

12 February 2014

ASX ANNOUNCEMENT

TRIALS RECOMMENCE ON ANTIBIOTIC PROJECT

The Board of Actinogen Limited (ASX: ACW) is pleased to announce that it has recommenced further research on its antibiotic project. The work will be conducted by the Company's scientific team at its new laboratory premises at Murdoch University's State Agricultural Biotechnology Centre (SABC), Western Australia.

During the Company's operations review process, the antibiotic research program was identified as one of the key components of the Company's future strategy in the drug development area.

Antibiotic-resistant bacteria are becoming an increasing global problem, with much research and investment directed to discovering new effective agents and treatment modalities. Infections caused by resistant microorganisms often fail to respond to the standard treatment, resulting in prolonged illness and greater risk of death. The death rate for patients with serious infections treated in hospitals is about twice that in patients with infections caused by non-resistant bacteria. A high percentage of hospital-acquired infections are caused by highly resistant bacteria such as methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin resistant enterococci (VRE) and *Clostridium difficile*.

The Company has identified the importance of continuing the research in this field due to the global demand for new potential agents and on the back of positive initial results conducted on numerous strains of bacteria, in particular MRSA and VRE.

Actinogen owns a private existing database of over 6000 actinomycetes. Previously, the library has been screened to identify actinomycetes able to produce compounds with antimicrobial activity against resistant strains. The actinomycetes are then tested for activity against the MRSA panel, VRE, *Candida spp.*, *Pseudomonas aeruginosa* and the anaerobic pathogen *Clostridium difficile*.

These testing panels consist of clinical isolates of microorganisms that have developed serious antibiotic resistance patterns and can therefore be used to increase the likelihood of finding new antibiotics.

Actinogen employs a series of screening tests which become more stringent. Primary screening is a rapid test to detect the production on solid agar of an isolate producing an antibiotic directed to one or more of the test organisms outlined above. Secondary screening is then carried out on known antibiotic producing isolates, in liquid culture. Once actinomycetes with antimicrobial activity against the clinical test isolates have been identified, Actinogen then tries to identify the active compound from public literature and databases. If the compound cannot be matched to an existing substance, it is sent to an independent laboratory to obtain a molecular structure.

In the Actinogen library 69 isolates have shown activity against the entire MSRA panel, 11 isolates have shown activity against the entire *Candida spp.* panel and 58 isolates have shown activity against VRE. Each compound with activity against the MRSA panel and *Clostridium difficile* has the potential to become a new antibiotic; however extensive further testing is required in order for this to be established.

The Company plans to retest the previously identified isolates with activity against MRSA, *Candida spp.* and possibly *C. difficile*. Of particular interest are the antimicrobial actinomycete isolates that produce unidentifiable active compounds. Future work will include isolating and testing the active compound using HPLC and fraction collection. If the isolation of the active compound is successful, it may be sent to an independent laboratory for further characterisation.

The Company is very pleased to have another of its key projects underway and will keep shareholders updated as the trials progress.

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Dr Brendan de Kauwe
Executive Director
Actinogen Limited

About Actinogen Limited
Actinogen Limited (ASX: ACW)

Actinogen is dedicated to the discovery and isolation of a group of environmental bacteria known as the Actinomycetes. Actinomycetes have been shown to be able to use a wide range of unusual nutritional resources and often produce bioactive molecules as a by-product that have been proven to be useful to man; including well known commercial examples such as bacterial antibiotics, anti-fungal agents, anticancer agents and a variety of other chemicals that are used in the control of physiological and physical processes.

In addition, there are examples of Actinomycetes that can degrade industrial wastes such as oils, tar, domestic and industrial waste, and the rehabilitation of oil spills. Actinogen has proven high-level expertise in the discovery and isolation of Actinomycetes from WA soils and in the detection of bioactive molecules they produce. During 2011, Actinogen began a bio-ethanol research program, which has had very encouraging results and to date is a focal project for the company. The Company's strategy is to collaborate with groups nationally and internationally who are active in the development of technology that is synergistic with or that could utilise the Company's current Actinomycetes research projects and exclusive intellectual property.