Non-random distribution of macronuclear genome in Tetrahymena thermophila

Masaki ENDO and Toshiro SUGAI (Department of Materials and Biological Sciences, Faculty of Science, Ibaraki University)

The macronucleus of *Tetrahymena* has 200–300 different DNA molecules, or chromosomes. Each chromosome is amplified to 45 copies. It is believed that the position of each chromosome within the macronucleus is random. We reported previously the presence of globular chromatin during macronuclear division which contains 1C amount of DNA. We have developed a method to make cells with a very small macronucleus which contains about 1C amount of DNA. These cells could grow and divide, suggesting that the macronuclear genome is clustered within the macronucleus.