NovoBiotic reports the discovery of teixobactin, a new antibiotic without detectable resistance

Cambridge, MA – January 7, 2015 – NovoBiotic Pharmaceuticals, LLC announces the discovery and preclinical development of teixobactin, a compound belonging to a new class of antibiotics. As reported in the journal Nature (Ling et. al. 2015), the compound shows potent killing against a broad panel of bacterial pathogens including methicillin resistant *Staphylococcus aureus* (MRSA) and vancomycin resistant enterococci (VRE). In addition, teixobactin showed favorable drug properties including excellent efficacy in three mouse models of infection (septicemia, skin and lung). In collaboration with the University of Bonn (Bonn, Germany) and Northeastern University (Boston, MA), teixobactin was shown to inhibit bacterial cell wall synthesis by binding to two cell wall components: lipid II and lipid III. The article reports that no resistant mutants of either *S. aureus* or *Mycobacterium tuberculosis* could be generated. ñThe need for new antibiotics is acute due to the global problem of pathogen drug resistance. Teixobactinôs dual mode of action and binding to non-peptidic regions suggest that resistance will be very difficult to developò said Dr. Kim Lewis, co-founder of NovoBiotic. Teixobactin was discovered in a screen against the companyôs extensive extract library generated from previously uncultured microbes. ñThe discovery of teixobactin is further evidence that our unique culturing technologies provide ready access to new chemistry from nature that can be screened for novel drug leadsò said Dr. Dallas Hughes, President of NovoBiotic.

About NovoBiotic Pharmaceuticals LLC

We focus on the discovery of new antibiotics and oncology drugs. While many marketed drugs in these therapeutic areas are derived from microbes found in the soil, few new classes have been introduced since the 1960s. Large pharmaceutical companies have exhaustively screened the readily culturable microbes, which represent <1% of microbes in the environment. Thus, the vast majority of microbes in nature have remained uncultured and inaccessible to drug discovery. Our discovery platform overcomes this long-standing problem by providing access to the >99% of microbes previously believed to be ñunculturableò, allowing us to explore a virtually unlimited diversity of natural products.Corresponding author:

Kim Lewis (Northeastern University, Boston, MA, USA)

Tel: +1 617 373 8238; E-mail: k.lewis@neu.edu