

PublisherInfo		
PublisherName	:	BioMed Central
PublisherLocation	:	London
PublisherImprintName	:	BioMed Central

## Reeling in DNA

ArticleInfo		
ArticleID	:	3822
ArticleDOI	:	10.1186/gb-spotlight-20001108-01
ArticleCitationID	:	spotlight-20001108-01
ArticleSequenceNumber	:	259
ArticleCategory	:	Research news
ArticleFirstPage	:	1
ArticleLastPage	:	2
ArticleHistory	:	RegistrationDate : 2000-11-08 OnlineDate : 2000-11-08
ArticleCopyright	:	BioMed Central Ltd2000
ArticleGrants	:	
ArticleContext	:	130591111

William Wells

Email: wells@biotext.com

---

The *Bacillus subtilis* SpoIIIE protein is required for DNA segregation during the asymmetric cell division that produces a mother cell and a pre-spore. In the 3 November *Science*, Bath *et al.* confirm that SpoIIIE is targeted to the leading edge of the septum that divides the two cells, and suggest that the protein pumps DNA into the pre-spore by tracking along DNA (*Science* 2000, **290**:995-997). They find that SpoIIIE is a DNA-dependent ATPase that can introduce unconstrained supercoils into a DNA substrate. A DNA-packaging protein would tend to introduce constrained supercoils, but SpoIIIE presumably introduces positive supercoils in front of itself, as it tracks along the DNA, while the negative supercoils left in its wake are selectively relaxed by bacterial topoisomerase I. SpoIIIE is not absolutely required for vegetative growth, but it may facilitate clearance of DNA from the septum even in symmetric cell divisions.

## References

1. *Bacillus subtilis* spoIIIE protein required for DNA segregation during asymmetric cell division.
2. *Science*, [<http://www.sciencemag.org/>]