

Press release



Auspherix Provides Update on its New Class of Organogold Antibiotics

Stevenage, UK – 5 January 2016 – Auspherix Limited, the anti-infectives company meeting the urgent need for new antibiotics by developing a novel class of antibacterials, today provided an update on its organogold chemistry platform and its pipeline of compounds.

Auspherix's new class of antibiotics are differentiated from current antibiotics by their chemical structure and distinct antibacterial profile.

Furthermore, preliminary data indicates that Auspherix's organogold molecules show low propensity for the emergence of resistance. Auspherix CEO Dr Neil Miller said, "Our pipeline comprises three structurally distinct series of organogold small molecules, with potent and broad spectrum activity against Gram-positive and Gram-negative bacteria, including life threatening multi-drug resistant (MDR) pathogens.

"We are currently in the lead optimization phase and are on track to progress a development candidate from one of our three lead series into human clinical studies by early 2019, with an initial focus on treating complicated urinary tract infections (cUTI)."

Auspherix co-founders, Professor Ian Charles and Dr Dagmar Alber, were in the vanguard of renewed interest in developing new classes of antibiotics in response to the worldwide healthcare crisis of rising antimicrobial resistance (AMR). Some six years ago the team embarked on a discovery programme that used phenotypic assays to identify antibacterial compounds with drug-like properties that had activity against bacterial communities in various life forms. This research identified auranofin (Ridaura), a FDA approved anti-rheumatic agent, with a long history of clinical use, as being active against Gram-positive bacteria in planktonic, biofilm and persister forms.

Mechanistic investigations are ongoing but both in-house data and recent publications from several academic groups suggest that auranofin's antibacterial activity is a likely due to a complex MOA involving modulation of multiple cellular pathways.

Auranofin's structure comprises a central gold(I) atom bound to two ligands, a sugar thiol and a trialkylphosphine. Auspherix has applied its chemistry expertise to modify both of these gold ligands to create novel chemical compounds which, in comparison to auranofin itself, inhibit both Gram-positive and Gram-negative bacteria, including life-threatening MDR pathogens. These include the ESKAPE pathogens (that encompasses the six pathogens

with growing multidrug resistance: *Enterococcus faecium*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa* and *Enterobacter species*). Its organogold antibacterials have also been shown to have a rapid bactericidal (killing rather than growth inhibition) activity against Gram-negative bacteria.

The choice of cUTI as a lead clinical indication reflects a number of factors including high unmet medical need, the profile of Auspherix's compounds and the significant commercial opportunity: over one million patients suffer from cUTIs in the USA every year, with a high prevalence of pathogenic Gram-negative bacteria in patients with cUTIs. There is also an increasing proportion of cUTI patients who have a MDR infection that is not sensitive to standard-of-care antibiotics thus requiring treatment with last-in-line antibiotics such as colistin.

"There is a well-defined clinical and regulatory path to approval for new antibiotic treatments for cUTIs with the opportunity to receive Qualified Infectious Disease Product designation which offers fast-track status and priority review with the FDA, plus potentially five years' additional market exclusivity, thus making our focus on cUTIs an attractive investment proposition," said Dr Miller, adding "Given the extensive clinical history with auranofin and other members of the organogold class of drugs, we are confident we can deliver a novel antibiotic medicine to patients."

In addition to its cUTI programme, Auspherix plans to explore additional indications such as complicated intra-abdominal infections and nosocomial pneumonia.

Auspherix has a robust and growing portfolio of patent applications that protects new composition of matter discoveries and covers a range of therapeutic uses including prevention of and treatment for bacterial infections with our proprietary organogold compounds.

The Company's new website with information on its team, R&D, investors and business model can be viewed at www.auspherix.com.

Biotech Showcase 2017

Auspherix will be holding a company presentation at Biotech Showcase at 9am on Monday 9 January 2017 in Room 1, Hilton San Francisco Union Square.

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Notes to Editors

About Auspherix Ltd

Auspherix is an anti-infectives company engaged in the discovery and development of a new class of organogold-based antibiotics for serious and difficult to treat, or potentially life threatening infections.

Its new class of antibiotics demonstrate potent and broad-spectrum activity against both Gram-positive and Gram-negative bacteria including many Gram-negative multi-drug

resistant (MDR) strains where there is a global rising unmet medical need and large market potential.

The Company is utilising its proprietary organogold chemistry platform to build a pipeline of novel antibacterials with an initial focus on treating complicated urinary tract infections (cUTI). Auspherix pipeline comprises three structurally distinct, small molecule lead series currently in pre-clinical development.

As a private company, Auspherix is backed by experienced investors including the Australian Medical Research Commercialisation Fund (MRCF) and UK-based Touchstone Innovations plc (AIM IVO). The Company is located at the Stevenage Bioscience Catalyst facility, UK a world-leading hub for open innovation and centre for fast growing biotech, pharma and medtech businesses.

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