

Project title:	Genomic Mapping of Invasion Risk for Exotic Mosquito Vectors
Keywords:	Molecular biology, mosquito genomics, citizen science, NGS
Description:	This project is part of a large initiative integrating genomics with citizen science to create early-warning systems for exotic mosquito incursions. Students will assist with processing samples of a native (backyard) mosquito <i>Aedes notoscriptus</i> collected through the citizen science program called Zika Mozzie Seeker (ZMS). The primary focus will be on hands-on molecular work in the lab: extracting DNA, preparing next-generation sequencing (NGS) libraries, and supporting quality control. If time allows, students will also be introduced to spatial data interpretation and the role of genomics in mapping incursion risk.
Expected outcomes and deliverables:	- Training in DNA extraction, quantification, and NGS library preparation - Introduction to sequencing workflows and data quality assessment - Insight into how genomic data informs public health surveillance - Participation in lab meetings; short oral presentation and brief final report
Suitable for:	Students in biomedical science, molecular biology, genetics, or related fields. Attention to detail and interest in wet-lab work is essential. Prior molecular lab experience (e.g. pipetting, gel electrophoresis) is desirable but not required as full training will be provided.
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