**File S1. Supplementary Data for**

Comparison of long read sequencing technologies in interrogating bacteria and fly genomes

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**Supplementary Figures**

Figure S1. Evidence of long read mapping to *E. coli* inversion region

Figure S2. Validation of a deletion region in *E. coli*.

Figure S3. Visualization of chimeric reads mapped to the *E. coli* genome

Figure S4. qPCR amplification of *E. coli* sequences

Figure S5. Distribution of modification QV values in *E. coli* PacBio libraries

Figure S6. Assessment of m6A modification in *E. coli* DNA motifs

Figure S7. *D. ananassae* k-mer assembly spectra copy number plots

Figure S8. Identification of chromosome 4 contigs in the Dana.UMIGS assembly

Figure S9. Identification of chromosome Y contigs in the Dana.UMIGS assembly

Figure S10. Methylated motifs in *D. ananassae*

**Supplementary Tables**

File S2. Supplementary Tables S1-S11

***Escherichia coli* E2348/69 assemblies**

File S3. *Escherichia coli* E2348/69 assembly Canu ONT RAPID unpolished

File S4. *Escherichia coli* E2348/69 assembly Canu ONT RAPID Pilon 1X polished

File S5. *Escherichia coli* E2348/69 assembly Flye ONT RAPID Flye polished

File S6. *Escherichia coli* E2348/69 assembly Unicycler ONT RAPID Pilon polished

File S7. *Escherichia coli* E2348/69 assembly Canu ONT LIG unpolished

File S8. *Escherichia coli* E2348/69 assembly Canu ONT LIG Pilon 1X polished

File S9. *Escherichia coli* E2348/69 assembly Flye ONT LIG Flye polished

File S10. *Escherichia coli* E2348/69 assembly Unicycler ONT LIG Pilon polished

File S11. *Escherichia coli* E2348/69 assembly Canu PB RSII unpolished

File S12. *Escherichia coli* E2348/69 assembly Canu PB RSII Pilon 1X polished

File S13. *Escherichia coli* E2348/69 assembly Flye PB RSII Flye polished

File S14. *Escherichia coli* E2348/69 assembly Unicycler PB RSII Pilon polished

File S15. *Escherichia coli* E2348/69 assembly Canu PB SQII CLR unpolished

File S16. *Escherichia coli* E2348/69 assembly Canu PB SQII CLR Pilon 1X polished

File S17. *Escherichia coli* E2348/69 assembly Flye PB SQII CLR Flye polished

File S18. *Escherichia coli* E2348/69 assembly Unicycler PB SQII CLR Pilon polished

File S19. *Escherichia coli* E2348/69 assembly HiCanu PB SQII HiFi unpolished

File S20. *Escherichia coli* E2348/69 assembly HiCanu PB SQII HiFi Pilon 1X polished

File S21. *Escherichia coli* E2348/69 assembly Flye PB SQII HiFi Flye polished

File S22. *Escherichia coli* E2348/69 assembly Unicycler PB SQII HiFi Pilon polished

File S23. *Escherichia coli* E2348/69 assembly Ecoli.UMIGS

***w*Ana-cured *Drosophila ananassae* Hawaiiassemblies**

File S24. *Drosophila ananassae* Hawaii assembly Canu ONT unpolished

File S25. *Drosophila ananassae* Hawaii assembly Canu ONT Pilon 1X polished

File S26. *Drosophila ananassae* Hawaii assembly Flye ONT Flye polished

File S27. *Drosophila ananassae* Hawaii assembly Flye ONT Flye+Pilon 1X polished

File S28. *Drosophila ananassae* Hawaii assembly Canu PB SQII CLR unpolished

File S29. *Drosophila ananassae* Hawaii assembly Flye PB SQII CLR Flye polished

File S30. *Drosophila ananassae* Hawaii assembly HiCanu PB SQII HiFi unpolished

File S31. *Drosophila ananassae* Hawaii assembly Flye PB SQII HiFi Flye polished

File S32. *Drosophila ananassae* Hawaii assembly Canu ONT + PB SQII CLR unpolished

File S33. *Drosophila ananassae* Hawaii assembly Dana.UMIGS

**Code for data processing and visualization**

File S34. R script for BED file formatting

File S35. R scripts for *Escherichia coli* E2348/69 data analysis

File S36. R scripts for *Drosophila ananassae* Hawaii data analysis