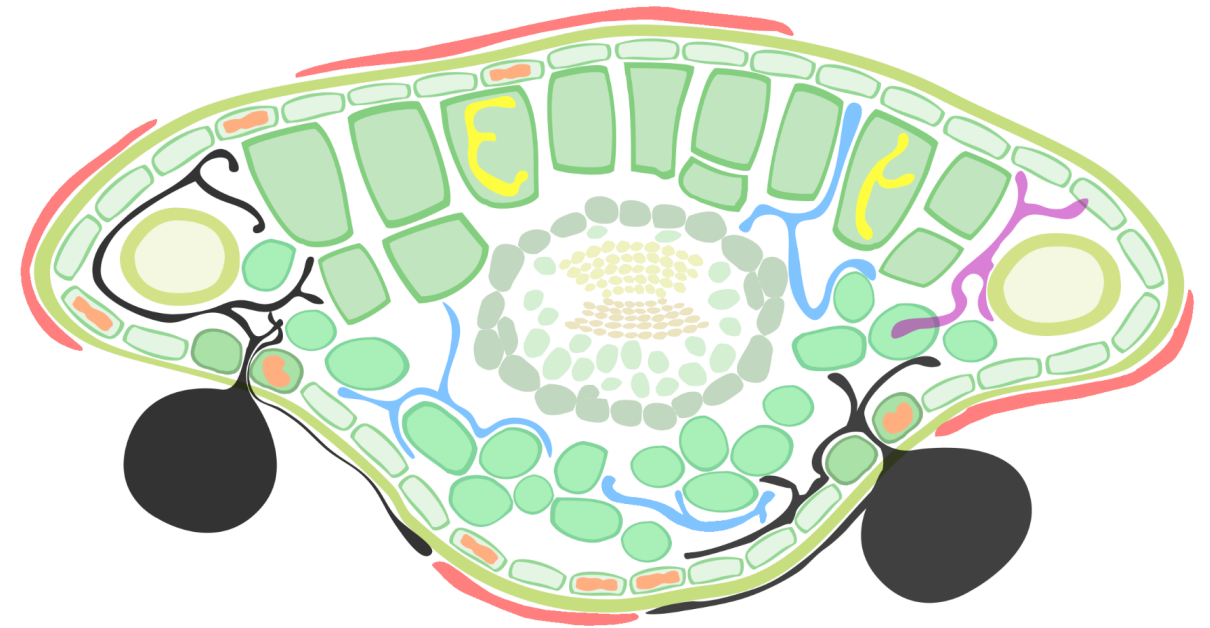
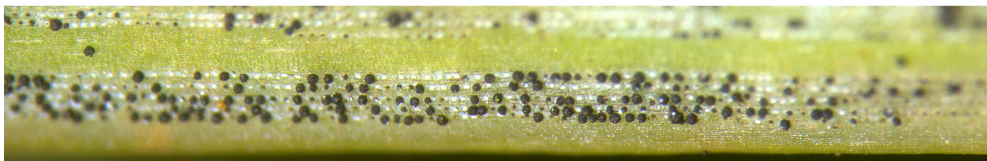






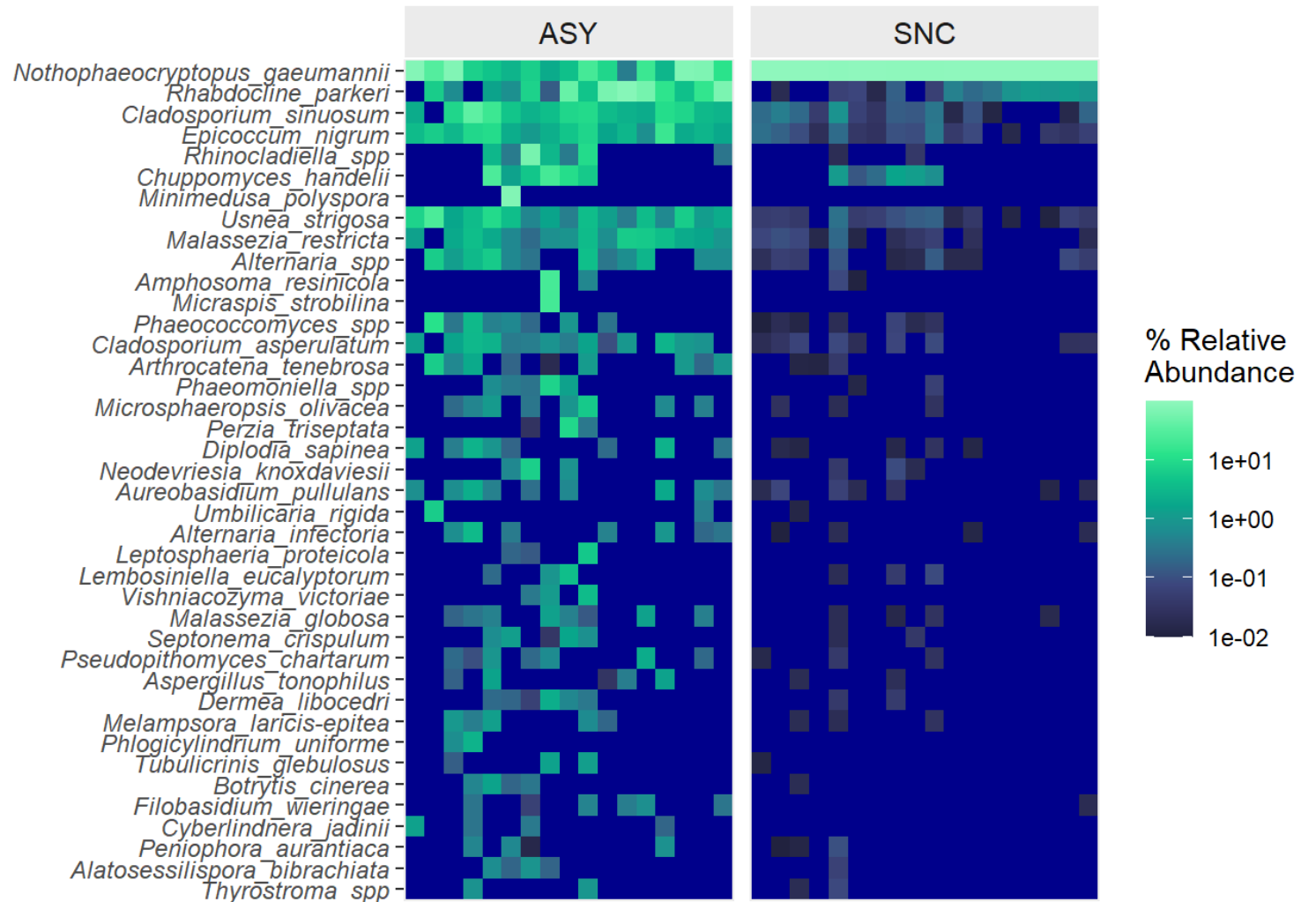
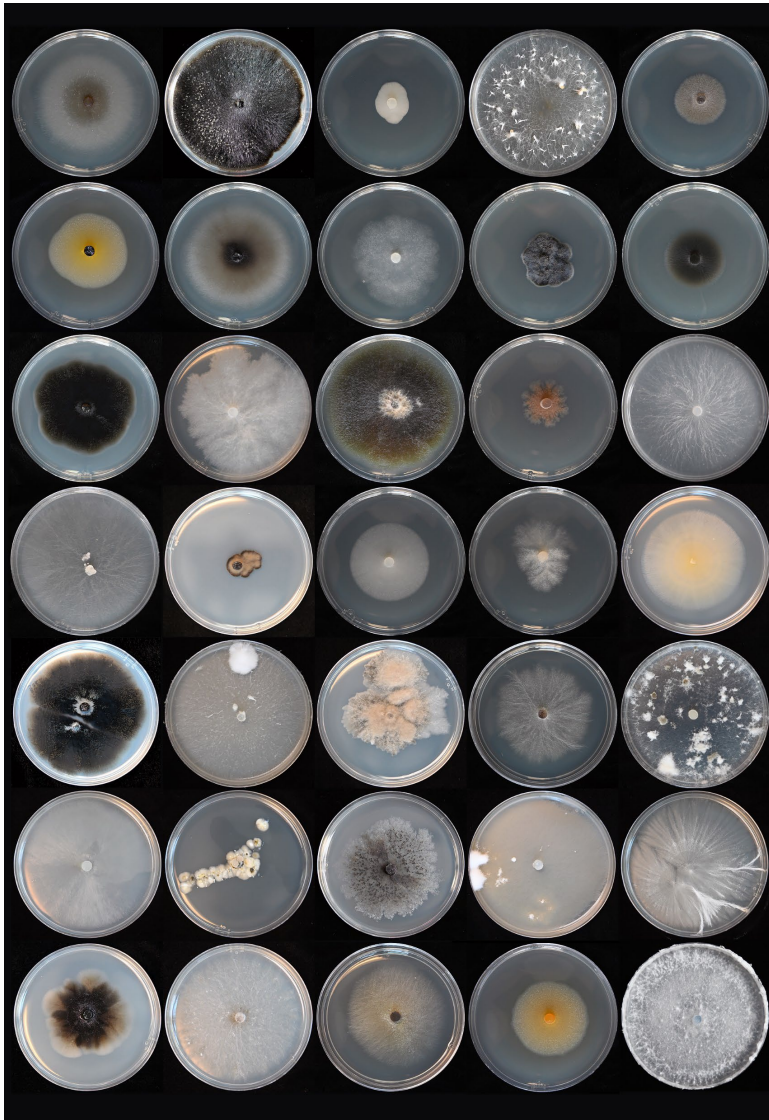


Harnessing mycobiomes to mitigate forest tree diseases: Douglas-fir and Swiss needle cast

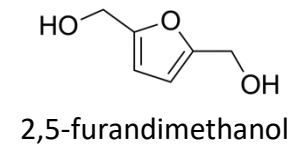
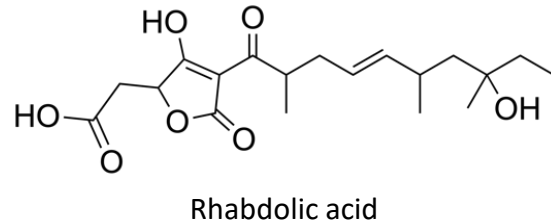
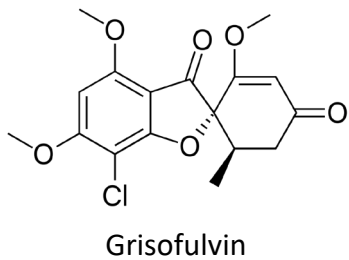
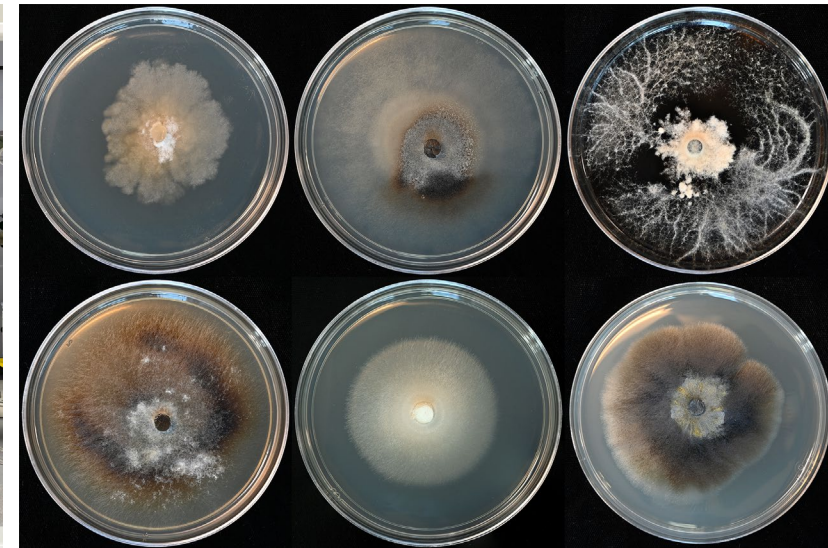
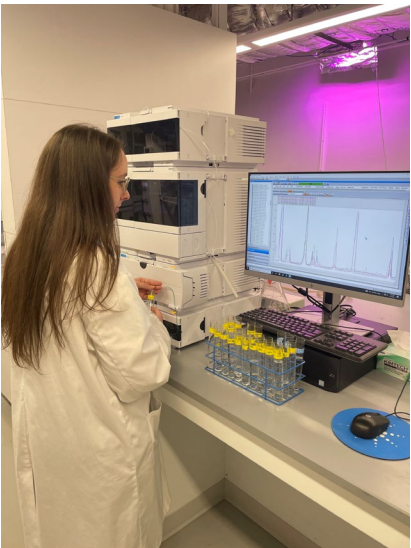


-  *N. gaeumannii* intercellular and epiphytic hyphae and perithecium
-  *Rhabdocline parkeri* intracellular hyphae
-  Intracellular endophyte
-  Intercellular endophyte
-  Inter- and intracellular endophyte
-  Epiphyte

Harnessing mycobiomes to mitigate forest tree diseases: Douglas-fir and Swiss needle cast



Harnessing mycobiomes to mitigate forest tree diseases: Douglas-fir and Swiss needle cast



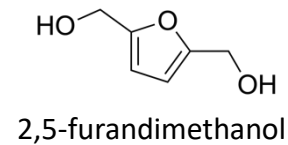
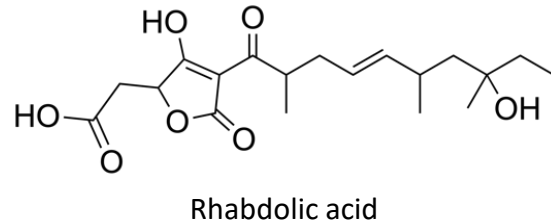
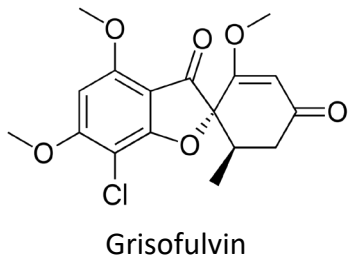
Lachnum virgineum

Michael G. Wood

Harnessing mycobiomes to mitigate forest tree diseases: Douglas-fir and Swiss needle cast

% growth inhibition

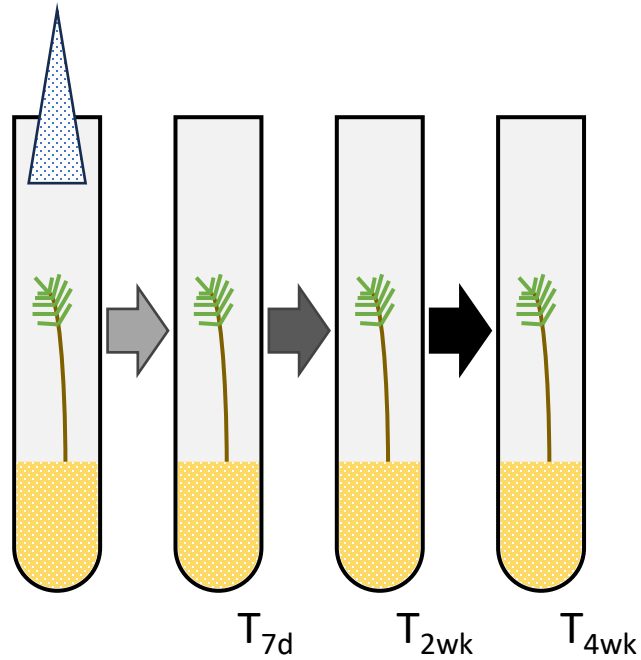
Lineage 2			Lineage 1c			Lineage 1i		
POS	Nystatin 10 mg/mL	51.30%	POS	Nystatin 10 mg/mL	62.60%	POS	Nystatin 10 mg/mL	69.10%
Df-43	<i>Lachnum virgineum</i>	40.76%	Df-43	<i>Lachnum virgineum</i>	40.34%	Df-43	<i>Lachnum virgineum</i>	39.45%
Df-46	<i>Coniochaeta taeniospora</i>	28.91%	Df-63	<i>Mollisia cf. melaleuca</i>	30.90%	Df-24	<i>Biscogniauxia</i> sp. nov.	39.45%
Df-17	<i>Coleophoma</i> sp. nov.	24.88%	Df-46	<i>Coniochaeta taeniospora</i>	26.04%	Df-25	<i>Biscogniauxia</i> sp. nov.	39.45%
Df-25	<i>Biscogniauxia</i> sp. nov.	24.88%	Df-52	<i>Plectania melastoma</i>	26.04%	Df-57	<i>Hypoxyton rubiginosum</i>	39.45%
Df-30	cf. <i>Rhodocline parkeri</i>	24.88%	Df-58	<i>Cladosporium</i> sp.	26.04%	Df-21	<i>Pragmopora cf. piceae</i>	30.36%
Df-33	<i>Rhodocline parkeri</i>	24.88%	Df-64	<i>Caliciopsis pseudotsugae</i>	26.04%	Df-48	Xylariales sp.	27.27%
Df-55	Mollisiaceae sp.	24.88%	Df-39	<i>Diaporthe</i> sp. nov.	23.75%	Df-60	<i>Jackrogersella multiformis</i>	24.18%
Df-58	<i>Cladosporium</i> sp.	24.88%	Df-28	<i>Rhodocline parkeri</i>	21.32%	Df-47	<i>Diaporthe</i> sp. nov.	21.27%
Df-63	<i>Mollisia cf. melaleuca</i>	24.88%	Df-33	<i>Rhodocline parkeri</i>	21.32%	Df-49	<i>Diaporthe eres</i>	21.27%
Df-12	Botryosphaeriaceae gen. et sp. nov.	21.09%	Df-34	<i>Rhodocline parkeri</i>	21.32%	Df-9	<i>Mycosphaerella</i> sp.	18.18%



Lachnum virgineum

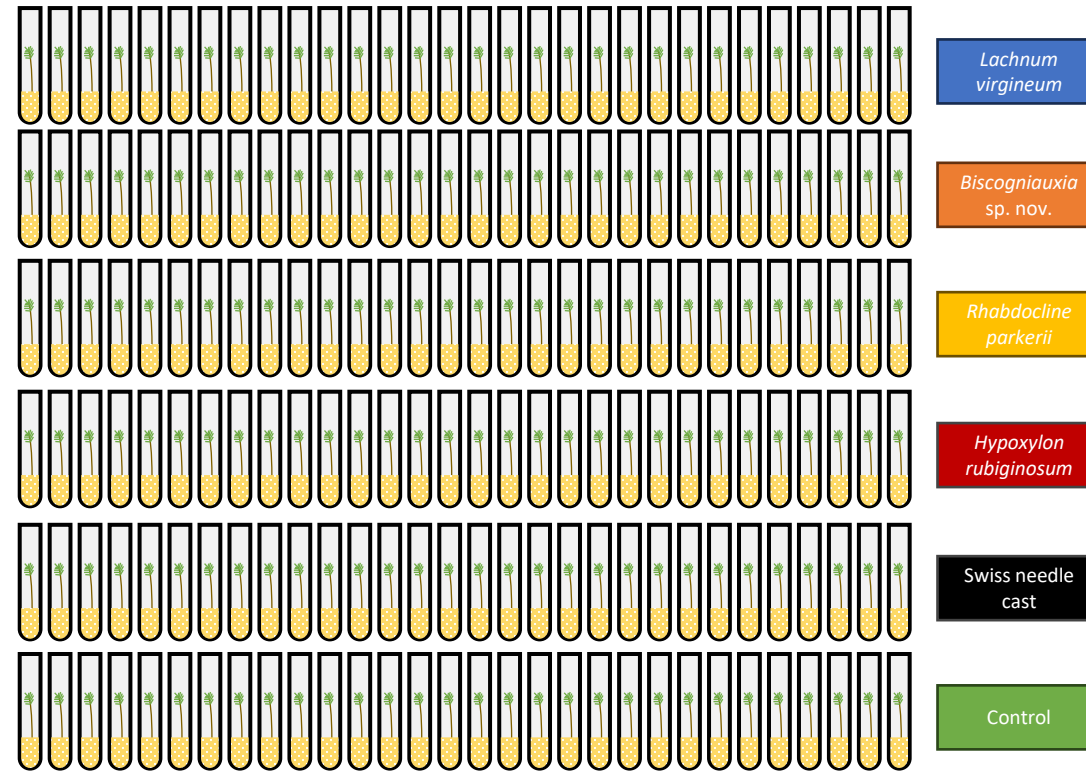
Michael G. Wood

Inoculum



- Harvest 7 germinants per treatment at each time point for RNASeq

7 germinants * 6 treatments *
3 time points = 126 samples



30 germinants * 6 treatments = 180 seeds

Goals:

1. Monitor health of inoculated seedlings;
2. Quantify fungal growth in needles;
3. Characterize host response to inoculation;
4. Pilot for possible SNC-endophyte pairing next year.

SNC Extracellular Extracts: Positive Mode

