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Sequence of a symbiont

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Tsetse flies, the vectors of African trypanosomes, feed exclusively on blood and require intracellular microorganisms to provide additional nutrients. In an Advanced Online Publication in *Nature Genetics*, Akman *et al.* report the genome sequence of *Wigglesworthia glossinidia brevipalpis*, the obligate symbiont of the tsetse fly (*Nature Genetics*, 3 September 2002, DOI:10.1038/ng986). The *Wigglesworthia* genome consists of a single chromosome of almost 700 kb and a small plasmid, pWig1, of 5,200 bp. The coding content is around 89%, with 621 predicted coding sequences. Notably, the genome lacks a gene encoding the DNA replication initiation protein DnaA, whose function may be provided by the host. Akman *et al.* assigned potential functions to a large number of the coding sequences, including those implicated in the biosynthesis of cellular structures, and fatty acid metabolism and the synthesis of vitamin metabolites (required for host nutrition). The *Wigglesworthia* genome provides an opportunity to study the genetics of symbiotic relationships.

References

1. Tsetse - A haven for microorganisms.
2. *Nature Genetics*, [<http://genetics.nature.com>]