



**Supplemental figure S1. Steps to gap-filling genome draft assemblies with Sealer.** Gaps are first detected from a draft assembly and flanking sequence pairs extracted. Next-generation sequence reads are supplied and  $k-1$  overlapping  $k$ -mers extracted and used to build Bloom filters. Bloom filters are interrogated in turn using start and goal  $k$ -mers from each flanking pairs and sequences are derived by navigating a de Bruijn graph. Resulting sequences are merged back in the original draft assembly producing a new, gap-filled genome sequence.