Study of the Chemical Constituents and Properties of Passiflora Lutea through Isolation

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Natural products have a long-standing history of providing medicinally important compounds from aspirin all the way to taxol. Our group has an interest in identifying medicinally relevant compounds in plants that are native to the southern Mississippi region. Passiflora incarnata, a member of the passion flower family, has been used widely as a home remedy for treating anxiety due to its calming effect. Belonging closely in the same family as P. Incarnata, P. lutea could possess similarly-interesting biological properties. While P. incarnata has been researched widely, P. lutea has remained largely unstudied. We are interested in discovering P. lutea's chemical constituents and determining the biological properties of these constituents to learn more about this plant species. P. lutea specimens were collected from its natural habitat at Lake Thoreau and were dried by incandescent bulbs, extracted over several iterations, purified by several silica gel column chromatographies. The fractions were screened for antimicrobial activity and were analyzed through the use of H-NMR, C-NMR and MS. Extracts are currently being further purified to identify unique compounds by 2D-NMR. This poster will describe the isolation, purification, biological testing procedures and analyzed results of P. lutea.

Awards Won: