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Colonization of mosquitoes by *Francisella tularensis* via a nectar reservoir.

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.