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November 16, 2018

Re: Revised Manuscript, JoVE58636

Dear Editors,

We would like to submit for your consideration a revised methods article entitled "Antimicrobial synergy testing by inkjet printer-assisted automated checkerboard array and time-kill."

Our science editor contact with whom we have been working is **Dr. Jaydev Upponi**. He indicated that we should request our article be considered in the JoVE **Immunology and Infection Section**.

In the manuscript, we describe the methodology for two techniques used to determine the combinatorial effects of antimicrobials on bacterial pathogens. These are specifically the checkerboard synergy test and the time-kill assay. We believe that a JoVE article will be of significant interest to the field as these two techniques are not well described in available materials in the public domain. Further we believe that a JoVE type video would be immensely helpful for scientists trying to successfully implement these techniques in their laboratories. We recently described in the literature a new technique for performing checkerboard synergy testing that makes use of inkjet printing technology to facilitate set up orthogonal antibiotic titrations. This allows the testing to be set up in a minute rather than an hour, and we believe represents a tremendous advance in the field. We present the details of the technique in the JoVE article and believe the technique is best illustrated in the combination JoVE text/video format. Importantly, based on our prior work, the US Centers for Disease Control and Prevention (CDC) has now deployed this inkjet printing methodology in their ARLN (Antimicrobial Resistance Laboratory Network) to enable these centers to test experimental and combinations of antimicrobials at will against pan-drug resistant pathogens. This capability will be used to identify new treatment options for infections that would otherwise be untreatable. We expect therefore there to be considerable interest in the JoVE article, and we hope that you consider it for publication in your journal.

The manuscript submission has not been previously published nor is under consideration for publication elsewhere. The authors have read and agree upon the contents of the submission. All authors have contributed substantially to the work.

Sincerely yours,

James E. Kirby, MD