CenSeq (Centenarian Sequencing) extends the research of the "Centenarians and oldest-olds in Liguria – COOL" study, which focuses on cognitive well-being in centenarians from Genoa, Italy. The project uses long-read sequencing technology for detailed genetic analysis, combined with CpG-methylation analysis to understand chromatin states.

The study aims to uncover the genetic and epigenetic factors associated with exceptional longevity and preserved cognitive function. Understanding these factors is crucial for developing health policies and promoting healthy aging.

The research includes analyzing genomic sequences and epigenetic profiles of centenarians, with particular attention to DNA methylation patterns, long repeat regions, single nucleotide variants, copy number variants, and telomere lengths.

As of February 2024, 61 centenarians have been enrolled, most of them female, aged between 99 and 108. Neuropsychological assessments and blood samples have been collected for genomic analysis.

The project involves a collaborative approach with experts in various fields. The data collected will be shared within the Ulysseus community and is expected to contribute significantly to the scientific understanding of aging.

The collaboration of several researchers and their specific contributions to the project, emphasizing the importance of multidisciplinary approaches in understanding the complex phenomena of aging and cognitive health.

Collaborating researchers would get access to the sequencing data.

If you are intereted in colaborting with us on this project please send an email to John.rowell@Univ-cotedazur.fr with a brief description of their research question they would use the data to answer.