

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

Guarding the *Giardiagenome*

ArticleInfo		
ArticleID	:	4270
ArticleDOI	:	10.1186/gb-spotlight-20011205-01
ArticleCitationID	:	spotlight-20011205-01
ArticleSequenceNumber	:	341
ArticleCategory	:	Research news
ArticleFirstPage	:	1
ArticleLastPage	:	2
ArticleHistory	:	RegistrationDate : 2001-12-05 OnlineDate : 2001-12-05
ArticleCopyright	:	BioMed Central Ltd2001
ArticleGrants	:	
ArticleContext	:	130592211

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Some **transposable elements** can be beneficial and others may persist in the genomes of sexually reproducing eukaryotes even if they are deleterious. In the December 4 **Proceedings of the National Academy of Sciences**, Arkhipova and Morrison report the characterization of retrotransposons in the *Giardia lamblia* genome (*Proc Natl Acad Sci USA* 2001, **98**:14497-14502). *G. lamblia* is a protozoan parasite, one of the earliest-branching eukaryotes, and is thought to be asexual. Arkhipova and Morrison detected three non-LTR (long terminal repeat) retrotransposon families (named GilM, GilT and GilD) in the *Giardia* genome. The GilM and GilT families are confined to immediate subtelomeric regions; the GilD family appears to be functionally 'dead' as a result of multiple deletions and point mutations. Thus, the protozoan genome appears to lack active deleterious transposons. The authors propose that *Giardia* telomeric transposable elements may help to protect chromosome ends, like those of *Drosophila* (HeT-A and TART) that regulate telomere maintenance.

References

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