

ASSESSING THE EFFECTS OF INHERITED MUTATIONS ON PALB2 STRUCTURE AND FUNCTION

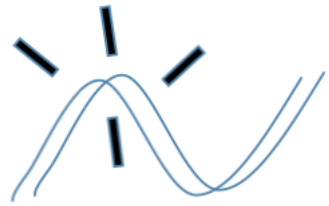
By: Davis Martin

Supervisor: Dr. Mikaela Stewart

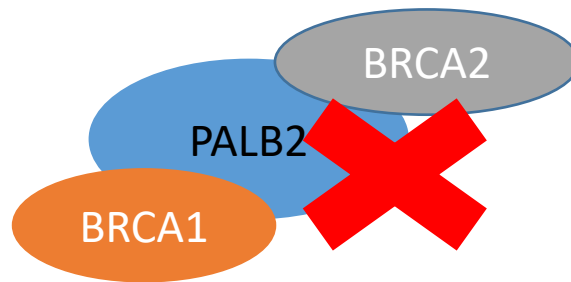
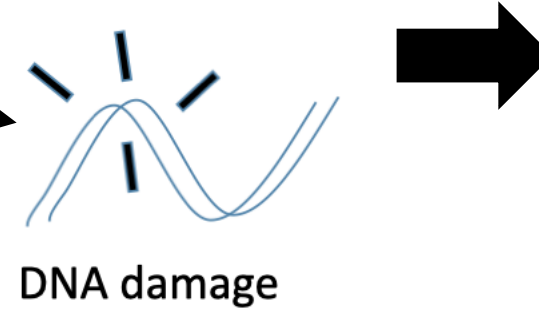
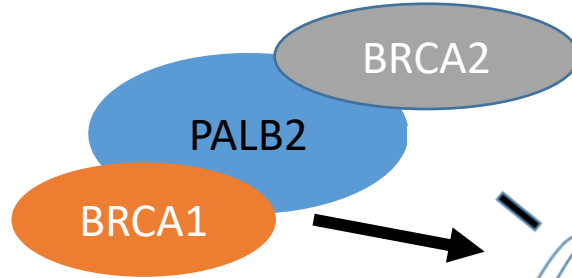
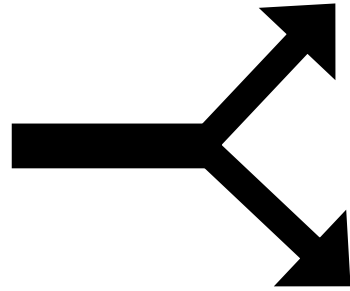


PALB2 Repairs DNA Damage with BRCA1 and BRCA2

Radiation,
chemicals, stress,
etc.



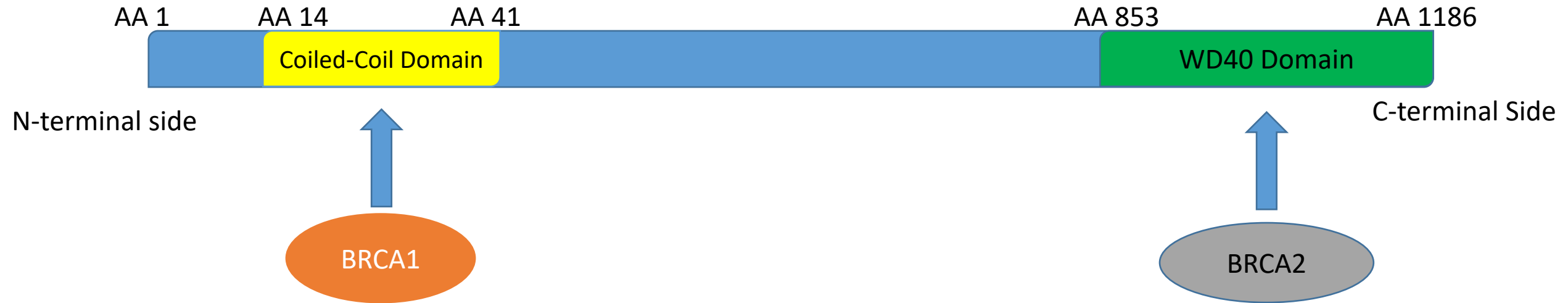
DNA damage



CANCER FORMATION



The Structure of PALB2



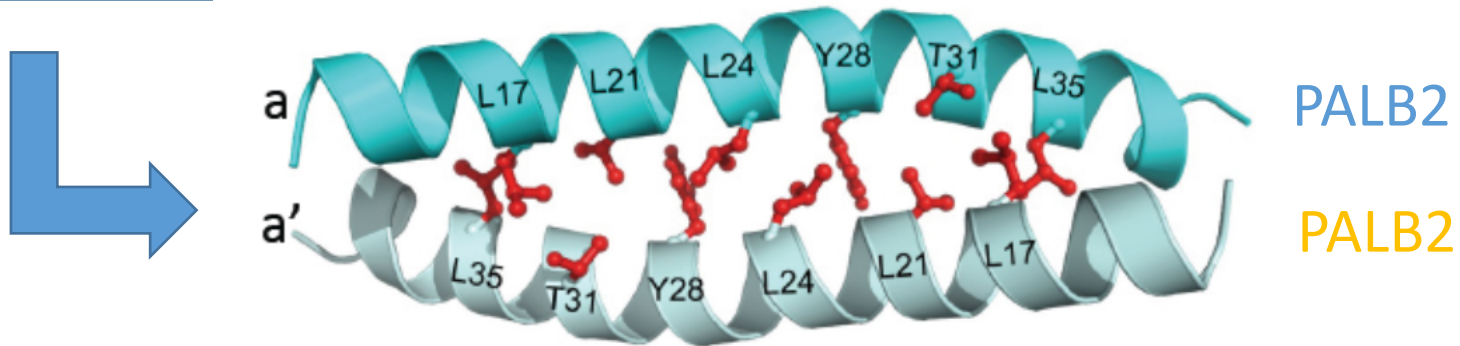
Variants of Unknown Significance (VUS)

Project Goals

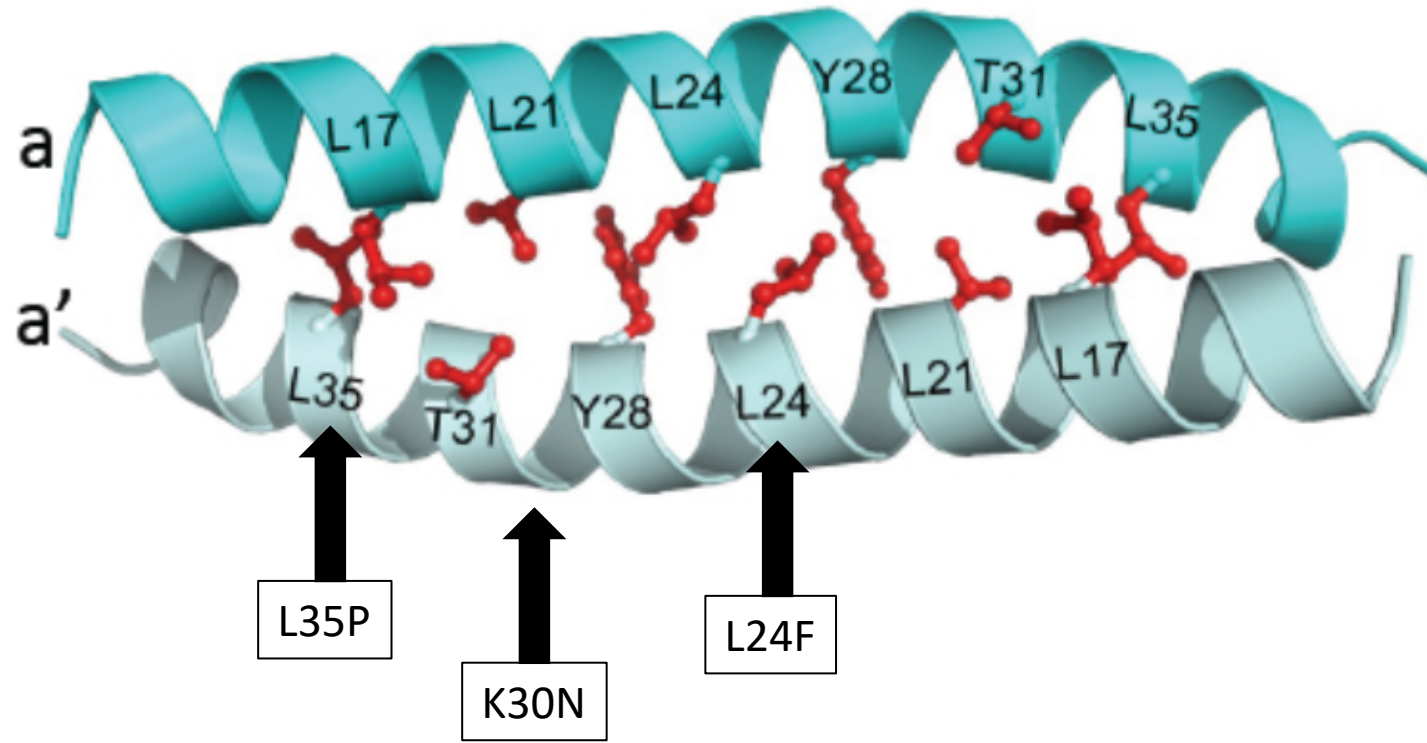
1. Test a new *in vitro* method for determining the effects of VUS on PALB2 function

2. Classify VUS as detrimental or benign

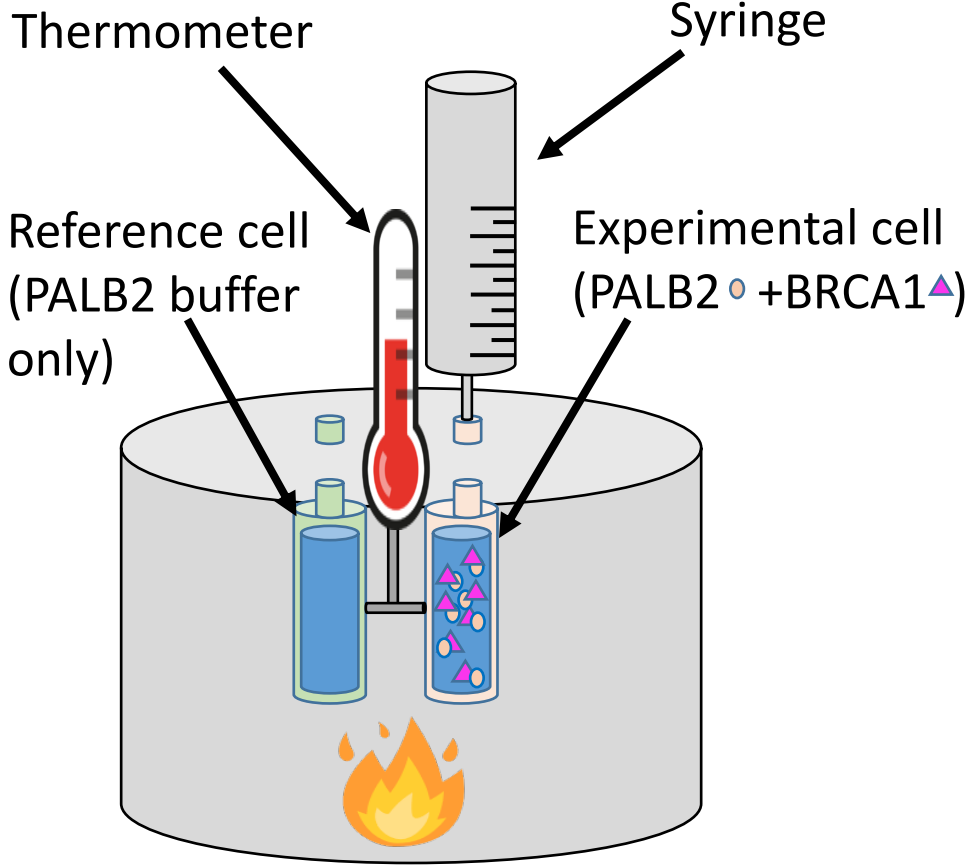
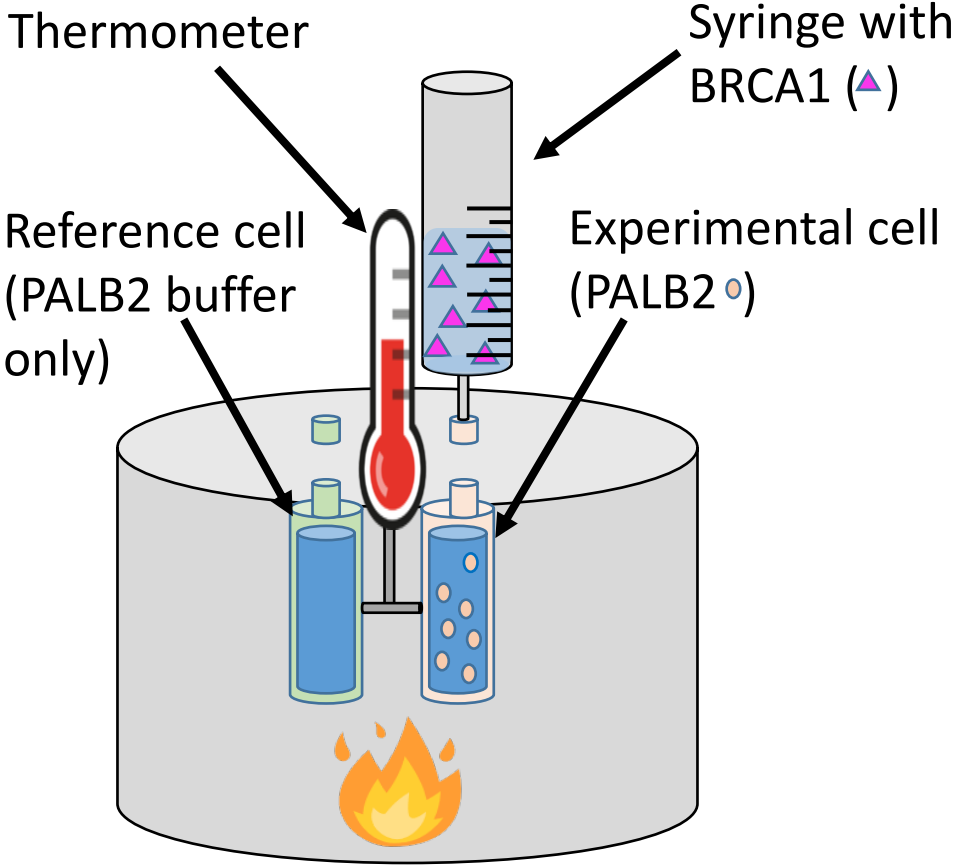
The Structure of PALB2 and its Coiled-Coil Domain



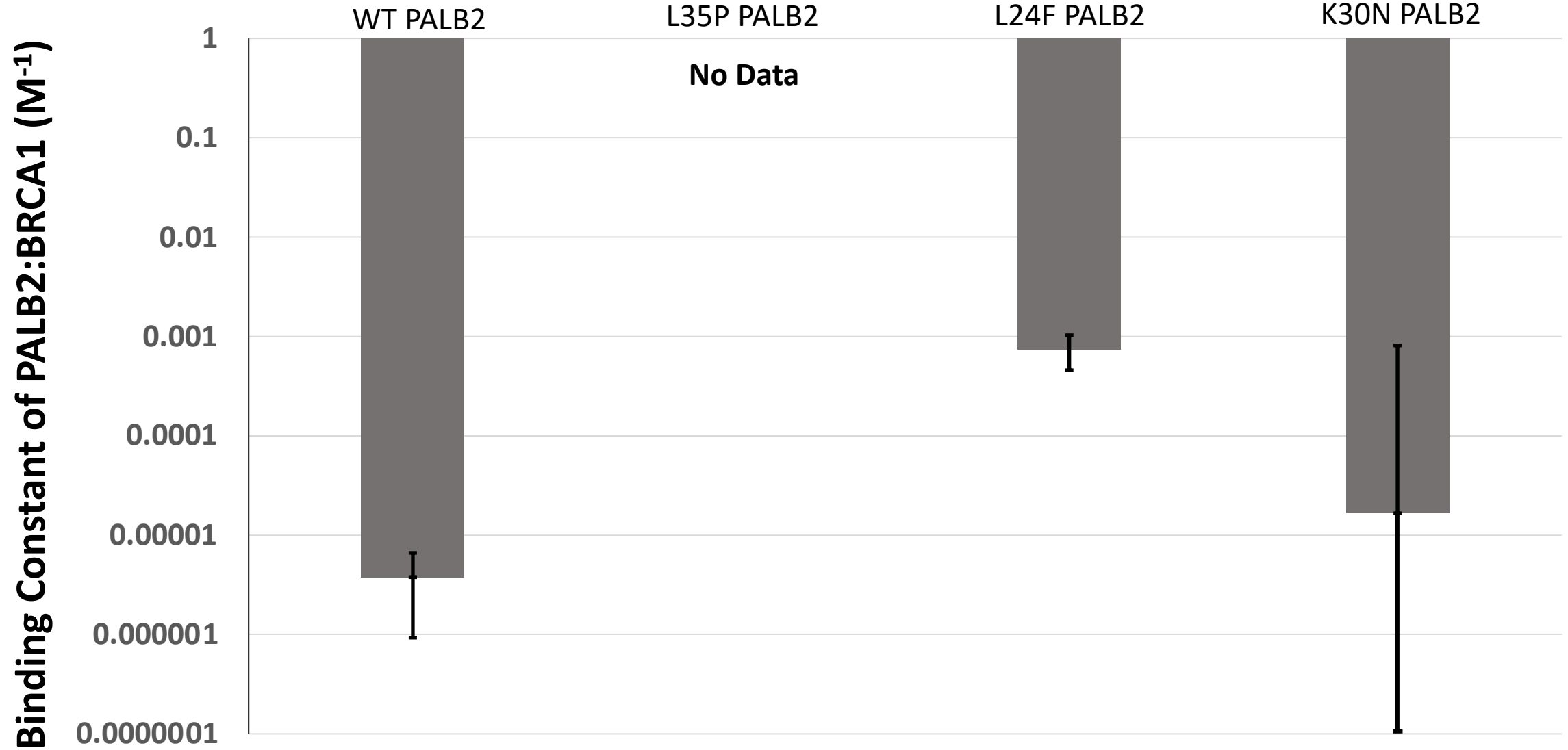
Identifying VUS for Testing



Goal 1: Isothermal Titration Calorimetry (ITC)



ITC Can be Used to Measure Differences in Binding Affinities for PALB2 Mutants



Questions?

Thank you!

