Australian National University

PUBLIC LECTURE

Mass cultivation of microalgae for biofuel production and CO_2 biomitigation

Wednesday 2 July 1 - 2pm

Speaker

Dr Patrick J. McGinn

Algal Carbon Conversion Flagship Program, Aquatic and Crop Resources Development Portfolio, National Research Council of Canada, Halifax, Nova Scotia, Canada

Location

Slatyer Seminar Room

R.N. Robertson Building (Bldg. 46), Linnaeus Way, ANU

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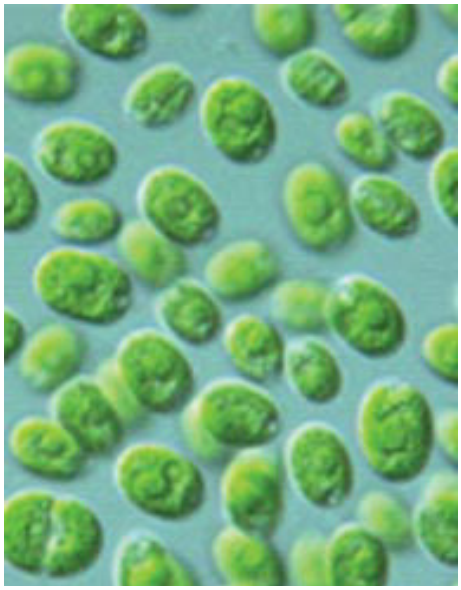
This lecture is free and open to the public

PSS event information: biology.anu.edu.au/News/events-ps.php



Research towards improving technologies for mass cultivation and processing of microalgae as a renewable source of biofuels, feeds and other materials has recently gained fresh momentum. Microalgae have several advantages over traditional 1st generation biofuel crops including higher areal productivity and the potential to be grown on marginal land of low agricultural value. In addition, microalgae can be grown on non-potable sources of water including municipal and agro-industrial wastewaters and seawater. Carbon for microalgae growth can be obtained as concentrated CO_2 from the flue-stacks of heavy industry, potentially mitigating the effects of this most potent GHG. Despite the promise, there are several unique challenges to microalgae production that need to be solved before large scale production for biofuels can become a commercial reality. These include techno-economic shortcomings related to biological productivity of strains, the capital costs of growth systems, inefficient harvesting methods and the high costs of the extraction and conversion of oils and other materials. This talk will describe research currently conducted by NRC Canada in partnership with industry to develop microalgae into a biotechnological tool for conversion of industrial CO_2 emissions into value-added biomass and biomaterials.

About the speaker

Patrick is a trained microalgae physiologist and molecular biologist. He has been studying microalgae and plant biology for the past 20 years. Currently, he leads a research team exploring the application of microalgae biotechnologies to the remediation of industrial wastestreams, including CO_2 exhaust and wastewater for the production of value-added fuels and chemicals.

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