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Titel des Beitrags: A common genetic variant in the NOS1 regulator NOS1AP modulates cardiac repolarization.

Abstract: Extremes of the electrocardiographic QT interval, a measure of cardiac repolarization, are associated with increased cardiovascular mortality. We identified a common genetic variant influencing this quantitative trait through a genome-wide association study on 200 subjects at the extremes of a population-based QT interval distribution of 3,966 subjects from the KORA cohort in Germany, with follow-up screening of selected markers in the remainder of the cohort. We validated statistically significant findings in two independent samples of 2,646 subjects from Germany and 1,805 subjects from the US Framingham Heart Study. This genome-wide study identified NOS1AP (CAPON), a regulator of neuronal nitric oxide synthase, as a new target that modulates cardiac repolarization. Approximately 60% of subjects of European ancestry carry at least one minor allele of the NOS1AP genetic variant, which explains up to 1.5% of QT interval variation.

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