

ANALYSIS ON COLLAGEN TYPE I CHAINS

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Collagen type I, consists of a heterotrimer of two $\alpha 1(I)$ and one $\alpha 2(I)$ chains, is the most common form of fibrillar collagen, being a major constituent of bone and skin. The research presents a correlation analysis of amino acids within and between collagen types I chains in the same specie and in different species. The collagen type I chains from the following species were included into analysis: *Rattus norvegicus* (Orjel et al., 2006), *Bos taurus* (Shirai et al., 1998), *Danio rerio* (Howden, 2007), *Canis lupus* (Lowe et al., 2003), and *Homo sapiens* (Strausberg et al., 2002). The correlation obtained were analyzed in accordance with the distribution of amino acids in the collagen type I chains [1,2]. A perfect correlation ($r = 1$) was obtained between species on the same α chain for cysteine, tryptophan, tyrosine, and lysine. The highest correlation on different collagen type I chains ($r = 0.763$) of the same species was obtained for *Canis lupus*.

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References

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