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Date: Tuesday, April 25, 2017

Time: 11:40 AM – 12:00 PM

Session F: Donald C. Mackel Award Finalists

Room: Frieden Plenary

Moderators: Reynolds Selerno and Greg Armstrong

Title: Unusual Pathogen Associated with Nonbiting Flies in a Person with Bacteremia — Washington State, 2016

Authors: Jesse Bonwitt, E. Dykstra, M. Tran, K. Eckmann, J. Zambito, M. Bell, M. Sixberry, S. Lindquist, W. Glover

Background: *Wohlfahrtiimonas chitiniclastica* is a rarely reported cause of bacterial infection associated with skin lesions and sepsis. It has been isolated in nonbiting flies that can cause myiasis (fly larvae infestation); however, it has neither been isolated from fly larvae on patients with *W. chitiniclastica* infection, nor from insects in the Americas. In August 2016, a man was hospitalized in Washington State with necrosis of the foot, myiasis, and *Wohlfahrtiimonas* spp. bacteremia. We investigated to determine exposure source.

Methods: We attempted to collect live and dead insects (including fly eggs and larvae) from the patient and patient's home and culture them for *Wohlfahrtiimonas* spp. at different lifecycle phases. Pulsed-field gel electrophoresis (PFGE) was performed on isolates to assess relatedness. Recent patient travel history was obtained through proxy interviews.

Results: We collected 8 insect species from inside the patient's home. Although larvae present on the patient when hospitalized were unavailable for testing, *Wohlfahrtiimonas* spp. was isolated from larvae collected from the carpet where the patient was found by emergency responders. These larvae were not taxonomically identified. *Wohlfahrtiimonas* spp. was also isolated from larvae hatched from eggs of a green bottle fly (*Lucilia sericata*) caught inside the home. PFGE results are pending. No travel outside of Washington was reported.

Conclusions: We report the first isolation of *Wohlfahrtiimonas* spp. in insects in the Americas and a previously undescribed vector, the green bottle fly. Our investigation provides further evidence of fly larvae as vectors for human infection. Green bottle fly larvae are a common cause of myiasis; patients with myiasis should be considered at risk for *Wohlfahrtiimonas* spp. infection.