

**MURC 2019**

**Presentation ID:** 154

**Presentation Format:** Poster Presentation

**Presentation Title:** Endophytic Microbial Communities of the Lodgepole Pine in BC

The goal of this investigation was to identify the endophytic bacteria, fungi and viruses of the lodgepole pine (*Pinus contorta*). Secondly, species that could resist blue stain fungus were identified. Identifying endophytes that could tackle the blue stain fungus could potentially lead to a solution to the Mountain Pine Beetle crisis. After sampling both asymptomatic and symptomatic plants and extracting endophytes, culturing was done using agar based plates. To account for microbes that cannot be cultured, New-Generational amplification and sequencing was performed. Identification to the genus level was done by NGS. All species were separated and screened against the blue stain fungus pathogen to test for effective control. The meaning of effective control is that the specimen can control over 70% of the total area of a petri dish, assuming that bacteria and fungi multiply and expand radially. The species that could effectively control the pathogen were then tested in greenhouse studies. It is predicted that a total of 100 different endophytic species of bacteria, fungi and viruses exist in *Pinus contorta*. It is predicted that there are 20 species that can control the fungus over 70% in a laboratory setting. Out of those species, 7 of them can prevent visible symptoms as seen in the greenhouse studies. A further application is to see if these species in amplified amounts can prevent symptoms in trees in a field setting, and even further, seeing if they can resist the Mountain Pine Beetle.

**Commented [C1]:** Since you say "secondly" in your second sentence, I would recommend "The primary goal..."

**Commented [C2]:** I suggest using the full term and abbreviation in brackets

**Commented [C3]:** Great definition! This would help someone outside of your discipline understand your method

**Themes:**

Check (highlight) the most applicable theme according to the abstract.

<input type="checkbox"/> Innovation and Technology	<input type="checkbox"/> Health and Wellness	<input type="checkbox"/> Culture and Society	<input checked="" type="checkbox"/> Sustainability and Conservation
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**Comments:**

This is a good abstract so far. I wonder if you could provide some background to begin your abstract, before diving into your study (e.g. why lodgepole pine, and the significance of the mountain pine beetle crisis). Your methodology is clear.