HEALTH: EXPRIVIA IS TAKING PART IN THE EUROPEAN SMARTOOL PROJECT FOR THE PREVENTION AND TREATMENT OF CORONARY ARTERY DISEASE

The project is coordinated by the Italian National Research Institute (CNR) of Pisa and involves 11 public and private partners from several European countries

28th January 2016. Exprivia, a company listed on the STAR segment of the Italian Stock Exchange [XPR.MI], which is the Italian leader in process consulting, technological services and Information Technology solutions, is taking part in the **European SMARTool Project** for the development of IT solutions supporting the prevention and treatment of heart disease related to coronary artery atherosclerosis, which represents the prevalent cause of mortality and morbidity all over the world.

The project is financed by the European Commission within the framework of the Horizon 2020 program and is coordinated by the Clinical Physiology Institute of the CNR in Pisa. Together with the CNR and **Exprivia Healthcare IT**, the SMARTool project sees the participation of another nine public and private partners, from several European countries specialized in medical and scientific research, the development of health software applications and the production of miniaturized devices for medical applications.

The purpose of the **SMARTool (Simulation Modeling of coronary ARTery disease: a tool for clinical decision support) Project** is to develop a software platform, based on cloud technology, which supports the creation of IT models for **simulating the formation and accumulation of plaque inside the coronary arteries**. Through Human Computer Interaction techniques, a 3D visual representation of the coronary arteries and the plaque present will be obtained, with a view to predicting its accumulation and the risk of it leading to acute complications; this will be done through integration with all the clinical data of each individual patient (specific medical history, environmental factors, circulating biohumoral markers, genetic factors, lipid profile). The platform will be used in a setting of personalized medicine, as a clinical decision-making tool for the diagnosis, prognosis and treatment of coronary artery disease, with a particular focus on revascularization through the implantation of intracoronary *stents*.

The **contribution of Exprivia** to the SMARTool project concerns the development of a **clinical repository based on cloud technology capable of acquiring structured information of various kinds** (laboratory data, generic data, reports, biometrical measurements, etc.) **from all the clinical partners involved**, putting it at the disposal of the technical partners of the project who will create the models and perform the simulations. Exprivia will also collaborate in the development of the final IT platform providing decision-making support for the treatment of patients with coronary artery disease to be validated at the end of the project through a pilot study at selected clinical research centres.

The simulation process based on an anatomofunctional, multi-scale and multi-level model will enable the future development of the plaque in a given biological setting to be predicted on the basis of the clinical characteristics of each individual.

The final objective of the project is to provide doctors, hospitals and clinical research centres with an advanced tool for early diagnosis and the stratification of the risk in patients with coronary artery disease with a view to optimizing the **prevention and treatment of its acute manifestations such as myocardial infarction.**

"The SMARTool project", states **Prof. Oberdan Parodi**, coordinator of the project at the Clinical Physiology Institute of the CNR in Pisa, *"continues the scientific and technological tradition of previous European projects coordinated by our Institute and is aimed at concretizing and enhancing its usefulness in the clinical field, improving the prevention and treatment of the clinical manifestations of coronary artery disease: the collaboration of clinical research centres of excellence and highly skilled technological partners will make a decisive contribution to the achievement of this ambitious result".*

"The excellence of the SMARTool project", states **Paolo Stofella**, Business Development Director of Exprivia Healthcare IT, *"is guaranteed by the panel of scientific and technological partners whose competence in their roles is recognized on an international level and the presence of Exprivia confirms the level of professional excellence reached by our company, particularly in the specific sector of information technology at the service of public and private health".*

EXPRIVIA

Exprivia S.p.A. is a company specialised in the design and development of innovative software technologies and in supplying IT services for the banking, financial institution, industry, energy, telecommunications, utilities, healthcare and public administration markets.

The company today is listed on the Borsa Italiana MTA, Star segment (XPR), and it is subject to the direction and coordination of Abaco Innovazione S.p.A..

Exprivia has a team of more than 1800 individuals, located in its headquarters in Molfetta (Bari) and throughout its offices in Italy (Trento, Vicenza, Milan, Piacenza, Genoa, Rome and Palermo) and abroad (Madrid, Las Palmas, New York, Dover, Mexico D.F., Monterrey, Guatemala City, Lima, São Paulo do Brasil, Rio de Janeiro, Sãn Bernardo do Campo, Beijing, Shanghai, Suzhou and Hong Kong).

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