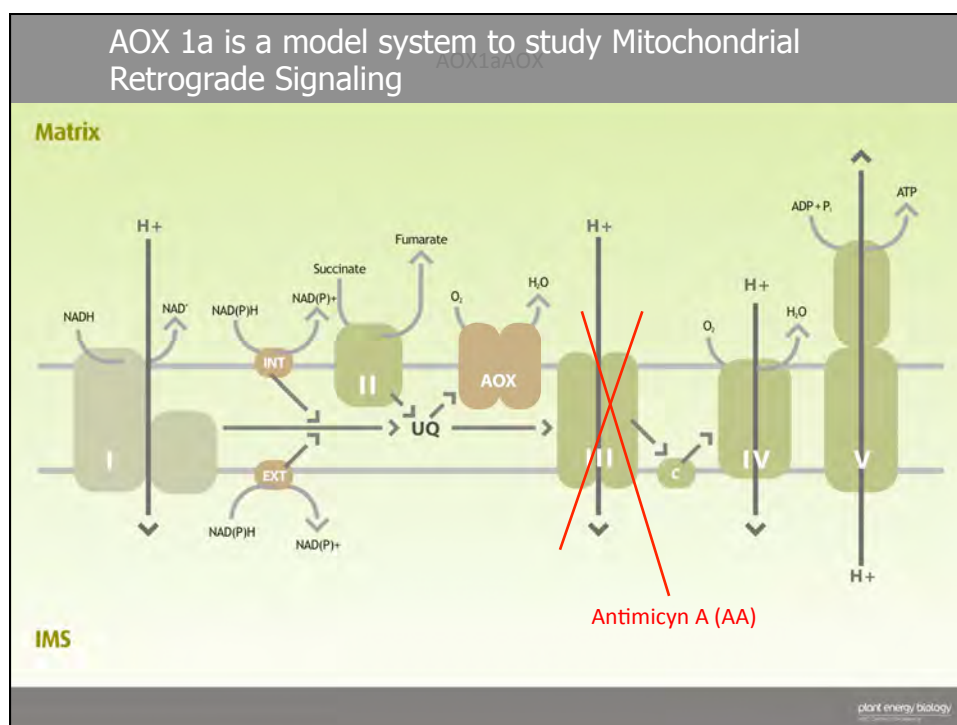
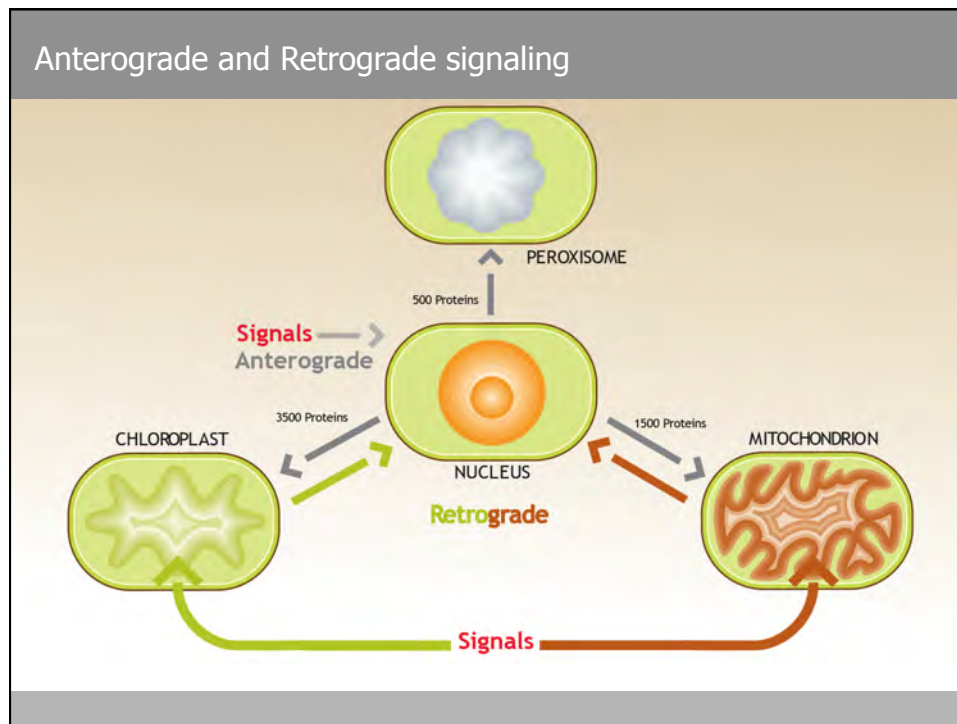
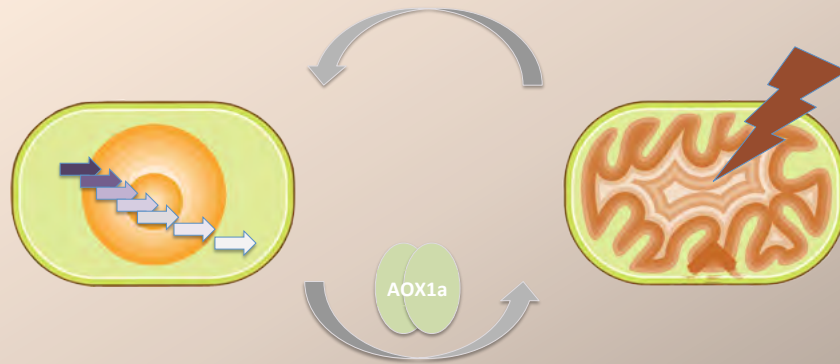




Aim of the project

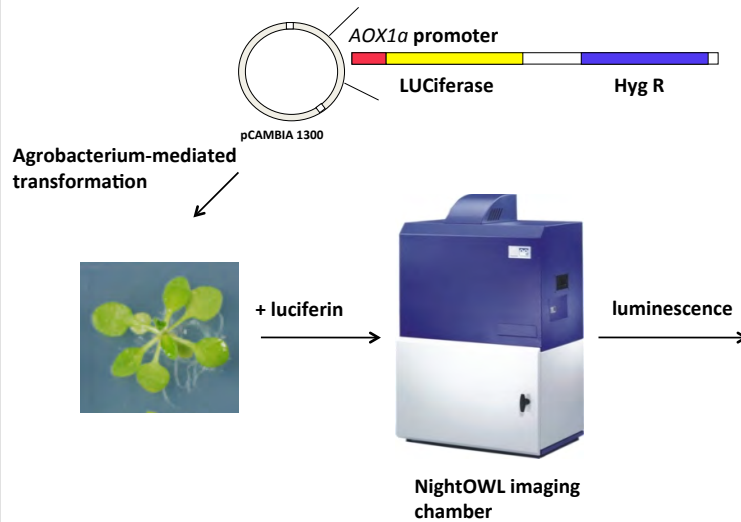


❖ Identify retrograde signaling components that mediate pathway between nuclear and mitochondria in regulation of AOX expression

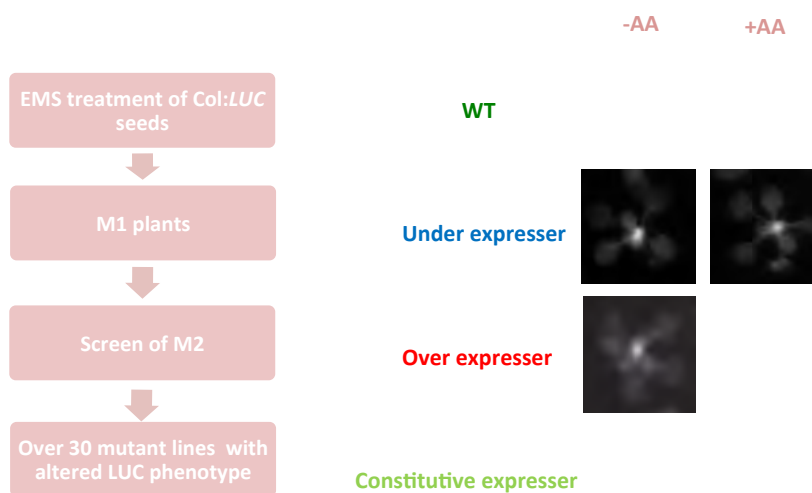
Identification of *RAO* (*Regulators of Alternative Oxidase 1a*) using forward genetics

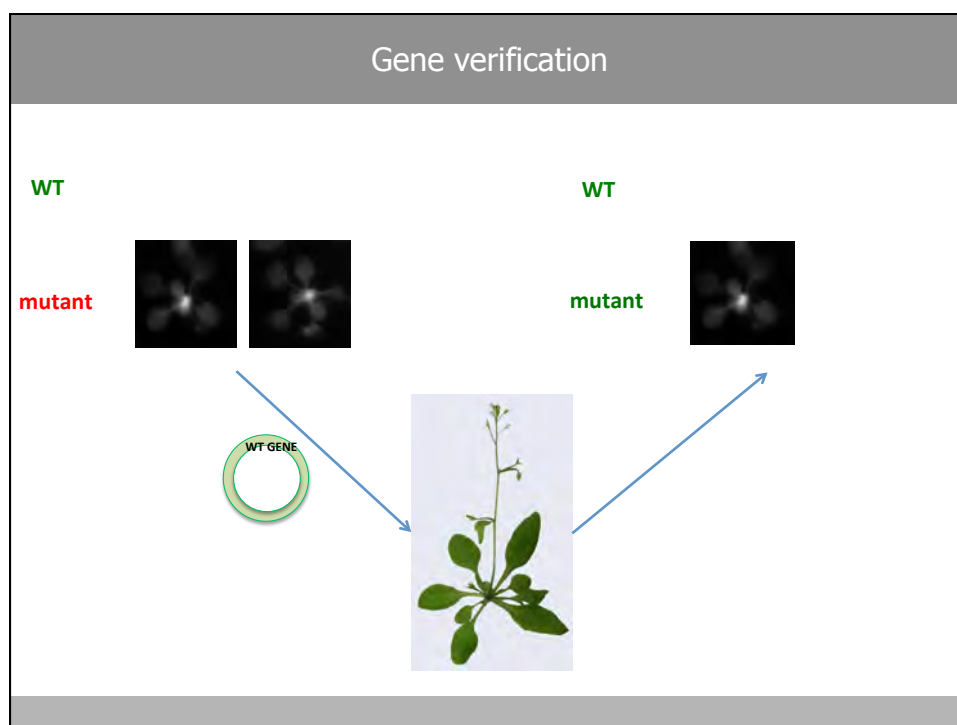
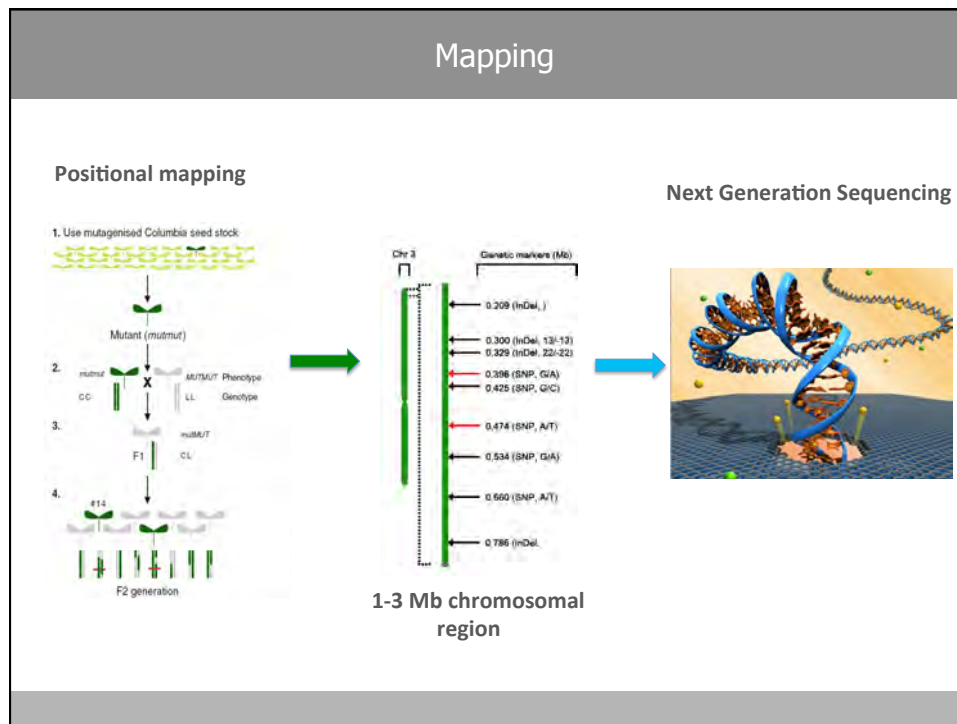
1. To saturate the upstream pathway(s) that regulate Aox1a gene expression in response to mitochondrial stress (Antimycin A) with EMS generated mutants (The Boring Stage)
2. Map those mutations and identify the corresponding Genes (The Bottle Neck)
3. Extensive mutant characterization- physiology, biochemistry, transcriptomics etc (The important stage)
4. Work out the sequence and relations of those genes within a Mitochondrial Retrograde Pathway (The Excitement)

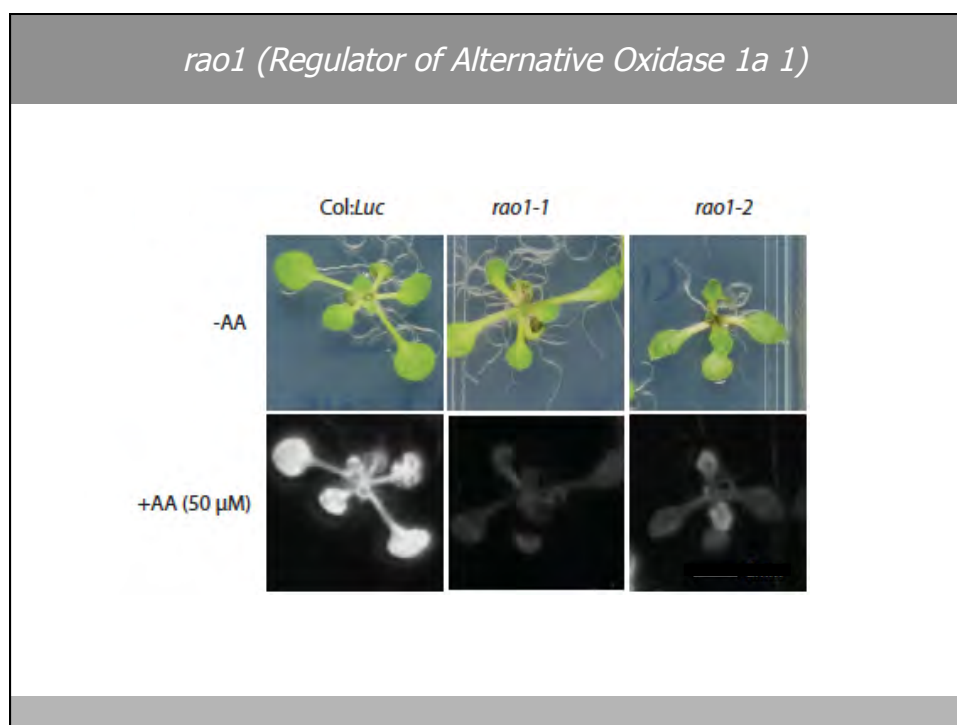
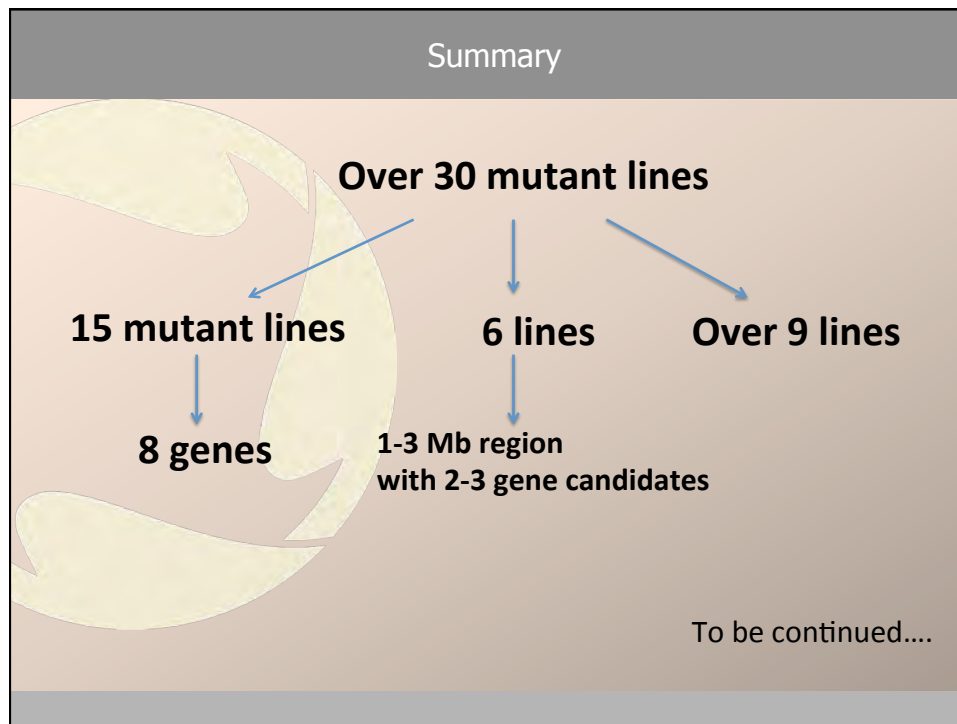
Forward genetic approaches to identify regulators of AOX1a



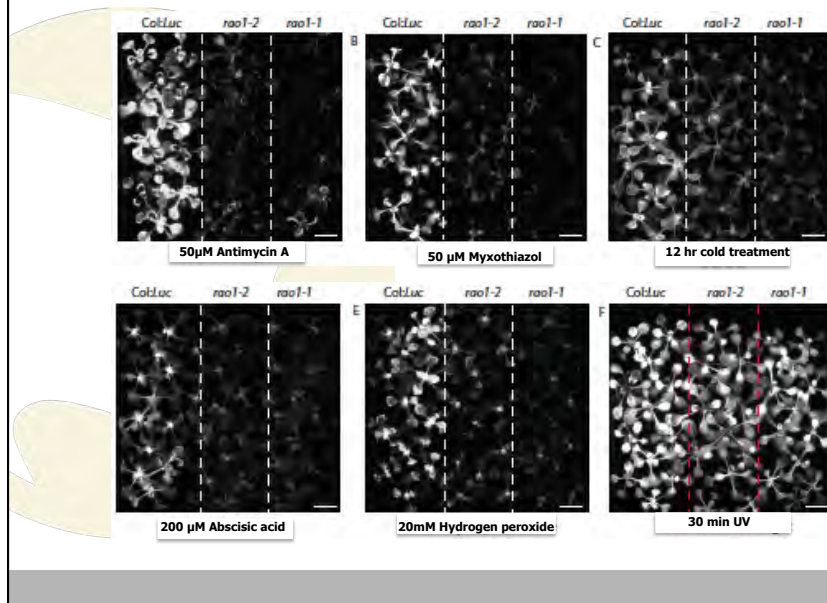
Genetic screen







Diverse cellular stress signaling pathways are regulated through *RAO-1*



rao2(Regulator of Alternative Oxidase 1a 2)

