

APOB, a gene involved in lipid transport, linked to cases of familial extreme longevity

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In a recent report in *Aging Cell*, a multidisciplinary team of Spanish scientists, led by Tim Cash and Manuel Serrano at the Spanish National Cancer Research Centre (CNIO), identify rare variants in the APOB gene in several families where exceptional longevity (>100 years of age) appears to cluster. Investigators identified three Spanish families with at least two siblings of around 100 years of age and they sequenced their genes in the hope of finding rare variants that could be associated with extreme longevity. Remarkably, only one gene was found carrying rare variants in all the long-lived siblings of the three families, namely, APOB.

APOB is an attractive longevity gene because of its previous link to hypobetalipoproteinemia, a putative "longevity syndrome" and also because the protein encoded by APOB works in lipid transport together with the related protein APOE, which has common genetic variants with undisputed associations with longevity.

This work is a first step in the identification of the genetic basis of familial extreme longevity and it points to cholesterol and lipid metabolism as an important determinant of [human longevity](#).

More information: Exome sequencing of three cases of familial exceptional longevity. Cash TP, Pita G, Domínguez O, Alonso MR, Moreno LT, Borrás C, Rodríguez-Mañas L, Santiago C, Garatachea N, Lucia A, Avellana JA, Viña J, González-Neira A, Serrano M. *Aging Cell* (2014). [DOI: 10.1111/accel.12261](https://doi.org/10.1111/accel.12261)

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