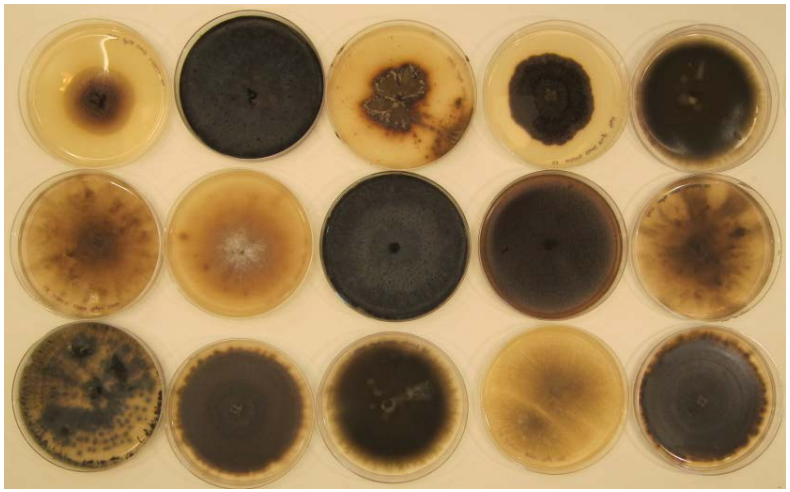
Chris Schwebach

Mentor:

Val Wong – May Lab

Isolation frequency and diversity of foliar endophytes in Cloquet, Minnesota

Isolation of foliar endophytes in Cloquet, Minnesota



- Fungal Endophytes
  - Reside in the vast majority of plant species
  - Hyper-diverse
  - Have varying effects on plant host
    - Drought resistance
    - Herbivore resistance
- Project
  - Two host species (*Picea* and *Populus*) investigated
  - Varying heat treatments
  - Procedure
    - Leaf sampling
    - Endophyte culturing
    - PCR and Sequencing
- Results
  - Low isolation frequency with current sampling (4.6% and 2.1%)

Host Species	Treatment	Species Found
Picea	Ambient Temperature	*Cyclothyrium* sp., *Dothideomycetes* sp., *Phoma* sp.
	+1.8°C	*Leucostoma niveum, Mycosphaerella graminicola, Ramularia coleosporii*
	+3.6°C	*Penicillium* sp., *Valsa sordida, Sordariomycetes* sp.
Populus	Ambient Temperature	*Daldinia* cf., *Physalospora vaccinii, Cladosporium cladosporioides*
	+1.8°C	*Cladosporium* sp., *Microdiplodia hawaiiensis, Nigrospora oryzae*
	+3.6°C	*Epicoccum nigrum, Biscogniauxia mediterranea, Anthostomella brabeji*