

Genomic integration of DNA microinjected into *Paramecium caudatum*

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SUMMARY

We developed a novel expression vector, pTT3, for transformation in *Paramecium caudatum*. In this study, we examined how microinjected DNA is maintained in the macronucleus of transformant cells. The vector, pTT3 H2B-PcVenus, was constructed by using the *P. caudatum* histone H2B gene which was fused with a codon-optimized and superenhanced yellow fluorescent protein gene named PcVenus. Upon microinjection of the vector, significant fluorescent signals derived from histone H2B-PcVenus were detected throughout the macro- and micronuclei of transformant cells. We analysed the genomic DNA of fluorescence-positive clones using the southern blot and plasmid rescue methods.