Cancer Vaccine Development for Hepatocellular Carcinoma
HEPAVAC aims to develop a highly innovative cancer vaccine approach for hepatocellular carcinoma (HCC).

HCC is the third and fifth leading cause of cancer related death worldwide in men and women, respectively.

The prognosis of HCC is poor: only 5-6% of patients survive more than 5 years after diagnosis.

Cancer vaccines could represent an important turning point in HCC therapy.

Main objectives of HEPAVAC will be:

- **Identification of novel and relevant HCC-associated antigens by analysis of HLA class I and II binding epitopes naturally processed and presented on primary HCC tissues;**

- **Design of an “off-the-shelf” multi-peptide formulation comprising multiple class I and class II-restricted tumor associated epitopes (the HEPAVAC vaccine);**

- **Set-up of a platform for personalized booster vaccination;**

- **Proof of concept for the MoA of the HEPAVAC HCC vaccination approach via a comprehensive centralized immune monitoring program;**

- **Proof-of-concept for the combination of the peptide-based vaccination approach and a novel immunomodulator (RNAdjuvant®).**

- **Demonstration of safety, biological efficacy and first indication of clinical efficacy for a novel, highly innovative vaccine approach by a first-in-man clinical trial.**
The HEPAVAC project will be divided into a “preclinical/translational” and a “clinical” phase.

The peptide-based cancer vaccine will be evaluated in a European randomized multi-centre Phase I/II clinical trial.
COORDINATING TEAM

Coordinator: Luigi Buonaguro (INTNA)
Vice Coordinator: Harpreet Singh (IMM)
Project Manager: Serena Salerno (INTNA)

RESEARCH SERVICES OFFICE

Legal Issues: Jolanda Attanasio (INTNA)
Financial Issues: Vincenza Farinari (INTNA)
Grant Office: Lisa Mazzone (INTNA)

TEAM MANAGEMENT

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The INTNA is a Governmental National Cancer Institute involved in research, diagnosis and therapy of cancer. It is one of the 8 Italian NCIs and is the largest Cancer Center in Southern Italy.

Luigi Buonaguro, M.D.

Expert in vaccine design and evaluation. He will coordinate the whole project and participate to identification of peptides to be selected and included in the vaccine cocktail.

Hans Georg Rammensee, Ph.D.

Pioneer in studies on correlation between epitope and HLA alleles. Actively involved in personalized immunotherapy. He will coordinate the WP-4.

Roberto S. Accolla, M.D., Ph.D.

Pioneer in studies on master regulator of the HLA class-II molecules. Actively involved in immunology of tumor. He will coordinate the WP-2.
The INSERM research unit UMR1102, Institut de Cancérologie de l'Ouest has specific expertise in tumour immunology and in particular in development of human anti-cancer vaccines based on Cancer Testis Antigens.

Danila Valmori, Ph.D.
Immunologist focused on tumour immunology and development of human anti-cancer vaccines based on NY-ESO 1 TAA.

Sarah Kutscher, Ph.D.
Immunologist with profound experience in T-cell biology and immune monitoring of clinical trials. She will coordinate the WP-6.

Harpreet Singh, Ph.D.
CSO and Founder of IMMATICS, with profound experience in clinical immunotherapy. He is the Vice-Coordinator of the Project.

Regina Heidenreich, Ph.D.
At CureVac she contributed to RNAdjuvant® development and preclinical analysis of RNA-based cancer vaccines.

Immatics is a leading clinical-stage biopharmaceutical company dedicated to the rational discovery and development of peptide-based cancer immunotherapeutics.

CureVac is developing mRNA-molecules for therapeutic and prophylactic vaccines in the fields of oncology and infectious diseases based on its proprietary technology.
Partner BHAM

The Univ of Birmingham is involved with the NIHR Biom Res Unit for Liver Disease (NIHR Liver BRU) and the Cancer Res UK Clinical Trials Unit (CRCTU). The CRCTU is one of the largest in the UK. The NIHR Liver BRU develops novel therapies for liver disease and liver cancer.

David Adams, M.D., FMedSci.

Hepatologist whose main interests are the immune regulation in the human liver and immune responses to human liver cancer including DC-based vaccination therapy.

Partner NAVAR

The Liver Unit of Clinica Universidad de Navarra (CUN) has been carrying out clinical research activities for liver disease, particularly regarding therapeutic innovation for hepatocellular carcinoma.

Bruno Sangro, M.D.

Hepatologist fully involved in liver cancer. He has been the principal investigator in clinical trials with gene and cellular therapy of liver cancer carried out in the Liver Unit in the last years.

Partner UZA

The Department of Hepatology of the University Hospital Antwerp is reference centre for liver diseases. It has a longstanding experience in both fundamental and clinical research in HCC.

Sven Francque, M.D., Ph.D.

Hepatologist expert in innovative treatments of HCC. He will be site coordinator for WP5 at the Antwerp University Hospital.
HEPAVAC

- Call Identifier: FP7-HEALTH-2013-INNOVATION-1
- Activity code: HEALTH.2013.2.4.1-2:
  "Strengthening the cancer patient’s immune system"
- Funding Scheme: Collaborative project
- Project number: 602893
- Total funding: 5,996,110.80 €
- Duration: 60 Months
- Starting date: 1st September 2013

Serena Salerno
HEPAVAC Project Manager.
She holds a Master Degree in Foreign Languages.

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