipulation techniques. My research has explored the phenotypic plasticity in snake pheromones and the sex hormones controlling their expression. As invasive species, snakes are exceedingly cryptic but potentially voracious predators requiring effective intervention strategies. Luring snakes to traps for removal is a key problem for management, and pheromones have been targeted as a potentially powerful tool for field implementation. I will discuss our work with two invasive snakes, Burmese pythons in Florida and brown treesnakes on Guam, and how we are using chemoecological methods to intervene in these specific invasions.