

FURTHER RESULTS IN THE BIOETHANOL RESEARCH PROGRAM

HIGHLIGHTS

- Actinogen has received and begun testing a sample of waste glycerol from a commercial biodiesel plant in recent bench trials. Actinogen is using the waste glycerol as a nutrient source for the production of cellulase(s) using an actinomycete isolated from Western Australian soil.
- Actinogen is producing cellulase(s) from using the waste glycerol as a nutrient source.
- This cellulase(s) production will be further tested in the coming weeks to determine if Actinogen can produce cellulase(s) from waste glycerol on a commercially competitive scale.
- Following the successful completion of preliminary tests, Actinogen will be in a position to optimize the growth conditions to maximize cellulase(s) production preparatory to investigating the use of the cellulase(s) for the production of sugars for the down-streaming processes to enable bio-ethanol production.
- Actinogen then plans to construct a test pilot plant to use the cellulase(s) and suitable biomass to produce sugars in order to produce bioethanol.

On 7 December 2011, Actinogen Limited (ASX:ACW), announced that research conducted by the CSIRO has shown that the production of cellulase(s) can be increased by up to at least 37% by using a continuous infusion system over that of simple batch culture, using laboratory purity glycerol. The production of cellulase(s) is developed from actinomycetes isolated by Actinogen from Western Australian soil samples.

Actinogen has now conducted bench trials using waste 'bio-glycerol' samples obtained from the biodiesel industry, which indicate that the bio-glycerol can under specific culture conditions be successfully used as a nutrient source for its actinomycetes, to produce cellulase(s).

The disposal of waste glycerol is a problem all around the world for the biodiesel industry.

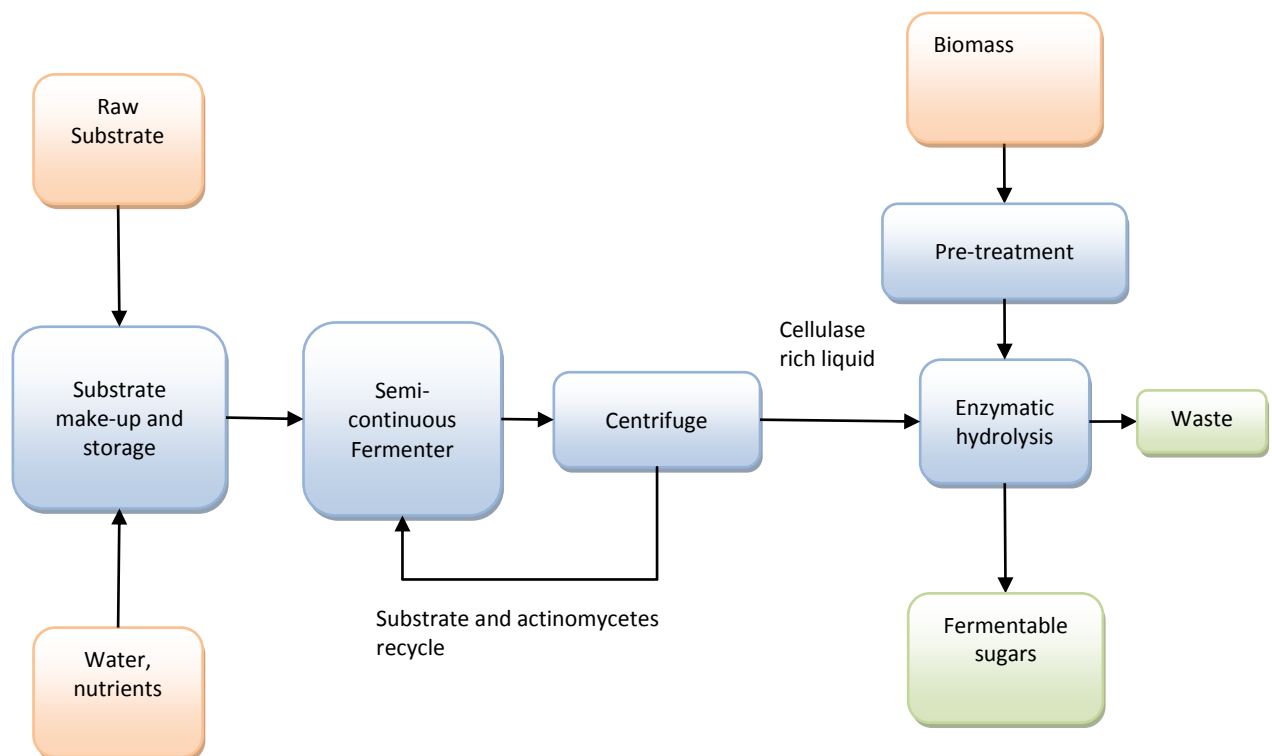
Actinogen is now testing the production of sugars using the cellulase(s) from the waste glycerol, using their method developed from actinomycetes. Once these tests have been successfully completed, Actinogen plans to further develop their method using other sources of waste products such as straw, paper wastes, sedge grasses or green biomass.



The sugars produced are then used for the down-stream production and finally the distillation of bioethanol. Production or purchase of cellulase(s) is a significant part of the cost of production of 2nd generation bioethanol and use of glycerol waste to make cellulase(s) could greatly reduce that.

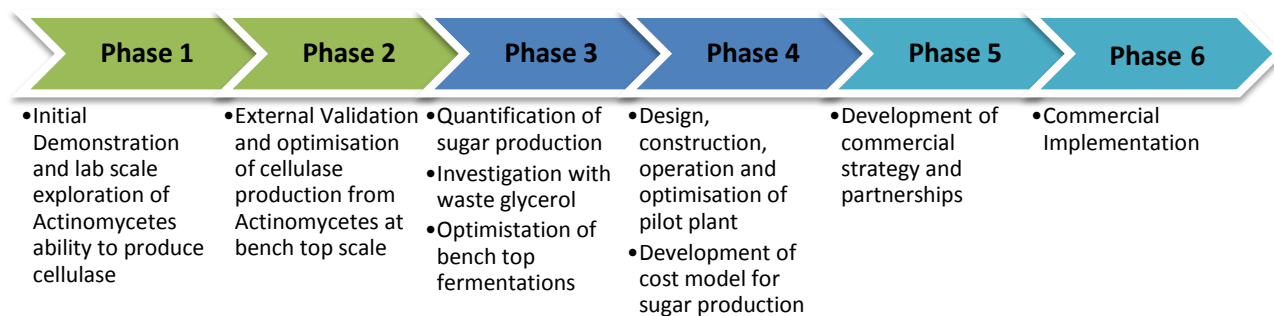
Plans are already being developed with the expectation that Actinogen will construct a test pilot plant.

The pilot plant will be constructed to test Actinogen's method of producing cellulase(s) from waste glycerol and then it may use the cellulase(s) to produce glucose and other sugars from various sources of biomass. The glucose and other sugars will be measured in order to determine how much bioethanol can be produced and at what cost.



Proposed Pilot Plant

Actinogen has now completed part of Phase 3 of the commercialization plan proposed by Dr Karne De Boer as announced on 20 March 2012.



Actinogen will announce all results from further tests as soon as they become available.



Dr David Keast
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