The genome of *Theobroma cacao*

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The bioinformatics team of LIPM led by J. Gouzy has contributed the annotation of the genome of *Theobroma cacao,* an economically important tropical-fruit tree crop that is the source of chocolate.

The assembly corresponds to 76% of the estimated genome size and contains almost all previously described genes, with 82% of these genes anchored on the 10 *T. cacao* chromosomes.

Analysis of this sequence information highlighted specific expansion of some gene families during evolution, for example, flavonoid-related genes. It also provides a major source of candidate genes for *T. cacao* improvement. Based on the inferred paleohistory of the *T. cacao* genome, we propose an evolutionary scenario whereby the ten *T. cacao* chromosomes were shaped from an ancestor through eleven chromosome fusions.

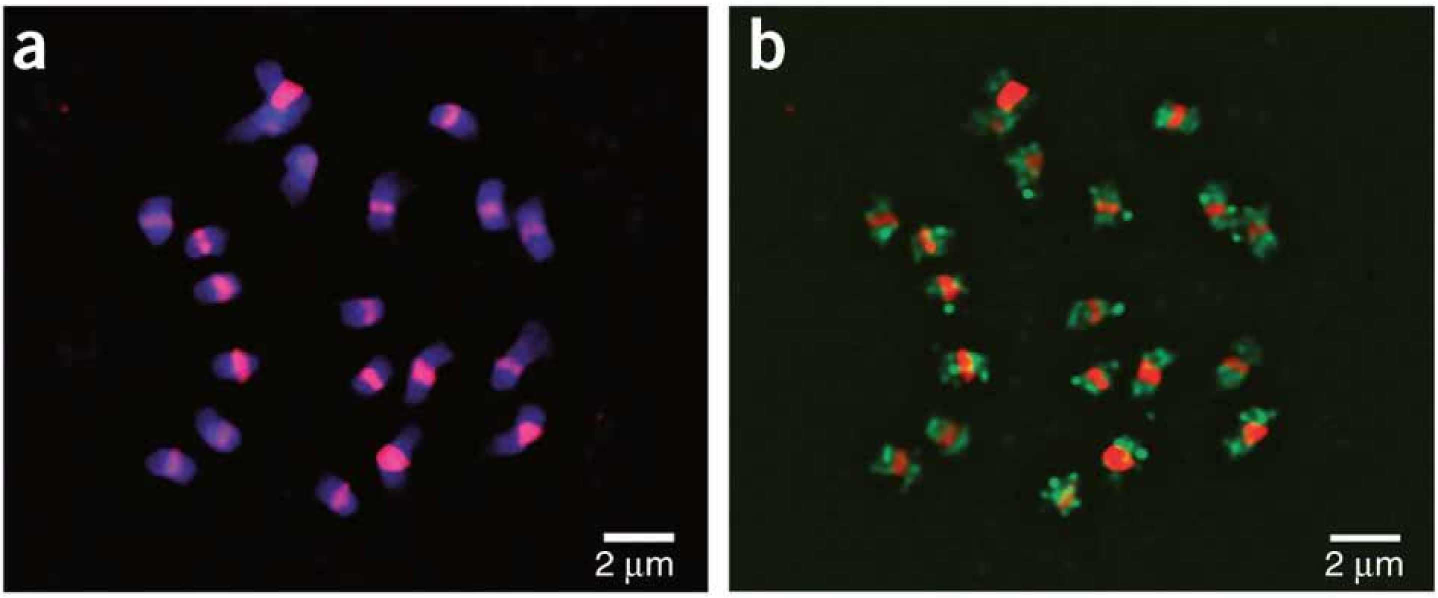

Figure Legend

(a) In situ hybridization of T. cacao chromosomes stained with DAPI (blue) using a ThCen repeat probe (red).

(b) In situ hybridization using Gaucho LTR retrotransposon (green) and ThCen repeat (red) probes.

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