**Introduction**

- Yarrow (*Achillea millefolium*) has an extensive ethnobotanical history in use as a tonic or panacea as well in treating digestive problems and infections, among many other purposes.
- Other members of the Asteraceae family have already been shown to affect the endocannabinoid system.
- Potential therapeutic pathways involving the mammalian endocannabinoid system include treating mood disorders, anxiety disorders, hypertension, and obesity/metabolic disorders, to name only a few.
- There is a potential connection between the role of the endocannabinoid system in regulating anxiety and reducing inflammation and the diverse traditional medicinal uses of yarrow.
- The fatty acid amide hydrolase enzyme (FAAH) acts to degrade anandamide, a major endogenous activator of the endocannabinoid system.

**Objectives**

- Characterize the effects of yarrow extract on fatty acid amide hydrolase enzyme.
- Determine IC₅₀ values (the concentration of yarrow extract that inhibits 50% of the enzyme) to compare potencies of different parts of the plant.

**Results**

- Both extracts were made from the same yarrow plant in the same time period.
- Chemical profiles of the potent inhibiting stem sample (1) and both leaf samples were similar.

**Conclusion**

- Yarrow leaf presented the most potent inhibition of FAAH, followed closely by the more potent and chemically similar yarrow stem sample.
- HPLC analysis indicated a very different chemical profile for the stem sample that was not a potent inhibitor—this provides an explanation for the vastly different IC₅₀ results for the two yarrow stem extracts.

**Acknowledgements**

I would like to thank Dr. Cory Harris, Rui Lin, and Alexandra Kachura for their support and patience during this project.

**References**