



🌐 ToLA Assembly Pipeline 1 V.1

¹Tree of Life - Wellcome Sanger Institute

protocol .



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Here you find the first assembly pipeline developed by the Tree of Life Assembly Team (ToLA) to assemble the genomes sequenced in the first 2 years of the Darwin Tree of Life Project (DToL), which belongs to the Tree of Life Department of the Wellcome Sanger Institute (<https://www.darwintreeoflife.org>). DToL aims to generate high-quality genomes for all named eukaryotes occurring in Britain and Ireland. This protocol describes all softwares and bioinformatics steps (assembly, polishing and scaffolding) ran to generate chromosome-level genomes with three data types: (i) PacBio HiFi, (ii) Linked-reads (Chromium 10X) and (iii) Hi-C. First, PacBio HiFi reads are checked and cleaned for adaptors

<https://protocols.io/view/tola-assembly-pipeline-1-b34agqse>

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Reads trimming

1 Pacbio Hifi reads trimming

Input your Pacbio Hifi reads to HiFiAdapterFilt (<https://github.com/sheinasim/HiFiAdapterFilt>)

HiFiAdapterFilt will convert .bam to .fastq and remove reads with remnant PacBio adapter

sequences.

HiFiAdapterFilt

```
bash pbadapterfilt.sh [ -p file Prefix ] [ -l minimum Length of adapter  
match to remove. Default=44 ] [ -m minimum percent Match of adapter  
to remove. Default=97 ] [ -t Number of threads for blastn. Default=8 ]  
[ -o outdirectory prefix Default=. ]
```