

THE FIR GENOME HAS HARDLY CHANGED IN THE LAST HUNDRED MILLION YEARS

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Genetic analysis revealed that the genome of conifers such as spruce, pine and spruce has remained almost unchanged for over 100 million years. This remarkable genomic stability explains the similarity between the current and fossil conifers of living in times of dinosaurs.



The team of researchers from the Canadian Forest Service and also Laval University in Canada came to this conclusion after analyzing genomes of conifers and compare them with flowering plants. Both groups of plants evolutionarily diverged from a common ancestor about 300 million years.

Jean Bousquet, Nathalie Pavy, Betty Pelgas, Jerome Laroche, Philippe Rigault, and Nathalie Isabel comparing genomic macrostructure 157 families of genes present in both conifers and flowering plants. The researchers found that the genomes of conifers have remained particularly stable for at least 100 million years, while those of flowering plants have undergone major changes over the same period.

That does not mean that there have been small-scale changes, such as genetic mutations, such as Bousquet qualifies. However, the macrostructure in the genomes of conifers has remained remarkably stable over time.

This stability goes hand in hand with the low rate of speciation of conifers. Today in the world only 600 species of conifers, while there are over 400,000 species of flowering plants. Conifers appear to reach equilibrium with its environment at a very early stage of its evolutionary history, as noted Bousquet. Today, conifers thrive in much of the world, especially in cold weather. Instead, flowering plants are under intense evolutionary pressure and struggling for survival and reproduction.