

An investigation of the ecology and bioactivity of endophytes from *Pittosporum angustifolium*

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Abstract. Knowledge of the ecology and antimicrobial activity of endophytes within Australian plants is currently limited. This project investigated the endophytes of *Pittosporum angustifolium*; an Australian plant known for its medicinal use by indigenous Australians and from which antimicrobial chemicals have been extracted (from the essential oils of its leaves and fruit). Plants were sampled from seven sites in SE Queensland. Endophytes were cultured from plant tissue onto potato dextrose agar. Sequencing of ITS-DNA regions of fungal endophytes and SSU-DNA regions of bacterial endophytes revealed a variety of different species isolated from plants sampled at the different sites - evidence against any host specific interactions. Primary screening of isolates occurred on Sensitest agar against ATCC type strains of *Staphylococcus aureus*, *Serratia marcescens*, *Escherichia coli* and *Candida albicans*. Primary screening resulted in strains of *Pseudocercospora fuligena* being identified as candidates for further investigation. Work is still ongoing to confirm the bioactivity of the *P. fuligena* isolate and to identify any bioactive compounds produced.

Keywords. endophyte, *Pittosporum angustifolium*, bioactivity.