

## Research & Development Request

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# H2020 - SIADE: Spatial Decision Support System for transportation planning

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### Summary

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*A Spanish company is searching for a partner for a H2020 project with the main goal of developing a Geographic Information System (GIS) - based decision support system for public transportation planning that facilitates the process to improve efficiency in public transportation, with a special emphasis in social and economical parameters. The partner sought is a bus operator company interested in implementing the new technology.*

**Creation Date** 15 May 2014  
**Last Update** 20 May 2014  
**Reference** RDES20140515001

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### Details

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#### Description

SIADE is a GIS-based decision support system for public transportation planning. It facilitates the process to improve efficiency in public transportation, with a special emphasis in social and economical parameters. Implementing a strategy to manage urban transportation involves several mathematical models allowing transportation network analysis and estimating their impact in both the environment and the users, while defining automatic procedures to compare different scenarios. Its main goal is to facilitate planning and managing transportation networks. Data are stored in the bus memory unit and sent to the server every day to update the database. Information from each user is captured very fast and can be easily processed, but there is a limitation: users pay with their card when entering the bus, but no information is available about when they leave it. As a result, there is no information regarding the destination of each trip. A high quality matrix of origin-destination data is a fundamental requisite to analyze a transportation system, being surveys the traditional methodology applied, but the process is expensive and difficult to implement. Fortunately, SIADE infers the destination, with a percentage of total inferred trips of up to 88%. It is possible to detect clusters showing different activities: individuals with a regular work schedule (with and without transfer schemes), people with short stays at destination, etc. It is important to remark that mobility patterns can be also studied depending on age, economical situation, disability, etc. For buses using GPS, the arrival time to each bus stop is recorded in the database, so it is possible to analyze travel time versus scheduled time. For companies not using GPS, route performance can be inferred from the ADC system. Interpolation procedures (i.e. IDW) are used by SIADE to generate spatial variations in data. Next step is to create performance reports that may allow bus companies understand where and why are delays, facilitating efficient planning of routes. It also provides passengers information regarding a more precise schedule.

#### Advantages and Innovations

Improving their public transportation companies' efficiency through the following objectives:

- Study population's mobility patterns when using public transport (bus)
- Analyze the performance of different routes (scheduled versus real travel times)
- Optimization of bus stops location

## Technical Specification or Expertise Sought

Passenger transportation / Bus operator company

## Stage of Development

Available for demonstration

## Comments Regarding Stage of Development

Proposal is under development.

## IPR Status

Secret Know-how

## Comment Regarding IPR status

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## Keywords

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### Technology

002008005      Road Transport

### Market

002007007      Applications software

### NACE

H.49.3.1      Urban and suburban passenger land transport

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## Network Contact

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### Issuing Partner

Chamber Of Commerce And Industry Of Pécs-Baranya

### Contact Person

Gergely CSASZAR

### Phone Number

+36 72 507186

### Email

gcsaszar@pbkik.hu

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

2003

### Turnover

<1M

### Already Engaged in Trans-National Cooperation

Yes

### Client Country

Spain

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## Partner Sought

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### Type and Role of Partner Sought

Public Transportation Company using smart cards as paying method (automatic data collection systems). Not Spanish.

### Type and Size of Partner Sought

SME 51-250

### Type of Partnership Considered

Research cooperation agreement

## Research & Development Request

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# EUREKA-Eurostars: Development of small molecule for the treatment of chronic inflammatory diseases

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### Summary

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*A German University is working on a Eurostars proposal with the objective of the project is to establish an iterative selection of inhibitors for a more-effective treatment of chronic inflammatory diseases such as asthma, atopic dermatitis (AD), ulcerative colitis (UC) and allergies. The coordinator is looking for a SME, expert in medical chemistry, in order to complete the planned research activities.*

**Creation Date** 30 January 2014  
**Last Update** 20 May 2014  
**Reference** RDDE20140124002

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### Details

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#### Description

Chronic inflammatory diseases such as Asthma, atopic Dermatitis (AD), ulcerative Colitis (UC) and allergies affect young people in full swing of their professional lives. Current therapies mainly rely on immune-suppressing drugs which are accompanied by severe side effects. Interleukin (IL) - 13 has been identified as a key effector cytokine responsible for the pathological changes in the affected organs. Therapeutics in development addressing this pathway are based on monoclonal antibodies which serve as traps for IL-13 or bind to the IL-13 receptor thereby inhibiting the ligand- receptor interaction. Monoclonal antibodies, however, have the disadvantage of extremely high costs and the application by infusion or injection. Orally available small molecule inhibitors of the IL-13 receptor bypass these disadvantages. However, the inhibition of protein – protein interaction by small molecules still constitutes a major challenge and to date not many examples have been shown which successfully inhibit protein ligand interaction. The cooperation with an expert (SME) in development of small molecule inhibitors interacting with large protein interfaces and the expertise of the already involved partners in structure based drug design for the IL-4 and IL-13 receptors, will allow for an iterative selection of inhibitors based on inhibitory capacity, specificity, patentability, toxicity, costs, stability and pharmaco-chemical properties. Moreover, the animal models for drug testing and the necessary stratification of patient groups are also already covered by the proposers. The framework of EUREKA-Eurostars allow such a collaboration between scientists and enterprises in order to develop the project idea and bring to the market.

#### Advantages and Innovations

New approach for the research based on the fragment based drug design that will allow to treat chronic common inflammatory diseases in a new and easier way - with no collateral impacts.

#### Technical Specification or Expertise Sought

Expertise in medicinal chemistry with a focus on protein-protein interactions.

## Stage of Development

Under development/lab tested

## IPR Status

Copyright

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## Keywords

### Technology

006001013	Medical Research
006001018	Surgery
006002006	Microbiology
006002012	Protein Engineering

### Market

005002001	Therapeutic services
005006010	Allergy research

### NACE

M.72.1.1	Research and experimental development on biotechnology
Q.86.2.2	Specialist medical practice activities

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## Network Contact

### Issuing Partner

Chamber Of Commerce And Industry Of Pécs-Baranya

### Contact Person

Gergely CSASZAR

### Phone Number

+36 72 507186

### Email

gcsaszar@pbkik.hu

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## Dissemination

### Send to Sector Group

Healthcare

### Restrict Dissemination to Specific Countries

France, Hungary, Switzerland, United Kingdom,

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## Client

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### Type and Size of Organisation Behind the Profile

University

### Year Established

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### Already Engaged in Trans-National Cooperation

No.

### Langages Spoken

English

German

### Client Country

Germany

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## Partner Sought

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### Type and Role of Partner Sought

Target Partner: SME; Partner Profile sought: Expert in medicinal chemistry with a focus on protein-protein interactions; Role of the partner: Design and synthesis of inhibitors. It should be able to perform HTS screenings.

### Type and Size of Partner Sought

SME 51-250

### Type of Partnership Considered

Research cooperation agreement

## Research & Development Request

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# New sterilization technology for pharmaceuticals based on the use of an innovative gas for the heating and cooling phases with substantial reduction in the consumption of energy. SME Instrument - NMP-25-2014-1

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## Summary

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*An Italian enterprise is looking as Project Coordinator, for partners (SMEs and/or Universities). The idea is the design, engineering, field-test and prototyping of an energy and water saving sterilization system for pharmaceutical glass containers, based on use of an innovative gas as the de-pyrogenation technology. The ideal partners should have competences in chemical analysis, heat transfer, energy balance calculation and heat exchangers industrial manufacturing.*

**Creation Date** 22 April 2014  
**Last Update** 15 May 2014  
**Reference** RDIT20140422002

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## Details

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### Description

The sterilization is known as a critical process in the pharmaceutical industry for the high impact on the quality and the safety of the final products and for the impact on the total energy used in the process and water consumption. In the case of injectable pharmaceuticals, sterilization process mainly deals with de-pyrogenation, i.e. the removal of bacterial pyrogens to avoid collateral effects on the human body. In particular, to assure the absolute asepsis of the final products, it is mandatory to de-pyrogenize the glass containers, e.g. ampoules, cartridges, vials, etc., immediately before their filling and closing phases. Integrated de-pyrogenation and filling tunnels are, generally, adopted. Aim of the proposed idea is the design, field-test, industrialization and market reach of an energy and water saving sterilization system for pharmaceutical glass containers, based on the combustion of an innovative gas as the de-pyrogenation technology. The new de-pyrogenation system will be based on the combustion of an innovative gas to heat the air to sterilize the glass containers. In this way, the traditional heaters, actually based on energy-consuming electrical resistances, become unnecessary with a consequent energy saving of about 50%. Furthermore, carbon emissions will be reduced. The proposed idea has the specific objective to demonstrate the effectiveness of the new gas as de-pyrogenation technology when applied to a sterilization tunnel from both a technical and environmental perspective and to fully design and prototype the aforementioned sterilization system. The work program includes subsequent phases of design, engineering, prototyping, of the functional units and their assembly to compose the whole system.

### Advantages and Innovations

The major outputs and results expected from idea deal with the industrialization of the new de-pyrogeneration technology applied to tunnel sterilization systems. The primary goal is to design, engineer and prototype an innovative energy and water saving de-pyrogeneration system to decrease the environmental impact of such a pharmaceutical process. To meet this goal two basic upgrades in the sterilizing tunnel are introduced: • the replacement, in the hot chamber, of the electrical heating battery with an innovative gas generator and burner; • the replacement, in the cooling chamber, of the water-air exchanger with a compression refrigeration cycle. Such a new process concept is based on an alternative heat generation system using the combustion of an innovative gas not yet utilized in this field, allowing a significant electric energy saving, i.e. approximately 50%, with no decrease of the sterilization air temperature. Finally, the project dramatically reduces the use of cooling water thanks to the introduction of a compression refrigeration cycle instead of the air-water exchangers fed by natural sources.

## Technical Specification or Expertise Sought

### Stage of Development

Under development/lab tested

### Comments Regarding Stage of Development

The company has already conducted some experiments and tests, which validated the effectiveness of the new idea.

### IPR Status

Patent(s) applied for but not yet granted

### Comment Regarding IPR status

The Italian company has just built a new factory, of about 6'000m<sup>2</sup>, dedicated to the future production of this new product, with an estimated yearly full production capacity of 60-80 de-pyrogeneration units, to be gradually reached within 2018. Prototypes of the new gas generator and of the new innovative burner have already been realized and tested. IPR does not represent an issue for this proposal, because patents on the critical technologies has already been requested..

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## Keywords

### Technology

006001016      Pharmaceutical Products / Drugs

### Market

005003002      Pharmaceuticals/fine chemicals

### NACE

C.32.5.0      Manufacture of medical and dental instruments and supplies

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## Network Contact

### Issuing Partner



Chamber Of Commerce And Industry Of Pécs-Baranya

**Contact Person**

Gergely CSASZAR

**Phone Number**

+36 72 507186

**Email**

gcsaszar@pbkik.hu

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**Client**

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**Type and Size of Organisation Behind the Profile**

Industry SME 50-249

**Year Established**

1979

**Turnover**

10 - 20M

**Already Engaged in Trans-National Cooperation**

Yes

**Experience Comments**

At the beginning of 2000 the company established various aims, two of them were the ISO 9001 certification and the insertion in the Italian register of Qualified Laboratories for Industrial Research. In 2001 the company was certified ISO 9001 by "Lloyd's Register" and, at the beginning of 2002, it obtained the registration as Qualified Laboratory for Industrial Research by MIUR (Italian Ministry of Instruction, University and Research).

**Certification Standards****Langages Spoken**

English  
Italian

**Client Country**

Italy

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**Partner Sought**

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## **Type and Role of Partner Sought**

The Italian company will be coordinator of the proposed project. So, the Italian company is looking for project partners being SMEs and/or Universities capable of developing the following tasks, or having the following expertise: 1) Partner with competences in chemical analysis to fully characterize the HHO gas in order to extrapolate the gas composition and the real gas calorific value. 2) Partner with competences in heat transfer and energy balance calculation in order to optimize the heat exchangers design, finding the most effective way for heating and cooling the air inside the machine also by means of energy recovery systems. 3) Partner with competences in heat exchangers industrial manufacturing for the realization and the integration of the heating and cooling equipment inside the machine.

## **Type and Size of Partner Sought**

SME 51-250

## **Type of Partnership Considered**

Research cooperation agreement

## Research & Development Request

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# H2020 -GV-2-2014 Green Vehicle 2014 Li-Ion Battery Pack SOC/SOH Virtual Sensors for Battery Management Systems

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### Summary

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*An innovative company of North Italy is preparing a proposal for the Horizon 2020 - GV-2 -2014 Green Vehicle 2014. The project aims to develop new methods to introduce decisive improvements to the existing battery management systems, in particular for automotive industry (HEV and EV). They require batteries factories, silicon factories, end users, research centers of the hardware embedded design sector or real time system design sector.*

**Creation Date** 15 April 2014  
**Last Update** 12 May 2014  
**Reference** RDIT20140415002

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### Details

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#### Description

To ensure a long life of lithium-ion batteries and avoid damaging of cells or losing of functionality of the system a BMS have to estimate (State Of Charge) SOC and (State Of Health) SOH for each cell. Today the estimation of SOC and SOH is affected by uncertainties related to the complexity of the chemistry of the batteries and the accuracy of the measurements of the variables involved. The development of new methodologies for the estimation of SOC and SOH can reduce costs for the experimental characterization of the batteries and extend the life cycle of batteries. The proposed research aims at development of methods and technologies to introduce decisive improvements to the existing battery management systems, in particular for automotive industry (HEV and EV). One of the key features of a battery management system (BMS) is the accurate estimation of "state of charge" of batteries, that is actually the energy that can be delivered from a certain initial time, and their "state of health", linked to "aging" of cells, which defines their efficiency and productivity. The knowledge of this information is the basis for any policy management of battery pack, for instance a rational use of the available energy, every countermeasures have to be taken in case of overload, maximizing the yield, the distribution of the load as a function of the stress degree of each cell, etc. It is therefore proposed to develop new algorithms to accurately estimate the state of charge of each cell of battery pack and identify online vital parameters, based on measurements can easily be made and based on sensors typically already equipped in this type of systems (current, voltage and temperature sensors). These algorithmic methodologies are also conceived as independent as possible from off-line identification campaigns, typically strongly linked to a particular type of technology, on which is based the chemistry of cells and/or tied to a particular manufacturer.

#### Advantages and Innovations

The proposed research aims at development of methods and technologies to introduce decisive improvements to the existing battery management systems, in particular for automotive industry (HEV and EV). One of the key features of a battery management system (BMS) is the accurate estimation of "state of charge" of batteries, that is actually the energy that can be delivered from a certain initial time, and their "state of health", linked to "aging" of cells, which defines their efficiency and productivity.

## Technical Specification or Expertise Sought

At the moment the consortium is made up of three Italian partners: an SME that operates in the field of mechatronics, a university department and a technology partner for experimentation and characterization of batteries. To complete the consortium they require batteries factories, silicon factories, end users, research centres of the hardware embedded Design Sector or Real time system design sector

## Stage of Development

Concept stage

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## Keywords

### Technology

001001001	Automation, Robotics Control Systems
001001002	Digital Systems, Digital Representation
001006003	Embedded Systems and Real Time Systems
004001003	Storage of electricity, batteries
009003	Electronic measurement systems

### Market

006014	Energy Storage
006015	Energy for Transport

### NACE

M.71.1.1	Architectural activities
M.71.1.2	Engineering activities and related technical consultancy
M.71.2.0	Technical testing and analysis

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## Network Contact

### Issuing Partner

Chamber Of Commerce And Industry Of Pécs-Baranya

### Contact Person

Gergely CSASZAR

### Phone Number

+36 72 507186

## Email

gcsaszar@pbkik.hu

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME 50-249

### Year Established

2008

### Already Engaged in Trans-National Cooperation

Yes

### Langages Spoken

English  
Italian

### Client Country

Italy

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## Partner Sought

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### Type and Role of Partner Sought

The company is looking for: One End user or more: like a carmaker or a maker of electric vehicle (bike, scooter, forklift) that needs to optimize its powetrain and electric system. The end-user have to give the target market, producing requirements and leading development of BMS systems in order to improve performance of vehicle. One factory Silicon: The project need a silicon maker to supply and develop technologies about management and acquisition of multiple voltage. One factory batteries: a batteries producer is necessary to optimize the battery assembly and support for chemical characterization. Research centers or other SMEs (no less than two): we needs centers to design embedded device for safety critical applications by hardware and software point of view. The target is to develop an hardware device with two microcontroller or a dual core microcontroller for safety critical applications. Microcontrollers have to support the software applications.

### Type of Partnership Considered

Research cooperation agreement

## Research & Development Request

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# Evidence Based Decision Model for Personal Health Record

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### Summary

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*A consortium led by Slovenian SME is preparing a project for H2020 ICT-37-2014 on personalized medicine in health and care systems. The proposal is based on innovative use of evidence based decision model in personal health record. The SME is willing to submit a project to integrate mobile Personal Health Record and mHealth devices with Decision Support Model to improve citizen's health and increase healthcare quality. The coordinator is looking for partners to complete the consortium.*

**Creation Date** 23 April 2014  
**Last Update** 12 May 2014  
**Reference** RDSI20140423001

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### Details

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#### Description

The challenge of the proposal is to provide a high-risk innovative ICT solution by a SME consortium. ICT concept will apply new set of rules and values to models that already exist in the market, but were never combined in order to improve patient self-care. Healthcare is clearly moving in the direction of greater patient engagement outside of traditional care settings. Therefore the consortium will offer personalized health tool that meets lifestyle needs – Evidence Based Decision Model for Personal Health Record. Our team is currently developing mobile Personal Health Record (PHR) application for smartphones and tablets. Beside patient – physician information sharing we will provide a tool for a patient to make his health decisions based on recommendations of Evidence Based Decision Model. Evidence Based Decision Model is constructed from real-time analyses of scientific evidence, experiences, clinical circumstances, patient preferences and mainly of clinical pathways which have proved successful at other patients having comparable diagnostics and medical parameters. Universal penetration of information technology in homes and work places is going on, therefore the increasing number of patients demand to participate with health care professionals in health care decision-making. The project will provide a tool for a patient to actively contribute in constructing his own personal pathway to accomplish greater involvement in the healing process. mHealth devices are driving development of PHR systems and big data analytical tools provide platform for personalized clinical pathways The project will provide PHR as a product and analytical tool to provide evidence based recommendations as a service.

#### Advantages and Innovations

Personal Health Record in combination with Evidence Based Decision Model offers innovative patient-centric health treatment and diagnosis support. Decision model analyses are built on the basis of data assembled from broad patient population. Decision support model based on previous and other's health treatments brings innovative approach in the healing process.

Innovative solution will make eHealth tools more effective, user-friendly and widely accepted. The project will bring mobile Personal Health Record in a pocket of every patient to provide accessibility to vital information and to make treatment decisions by patient himself based on evidence based system. mHealth devices are subject of Internet of Things and will collect large amount of data to serve analytical platforms to produce reliable algorithmic decisions

## Stage of Development

Proposal under development

## Comments Regarding Stage of Development

The company is developing mobile Personal Health Record to organize your medical data, measurements and observations in a transparent manner. The project proposal is in the stage of selecting the partners of the consortium and coordination of project ideas with potential partners. At the time two partners have already ensured the interest in participating in the project.

## IPR Status

Secret Know-how

## Comment Regarding IPR status

Participants will sign Consortium Agreement aimed to establish in detail the rules on the internal management of the consortium. The agreement shall include inter alia additional rules on dissemination, use and access rights. The following IPR related clauses may be included in the Consortium Agreement: •Ownership of foreground •Transfer of foreground •Protection of foreground •Use of foreground •Dissemination of foreground •Access rights

## Keywords

### Technology

001002006	Computer Software
001002008	Data Processing / Data Interchange, Middleware
001002013	Information Technology/Informatics
001002015	Knowledge Management, Process Management
001002022	Smart Appliances

### Market

002007001	Systems software
002007004	Program development tools/languages
002007007	Applications software
002007012	Medical/health
005003005	Hospital and other institutional management (including management services and leasing)

### NACE

J.62.0.1	Computer programming activities
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## Network Contact

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### Issuing Partner

Chamber Of Commerce And Industry Of Pécs-Baranya

### Contact Person

Gergely CSASZAR

### Phone Number

+36 72 507186

### Email

gcsaszar@pbkik.hu

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## Dissemination

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### Send to Sector Group

ICT Industry and Services

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

2012

### Turnover

<1M

### Already Engaged in Trans-National Cooperation

Yes

### Langages Spoken

English

German

### Client Country

Slovenia

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## Partner Sought

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## **Type and Role of Partner Sought**

Type of the partner sought: R&D oriented ICT SMEs, medical institutions, health care providers, healthcare insurance companies with the expertise in ICT Applications, Scientific research, Information processing, Medicine, Health, Decision Support. Role of the Partners sought will be:

- Medical institutions - to define clinical pathways based on data collected
- Healthcare providers - to certify and disseminate the solution
- Healthcare insurance companies - to evaluate treatment cost reduction by enabling PHR
- ICT SMEs in the field of medical informatics and decision support models

## **Type and Size of Partner Sought**

SME 51-250

## **Type of Partnership Considered**

Research cooperation agreement

## Research & Development Request

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# H2020: Next Generation Navigation System by exploiting real-time crowdsourcing of transport and sensory data

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### Summary

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*Greek company active in environmental consulting and IT services is looking for partners (research institute, SME and Municipality), in order to submit a proposal under the H2020 Mobility for Growth (MG) topic: Demonstrating and testing innovative solutions for cleaner and better urban transport and mobility. The project aims to demonstrate under real-life conditions an innovative mobility solution for environmentally-aware mobility management, by exploiting real-time crowdsourcing of transport.*

**Creation Date** 06 May 2014  
**Last Update** 20 May 2014  
**Reference** RDGR20140506002

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### Details

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#### Description

According to the call the specific challenge of the action is to address the transport-related difficulties that many Europe's urban areas are facing. The project objective is to demonstrate and test, under real-life conditions, an innovative mobility solution for environmentally-aware mobility management. The project will introduce the Next Generation of Navigation systems, by exploiting real-time crowdsourcing of transport and sensory data, combined with cloud services, advanced mobile technologies and high-precision GNSS-assisted navigation. The project will take advantage of recent innovations used in smart phone applications, crowdsourcing and sensor technologies, in order to develop an extensible, scalable architecture that will facilitate citizens' engagement in monitoring of urban environment and promotion of environmental sustainability. These technologies will be empowered by affordable and easy to use networks of environmental sensor mechanisms for management, process, interpretation and exploitation of environmental data, for the empowerment of decision making at local level. The role of the Greek company in the consortium will be to enhance conventional navigation and mobility devices with environmental capabilities, making them able to measure a number of environmental parameters such as CO<sub>2</sub>/CO data, light, humidity, temperature and air quality and produce environmental information valuable for mobility awareness. The Greek company is looking for a research institute specialising in impact assessment of the demonstration as well as an SME, which will technically support the pilot operation and a municipality, which will establish a living laboratory where the innovative mobility solution can be implemented.

#### Stage of Development

Proposal under development

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## Keywords

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### Technology

001003003	Applications for Transport and Logistics
001003006	Environment Management Systems & Documental Management Systems
001005008	SatelliteTechnology/Systems/Positioning/Communication in GPS - Global Positioning System

### Market

001005001	Satellite services/carriers/operators
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### NACE

H.49.3.1	Urban and suburban passenger land transport
H.49.3.9	Other passenger land transport n.e.c.

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## Network Contact

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### Issuing Partner

Chamber Of Commerce And Industry Of Pécs-Baranya

### Contact Person

Gergely CSASZAR

### Phone Number

+36 72 507186

### Email

gcsaszar@pbkik.hu

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## Dissemination

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### Send to Sector Group

Automotive, Transport and Logistics

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME 11-49

**Year Established**

2000

**Turnover**

1 - 10M

**Already Engaged in Trans-National Cooperation**

Yes

**Certification Standards****Langages Spoken**

English

Greek

French

Spanish

**Client Country**

Greece

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## Partner Sought

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**Type and Role of Partner Sought**

The Greek company is looking for three different partners: Research institution, an SME and a Municipality. In detail: - Type of Partner Sought (1): Research Institution -Specific Area of Activity of the Partner (1): Experience in urban planning and policy is required. Task to be performed by the partner sought (1): The partner will perform the impact assessment of the demonstration and formulate policy recommendations. - Type of Partner Sought (2): SME -Specific Area of Activity of the Partner (2): Experience in information / mobile technologies is required. Task to be performed by the partner sought (2): Technical support of the pilot operation in China, setup mobile devices, collect and process data. - Type of Partner Sought (3): Municipality -Specific Area of Activity of the Partner (3): Municipalities with a population higher than 5 million will be preferred. -Task to be performed by the partner sought (3): The partner will establish a living laboratory, where the innovative mobility solution can be implemented.

**Type of Partnership Considered**

Research cooperation agreement

## Research & Development Request

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# H2020: CANVAS - A collaborative toolkit of emerging and social media technologies

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### Summary

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*Greek company active in web and mobile development is looking for a research institute and an SME in the field of creative industries as partners to submit a proposal under the topic "Technologies for creative industries, social media and convergence". The project aims to develop a new toolkit to address the needs of different sectors of the creative industries, such as design and digital media, digital communication channels, branding, digital signage and architecture.*

Creation Date	07 May 2014
Last Update	21 May 2014
Reference	RDGR20140507001

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### Details

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#### Description

The focus of this call is on research, development and exploitation of new or emerging technologies for digital content creation to support the creative and media industries. CANVAS project aims to revolutionize the creativity industry by customizing, enhancing, and mainstreaming pioneering ICT technologies and tools, in order to address the needs of different sectors of the creative industries, such as design and digital media, digital communication channels, branding, digital signage and architecture. The objective is to empower creators to leverage novel technological tools in order to create differentiation that consumers value and ensure sustainability and longevity in an increasingly competitive landscape. Moreover the project intends to bring creators and technologists to collaborate together in order to explore new ways of working and delivering innovation in creative outcomes. To achieve its objectives, CANVAS introduces a collaborative toolkit that inspires creativity with the use of emerging technologies. A powerful toolkit of APIs (Application Programming Interfaces) that will implement and deploy location based services, social media monitoring tools and gamification based functionalities that each participating designer, creative and media agency will be able to integrate and build according to the experience, installation or product that he wants to design or strategy that he will formulate. Widgets can be used to effortlessly integrate social media metrics with aesthetically pleasing visualizations in portals, application dashboards, communication campaigns, events, installations and experiences. CANVAS inspires new channels of creativity with the help of state-of-art multimedia knowledge and social media mining technologies. Its effectiveness is fuelled by the dominance and transformational effect of social media in the creative marketplace. The era of Social Media Technologies provides endless opportunities for individuals and brands. With the proliferation of digital, mobile, online, social media, and countless other technologies, there has been a massive creative convergence happening for some time. All advertising, marketing and communication is increasingly becoming content of one variety or another – text, audio, video, and visual – and being on the cutting edge of acknowledging this will lead to better, more focused creative work. By its nature,

social media is a dynamic, ever-changing landscape. This dynamism carries over to the content one can create for each respective platform. The prospect of using tools in new and interesting ways should be exciting, and there are countless ways to engage, interact with and provide value to a targeted audience. Small and medium creative businesses continue to play an important role in the European economy and the world but when it comes to innovation they have critical issues to confront. These issues are correlated with (a) financing, (b) complex legislative requirements and (c) familiarity with and confidence in the role of ICT technologies. The Greek company is looking for an innovative organization (SME, industry or Research center) that could help and support in the design and development of these hardware (HW) solutions. An example of such a product is low cost, small, personal devices based on open HW solutions (like Arduino or Raspberry pi) that could be used in conjunction with CANVAS platform and its mobile gamification or Augmented Reality (AR) applications to collect more information from the user environment. Such devices can be used to detect (without being confined) a number of things: motion, light, volume, air quality, water, flow, noise, weather conditions, UVA/UVB. The company believes that it can exploit the capabilities of this HW and by combining it with toolkits for the creative industry it can explore new ideas, products and services both for the professionals and the end users.

## Technical Specification or Expertise Sought

The focus of this particular project is the research development and exploitation of new or emerging technologies such as 3D and augmented reality technologies for digital content creation to support the creative and media industries. These technologies can be part of the CANVAS toolkit. The Greek company would like to exploit capabilities of modern smartphones by matching them with wearables and open HW solutions (like sensors) that could form a more diverse “ecosystem” and enhance user’s experience by allowing them not only to consume but also to create and share new digital content. Small creative agencies and freelancers could exploit the capabilities of this platform to interact with the public and experiment on their own creative ideas and concepts.

## Stage of Development

Proposal under development

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## Keywords

### Technology

001004006	Visualisation, Virtual Reality
001005003	Mobile Communications
011009	Creative services
011010	Creative products

### Market

001001004	Other commercial communications
002002003	Graphics software
002002008	3D
009003002	Advertising and public relations
009003006	Media related services

### NACE

J.58.2.9	Other software publishing
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J.62.0.1 Computer programming activities  
R.90.0.3 Artistic creation

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## Network Contact

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### Issuing Partner

Chamber Of Commerce And Industry Of Pécs-Baranya

### Contact Person

Gergely CSASZAR

### Phone Number

+36 72 507186

### Email

gcsaszar@pbkik.hu

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## Dissemination

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### Send to Sector Group

ICT Industry and Services

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

2004

### Turnover

1 - 10M

### Already Engaged in Trans-National Cooperation

Yes

### Certification Standards

### Langages Spoken

English  
Greek  
French

## Client Country

Greece

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## Partner Sought

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### Type and Role of Partner Sought

The Greek company is looking for two partners: a Research Institution/ University and an SME as follows. Ideally both partners should have experience in R&D projects and grants: Type of partner sought (1): Research Institution/University Specific area of activity of the partner (1): The research institute should be experienced in Augmented reality and/or social media and Gamification. Task to be performed by the partner sought (1): software development Type of partner sought (2): SME Specific area of activity of the partner (2): Creative Sector: A creative agency in the field of marketing, promotion, design, social media, gaming would be a great fit to our ideas. This partner should have a strong portfolio and experience in at least one of the above activities. A company (industry or SME) specializing in Hardware solutions. Task to be performed by the partner sought (2): development of the actual application for social media, gaming etc. Marketing and promotion of the tool.

### Type and Size of Partner Sought

SME <10

### Type of Partnership Considered

Research cooperation agreement



## Research & Development Request

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### Smart underwear technology project - healthcare sector partner search

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#### Summary

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*A Croatian company which is one of the leading vendors for the implementation of analytical systems and strategic ICT consulting in South East Europe is preparing submission for Horizon 2020 programme (call not yet known). Project idea is to bring smart textile technology to everyday use and to test it in areas of healthcare and sports. International consortium is looking for partners, hospitals or similar institution, to test the technology.*

**Creation Date** 06 May 2014  
**Last Update** 13 May 2014  
**Reference** RDHR20140210001

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#### Details

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##### Description

Development and innovations of nanotechnology sensors for textile are breaking the limits of what we can expect from our clothes in future. First applications of such technologies are already under development for military purposes, but the next step is to bring such technologies to everyday use. A Croatian company with previous experience and participation in EU tenders (Eureka and 7th Framework (FP7) programme) is preparing Smart Underwear Technology proposal (hereinafter: Smaut) for the participation in Horizon 2020 programme (call not yet known). Project partners will combine knowledge of underwear manufacturing processes and in-depth understanding of data, its meaning, collection and recording methods, data interconnection, conditionality, quality assurance and consistency. Underwear sensors in Smaut project will measure different information of wearer's metabolism: •Heart rate, Heart rate variability, Heart rate recovery •Blood pressure •Body temperature and changes in temperature •Breathing rate and volume •Skin moisture •Step count and cadence, activity intensity •Estimate VO2 max etc. Additional functionalities that smart underwear may have depend on available technology and various applications: •Process sensor data in situ and transmit the data in real-time •Release drugs to relieve pain and treat wounds. Main requirements for Smaut project shall be: •Commercially acceptable for everyday usage •Long lasting •Comfortable to wear without scratching, itching or movability limitations, with sensors knitted, applied to the fabric in fabric finishing process, printed or sewn to the fabric •Waterproof sensors, washable at standard underwear washing temperature and optionally resistant to heat from ironing •Resistible to external force including pulling, tearing and ripping. Proposed company is active in trans-national cooperation and provides services for the implementation of Data Warehouse, Data integration, Business Intelligence, Data Mining, Complex Event Processing, Planning and Budgeting, Financial Consolidation, Performance Management, Risk Management and Master Data Management systems. International consortium is interested in research cooperation agreement with partners active in healthcare sector: hospital or similar institution willing to test developed underwear with their patients to enable better monitoring and support.

## Advantages and Innovations

Proposed project has aim to bring innovative technology to everyday use. First applications of smart textile technologies are already under development for military purposes and the next challenge is to bring such technologies to everyday use. The project will test innovative technology in areas of healthcare and sports. Project partners will share and combine expertise in the field of analytical systems, textile industry and health/sports sector to give new insights on the big data challenges and exploit them as an innovative advantage.

## Stage of Development

Proposal under development

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## Keywords

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### Technology

001006006	Nanotechnologies related to electronics & microelectronics
006006004	Sensors & Wireless products

### Market

005003004	Monitoring equipment
007001004	Sporting goods, hobby equipment and athletics clothes

### NACE

C.14.1.4	Manufacture of underwear
Q.86.9.0	Other human health activities
R.93.1.9	Other sports activities

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## Network Contact

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### Issuing Partner

Chamber Of Commerce And Industry Of Pécs-Baranya

### Contact Person

Gergely CSASZAR

### Phone Number

+36 72 507186

### Email

gcsaszar@pbkik.hu

## Client

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### Type and Size of Organisation Behind the Profile

Industry SME 50-249

### Year Established

2001

### Turnover

1 - 10M

### Already Engaged in Trans-National Cooperation

Yes

### Certification Standards

### Langages Spoken

English  
Croatian

### Client Country

Croatia

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## Partner Sought

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### Type and Role of Partner Sought

Croatian companies are looking for partners in the potential consortium: •Test user(s) in healthcare – hospital or similar institution willing to test developed underwear with their patients to enable better monitoring and support

### Type and Size of Partner Sought

>500

### Type of Partnership Considered

Research cooperation agreement

## Research & Development Request

# H2020 - Personalizing Health & Care : Computational chemistry to find and optimize innovative molecule candidates for new therapeutic and diagnostic solutions

## Summary

*A French SME, specialized in molecular modelling and chemo-informatic, has developed innovative computing solutions to support, improve, and accelerate the early stage of therapeutic and diagnostic researches. They are searching for a coordinator for a H2020 Personalizing Health & Care project whose aim is to develop innovative molecule candidates to new therapeutic and diagnostic solutions.*

<b>Creation Date</b>	05 May 2014
<b>Last Update</b>	20 May 2014
<b>Reference</b>	RDFR20140505001

## Details

### Description

This company offers molecular modeling and computer-aided drug design services. The platforms are focused on human health issues but can also target a wider field of applications in the industry. Through its services, it is able to support, improve, and accelerate the early stage of therapeutic and diagnostic researches. Its offers are based on the integration of several skills:

- A high-throughput virtual screening solution to identify putative drug candidates for protein target among 10 millions compounds.
- An integrative solution to identify protein targets for compounds. Based on molecular docking, this service searches for binding site on the known protein structures and protein modelled using the expertise of the company.
- Physico-chemical, ADME (Absorption Distribution Metabolism Excretion) and toxicity predictions obtained by its fast predictive platform. Based on consensus of tridimensional similarity and QSAR (Quantitative Structure-Activity Relationship) models, which lead to reliable in silico property predictions. Moreover, the whole combined solutions offer a wide scope of molecular modelling:
- Chemoinformatic
- Molecular dynamics simulation
- Quantum chemistry
- Enzyme design
- Catalysis modelling

The calls and topics relevant for that framework of objectives are: H2020 personalizing health & care 2015: - PHC 2 - 2015: Understanding diseases : systems medicine - PHC 9 - 2015: Vaccine development for poverty-related and neglected infectious diseases: HIV/AIDS - PHC 11 - 2015: Development of new diagnostic tools and technologies: in vivo medical imaging technologies - PHC 14 - 2015: New therapies for rare diseases

### Advantages and Innovations

Virtual screening helps pharmaceutical companies by rapidly providing reliable results. The integrative platform proposed by the company combines molecular dynamic simulation, fast and accurate docking and a database of over 10 millions drug-like compounds. Moreover, chemoinformatic approaches (QSAR, pharmacophore) can be used when the target structure is

not available. Based on these technologies, this approach can accelerate the drug discovery processes by providing a fully documented list of molecular hits for protein target. Another approach offers a complete solution to identify protein targets combining structural similarities and docking simulation of molecule(s). The similarity process is based on 2D/3D structures or pharmacophoric representation and can be carried out with a specific database which contains molecules with known protein partners. Docking simulation can be used by choosing classical method with known protein binding site or blind docking on the protein 3D structure databases. The solution helps pharmaceutical research to detect problematic compounds during the early stages of drug development. Other domains of industry such as cosmetic or petrochemichistry could be interested by these property predictions. The platform relies on a consensus of two predictive methods based on similarity : QSAR models and 3D similarity. The 3D similarity approach is a scoring function depending on the 3D structures superposition, weighted by chemical functions. The score of similarity will be mentioned in final report. The QSAR approach can predict qualitatively and quantitatively the physico-chemical or biological properties. Depending on the demand, this SME can develop QSAR or QSPR (Quantitative Structure-property relationship) models or apply approved and validated models from European Union (REACH framework).

## Technical Specification or Expertise Sought

This French SME offers contract research as a CRO (Contract Research Organization) specialized in molecular modelling and molecular structure analysis. They are searching for a coordinator for a H2020 Personalizing Health & Care project whose aim is to develop innovative molecule candidates to new therapeutic and diagnostic solutions.

## Stage of Development

Proposal under development

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## Keywords

### Technology

006001016	Pharmaceutical Products / Drugs
006002007	Molecular design
006002008	Toxicology
006002010	Enzyme Technology
006003002	Gene Expression, Proteom Research

### Market

005001010	Molecular diagnosis
005001012	In-vitro diagnostics
005002005	Other therapeutic (including defibrillators)
005003002	Pharmaceuticals/fine chemicals
005003007	Computer-aided diagnosis and therapy

### NACE

M.72.1.1	Research and experimental development on biotechnology
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## Network Contact

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### Issuing Partner

Chamber Of Commerce And Industry Of Pécs-Baranya

### Contact Person

Gergely CSASZAR

### Phone Number

+36 72 507186

### Email

gcsaszar@pbkik.hu

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

0

### Already Engaged in Trans-National Cooperation

No.

### Langages Spoken

English

French

### Client Country

France

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## Partner Sought

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### Type and Role of Partner Sought

- Type of partner sought: industry, public or private research organization - Specific area of activity of the partner: pharmaceuticals - Task to be performed by the partner sought: to integrate their solutions to develop new innovative molecule thus bringing added-value in this development of new innovative molecule.

### Type of Partnership Considered

Research cooperation agreement

## Research & Development Request

# PS- H2020-PHC-2015-Transmembrane anion transporters as new chemotherapeutics for the treatment of cystic fibrosis and related conditions

### Summary

*A Spanish research university group is looking for partners in order to submit a proposal to H2020-PHC-2015-two-stage call. The aim of the project is to explore the therapeutic potential in the treatment of cystic fibrosis of small synthetic molecules capable of promoting transmembrane transport of anions such as chloride and bicarbonate, which have been developed by this group. Different kinds of partners with expertise in early drug discovery to further explore this idea are sought.*

<b>Creation Date</b>	05 May 2014
<b>Last Update</b>	16 May 2014
<b>Reference</b>	RDES20140505001

### Details

#### Description

The control of ion flux across cell membranes is an important issue in biology. A process of this importance is also a point of vulnerability. A number of human diseases are caused by genetic defects that perturb the function of membrane transport proteins known as channelopathies. Among these channelopathies, Cystic fibrosis (CF) is an inherited chloride carrier deficiency, caused by mutations in the cystic fibrosis transmembrane regulator (CFTR) gene resulting in malfunctioning passive CFTR chloride channels in epithelial cell membranes. Further, bicarbonate conductance controlled by the CFTR channel is defective in mucus producing (goblet) cells in the lungs and intestines of CF patients. This is believed to result in the abnormal viscosity of secreted mucus, causing mucus plugging of airways and intestinal crypts, which is a hallmark of this disease. At present an effective cure is not available. Since reduced chloride and bicarbonate permeabilities of plasma membranes is the primary defect in CF, the use of synthetic anion carriers may offer therapeutic possibilities. Yet, the potential of these anion carriers in the treatment of disease is a largely unexplored area. This raises some important questions and opportunities. Could successful anion transporters possess new modes of biological activity and play roles in medicine?. Moreover, lipophilic organic molecules may induce powerful biological effects by transporting ions across cell membranes, interfering with concentration gradients. This behaviour is shown, for example, by microbially-derived ionophoric (ion carrying) antibiotics such as valinomycin, gramicidin A, nonactin, monensin, lasalocid A and amphotericin B. Aside from their medical/veterinary applications, these complex natural products have proved valuable in studies of membrane transport, and as tools for biochemistry and physiology. The above ionophores, and almost all others known, transport inorganic cations. On the other hand, anion transport is no less important to the cell, and it seems that anion carriers should have corresponding activities and applications. In the last few

years, this Spanish research university group has focused on the development of small molecules capable of facilitating the transmembrane transport of anions such as chloride and bicarbonate. They pioneered this area of research and have gained an important expertise in the molecular design of these compounds. So far they have focused in studying the relationships between anion transport and cytotoxicity. Since ion transport homeostasis is vital to normal function of cells and requires carefully regulated and coordinated activity of many different transmembrane ion transport systems, systemic delivery of a powerful selective anion carrier will likely disrupt this carefully balanced system and uncouple vital control mechanisms, leading to cytotoxicity. On the other hand, carefully selected carriers with properties tailored for specific applications, delivered to achieve optimal activity may help to relieve anion carrier related pathology. The Spanish research university group, specialized in new heterocyclic materials and supramolecular chemistry, are proposing a project to explore whether synthetic molecules capable of facilitating chloride and bicarbonate transport have potential as chemotherapeutics for the treatment of CF and related conditions. The research group has a demonstrated expertise in the molecular design of such compounds, which would allow to optimize lead properties and tackling issues related to the preclinical development of these molecules. Partners with expertise in early drug discovery related to CF, in monitoring transepithelial ion transport and in vitro models of human CF are sought. This project proposal is intended to be submitted H2020-PHC-2015-two-stage call (topic PHC-14-2015: "New therapies for rare diseases"), which deadline is October 14th, 2014.

## Stage of Development

Proposal under development

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## Keywords

### Technology

003004007	Pharmaceutics
005002002	Computational Chemistry and Modelling
005002004	Organic Chemistry
006001016	Pharmaceutical Products / Drugs
006002007	Molecular design

### Market

005003002	Pharmaceuticals/fine chemicals
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### NACE

C.20.5.9	Manufacture of other chemical products n.e.c.
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## Network Contact

### Issuing Partner

Chamber Of Commerce And Industry Of Pécs-Baranya

### Contact Person

Gergely CSASZAR



**Phone Number**

+36 72 507186

**Email**

gcsaszar@pbkik.hu

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**Client**

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**Type and Size of Organisation Behind the Profile**

University

**Year Established**

0

**Already Engaged in Trans-National Cooperation**

Yes

**Langages Spoken**

English  
Spanish

**Client Country**

Spain

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**Partner Sought**

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**Type and Role of Partner Sought**

The Spanish research university group is searching for R&D organisations, pharmaceutical companies, hospital research departments, etc., with expertise in drug discovery and preclinical development of novel drugs related to cystic fibrosis (CF), chronic obstructive pulmonary disease (COPD) and related conditions. In particular, partners with expertise in biomembrane research and in vitro electrophysiological assays (Using chamber, patch clamp analysis, flux measurements) will be useful. Potential partners should be able to develop novel drugs using these synthetic molecules developed by the research group (transmembrane anion transporters) in order to get new chemotherapeutics for the treatment of cystic fibrosis.

**Type and Size of Partner Sought**

>500

**Type of Partnership Considered**

Research cooperation agreement