Review of: "The Assembly of the Y Chromosome Reveals Amplification of Genes Regulating Male Fertility in Bactrocera Dorsalis"

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Potential competing interests: No potential competing interests to declare.

The authors worked on the characterization of the Y chromosome of the Oriental fruit fly to unveil the male fertility genes with appropriate tools and techniques. PacBio, Hi-C, and resequencing data from both sexes have been used to obtain a chromosome-level genome assembly that authenticates the methodological dependability. They obtained a size of around 7.6 Mb with 61 genes. The key male-determining gene in Tephritidae was found to have multiple copies in this fruit fly. gyfY was found to be significant in male fertility.

The first complete assembly of the Y chromosome in this research opens up opportunities for research in sex determination and differentiation. Being an invasive species, the Oriental fruit fly, this work has implications in its control using CRISPR/Cas9 gene edits.