

BROAD-HOST RANGE PLASMIDS

S u m m a r y

Broad-host-range plasmids are model systems for exploring replication mechanisms in diverse bacterial species and can extend our understanding of universal rules guiding DNA metabolism. Despite extensive work carried out in many laboratories, several critical aspects of the plasmid DNA metabolism still remain unclear. This review is restricted to specification of the molecular events during theta replication initiation of the iteron containing broad-host-range plasmids. The discussion concerns RC (rolling circle)

broad-host-range plasmids replicating *via* sigma mode and the well biochemically characterized initiation of replication at *Escherichia coli* *oriC*. Recent extensive biochemical investigations of replication initiation of narrow-host-range plasmids: pSC101, R1, P1, F, R6K, and broad-host-range plasmids RSF1010 and RK2 allow us to discuss the specificity of DNA replication initiation at broad-host-range origins.