Francisella tularensis is a highly infectious bacterium that causes the potentially fatal disease tularemia. In parts of Europe, specifically Scandinavian countries, mosquitoes are capable vectors of F. tularensis. Presumably, mosquitoes become colonized with F. tularensis following extraction of blood from an infected mammal. Mosquitoes feed intermittently on nectar between blood meals, allowing for the possibility of a colonized mosquito transmitting F. tularensis to flower nectar. Consequently, flower nectar may act as a natural reservoir of F. tularensis. We aimed to assess if nectar was a viable reservoir of F. tularensis, as well as the ability of mosquitoes to ingest and transmit F. tularensis from one nectar source to another. Therefore, we first sought to determine the viability of F. tularensis in nectar by inoculating nectar, in comparison to water and a bacterial growth medium (TSBc). Bacteria were capable of surviving in sucrose and TSBc over a long period of time relative to water. In addition, mosquitoes (Aedes aegypti) that fed on a nectar surrogate (30% sucrose solution) inoculated with bacteria became colonized with F. tularensis as was determined by plating insect homogenates at various time points. The presence of F. tularensis was confirmed by PCR using Francisella-specific primers on the viable bacteria recovered from the mosquitoes that fed from the inoculated sucrose. We are currently investigating whether F. tularensis can be re-deposited into sterile nectar or a nectar surrogate by colonized mosquitoes.