

The secret to long life may not be in the genes

May 5 2008

A research on the bone health of one of the oldest persons in the world, who recently died at the age of 114, reveals that there were no genetic modifications which could have contributed to this longevity. The research team, directed by Universitat Autònoma de Barcelona professor Adolfo Díez Pérez, pointed out a healthy lifestyle, a Mediterranean diet, a temperate climate and regular physical activity as the reasons for his excellent health.

The research team studied the bone mass and analysed the genetics of a man with enviable health who at the time of the study was 113 years old. The research was carried out with four other members of his family: a 101-year-old brother, two daughters aged 81 and 77, and a nephew aged 85, all of them born and still living in a small town of the island of Menorca.

The research findings were recently published in the *Journal of Gerontology* and reported that the man's bones were in excellent conditions: his bone mass was normal, there were no anomalous curvatures and he had never sustained a fracture.

With regard to the genetical analyses, researchers were unsuccessful in finding any mutations in the KLOTHO gene, which is generally related to a good level of mineral density and therefore healthy bones. Neither did they find any mutations in the LRP5 gene, which is associated with longevity. None of the members of the family who participated in the study presented any mutations in this gene.

The results of the research do not rule out the possibility that other genetic mutations could positively influence longevity. However, researchers do point out the fact that the excellent health of this family, and of the 113-year-old man in particular, is probably due to a Mediterranean diet, the temperate climate of the island, a lack of stress and regular physical activity. The article underlines the fact that until the age of 102, the man cycled every day and looked after the family orchard.

Source: Universitat Autònoma de Barcelona

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