UPMC
LIFE CHANGING MEDICINE

# Omics per l'oncologia innovativa - Ongoing

CUP G78I18000860007

## Operational Program FESR Sicilia 2014/2020

Priority axis 1 Research, Technological Development and Innovation

Action 1.1.5 "Support for the technological advancement of companies through the financing of pilot lines and early product validation and large-scale demonstration actions."

## Partnership

- University of Pittsburgh Medical Center Italy - Capofila
- Università degli Studi di Palermo - Partner
- Università degli Studi di Catania- Partner
- La Maddalena s.p.a- Partner
- Xenia Progetti s.r.l.- Partner

**Total Cost of the Intervention € 3.891.726,76**

**Contribution fee of the PO FESR € 2.921.340,65**

The Omics project for innovative oncology - OngOIng, co-financed by the Sicilian Region, Department of Productive Activities, through the resources of the PO FESR Sicily 2014-2020, is aimed at creating an innovative service for the diagnosis and treatment of oncological pathologies, based on advanced technologies for genomics and the use of decision support systems, as a means of enhancing and accelerating medical knowledge.

With this project, the partnership has set the goal of making advanced technologies for the diagnosis and personalized treatment of oncological pathologies accessible to everyone, by making available a service that can be used everywhere and every time by any subject who deals with the diagnosis and treatment of tumors. The service organized by the proposing subjects acts as a collector of requests from different sources, namely the health facilities ('Service User') for the diagnosis and/or determination of oncological therapy. The process requires the Service User to send a request through a web interface made available, and that in parallel the histological sample is sent, through a system that guarantees its suitable conservation and transport, and that it can be traced, to guarantee the 'quality' of the process itself. The sample is processed with NGS techniques, through the use of advanced technological systems for genomics, which allow the entire genome to be mapped and significant mutations to be highlighted. Therefore, these mutations will be subjected to analysis and interpretation by a DSS (Decision Support System) which, through research on a broad base of recognized scientific knowledge, provides information to characterize the oncological pathology, making a diagnosis; indicate the most appropriate pharmacological treatment for the case; indicate the expected outcome, in terms of survival in the short, medium term, and/or in terms of tumor evolution (size, replication, etc.); associate a reliability indicator (i.e., error, accuracy) to the suggested diagnosis/therapy.

The possibility of performing detailed diagnoses allows for the introduction of innovative therapies, as they are personalized, which aim to: improve the prognosis, thanks to a diagnosis that allows for better discernment of the specific tumor form and, in addition, to discern tumor forms that are not currently properly characterized; improve the quality of life of patients, thanks to a therapeutic approach that is as targeted as possible to target only the tumor tissue, preserving the healthy one.

The main result of the project is the creation of an innovative service for the diagnosis and treatment of oncological pathologies, based on advanced technologies for genomics and the use of decision support systems, as a strengthening and acceleration of medical knowledge.

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