

Behind the scenes of genetics, leukemia in Down syndrome

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Children affected by trisomy 21 (or Down syndrome) are 50 to 500 times more likely to develop leukemia than other children.

A group of geneticists working in the Faculty of Medicine at the University of Geneva (UNIGE) focused for many years on the [genetic characteristics](#) of Down syndrome.

They have sequenced the exome, a specific part of our genome, in a cohort of patients affected both by Down Syndrome and Acute Lymphoblastic Leukaemia (DS-ALL), a type of cancer relative to the cells of the immune system in the [bone marrow](#).

They were able to sketch an outline of the "genetic identity card" of this disease.

They found that RAS, an important oncogene in many cancers, is involved in the tumorigenesis of one third of DS-ALL cases.

This work is being published in the latest issue of the journal *Nature Communications*.

Provided by University of Geneva

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