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Sommario/riassunto

In the last two decades, due to the continuous increase of lifespans in Westernsocieties, and the consequent growing of the elderly population, have witnessedan increase in the number of studies on biological and molecular factors able topromote healthy aging and reach longevity. The study of the genetic componentof human longevity demonstrated that it accounts for 25% of intra populationphenotype variance. The efforts made to characterize the genetic determinantssuggested that the maintenance of cellular integrity, inflammation, oxidativestress response, DNA repair, as well as the use of nutrients, represent the mostimportant pathways correlated with a longer lifespan. However, although aplethora of variants were indicated to be associated with human longevity, onlyvery few were successfully replicated in different populations, probably becauseof population specificity, missing heritability as well as a complex interactionamong genetic factors with lifestyle and cultural factors, which modulate theindividual chance of living longer. Thus, many challenges remain to be addressedin the search for the genetic components of human longevity. This Special Issue isaimed to unify the progress in the analysis of the genetic determinants of humanlongevity, to take stock of the situation and point to future directions of the field.We invite submissions for reviews, research articles, short-communicationsdealing with genetic association studies in human longevity, including all types ofgenetic variation, as well as the

characterization of longevity-related genes.