

College of Medicine

Department of Microbiology, Immunology & Molecular Genetics Chandler Medical Center, MS 415 Lexington, KY 40536-0298 (859)323-5256 Fax: (859)257-8994

September 30, 2019

Dear Editor,

Enclosed is a new submission of a manuscript entitled: "Method for marker-less gene deletion by Floxed-Cassette Allelic Exchange Mutagenesis (FLAEM) in *Chlamydia trachomatis*" to be considered for publication in JoVE.

Chlamydia spp are important human pathogens whose obligate intracellular lifestyle has complicated direct genetic manipulation. Herein, we describe the protocol for Floxed-Cassette Allelic Exchange Mutagenesis that allows targeted marker-less gene deletion in Chlamydia trachomatis. This method utilizes the Cre-lox system to excise the selection cassette after allelic exchange mutagenesis. We have developed this method to alleviate cassette-induced polar effects, and to our knowledge, it is the first application of the Cre-lox system in a bacterium where cultivation in host cells is required. We feel the protocol will be useful to both chlamydiologists and a broad range of researchers. We look forward to hearing from you.

Thank you for your consideration.

Sincerely,

Gabrielle Keb

Microbiology PhD Candidate

Dept. of Microbiology, Immunology and Mol Genetics

jobrielle Ket

University of Kentucky College of Medicine

800 Rose St. MS423

Lexington, KY 40536-0298

Phone: 269-365-2599

Email: gabrielle.keb@uky.edu