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Barbatimão, a Brazilian wound healing plant, restores markers of senescent human dermal fibroblasts

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Modification of body tissues, such as skin, over time leads to reduced tissue integrity due to decreased cell functions, among which the fibroblast is highlighted. Despite the many changes caused by cellular senescence, the most notable is the decrease in tissue healing capacity. In the search for therapies that improve biological functions, the barbatimão (*Stryphnodendron adstringens* (Mar.) Coville) is a plant native to Brazil with a well-known cicatrization capacity, but little explored. Using the aged human fibroblast cell line (HFF-1), this study sought to demonstrate the potentialities of barbatimão extract in the modulation of cellular senescence genes, in anti-inflammatory action, proliferation, apoptosis and morphology. The results demonstrated the ability of the extract to increase the expression of senescence marker genes without, however, significantly altering cell proliferation, in addition to reducing mortality rates. Our results suggest that barbatimão is capable of restoring the metabolism of senescent skin cells.

Biography

Fernanda Barbisan holds Bachelor's degree in Biological Sciences, Master and PhD degree in Pharmacology. Currently, she holds a Postdoctoral degree in Gerontology. She is a Professor at the Federal University of Santa Maria-Brazil. She acts as a Researcher on projects that studies genetic-environmental interactions on the human aging and diseases associated with aging. She has experience in the areas of cellular aging and immunosenescence, toxicogenetics, nutrigenetic and pharmacogenetics, involving tests of modulation of oxidative stress, apoptotic and inflammatory cascade by toxic agents, functional foods and pharmacies. She has worked with molecular biology techniques for the evaluation of genetic variability, genetic polymorphisms, real time PCR, DNA damage, epigenetics, cell culture and biochemical, spectrophotometric and fluorimetric analyzes. She has participated in a Phase I clinical trial, using the drug Rosuvastatin and she has already designed and executed studies with humans, mainly with the elderly.

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