

MS06-P04 | CHROMOSOME PARTITIONING SYSTEM, PARABS

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ParABS is an important DNA partitioning process in chromosome segregation. ParABS consists of three major components: ParA (an ATPase), ParB (a *parS* binding protein) and *parS* (a centromere-like DNA). The homologous proteins of ParA and ParB in *Helicobacter pylori* are *HpSoj* and *HpSpo0J*, respectively. From the complex crystal structures of *HpSoj* and *HpSpo0J*, the *HpSoj*-DNA complex, *HpSoj* nonspecifically binds DNA through a continuous basic binding patch formed and the *HpSpo0J*-DNA complex, *HpSpo0J* folds into an elongated structure with a flexible N-terminal domain for protein-protein interaction and a conserved DNA-binding domain for *parS* DNA binding. Also, we detected the *HpSpo0J*-*HpSoj*-DNA complex, the nucleoid adaptor complex (NAC), by electron microscopy. NAC formation is promoted by *HpSoj* participation and specific *parS* DNA facilitation.