

23 December 2013

ASX ANNOUNCEMENT

LEAF ENERGY LTD TO FUND FIRST TRIAL PROGRAM ON ACTINOGEN'S BIOETHANOL PROJECT

The Board of Actinogen Limited (**ASX: ACW**) (**the Company**) is pleased to announce that it has entered into a collaborative and royalty agreement with Leaf Energy Ltd (**ASX: LER**), in the Company's Bioethanol project.

Under the terms of the agreement LER will fund further studies in ACW's Bioethanol project; in which the Company previously identified strains of actinomycetes capable of producing cellulase(s). Cellulase(s) are enzymes used to breakdown cellulose from plant material, papers and industrial waste glycerols (Biomass), and are an important step in the production of second generation bioethanols.

An independent study by the CSIRO has confirmed the Company's ability to produce cellulase(s) and it was shown to be more active than its comparative commercially available preparations using a well diffusion assay.

Actinogen's process can potentially be much more cost effective than current methods, and avoid the need to rely on precious and dwindling food stocks as the source material. The traditional method of producing cellulase(s) is usually performed in an anaerobic environment at high temperatures, which is costly and requires significant capital for the infrastructure. The Company can produce cellulase(s) in an aerobic environment at room temperature, which may significantly lower costs.

Actinogen's process is complementary to Leaf Energy's glycerol pretreatment process which overcomes the current issues in biomass pretreatment using a highly effective and innovative technology that utilizes the cheap, recyclable, reagent glycerol in a simple process to break down plant matter into Lignin, Cellulose and Hemicellulose at low temperature and pressure. The cellulose and hemicellulose are then available for conversion to sugars using enzymatic hydrolysis and those sugars can then be converted to advanced biofuels, bioplastics and green chemicals

Actinogen and Leaf Energy aim to further improve the current enzymatic production processes and yields, and to identify additional strains of cellulase producing actinomycetes that would be synergistic to LER's glycerol pre-treatment process. The initial trials will be conducted in ACW's new laboratory facility at Murdoch University's SABC, by the Company's scientific team, in collaboration with LER's scientific advisors.

On success of LER's fully funded initial trial, LER will have the option to contribute further funding towards additional trials to explore the potential synergy of other actinomycetes in the Company's library, specifically those identified to produce lignase(s) and Shikimic Acid, for the use in its biomass processes. The Company will grant LER the rights to exclusive uses of any of the methods of production solely developed as part of the collaborative process in return for a net profit royalty on LER's future licensing arrangements, which are confidential in nature.

About Leaf Energy (ASX:LER)

Leaf Energy is an Australian company with a simple vision, turning waste biomass into biofuels, bioplastics and green chemicals with a clean, green, sustainable process – the Glycerol Pre-treatment Process. This process is an innovative, but simple pre-treatment technology that uses a cheap, reusable, effective reagent being Glycerol, to break down the biomass into cellulose, hemicellulose and lignin at low temperature and atmospheric pressure. The cellulose and hemicellulose are then available for conversion to sugars using enzymatic hydrolysis and those sugars can then be converted to biofuels, bioplastics and renewable chemicals. The Glycerol Pre-Treatment Process has significant advantages over current pre-treatments being used such as steam explosion.

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Dr Brendan de Kauwe
Executive Chairman
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.