

e-Therapeutics plc

("e-Therapeutics" or "the Company")

Successful completion of preclinical efficacy and resistance studies of candidate antibiotic ETX1153 against MRSA

e-Therapeutics plc (AIM: ETX), the systems biology drug discovery company, is pleased to announce the successful completion of preclinical studies of efficacy and rates of resistance of its candidate antibacterial drug compound ETX1153 against methicillin-resistant *Staphylococcus aureus* (MRSA), commonly referred to in lay terms as one of the hospital "superbugs".

High potency

ETX1153 has been tested *in vitro* against numerous strains of MRSA, including the vancomycin intermediately sensitive (VISA) strains. ETX1153 was found to be highly potent, with a Minimum Inhibitory Concentration (MIC) below 0.25 µg/ml for all but three strains tested, for which the median MIC was 0.5 µg/ml. The most common epidemic strain of MRSA in the UK is EMRSA-16, and this was among the strains killed most effectively at the lowest concentration. Furthermore the potency of ETX1153 was compared with that of other antibiotics commonly used against MRSA, such as moxifloxacin, trovafloxacin, ciprofloxacin, quinupristin/dalfopristin, linezolid, teichoplanin and vancomycin, and determined to be significantly greater, showing the lowest MICs among these drugs.

Low rate of resistance emergence

Initial laboratory studies conducted by e-Therapeutics in 2006 suggested that the rate of resistance development of bacteria to ETX1153 was very low. Quantitative comparative studies of the rate of resistance development, comparing ETX1153 with two antibiotics frequently prescribed for MRSA, mupirocin and ciprofloxacin, have confirmed this low rate of resistance. In a study involving 10 common strains of MRSA and a widely-accepted industry model for measuring the development of bacterial resistance, resistant mutants emerged from all the strains treated with mupirocin or ciprofloxacin, but for 4 out of 10 strains treated with ETX1153, no resistant mutants were observed whatsoever. Across the other strains, the rate of development of resistance to ETX1153 was orders of magnitude lower than for these frequently prescribed antibiotics.

Professor Malcolm Young, Chief Executive of e-Therapeutics commented:

“We are delighted that these rigorous studies have confirmed our initial belief that ETX1153 could become an important weapon in the battle against this devastating bacterial infection. We will aim to progress to clinical studies with ETX1153 as quickly as possible.”

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Notes to Editors

e-Therapeutics plc is a systems biology drug discovery company. It has developed proprietary computational systems to swiftly and accurately analyse and predict how medicines interact with cells in the body. This optimises the probability of identifying drug candidates with desirable efficacy and low toxicity. The Company applies its novel, systematic approach to three areas of activity:

- discovery of new drugs;
- discovering novel uses for existing drugs; and
- analysis of the interactions between different drugs.

Amongst e-Therapeutics' pipeline of compounds in development are novel antibiotics that have been shown to kill the "superbug" MRSA, and a novel cancer chemotherapy that has been shown to kill malignant cells at safe doses in a very short time. Other candidate therapies in development are targeted at atherosclerosis, asthma and depression. The Company is currently in negotiation with a number of pharmaceutical companies, and is progressing the preclinical and clinical development of these products. For further information on e-Therapeutics visit www.etherapeutics.co.uk.

About MRSA

Every year an estimated 100,000 UK patients contract an antibiotic-resistant infection while in hospital. Cases of MRSA in England and Wales have increased by 600% in the last decade. The reported cost to the NHS of treating these infections is already believed to exceed £1 billion a year. With the steep increase in the appearance of so-called "super-bugs" such as MRSA in UK hospitals, there is a widely-recognised need for new anti-bacterial treatments.

The majority of strains of MSRA are resistant to a wide range of antibiotics and certain strains are even beginning to exhibit resistance to some of the most recently introduced antibiotics such as vancomycin.

Minimum inhibitory concentration (MIC)

In [microbiology](#), the MIC is the lowest [concentration](#) of an antimicrobial that will inhibit the visible growth of a microorganism after overnight incubation. The MIC is the routine measure used to quantify the activity of new antimicrobial agents and to identify and monitor resistance of microorganisms to antimicrobial agents.