

**Title**

Design and study of AV-HALT compounds, a new class of antiviral and immunoprotective drugs

**Deputed officers**

Temporary Business Association between Porto Conte Ricerche Srl and ViroStatics Srl

**Description**

This project is aimed to the development of new and efficient drugs against viral diseases, focusing mainly on acquired immunodeficiency syndrome (AIDS) caused by the human immunodeficiency virus (HIV), through the identification of drug prototypes to be subjected to preclinical development and clinical trial.

The activities will include the characterization of new compounds with activity against HIV and "contiguous" viruses. This new class of drugs is defined as AV-HALT (Anti-Viral Hyper-Activation Limiting Therapeutics). These compounds represent a dramatic shift in therapeutic perspective, being designed to limit viral replication and, in parallel, to reduce the immune system hyperactivation seen in chronic infections (which is believed to be key to the pathogenesis of HIV infection and the progression to AIDS, as well as for many other related diseases).

The work methodology will leverage on the integration and collaboration of Virostatics that, with its experience in anti-HIV drugs, will carry out the drug development activities down to the Phase II of clinical trial, with the significant experience of Porto Conte Ricerche in genomics and proteomics research.

**Objectives**

The research aims to provide new tools for fighting AIDS, in the form of new lead compounds able to produce more powerful, specific and safe drugs, by overcoming the first development phases to reach pre-clinical research and clinical trial.

**Expected results**

At the end of the project a new class of AV-HALT compounds is expected to be validated.

Then, following this research project, these compounds might have the potential to enter advanced preclinical and clinical phases, reaching the clinical lead status and then closing the development cycle by finally becoming drugs.

The final aim of this research is to find the best lead compounds with AV-HALT/anti-HBV/HCMV activity, which can be considered as pre-clinical prototypes.

**Funding system**

Sardegna Ricerche

**Project timing**

24 months