APRESENTAÇÃO DE PÔSTER - GENÉTICA ANIMAL E EVOLUÇÃO

THE MOLECULAR EVOLUTION OF CETACEANS FROM THE PERSPECTIVE OF TRANSPOSABLE ELEMENTS

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Transposable Elements (TEs) and sequences derived from them are repetitive entities found in most eukaryotes studied to date. Due to their ability to relocate themselves within a genome, they are a source of genetic variability and a disruptive force for coding sequences in somatic and germ cells. Its dynamics inspire great interest to understand the molecular evolution of a lineage. For example, in the evolution of the adaptive immune system in vertebrates, in the emergence of the placenta, in the regulation of gene expression and also in the interference in viral infections. This study proposes to investigate the TEs in cetaceans, comparing this group divided between Mysticeti (whales with fins) and Odontoceti (whales with teeth, dolphins and porpoises) and the surrounding regions of these sequences. They are mammals that have undergone a very remarkable evolutionary adaptation by exclusively occupying the aquatic environment and are distributed across a wide range of habitats. Which requires metabolic, immune and physiological adaptations that may eventually be related to their TEs composition, at least in a regulatory level. The group has high-coverage sequencing for a considerable portion of its 89 species, some at the

chromosomal level. In this context, we propose to advance the characterization of its library of TEs with computational analysis of de novo and published libraries, study structural relationships with coding regions of interest, amplification events, genome position and silencing and transcription patterns using gene editing and cell culture.

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