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THE PROJECT

Despite a reduction in the number of severe cases of COVID-19, SARS-CoV-2 continue to circulate., The possibility of a genetic drift towards novel prevalent variants with uncertain consequences on the epidemiology and clinical presentation of COVID-19 exists.

In Italy, genomic surveillance of SARS-CoV-2 is performed through periodic prevalence surveys, continuous sequencing in specific target-groups and periodic sequencing of raw sewage samples.

The project aims to consolidate and strengthen the capacity and infrastructure for the genomic surveillance of SARS-CoV-2 and other respiratory viruses, including influenza and RSV in Italy in order to reach higher EU/EEA standards, make it sustainable and enhance epidemic and pandemic preparedness against future threats.

The project also aims to encourage a national technical discussion on data integration and analysis to improve policy-relevant information that can be gained from existing surveillance systems.



GENERAL OBJECTIVES:

In this view, the project will pursue the following two General Objectives:

- Support the ongoing enhancement of the WGS capacity for respiratory viruses with epidemic/pandemic potential within the laboratories of the Italian genomic laboratory network and the sustained performance of periodic SARS-CoV-2 flash surveys to estimate the prevalence of virus variants.
- Support the consolidation and quality of centralized genomic data collection and the establishment of innovative integrated data analysis of genomic and epidemiological data using multiple data sources (including also data sources not funded through this project) from a One Health Perspective.

WHAT WE DO

In this view, the project will significantly contribute to strengthen the Italian genomic laboratory preparedness and response, build WGS capacity on genomic surveillance and innovate data analysis through the integration of human genomic, epidemiological and environmental sectors, also using statistical and mathematical models.

The project is coordinated by the Istituto Superiore di Sanità as national competent authority, and involves both the Ministero della Salute and the Fondazione Bruno Kessler for their respective specific expertise, as well as the Italian genomic laboratory network