**Against Brain Cancer:** finding personalized therapies with in Silico and in vitro strategies - ARES

Speakers: Stefano Cozzini (eXact LAB)

This project presents an innovative approach for the treatment and personalized therapy of glioblastoma (GBM). Starting from the study of Glioblastoma cells (GSC) and with the support of an advanced integrated technology platform, innovative methods of analysis, evaluation and treatment will be implemented. Subsequently these methods will be compared with the currently systems used in the therapeutic field in order to verify the effectiveness. The project aims are:

- Implementation of a glioblastoma stem cell bank.
- Definition of new 3D in vitro models (to study the invasiveness of GBM cells).
- An integrated technological platform with advanced services for health data management purpose;
- Development of diagnostic kits for in vitro prediction of the therapy response.

**BioSafe**

Biofilm Sensing and Analysis For hEalth

Speakers: Stefano Prato (APE Research)

Bacterial biofilms are microorganisms' communities with a high colonizing capacity. Considered the main causes of microbial contamination in health, domestic and industrial contexts, they are one of the top health risk. To tackle the hygienic-sanitary problems it is necessary to set extraordinary sanitation interventions, with negative side effects. In order to avoid these interventions, an early detection system to use in difficult access contexts (such as tubes, membranes of medical devices or household appliances) will be developed. During the project different microorganisms will be characterized and an innovative biofilm monitoring system based on optomechanical sensors settled. By the end of the project the device can be widely used in different operating environments.

**Workshop**

Collaborative public-private R&D innovative projects financed by ROP - ERDF 2014/2020

16 October 2019

13.30 – 14.30
Thyroid Cancer Prediction

PREDITT

Speaker: Dino Paladin (AB Analitica)

The Fine-Needle Aspiration Biopsy (FNAB) is the most common methodology used to establish the most adequate therapeutic approach for the thyroid tumor treatment. Nowadays, this method does not allow clinicians to define tumor aggressiveness and it does not possess predictive value towards therapeutic response. The project aims to develop an innovative methodology to improve the management/treatment of patients through the realization of the following outputs:

- Generation and validation of a low-cost NGS system to identify the presence of somatic mutations.
- Development of new evaluation technologies (based on me-RIP me-RIP Methylated - RNA Immunoprecipitation).
- Creation of innovative pipeline for tumor samples management that could be offered to NHS.

Total Project: 474,294.30 Euro
Total Grant: 339,943.51 Euro

Nuovi approcci predittivi per il management del tumore tiroideo

Total Project: 1,155,744.97 Euro
Total Grant: 884,939.36 Euro

Innovative Molecular Hospital Diagnostics in NGS for Oncology - DOMINO

Speaker: Marko Matanovic (AB Analitica)

DOMINO is an innovative project characterized by a high content of industrial research. Two industrial partners, three research institutes and several Pathological Anatomy Operative Units of different Hospitals of the Friuli Venezia Giulia Region are involved in the project. By the comparison of the real samples analysis output with the reference results obtained from diagnostics routine, the partners will study and develop know-how for the creation of in vitro diagnostic (IVD) products, based on DNA and RNA-NGS (Next Generation Sequencing) technology. The products, in accordance with the In Vitro Diagnostic Medical Device Directive (98/79 / EC), will receive the CE IVD.

Total Project: 1,155,744.97 Euro
Total Grant: 884,939.36 Euro

Thyroid Cancer Prediction

PREDITT

Speaker: Dino Paladin (AB Analitica)

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Total Grant: 339,943.51 Euro

Innovative Technologies for Personalized Chemotherapy - TICheP

Speaker: Gianluca Bacchiega

TICheP project aims to develop an innovative technological framework for the development of a personalized chemotherapy allowing reduced toxicity treatment. It will use ovarian carcinoma as a model, but it has the potential for extension to other types of tumors. The project proposes the development of a totally automated system for the execution of pharmacological sensitivity tests to be performed on peritoneal carcinosis cells taken from a patient. The automated tests will evaluate the individual response to chemotherapeutic drugs.

Total Project: 160,903.00 Euro
Total Grant: 128,722.40 Euro

PARTNERS:

- AB Analitica
- exact
- UNIVERSITÀ DEGLI STUDI DI UDINE
- CRO AVIANO
- UNIVERSITÀ DEGLI STUDI DI TRIESTE
- IRS ingegneria Ricerca Sistemi
- Alphagenics Biotech