Q&A ATCC® *Excellence in Research* Webinar "Carbapenem-resistant Enterobacteriaceae (CRE) – A Growing Superbug Population"

General Questions

1. Will we be able to download the presentation?
   This presentation will be available to watch on demand on the ATCC website, or click here.

2. What other drug-resistant strains are available from ATCC?
   ATCC has a number of drug-resistant strains available. In addition to our carbapenem-resistant (CRE) strains, ATCC offers methicillin-resistant *Staphylococcus aureus* (MRSA), Vancomycin-resistant Enterococci (VRE), Extended-Spectrum beta-lactamase (ESBL) strains, drug-resistant *Acinetobacter baumannii*, drug-resistant *Pseudomonas aeruginosa*; isoniazid-resistant mycobacteria, drug-resistant *Candida albicans*, and drug-resistant vector-borne parasitic protozoa, including strains of *Plasmodium falciparum.* For more information about superbugs, please visit our website at www.atcc.org/superbugs. To view a complete listing of our multidrug-resistant strains, visit us online at www.atcc.org, or download a copy of our Multidrug Resistant & Antimicrobial Reference Strains brochure.

3. Have the ATCC CRE strains been analyzed for the mechanisms that resulted in drug resistance?
   Our KPC and NDM strains have been examined for the presence of the gene conferring carbapenem resistance (bla_{KPC} and bla_{NDM}, respectively). The mechanism of resistance to other antibiotic classes has not been evaluated, only the overall resistance or susceptibility was tested.

4. How high is the mortality rate associated with CRE infection?
   Some studies suggest that the mortality rate associated with CRE infections is as high as 50% (Borer A, *et al.* Infect Control Hosp Epidemiol 30(10): 972-976, 2009; Patel G, *et al.* Infect Control Hosp Epidemiol 29: 1099-1106, 2008).

5. How common are metallo-β-lactamase producing CRE in the United States? Which strains does ATCC offer?
   Based on the CDC's surveillance for these organisms, it appears that NDM- and VIM-producing Enterobacteriaceae are uncommon in the United States. ATCC currently offers strains producing the NDM carbapenemase, we do not currently have VIM-producing strains.

6. Can ATCC provide information on the PCR reaction that was used to verify that the NDM-producing strains are *bla*$_{NDM}$ positive?
   The protocols ATCC used to verify the presence of the *bla*$_{NDM}$ gene were provided by the CDC. You can find the primer sequences, reaction mixture, and the PCR cycling parameters in the customer support section of our website here.

7. Does ATCC have controls for the Modified Hodge Test?
   Yes, ATCC offers ATCC® BAA-1705™ as a positive control and ATCC® BAA-1706™ as a negative control for the Modified Hodge Test. Both are *Klebsiella pneumoniae* strains.

8. What methods does ATCC use to evaluate antibiotic resistance and sensitivity of a bacterial strain?
   ATCC employs a variety of methods for the detection of susceptibility or resistance to antibiotics. These include Kirby-Bauer disc diffusion and VITEK®. Which test(s) are used is dependent on the strain. In some cases, if a strain is found to be resistant to a particular antibiotic ATCC would perform an Etest® to determine the minimum inhibitory concentration.