

SEDICIDODICI srl is a biomedical company constituted by a consolidated management and scientific expert team, focused on the development of a NOVEL EX VIVO DIAGNOSTIC MICROFLUIDIC BASED POINT OF CARE PLATFORM, **SMART CLOT**, evaluating the blood prothrombotic potential of contributing to arterial or venous thromboembolic episodes and establishing the need for preventive treatment.

Partnerships



26 settembre 2018

1 / POR-FESR 2014-2020 SMART HEALTH

DEVELOPMENT AND CONSTRUCTION OF SEVERAL AUTOMATED INSTRUMENTS OF SMART CLOT V2 WITH “REAL TIME” IMAGE ACQUISITION TECHNOLOGY AND DISPOSABLE CARTRIDGES.

CLINICAL VALIDATION IN SEVERAL CENTERS OF EXCELLENCE

2 / PARTNERSHIP

SEDICIDODICI

PROJECT LEADER

SEDICIDODICI Srl

<http://www.bloodclotfinder.com/>



friulchem spa

INDUSTRIAL PARTNER

FRIULCHEM SpA

<https://friulchem.com/>



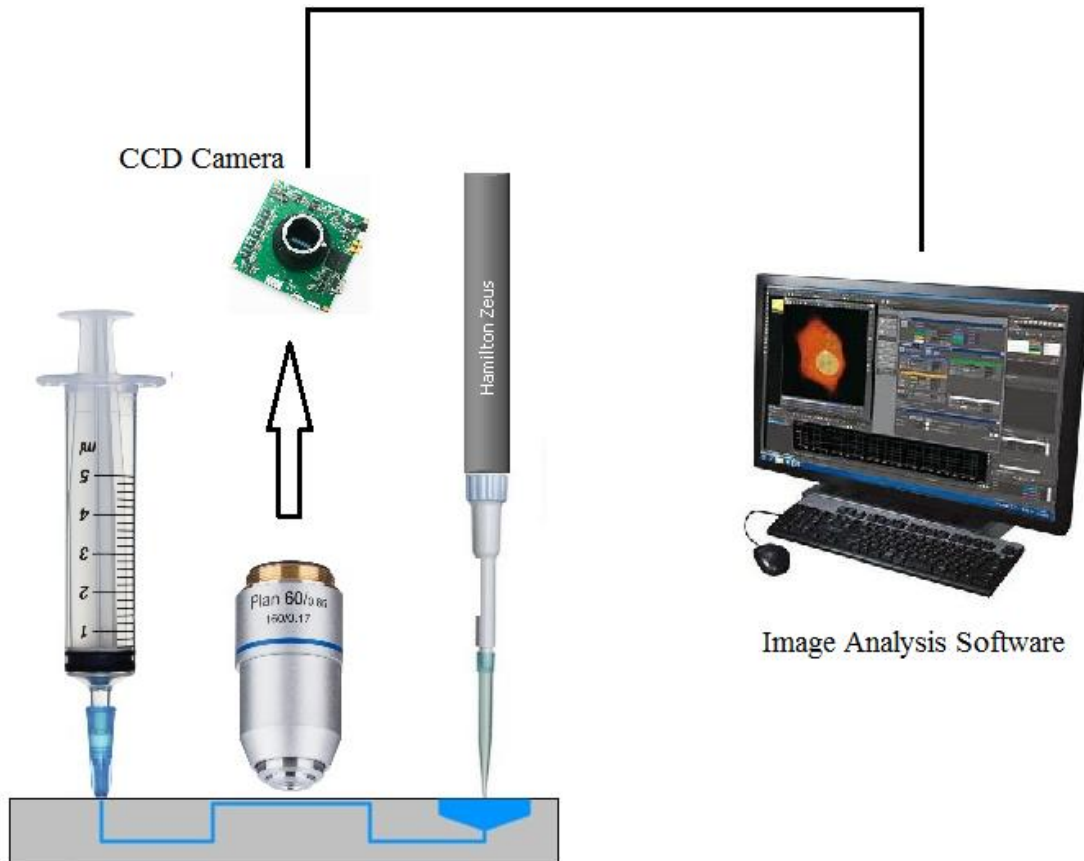
RESEARCH PARTNER

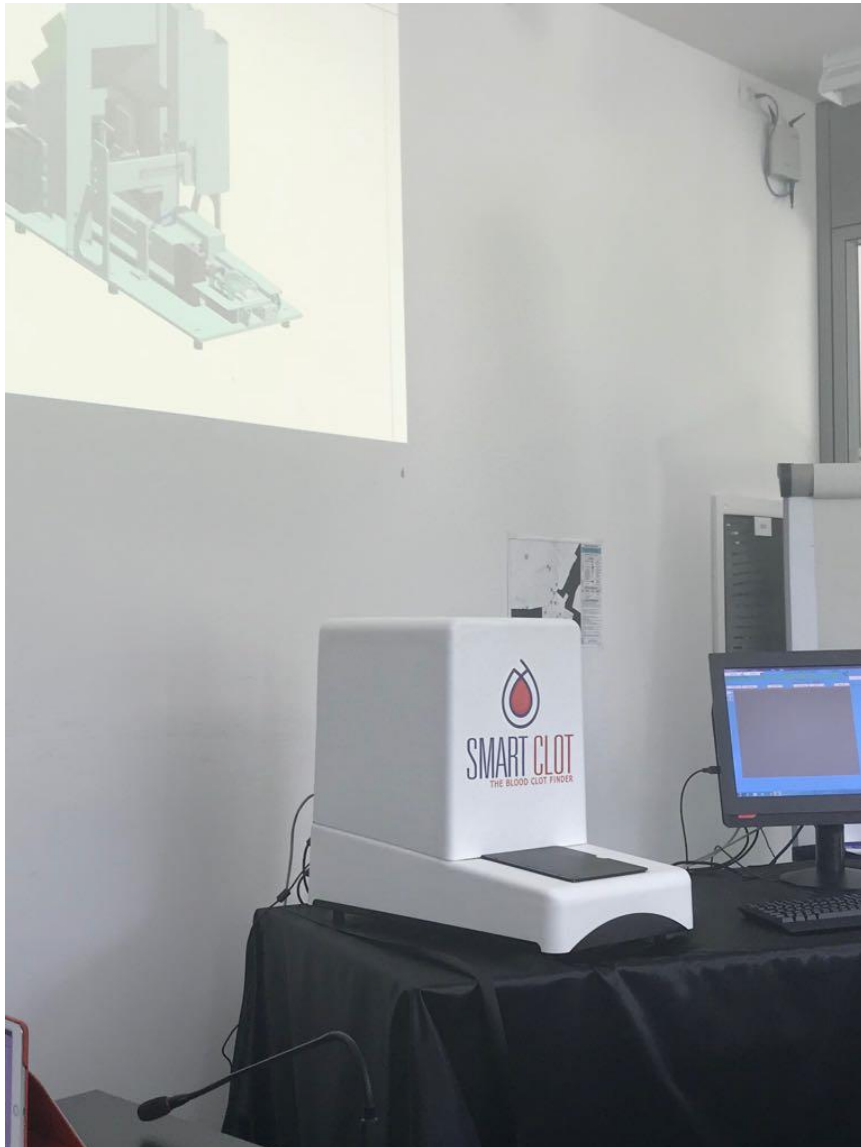
I.R.C.C.S – C.R.O. di Aviano

<http://www.cro.sanita.fvg.it/>

3 / THE PROJECT

Schematic Rappresentation





SMART CLOT is an innovative patented diagnostic device performing automatically a dynamic global test of platelet and coagulation function (fibrin deposition) in blood under controlled flow conditions reproducing the shear rate of arterial or venous circulation.

Preliminary results indicate that the SmartClot platform can support health providers in making diagnostic and therapeutic decisions, in particular related to:

- a) evaluating the blood risk of developing an arterial or venous thromboembolic episode and establishing the need for a preventive therapeutic treatment;
- b) initiating and monitoring, where indicated, an appropriate treatment in patients who have developed a thromboembolic disorder.

The instrument dimension are comparable to those of a blood gas analyzer.

It is a full automated instrument that requires no sampling handling steps from the user.

5 / THE DISPOSABLE CARTRIDGE



SMART CLOT is intended to fill an unmet need providing an “ex vivo” test fully integrating platelet adhesion/aggregation and coagulation in whole blood for the global and dynamic assessment of an individual’s thrombogenic potential.

Importantly, these processes are influenced by fluid dynamic forces resulting from blood flow.

SMARTCLOT WILL UNIQUELY INCORPORATE THESE VARIABLES IN THE TEST FORMAT, THUS SURVEYING ALL CELLULAR, BIOCHEMICAL AND BIOPHYSICAL BLOOD PARAMETERS THAT MODULATE THE MECHANISMS OF THROMBUS FORMATION IN BOTH PLATELET AND FIBRIN COMPONENTS.

NO SINGLE TEST PRESENTLY ON THE MARKET CAN INCLUDE ALL THESE VARIABLES IN A DYNAMIC ASSESSMENT OF THROMBOGENESIS

6 / COMPETITORS ANALYSIS

SMART CLOT as a global test represents an economic benefit to the users, not to mention ease of use and interpretation, as compared the battery of current state-of-the-art tests required to provide a survey of thrombogenesis similarly comprehensive. This will make the users want to buy or invest in the innovation.

Technical Features	Smart Clot	Aggregometer Systems (Verify Now, <u>Ultegra RPFA</u>)	PFA 100 - Siemens	Elastograph (TEG, ROTEM)
Physiological dynamic condition (venous and arterial shear rate)	✓	✗	✗	✗
Platelets Adhesion	✓	✗	✓	✗
Platelets Activation	✓	✓	✓	✗
Platelets Aggregation	✓	✓	✓	✗
Thrombus Formation	✓	✗	✗	✓
Thrombus Stability	✓	✗	✗	✓
Fibrin Formation	✓	✗	✗	✗
Anti-aggregation therapy monitoring	✓	✓	✓	✗
Anti-coagulation therapy monitoring	✓	✗	✗	✗
New Anticoagulant drugs monitoring	✓	✗	✗	✗
User friendly	✓	✗	✓	✗
Fast Turn Around Time (< 15 min)	✓	✗	✓	✗

7 / THE MARKET

The **SMART CLOT** platform will be used primarily in the fields of arterial and venous thromboembolic disorders as well as congenital or acquired hemorrhagic disorders

The test results provided by **SMART CLOT** are intended to assist health providers in making diagnostic and therapeutic decisions in these patient populations, in particular related to determining the need for a preventive treatment or establishing and monitoring, where indicated, an appropriate treatment.

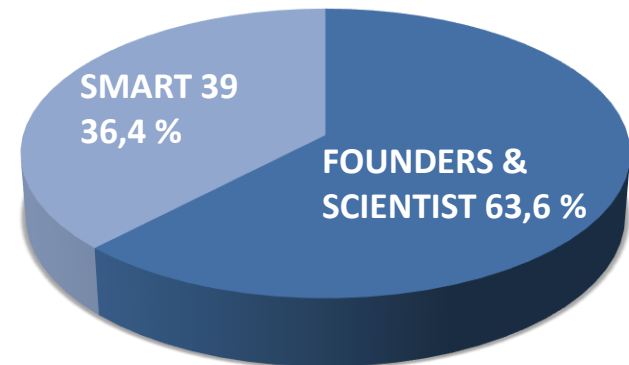
- **Cardiovascular diseases with either hemorrhagic or thrombotic complications (in 2012 17,5 millions of death worldwide)**
- **Patients with abnormal heart valve function – patient evaluation**
- **Cerebral stroke – monitoring of therapy**
- **Congenital and acquired bleeding disorders**
- **Diabetes**
- **Cancer and thrombosis chemotherapy-induced**

8 / THE PROJECT LEADER SEDICIDODICI srl

SEDICIDODICI srl was founded in 2005 by four young entrepreneurs from Pordenone and won the national Start Cup Prize for innovation in collaboration with scientists of **IRCCS CRO Aviano**, Institute for Cancer Research located in Aviano (PN) and in cooperation with scientists at the **SCRIPPS Research Institute** (La Jolla, Ca – USA).

Italian Angel for Growth (IAG) entered the company as **SMART 39** in 2011 with a financial contribution of 900.000 €.

The company has now 4 employees and the operational headquarters are located at IRCCS CRO of Aviano.



9 / RESEARCH AND INDUSTRIAL PARTNERS



RESEARCH PARTNER: *I.R.C.C.S – C.R.O. Aviano*

Clinical validation in oncological patients with thrombotic complications and patients treated with anticoagulant and /or antiplatelets therapies



INDUSTRIAL PARTNER: FRIULCHEM SpA

Friulchem is a private chemical-pharmaceutical company dealing with research. Development and production of original and generic pharmaceutical products.

**Industrialization of cartridge coating with collagen and other thrombogenic surfaces.
Sterile packaging of cartridge and reagent pack.**

10 / CLINICAL VALIDATION IN CENTERS OF EXCELLENCE

•[UNIVERSITA' DI PADOVA – Prof. S. Casonato](#)

Dipartimento di Medicina di Laboratorio per lo studio di pazienti affetti da coagulopatie congenite ed acquisite.

•[UNIVERSITA' DI MILANO – OSPEDALE SANTI PAOLO E CARLO - Prof. M. Cattaneo](#)

Dipartimento di Scienze della Salute

•[UNIVERSITA' DI PERUGIA – Prof. P- Gresele](#)

Dipartimento di Medicina Interna e Cardiovascolare

•[UNIVERSITA' DI UDINE – Prof. F. Curcio](#)

Dipartimento di Medicina di Laboratorio

•[ISTITUTO EUROPEO DI ONCOLOGIA - IEO – Prof. C. Cipolla](#)

Dipartimento di Cardiologia

•[IRCCS MULTIMEDICA – L. ROSSI BERNARDI](#)

Direttore Scientifico

•[THE SCRIPPS RESEARCH INSTITUTE , LA JOLLA CA \(USA\) – Prof. Z. M. Ruggeri](#)

Roon Research Center for Arteriosclerosis and Thrombosis

THANK YOU

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