

Sequence whole exome of patient and parents

-Agilent 50mb kit

-Average coverage between 60-70x

->80-85% of captured region covered with sufficient reads to accurately call variants

Identify variants by comparison to reference genome

Aligned using the Burrows-Wheeler Alignment (BWA) tool, SNVs and indels identified by using SAMtools

Identify *de novo* variants

Identify recessive and X-linked variants

Identify compound heterozygote genes

Investigate all candidate genes based on any known associated human disease or mouse knockout phenotype

Functional follow-up of good candidate variants