Title: The genetics of quantitative plant pathology: Botrytis cinerea genetic control of pathogen and host disease phenotypes

Chapter 1: Natural variation of plant metabolism: genetic mechanisms, interpretive caveats, evolutionary and mechanistic insights

Chapter 2: Interactions of tomato and *Botrytis cinerea* genetic diversity: Parsing the contributions of host differentiation, domestication, and pathogen variation

Chapter 3: Pathogen genetic control of transcriptome variation in the *Arabidopsis thaliana* – *Botrytis cinerea* pathosystem

Biorxiv considered published!! Don’t need to format!!

ABSTRACT (must exist… no length requirement stated) “Each chapter may have an abstract of its own. There must be a general abstract covering the entire dissertation.”

ABSTRACT

1. DJK grant proposal:
   1. Transcriptome = mechanistic side
      1. “ A central goal of this proposal is to use host/pathogen co-transcriptomics to directly map the interaction networks between the organisms and test how these mechanistically diverge across dicot evolution [58]. Aim1 will provide an image of how plant defenses have evolved but it will not provide specific genic information. To test how mechanisms are changing, we will measure transcriptomics of the host and pathogen across these lineages.”