The Cellular Biology and Molecular Biology are fields of Science that use very abstract concepts, because they look into microscopic and molecular aspects of the nature. The process of teaching/learning of those disciplines requires didactic material, as an alternative approach for the students, to increase the chances of understanding these issues and to become an important tool in the synthesis of this knowledge. One of the methods that can be employed is the didactic models based on multimedia, because they allow an easy and fun interaction with these subjects. On this work was created a new educational model that represents the human mitochondrial DNA molecule, mtDNA, in its circular form, using the softwares Excel 2007 and PowerPoint 2007. The model was constructed in hypertext format, which allowed a quick and interactive access to the information contained in the genes found in the L and the H strands of mtDNA, and its function in the mitochondrial processes, like the mechanism of energy production that occurs inside of the mitochondria by the coupling of electron transfer and ATP synthesis or still others uses like forensic identification.

Keywords: didactic model, mitochondria, mitochondrial DNA

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