

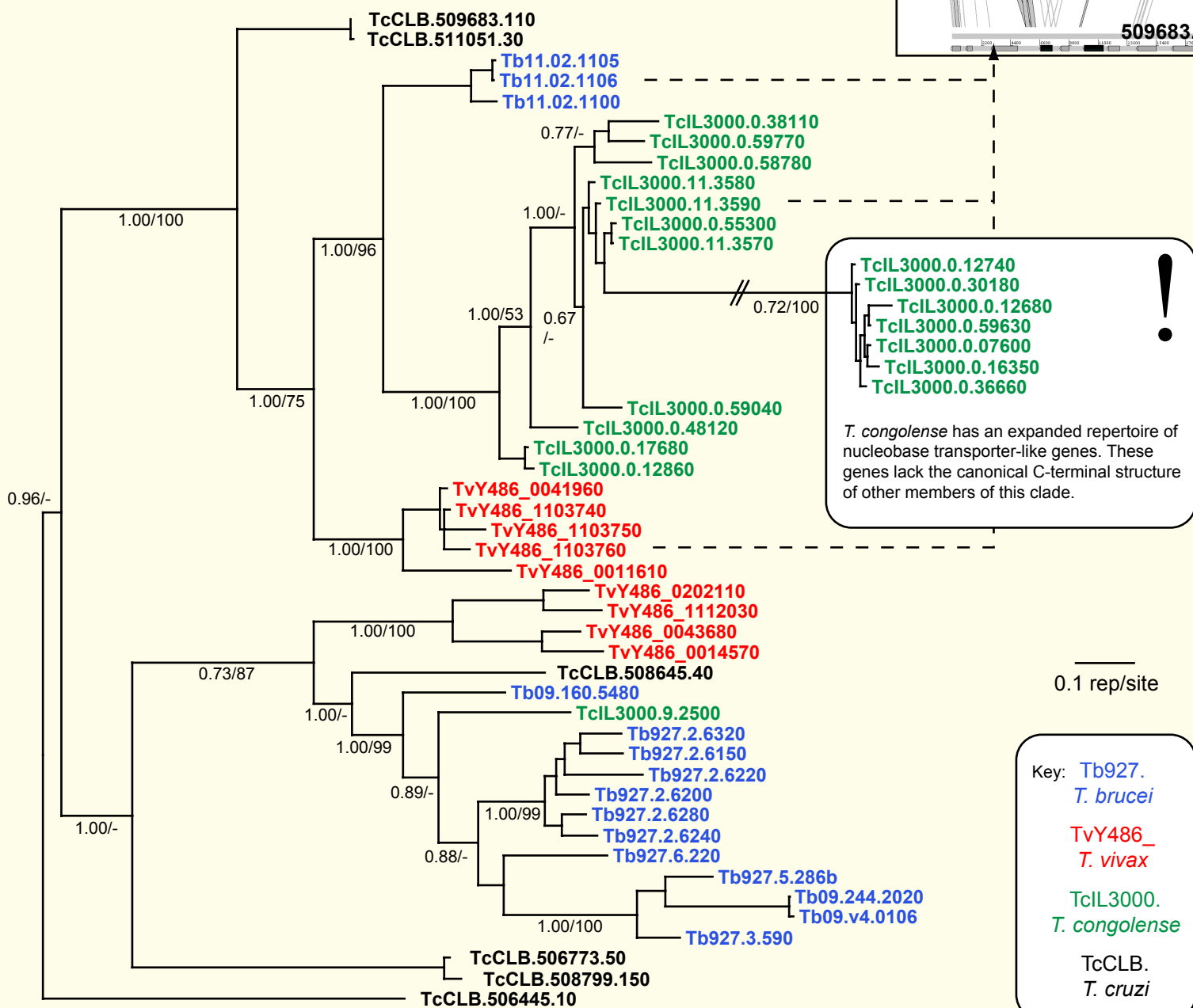
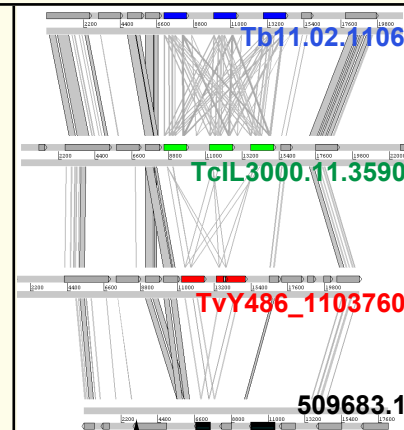
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Jackson, AP et al. 2012. A cell surface phylome for African Trypanosomes. *Manuscript submitted.*

Fam61: Nucleoside/ nucleobase transporters



Fam61 includes membrane transporters that are thought to bind both nucleobases and nucleosides, with varying specificities, in *T. brucei*. One clade includes the nucleobase transporters in *T. brucei*, which are tandemly arrayed on chromosome 11. This array is conserved in all species (inset showing an ACT comparison in which vertical grey bars represent significant BLASTp matches and Fam61 members are coloured). The other clade includes all nucleoside transporters and these are not conserved by genomic position, due in part to species-specific expansions; e.g. on chromosome 2 in *T. brucei*.



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T. congolense has an expanded repertoire of nucleobase transporter-like genes. These genes lack the canonical C-terminal structure of other members of this clade.

Key:

- Tb927. *T. brucei*
- TvY486_ *T. vivax*
- TcIL3000. *T. congolense*
- TcCLB. *T. cruzi*

NOTES: Fam61 comprises predicted nucleoside or nucleobase transporters from various loci throughout genomes from all species. All members have 9-11 transmembrane helices; several members have predicted signal peptides. The Bayesian phylogram was estimated from a multiple protein sequence alignment of 485 characters, using MrBayes under default settings. The tree is rooted with a divergent *T. cruzi* sequence (506445.1). Selected nodes are supported by posterior probability values and non-parametric bootstraps generated from a maximum likelihood analysis using an LG model with rate heterogeneity.