

Supplementary materials

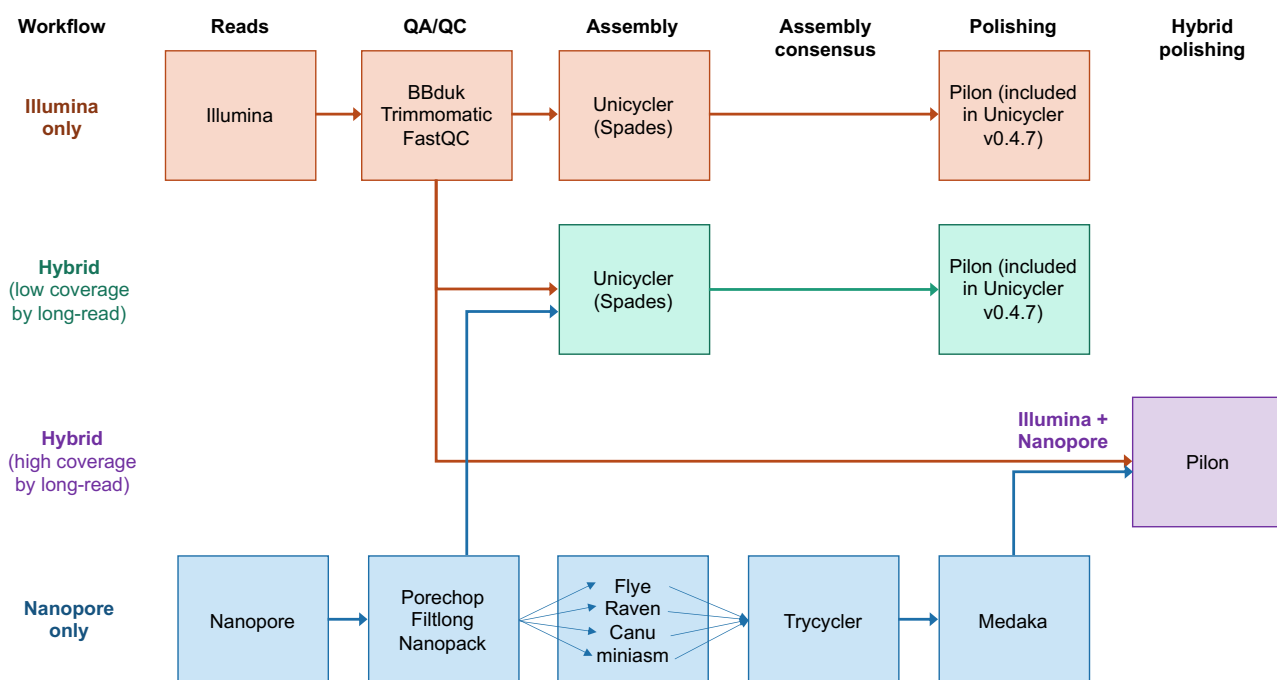


Figure S1: Short-read and long-read assembly workflows.

Table S1: Comparative genomics of pHUM3355 and pHUM7199 plasmids incompatibility (*Inc*), genes associated with replication, conjugative transfer and maintenance/stability

Plasmid	pHUM3355_A	pHUM3355_B	pHUM3355_C	pHUM7199_A	pHUM7199_B
<i>Inc</i> group	<i>IncC</i>	<i>IncFII/IncFIB/IncQI</i>	<i>IncIIa</i>	<i>IncFIB(K)</i>	<i>IncR</i>
pMLST alleles	repA_2, parA_2, parB_2, A053_1	FII_2	repI1_1, ardA_4, pill_1, sogS_4, trbA_3	FIIK_13	FIA_13
Conjugative transfer genes					
-Relaxase	<i>traI</i>	<i>traI</i>	<i>nikB</i>	<i>traI</i>	
-T4CP	<i>traD</i>	<i>traD</i>		<i>traD</i>	
-ATPase		<i>traC</i>	<i>traU,J, pilQ</i>	<i>traC</i>	
-T4SS-MPF: Pilus assembly/ biogenesis	<i>tra</i> :L,E,K,B,V,A,C, W,U,F,H,G	<i>tra</i> :L,E,K,B,V,C,W ,U,F,H,A,X	<i>tra</i> :R,Q,O,M <i>pil</i> :V,T,S,,R,N	<i>tra</i> :L,E,K,B,V,C,W ,U,F,H,A,X	
-Surface exclusion		<i>tra</i> :S,T	<i>traX</i>	<i>tra</i> :S,T	
-Transfer regulators		<i>tra</i> : M,J,Y	<i>traB</i>	<i>tra</i> :M,J,Y	
-Fertility inhibition		<i>finO</i>		<i>finO</i>	
-Other	<i>traN</i>	<i>tra</i> :P,R,N,Q,G <i>trb</i> :G,I,E,A,B,J,F	<i>tra</i> :Y,W,S,P,N,L, K,I,H,G,C,A <i>pil</i> :P,U,M,L,,K,I	<i>tra</i> :P,R,N,Q,G <i>trb</i> :D,G,I,E,A,B,J,F	
Maintenance/ stability genes					
-Partitioning	<i>parA, parB</i>	<i>parA, parB</i>		<i>parA, parB</i>	<i>parA, parB</i>
-Plasmid addiction		<i>phd, doc</i>	<i>psk, phd, doc</i>		
-Plasmid SOS inhibition		<i>psiA, psiB</i>	<i>psiA, psiB</i>	<i>psiA, psiB</i>	
-Anti restriction			<i>ardA</i>		

pMLST; plasmid multi-locus sequence typing, T4CP; type IV coupling protein, T4SS-MPF type IV secretion system membrane associated mating pair formation