

ANDALUCÍA



## Boletín nº 180 de Oportunidades de Cooperación: Agroalimentario

(Octubre 2019)



Agencia Andaluza del Conocimiento  
CONSEJERÍA DE CONOCIMIENTO, INVESTIGACIÓN Y UNIVERSIDAD

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Technology Request: A Spanish biotechnology SME with in vitro cell-free assays expertise for the screening of biological activities of natural extracts seeks technical or research agreements with agro-food, nutraceutical and cosmetic industries or R&D institutions

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Business Support at Your Disposal

## Partnering Opportunity

# 1. Agricultura y Ganadería & Acuicultura y Pesca

## Partnering Opportunity

### Business Request

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## Hungarian SME is looking for producers/distributors of basic materials for food industry

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### Summary

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*The main activity of the medium sized Hungarian enterprise is wholesale of basic materials for food products and food industrial processes, which are imported from abroad. The company is looking for new partners in the frames of distribution services agreement.*

Reference BRHU20190909001

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### Details

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#### Description

The Hungarian company's predecessor was established in 1991, therefore its founders have relevant experience in wholesale of food ingredients. Its main focus was to make premium quality basic and auxiliary materials available for Hungarian food producers. Since its founding the product assortment has been widened, the company offers premium materials for bakery, confectionary, meat, dairy and pharmaceutical industry.

The SME has relevant experience in importing raw materials mainly from Europe, but it has partners already from non-EU countries such as China, Malaysia and Indonesia.

The main product portfolio of the company: margarines, yeasts, soy products (flours, lecithin etc.), gluten, starches, cocoa powders, coating mass, oils-fats (coconut, palm oil, sunflower seed oil, olive oils, pork fat), sourdoughs, seeds, dried fruits, bakery flakes, flour mixes, milk and vegetable products, liquid egg and powder, fillings, jams, tinned goods, fondant, desiccated coconut and glycerine.

The Hungarian SME is searching for partners who are producers or distributors of the above mentioned products. The frame of co-operation is possible in distribution services agreement.

#### Technical Specification or Expertise Sought

Main parameters of potential partners:  
- Producers/distributor of basic materials for food sector

- Products with a longer period of expiration.
- Flexibility and reactivity of potential partners should be compatible with the needs of the market.
- Meet the requirements and have relevant certifications in accordance with international standards of the various countries

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## Network Contact

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### Contact Person

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## Partner Sought

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### Type and Role of Partner Sought

The ideal partner is a producer or distributor of basic materials for food industry. The expectation of the company is the accuracy, reliability, on-time delivery and price-value for money. Partners should be flexible and reactive in order to be compatible with the needs of the market.

### Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE, 251-500, SME 51-250,>500

### Type of Partnership Considered

Distribution services agreement

## Partnering Opportunity

### Business Request

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## Dutch organization requesting European frozen food producers to enter into supplier agreement to buy their overstock/overproduction

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### Summary

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*This Dutch SME has a Corporate Social Responsible vision of giving products of fine quality a good destination and in this way prevent waste of food. The company is interested in buying food products that can not be sold (anymore) to regular markets. This can be because of multiple reasons like irregular size or shape, a closing end of sale date or because of leftover stock. The company is very experienced in storing and distributing food products and offering a win win situation to suppliers.*

Reference BRNL20190826001

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### Details

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#### Description

The company is part of a Dutch group of organizations. As such it has own transport and deep freeze capabilities. This specific company has specialised in Residual Product Management based on its corporate social responsible mission to help reduce food waste, while at the same time earn money for both themselves and the producers.

Due to the success of the formula, the organization is looking broaden its supply and is looking to buy any food products, directly from the producers, that have production errors (deviation in size, weight or other), but also products that are leftover due to cancelled orders, overproduction, any kind of damage, "end of life" stock, etcetera.

The company wants to get in touch with food producers, preferable from the western European countries (because of distance). But if the quantity and/or quality justify it, the company is also interested in offerings from other countries.

#### Advantages and Innovations

1) The company is part of a group with own transport and storing facilities, therefore it can offer a discrete, no hassle, "Win-Win" solution for any producer of perishable goods and food

supplies that has overstock, overproduction.

2) The business model helps prevent food waste

3) Next to preventing food waste it provides a means for producers to capitalize on products that would otherwise have resulted in to a financial loss.

#### **Technical Specification or Expertise Sought**

Any producer of food and beverage products from (mainly western) Europe that is open to offering its overstock / overproduction products that it can not sell to its regular markets is of interest to the Dutch organization.

#### **Stage of Development**

Already on the market

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### **Network Contact**

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### **Partner Sought**

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

As it wants to expand its supply due to increased demand the company wishes to establish contact and discuss entering into a supplier agreement with any producer of food, fruit, vegetable, meat, fish and beverage products from (mainly western) Europa that is open to offering its products that it can not sell to its regular markets.

The Dutch company will arrange transport themselves. The role of the suppliers is therefore only to offer their overstock / overproduction.

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

SME 11-50,SME <10,251-500,SME 51-250

#### **Type of Partnership Considered**

Supplier agreement



## Partnering Opportunity

### Business Request

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## Romanian company is looking for manufacturers of cattle mobile milking parlour for distribution services agreement

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### Summary

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*A Romanian company from Transylvania is specialised in the wholesale of milking systems and related accessories. With previous transnational experience, the company is interested in enlarging its portfolio of partners by identifying new international manufacturers of cattle mobile milking parlour willing to cooperate on the basis of distribution services agreement.*

Reference BRRO20190822001

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### Details

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#### Description

Established in Transylvania in 1994, the Romanian company is actively involved in the wholesale of agricultural machinery, equipment and supplies, focusing on cattle breeding and milking systems and accessories.

For an optimum milking performance, the Romanian company offers to its clients on the internal market various milking solutions designed to provide excellent hygiene during milking, to improve the health of the udder, reduce operational costs. Besides the classical and mobile milking parlours, the company also offers to farmers solutions for storing and transporting milk, milk analysers and accessories, milk processing solutions, milk vending machines etc. The target customers of the Romanian company are, generally, small farmers from Transylvania.

With over 20 years of experience in the wholesale of agricultural machinery, equipment and supplies, the Romanian company has previous transnational experience as it is cooperating with numerous well-known international manufacturers.

Willing to offer its customers a large variety of products, the Romanian company is interested in getting in contact with foreign manufacturers of mobile milking parlours that can be easily towed by even a small (e.g. 9-10 HP) tractor or another suitable vehicle. The international partnership is expected to be based on distribution services agreement.

### Advantages and Innovations

- 25 years of experience in the wholesale of agricultural machinery, equipment and supplies;
- portfolio of partners comprising over 30 international manufacturers and/ or distributors active in the field of cattle breeding equipment and accessories;
- promotion of company's' activity and milking systems & related accessories at several international agricultural fairs organised in Romania;
- own shop and online selling;
- knowledge of the internal market in the field of cattle milking parlours and related accessories.

### Technical Specification or Expertise Sought

The Romanian company is looking for international manufacturers of complete mobile milking systems designed for small farms, which can be easily towed by even a small (e.g. 9-10 HP) tractor or another suitable vehicle.

As farmers focus on efficient milking (considering time, working conditions and ergonomics associate with milking), the cattle mobile milking parlour parameters to be taken into account are: size (2- 12 cows milked at the same time), weight/ dimensions (the mobile parlour should be light, but firm), easy to move, with milk cooling or direct milking to vacuumed tank, diesel, gasoline or electric powered etc.

Thus, the mobile milking technique is to be discussed with the manufacturer based on its offer of products.

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## Network Contact

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## Partner Sought

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### Type and Role of Partner Sought

As the Romanian company is looking for new cattle mobile milking parlour, the partners sought are international manufacturers willing to cooperate based on distribution services agreement. The manufacturer of mobile milking parlours should provide quality products at affordable prices for small farms.

**Type and Size of Partner Sought**

SME 11-50,SME <10,SME 51-250

**Type of Partnership Considered**

Distribution services agreement

## Partnering Opportunity

### Research & Development Request

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## H2020-CE-FNR-09-2020 : Technological providers for removal of marine plastic and litter sought

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### Summary

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*A French aquaculture and marine resources cluster is looking for companies from Northern, Eastern and Central Europe which are able to develop automatic or remotely controlled wireless devices capable of collecting plastics and other litter from oceans, to complete their consortium for the Horizon 2020 CE-FNR-09-2020 call "Pilot action for the removal of marine plastics and litter".*

**Expiration Date** 30 November 2019  
**Reference** RDFR20190723001

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### Details

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#### Description

The French cluster will be coordinating a proposal during the next months in order to reply to a topic of the Horizon 2020 working programme Societal Challenge 2 on bio-economy. The topic of interest is the FNR-09: Pilot action for the removal of marine plastics and litter.

The FNR-09 is an innovation action which has to achieve a TRL of 6.

The co-financing rate is 70% for companies (small or large).

An urgent action is needed both for the prevention and for the removal of existing marine litter, notably plastics and microplastics. For this topic, a demonstration of the removal of marine litter and research is being proposed, highlighting how the environment is impacted by the removal, and the corresponding impacts in terms of ecosystem and economic recovery.

The consortium's goal for this topic is to demonstrate approaches and technologies to improve marine spatial planning and conservation (and even restoration) of coastal ecosystems.

EOI deadline: 30th of November 2019.

Call deadline: 22nd of January 2020.

The consortium is looking for companies with automatic or remotely controlled wireless technologies targeting the removal of marine plastic and litter. The proposed solutions must be able to work at the sea surface and on the seafloor/beach.

The solutions will be implemented and it is expected of the project to achieve in treated areas:

- the removal of 90% of macro-plastic litter and a substantial fraction of micro-litter
- 80% reduction of micro-plastics in shellfish
- 80% reduction of micro-plastics and plastics in non-migratory birds species

### Stage of Development

Proposal under development

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## Partner Sought

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### Type and Role of Partner Sought

The French cluster has already built an almost complete consortium that is now looking for targeted technology providers able to develop automatic or remotely controlled wireless devices for litter removal from beaches/seafloor, the ocean surface and shellfish.

In addition to this, companies that have the capacity to develop or that have already developed a solution capable of sorting and reusing the collected plastics are more than welcome to contact the coordinator.

Partners from Northern, Eastern and Central Europe are sought : most current partners are from Southern and Western Europe. Greece is also already strongly represented.

### Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE,251-500, SME 51-250,>500

### Type of Partnership Considered

Research cooperation agreement

## Partnering Opportunity

### Technology Offer

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## Biomass detection system in aquaculture based on optical sensors and neural networks

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### Summary

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*A Spanish university has developed a system for estimating the biomass in aquaculture. The estimation is made through the use of optical sensors and neural networks to establish the optimum amount of biomass in intensive aquaculture facilities with the smallest possible margin of error. Also, the fish count is especially indicated in the case of rivers where it is needed to have control of the fish population. Aquaculture companies are sought to develop applications under license agreements.*

Reference TOES20190917001

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### Details

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#### Description

In aquaculture, the food costs represent approximately 45% of the operating costs. Thus, the reduction of food costs is essential to achieve the sustainability of such industry, existing great potential both in the reduction of food costs per unit and through the adoption of appropriate food management strategies. The present invention solves typical technical problems in estimating biomass (variable fish speed, low resolution or measurement errors in the calculation of the weight and height of the fish) through the use of new high-resolution optical systems, low-cost electronics and algorithms with neural networks.

Researchers from a Spanish university working in electronic engineering provide a novel biomass estimation system in aquaculture based on optical sensors and neural networks comprising two identical optical barriers. Each of these barriers comprises a first emitter block of photoemitters in the infrared spectrum and a second receiving block of photoreceptors in the infrared spectrum and also means for identifying the fish by radiofrequency, in such a way that a unique identification of each fish occurs when passing through the optical barriers thanks to a radiofrequency identifier. A subsequent classification of the fish identified will be done through neural networks.

The researchers would like to reach license agreements with companies operating in the aquaculture field with the aim to develop applications of the described technology.

### Advantages and Innovations

- Through 2D image processing, the system of the invention allows to identify the fish even when they pass in groups of two or more, and also to differentiate them from other objects.
- The system of the invention uses a high-resolution optical system, and due to current smaller and more powerful technology, the optical transmitters and receivers can be placed at a smaller distance from each other and thus obtain a more real fish profile.
- Real time measurement. By incorporating radio frequency (RFID), the system of the invention makes possible to identify at every moment the fish that is going through the barriers. This novelty provides a substantial improvement in the estimation of biomass, since it allows knowing in real time the biomass present in the cage and, depending on it, managing online the automatic feeding system.
- Through the use of neural networks, the system allows the unambiguous identification of the object that passes through the barriers, discarding false positives.

### Stage of Development

Available for demonstration

### IPR Status

Patent(s) applied for but not yet granted

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## Partner Sought

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### Type and Role of Partner Sought

Type of partner sought: Industry.

Specific area of activity of the partner: Companies that operate in the aquaculture field.

Task to be performed: Development of applications of the described invention under license agreements.

**Type and Size of Partner Sought**

SME 11-50, SME <10, >500 MNE, 251-500, SME 51-250, >500

**Type of Partnership Considered**

License agreement



## Partnering Opportunity

### Technology Offer

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## Biomass estimation system in aquaculture based on 3D images

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### Summary

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*A Spanish university has developed a system for estimating the biomass necessary for feeding in aquaculture. The estimation is made through the reconstruction of 3D images to establish the optimum amount of biomass for feeding fish in intensive aquaculture facilities with the smallest possible margin of error. In addition, it is useful to perform fish counting, growth tracking and for monitoring their behaviour. Aquaculture companies are sought to develop applications under license agreements.*

Reference TOES20190918001

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### Details

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#### Description

In aquaculture, the food costs represent approximately 45% of the operating costs in a fish farm. Thus, the reduction of food costs is essential to achieve the sustainability of such industry, existing great potential both in the reduction of food costs per unit and through the adoption of appropriate food management strategies. The present invention solves typical technical problems in this area (variable fish speed, low resolution or measurement errors in the calculation of the weight and height of the fish) through the reconstruction of 3D images.

Researchers from a Spanish university working in electronic engineering provide a system for estimating biomass in aquaculture based on reconstructions of images in three dimensions. The system comprises a frame that defines a cube whose interior is divided into two different zones: the first one is a passage for the fish and a second one is configured to prevent the access of fish to its interior and where several sensors for oxygen, pH, conductivity and turbidity are provided, as well as an RFID reader device connected with an RFID antenna arranged in a frame at the entrance of the fish passage zone. Unlike current systems, this technology works out the biomass in real time based on the volume of the fish and its density. It also uses a discretization and tracking algorithm and, with the use of all the obtained variables from the sensors and the use of neural networks, predictions of the state and behavior of the fish can be performed.

The researchers would like to reach license agreements with companies operating in the

aquaculture field with the aim to develop applications of the described technology.

### Advantages and Innovations

- Accuracy. Current systems base the calculation of biomass on models that characterize the relationship between the length of the fish and their mass. This system makes the estimation based on the volume of the fish and its density by 3D image reconstruction with two cameras and stereographic technology.
- Low cost equipment. New low-cost stereo cameras allow to calculate depth and enable devices to see, understand, interact with, and learn from their environment — powering intuitive, natural interaction and immersion. The onboard processor performs all the depth calculations on the camera, allowing for low power, platform agnostic devices.
- Unlike other systems, in which the selection of the fish is done manually by a technician, this technology uses a fish discretization and tracking algorithm, which can also help to follow the fish even when they overlap each other.
- Real time biomass estimation. The system has an antenna that, together with a reader, constitutes a radio frequency (RFID) system that allows real-time identification of the fish. This novelty, not present in current commercial equipment, provides a substantial improvement in the estimation of biomass as it allows the individual fish biomass to be monitored and compared with the global calculation.
- Record the physical variables of the farm. The system has a set of sensors that check the state of the medium at all times (oxygen, pH, conductivity and turbidity). Being a system that works continuously, with the use of all those inputs and the use of neural networks, predictions of the state and behaviour of the fish can be obtained.

### Stage of Development

Under development/lab tested

### IPR Status

Patent(s) applied for but not yet granted

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## Network Contact

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## Partner Sought

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### Type and Role of Partner Sought

Type of partner sought: Industry.

Specific area of activity of the partner: Companies that operate in the aquaculture field.

Task to be performed: Development of applications of the described invention.

### Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE,251-500,SME 51-250,>500

### Type of Partnership Considered

License agreement

## Partnering Opportunity

### Technology Offer

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## Platform based on QR codes for dynamic content management.

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### Summary

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*A Spanish research centre, involved in industrial innovation processes, has developed a platform, based on dynamic QR codes, that allows companies to manage and connect the dynamic production processes, adding value to offline products. Dynamic QR codes are processed automatically and transparently; they can be edited from anywhere, without any physical involvement; codes allow to standardize processes and integrate product traceability. Technical and research cooperation agreements are sought.*

Reference TOES20190828001

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### Details

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#### Description

A Spanish technology centre works with the objective of bringing solutions to companies within the industry 4.0 techniques: internet of things (IoT), big data, artificial intelligence, data processing...

Companies need simple and cheap systems that allow them to identify and connect the starting materials and the products they develop individually with their production process and also with their customers and suppliers. It is also very important for them to find a tool to standardize their production process.

The existing technological solutions and approaches for this problem are based on the use of static and non-dynamic QR codes. For this reason the center has developed a platform, based on dynamic QR codes, which give an answer to the individual traceability, standardization needs for all types of companies. Companies can manage, with the platform, all the content: materials, machinery, tools, personnel, etc. adding value to their products. The information is associated through dynamic QR codes which facilitates the adoption of its widespread use in many of its management and industrial processes.

QR codes enable the intelligent management associating products and processes. The platform gives special attention to traceability using technologies such as blockchain.

The platform gives access to tools and mechanisms for the management and treatment of QR codes, such as:

- Use of templates: creation and management of contents that are linked to QR codes.
- Creation of groups and ranges of QR codes
- Use control: who scans the QR code? (geolocation) where? how often? etc.
- Roles: matching the type of content with the type of user.
- Usage statistics
- Modules: the platform offers functionalities such as; documentation, user manuals, specific content, multimedia, news, incidents or management of spare parts; and it is also possible to include custom modules.
- Traceability of its products to see the information captured throughout the life of the QR code.
- Manage the tasks of the operator to use the QR code as an information gateway between users.
- Integration with ERP(enterprise resource planning) platforms, capturing and sending data from your ERP to the QR
- Custom design: modules with special features.

The research centre expects industrial partners who are able to integrate the platform into their management. The centre can support in realizing the integration with other systems in the company.

Cooperation with partners would be in the frame of a technical agreement.

Also the centre would like to collaborate on joint research and development projects, under research cooperation agreement, in programs such as Horizon 2020.

## Advantages and Innovations

This technology:

- saves time and resources when taking records and performing audits
- offers more information about products that can be shared with customers and consumers
- guarantees the authenticity of the product
- is monetizable thanks to business micro marketing campaigns based on the traceability process through segmented promotions aimed at consumers
- tracks production batches in real time, from their origin to their destination
- uses interface design focused on the user's experience. This contributes to simplify processes and optimize traceability tasks
- companies don't need to further spend money on modifying packaging, neither will they need to add new barcodes to use this technology. This platform works on the original branding of the product.
- has capability of integration with IoT (Internet of things) devices and other traceability software through the API (application program interface) of this technology.
- it is not necessary to regenerate QR codes or updating their content, the platform adapts old codes, which save time and money.

## Stage of Development

Already on the market

## IPR Status

Secret Know-how

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## Network Contact

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## Partner Sought

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### Type and Role of Partner Sought

The Research institution is looking for:

Potential users who would be interested in jointly developing use cases for their industry via a technology cooperation agreement.

The centre is also interested in research cooperation agreement with industry and other research institutes. The centre is also open to collaborate in the frame of European Projects such as Horizon 2020 projects.

### Type and Size of Partner Sought

SME 11-50,R&D Institution,SME <10,SME 51-250

### Type of Partnership Considered

Technical cooperation agreement  
Research cooperation agreement

## Partnering Opportunity

### Technology Offer

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**A Spanish biotechnology SME with in vitro cell-free assays expertise for the screening of biological activities of natural extracts seeks technical or research agreements with agro-food, nutraceutical and cosmetic industries or R&D institutions**

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#### Summary

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*A Spanish biotechnology company specialized in the extraction, characterization and application of natural extracts in the formulation of healthier food and cosmetics seeks to reach research or technical cooperation agreements with companies in the agro-food, nutraceutical or cosmetic sectors, R&D institutions or universities. By identifying biofunctional properties of products or extracts the company offers access to new functional food and nutraceutical markets or natural cosmetics markets*

**Reference** TOES20190912001

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#### Details

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##### Description

The Spanish biotechnology SME, established in 2013, is specialized in in vitro cell-free assays for the screening of biological activities of active principles from nature. The company has also experience in the production and commercialization of superfoods with functional ingredients.

The in vitro assays that the company offers are useful as screening tools of biological activities for the development and optimization of new natural extracts and single compounds to be used for nutraceutical and functional foods or cosmetic formulations, among others. The tests being performed allow to reject samples and select those that have the best properties, quickly and economically.

The range of in vitro assays to determine biological activities the company is specialised in are the following:

a) In vitro antioxidant capacities assays:

- Free radical scavenging activity (H-ORAC, L-ORAC, DPPH, ABTS)
- Ferric reducing antioxidant power (FRAP)
- Superoxide dismutase activity; inhibition of lipid oxidation.

b) Enzyme inhibitor screening assays related to:

- Diabetes
- Hypertension
- Hyperlipidemia
- Hypercholesterolemia
- Inflammatory processes

c) Evaluation of the efficacy of cosmetic products:

- Antioxidant potential
- Anti-Pigment efficacy : In vitro tyrosinase inhibitory activity.
- Anti-Wrinkle efficacy: In vitro elastase inhibitory activity.
- Anti-inflammatory efficacy: In vitro COX-1 (ovine) and COX-2 (human recombinant) inhibitory activity.
- Solar Protection Factor (SPF)

Additionally, the company can perform chemical composition analysis and characterization of raw materials, natural extracts, single compounds or final products, as well as other analytical services on request.

Therefore, the company offers its technological expertise and seeks to reach research cooperation agreements or technical cooperation agreements with companies in the agro-food, nutraceutical or cosmetic sectors, R&D institutions or universities in order to help them enhance existing or new products. In this sense the company offers access to new functional food and nutraceutical markets or natural cosmetics markets by identifying biological properties of products or extracts and optimizing biotechnological process (such as fermentation).

### **Advantages and Innovations**

The in vitro cell-free assays the company is specialised in present several advantages compared to in vivo assays. Firstly, they are more economical and less time consuming. Secondly, they allow the conservation of experimental animals.

The strength of the company is represented by the broad scientific background of the founders that range from chemistry to biotechnology and food technology.

Additionally, the company has collaborated, among others, with The Spanish National Research Council and it has been granted a national innovation seal certifying it as a highly innovative SME.

### **Stage of Development**

Already on the market

### **IPR Status**

Secret Know-how



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## Partner Sought

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### Type and Role of Partner Sought

The company seeks to reach research cooperation agreements or technical cooperation agreements with companies in the agro-food, nutraceutical or cosmetic or sectors, R&D institutions and universities. Potential partners should be looking for innovative solutions to be applied to healthy food, functional and nutraceutical products or cosmetics.

### Type and Size of Partner Sought

SME 11-50, University, R&D Institution, SME <10, SME 51-250

### Type of Partnership Considered

Technical cooperation agreement  
Research cooperation agreement

## Partnering Opportunity

### Technology Offer

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## A drone based solution to accurately predict the crop yields of fruits like apples

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### Summary

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*A small UK company is validating an economical drone-based solution to accurately predict orchard fruit yields, from blossom to harvest. Fruit growers, especially apple growers, are sought for technical cooperation and commercial agreements with technical assistance.*

Reference            TOUK20190919001

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### Details

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#### Description

Unmanned vehicles have been around for years that monitor fields and assist with farm or crop management. Still, it's a growing area with lots of niches where the demand hasn't been met. One example is the prediction of fruit crop yields. Recently, some terrestrial vehicles have been offered with the added software to monitor fruits in orchards but they are relatively slow and expensive still.

Especially in the business of Class 1 apples, predicting the yields is a valuable prospect. The current accepted rate is missing actual output by 15% either way. This error translates into unfulfilled contracts, or food waste. Ideally, an early prediction would allow for planning of surplus or lack of tonnage.

A UK start-up has developed a yield measurement and crop management platform for high value top fruit crops. The platform uses inexpensive drone systems to quickly survey orchard crops and estimate yields, weeks or months ahead of harvest. Growers can track yield estimates throughout the growing season, from blossom to fruit with crop data collated at the orchard level and the individual tree level (see the Picture). This data lets growers plan harvest campaigns, deploy farm resources efficiently and arrange contracts with confidence. The system is being developed on 5 commercial apple farms in the UK, and tests on several farms in South Africa are scheduled for Q3 2019.

The company is seeking growers in Europe and overseas to customise the system further under technical cooperation, as well as offering an early version of the solution to apple growers under commercial agreements with technical assistance.

### Advantages and Innovations

Such solutions haven't existed on the market yet. The company's expertise in horticulture, multispectral imaging and web technology have resulted in this plant-level analysis. The expertise builds on exclusive partnerships with research organisations.

### Stage of Development

Field tested/evaluated

### IPR Status

Secret Know-how, Copyright

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## Network Contact

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### Contact Person

Laura Valle Cerezo

### Email

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## Partner Sought

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### Type and Role of Partner Sought

Type of partner sought: industry

Specific activity of partner sought: horticulture, fruit growers

Role of partner sought: to adopt the new technology under guidance from the UK company and provide input for further customisation.

### Type and Size of Partner Sought

SME 11-50, SME <10, 251-500, SME 51-250, >500

### Type of Partnership Considered

Commercial agreement with technical assistance

Technical cooperation agreement

## Partnering Opportunity

### Technology Request

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## A Turkish automatic control and scada systems manufacturer is looking for a joint venture agreement for image processing

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### Summary

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*A Turkish company, which produces automatic control and scada systems for 12 years, is preparing for a smart farming project. They are looking for companies which can make the image processing part of the project. The company is looking for a joint venture agreement.*

**Reference** TRTR20190919001

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### Details

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#### Description

A Turkish company, which is active in the automatic control and scada systems sector for 12 years, is preparing for a project which is about smart farming systems. The company has experience with smart farming technologies and now they are working for developing on the systems. The company can handle the automatic control and scada systems of the project but they are looking for companies for image processing part.

About the automatic control and scada systems of the project which has been developed by the Turkish company:

- They can control so many different points,
- Remote control systems which are based on cloud systems,
- No need to installation by the users,
- High-security web and mobile interfaces,
- Unlimited multi-users,
- They can be applied to any IoT and industrial control devices

The Turkish company has experience with this subject and also about collaborations with foreign companies from different countries.

The company is looking for a joint venture agreement.

**Technical Specification or Expertise Sought**

The potential partner must handle image processing.

**Stage of Development**

Project already started

**IPR Status**

Other

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**Network Contact**

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**Contact Person**

Laura Valle Cerezo

**Email**

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**Partner Sought**

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**Type and Role of Partner Sought**

The type of potential partner could be R&D institution, SME, industry or university. The role will be the project partner since the Turkish company is preparing for a project. The company is looking for a joint venture agreement.

**Type and Size of Partner Sought**

SME 11-50, University, Inventor, R&D Institution, SME <10,>500 MNE, 251-500, SME 51-250, >500

**Type of Partnership Considered**

Joint venture agreement

## 2. Alimentación

## Partnering Opportunity

### Business Request

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## German company seeks medium capacity packaging line for ice cream under supplier agreement

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### Summary

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*A small German company producing ice cream is looking for a packaging line for small portions with a capacity of 1,000 portions per hour. Packaging lines available on the market usually have much higher capacities, but are uneconomical for the present application. The line should be fully developed to be adapted to the existing production environment within the framework of a supplier agreement.*

Reference BRDE20190916004

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### Details

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#### Description

The small German company produces ice cream in various flavours according to exclusive recipes. The size of one batch is up to 16 litres. This ice cream is filled into conical paper cups with a capacity of 110-500 millilitres. These cups are then closed with a lid and sealed. Afterwards a banderole is attached to the cup at the customer's request. Finally, 24-80 cups are packed in cartons and stored in a cold store at -18°C until delivery.

The individual steps for packaging the ice cream are currently carried out by hand, which is time-consuming and limits the delivery quantity. The company aims to automate the entire process of ice cream production and packaging. As several batches of different flavours are usually produced and packaged in one day, the capacity of the line should be approximately 1,000 portions per hour.

The company is interested in a supplier agreement because it does not have the expertise and resources to develop such a facility itself and the solutions available on the market are too large and uneconomical for the intended application. As part of the cooperation, the partner should install the packaging line in the company's premises and instruct the staff in its operation and make an offer for line maintenance.

#### Technical Specification or Expertise Sought

The capacity of the line should be approximately 1,000 portions of 110-500 millilitres per hour.

### Stage of Development

Available for demonstration

### IPR Status

Other

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## Network Contact

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### Contact Person

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## Partner Sought

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### Type and Role of Partner Sought

The company is looking for a partner in plant construction or the food industry who manufactures or has to deliver an automated production and packaging line with medium capacity for ice cream. Within the framework of a supplier agreement, this partner is to adapt and install the system to the existing conditions and instruct the operating personnel.

### Type and Size of Partner Sought

SME 11-50, SME <10,251-500, SME 51-250

### Type of Partnership Considered

Supplier agreement



## Partnering Opportunity

### Business Request

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## UK importer of authentic and traditional Spanish products seeks supplier of smoked and cured meat products in Spain

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### Summary

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*A UK company imports premium quality traditional Spanish products and supplies restaurants, wholesalers, hotels and deli shops across London and the South East of England. The company is searching for a new long-term supplier that offers natural smoked and cured meats from Spain.*

Reference BRUK20190906001

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### Details

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#### Description

The UK company originally established in 2013 in Brighton, has been expanding and building a reputation across the South East of England and London. The company acts a commercial agent for catering and retail purposes ranging from independent Spanish restaurants, tapas bars, hotels, wholesalers to deli and farm shops. This company offers a wide scope of quality traditional products from all over Spain, over 250 unique authentic natural products by 50 different family business suppliers that offer generations of farming knowledge. Their product line includes ingredients from each region of Spain ranging from Iberico Bellota Ham from the Black Iberian Pig living free-range in the Meadows of Extremadura, traditional Manchego Cheese, authentic chorizo, extra virgin olive oil, olives, vegetable preserves to spices and typical sweets.

The company carefully choses its suppliers and regularly travels to Spain to ensure a strong relationship with the producers to guarantee quality ingredients and a passion for the traditional produce.

Ideally the new supplier could offer smoked salami from mangalica pork, produces cured meats and has smokehouses from all over Spain.

The company wants to ensure that products are authentic, with the minimum possible of artificial preservatives as well as gluten and lactose free salami.

### **Advantages and Innovations**

The company supplies a wide range of restaurants in Sussex and London, including independent Spanish restaurants and tapas bars, hotels, wholesalers, catering businesses as well as deli shops and farm shops which seek to provide authentic Spanish products.

### **Technical Specification or Expertise Sought**

The company is looking for Spanish food producers able to guarantee high quality products and ingredients.

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## **Network Contact**

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### **Contact Person**

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### **Email**

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## **Partner Sought**

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

The company is looking for a supplier agreement of smoked and cured meat.

The products should meet the following requirements:

- Gluten-free
- Lactose-free
- with the minimum possible of artificial preservatives as well as smoked in a natural smokehouse.
- supply 500-800kg per month

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

SME 11-50, SME <10,>500 MNE, 251-500, SME 51-250

### **Type of Partnership Considered**

Supplier agreement

## Partnering Opportunity

### Business Request

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## Portuguese pastry and confectionery is looking for producers and suppliers of ground spices through distribution agreement

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### Summary

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*A Portuguese company from Madeira Island, specialised in the production of traditional regional cakes, biscuits and candies, such as honey cake (sugar cane honey), honey biscuits and candy, is searching for ingredients producers and suppliers, namely ground spices (nutmeg, clove, anise and cinnamon) to establish a distribution services agreement.*

Reference BRPT20190903001

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### Details

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#### Description

This Portuguese pastry and confectionery, established in 1982 in Madeira Island, is specialized in the manufacture of traditional regional cakes, biscuits and candies, such as honey cake (with sugar cane honey), honey biscuits and candy made with fennel, eucalyptus, passionfruit, banana, cherry and chestnut.

More recently, the company has innovated its variety of products, starting to manufacture fancy candy (hand-crafted with several kinds of drawings inside), which can be personalized in taste, drawings and colors.

The company also produces lollipops with different formats, following the news in terms of cartoons.

The production process involves an important manual component, essential to guarantee the authenticity of the products and the desired result.

This company has a specialized team, with appropriate know-how to manufacture this products, requiring a specific knowledge.

In order to diversify its production, the company seeks producers and suppliers of ground spices, such as nutmeg, clove, anise and cinnamon in order to undertake distribution

agreement.

The company does not predefine a package or quantities by batch, as it will depend on the producers' supply capacity and the shelf life of these raw materials. These aspects will be discussed at a later stage in direct contacts.

The intention through this type of partnership is to set a long term commitment, on the one hand allowing this company stability and quality standards in its production, and on the other hand give opportunity to potential partners to enter a new market and expand its business.

### **Advantages and Innovations**

The company blends traditional methods of production, essential to guarantee the authenticity of the products, whilst pursuing innovative techniques. They combine traditional flavours with modern design, which distinguishes the company from its competitors. In this way, it combines the artisanal manufacture highly valued by the clients, with the genuine flavors.

The company also produces lollipops with different formats, following the news in terms of cartoons, in order to delight the younger clients.

Through this partnership potential partners have the opportunity to expand their business to a new market, as a supplier of a company established in the market for over 30 years and that has a wide range of exclusive and unique products from Madeira Island.

### **Technical Specification or Expertise Sought**

The company is seeking for producers and suppliers of ground spices, such as nutmeg, clove, anise and cinnamon.

There are not specific or technical requirements to take into consideration.

### **Stage of Development**

Already on the market

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## **Network Contact**

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### **Contact Person**

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## Partner Sought

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

This company is looking for other companies of any size, acting as suppliers of ground spices such as nutmeg, clove, anise and cinnamon, to establish distribution services agreement.

No special requirements or transnational experience are required.

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

SME 11-50, SME <10, 251-500, SME 51-250, >500

### **Type of Partnership Considered**

Distribution services agreement

## Partnering Opportunity

### Business Request

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## A Polish company producing innovative, fully plant-based food products is looking a supplier of acorn kernels.

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### Summary

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*A Polish company produces various types of vegan (100% plant-based) food products, made with different nuts and seeds. The company is looking for a reliable supplier of hulled (unshelled) acorns (just acorn kernels, without the outer shell). Acorns should come from a controlled, registered forestry and ideally be organic certified. The company aims for establishing a cooperation under supplier agreement.*

**Reference** BRPL20190919001

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### Details

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#### Description

A Polish company produces various types of vegan (100% plant-based) food products, made with different nuts and seeds. The company sells its products to retail and wholesale clients in Poland, Germany, Austria, Belgium, Norway and Estonia.

Vegan market has so far been lacking plant-based counterparts of sophisticated, exclusive cheese from the “higher shelf”. Therefore, the company decided to fill this niche and is prepared to prove that regardless of the type of diet one chooses to follow, they will be able to meet customer needs. Whether they are vegan, have lactose intolerance or decided to drop dairy for any other reason, they do not have to give up on the pleasure of experiencing the taste of the traditional cheese.

The company is looking for a reliable supplier of hulled (unshelled) acorns (just acorn kernels, without the outer shell) and hopes for a long-term cooperation under supplier agreement.

### Advantages and Innovations

The demand for artisanal, high-quality vegan products is skyrocketing and the company itself is still growing and developing, constantly searching for market niches and pioneering in innovative ideas for unique plant-based products. This brings a serious advantage to potential partners. One of great idea in a vegan society is use acorns to prepare vegan, gluten free products coming from acorn.

### Technical Specification or Expertise Sought

Acorns should come from a controlled, registered forestry and ideally be organic certified. Acorns must be healthy – free from worms, mould and fungal contamination.

The company is in the process of building a new production line therefore it will need ad-hoc order of acorns in the next three-four months, but in longer term they want to have regular, monthly orders.

Amounts will vary between 30-100 kg per order.

### Stage of Development

Already on the market

### IPR Status

Secret Know-how

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## Network Contact

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### Contact Person

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## Partner Sought

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### Type and Role of Partner Sought

The Polish company expects to establish a long term cooperation under supplier agreement with reliable forest entity or other agri-food supplier able to regulary supply acorns.

Acorns should come from a controlled, registered forestry and ideally be organic certified.

Acorns must be healthy – free from worms, mould and fungal contamination.

Preferred oak species:

- Valonia oak (Quercus macrolepis)
- Pedunculate oak (Quercus robur)
- Sessile oak (Quercus petraea)
- Downy / Pubescent oak (Quercus pubescens)
- Red oak (Quercus rubra)

Acorns from other oak types present in Europe or Middle East are also acceptable and the less tannins they contain the better.

It is crucial that supplied acorns are not a mixture of different species and specific types of acorn can be provided separately.

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

SME 11-50, SME <10,>500 MNE, 251-500, SME 51-250,>500

#### **Type of Partnership Considered**

Supplier agreement



## Partnering Opportunity

### Business Request

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## A UK commercial agent for agro food, animal feed, fertilisers and solar energy equipment seeks new suppliers

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### Summary

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*A UK commercial agent with over 25 years specialising in the trade of food products, vegetable oils, fertilisers, animal feed and solar energy products offers its services to foreign partners who are seeking representation to enter into new markets, under a commercial agency agreement. The UK company offers consulting, marketing and sales support to companies seeking to enter into new markets under an exclusivity agreement. The UK company has links in more than 20 countries worldwide.*

**Reference** BRUK20190812002

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### Details

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#### Description

The UK company has over 25 years of experience is seeking to offer a commercial agency agreement to companies that are seeking to expand into new markets under an exclusivity agreement.

The consultancy services are to provide guidance to companies seeking to enter into new territories, where no upfront fees are charged, the companies will only be charged an agency fee once new orders have been established, and the fee will be based on a percentage of the order.

They have experience in representing companies from the food industry, agricultural and energy sector with the following products soya products, baby food, porridge, whey powder, milk powder, snack foods such as dry roasted nuts, confectionery products, cakes and biscuits , barley wheat, corn sunflower oil, animal feed, fertilizers and solar energy equipment.

The company has a well-established network of buyers at their disposal and has built a strong reputation among its customers having links to supermarkets, airlines, railway lines and cruise liners.

The UK company has operational activities in the following regions, EU, India, South Asia, South East Asia, China, Vietnam, and South Korea and has operated in more than twenty countries worldwide, with a multi-lingual staff enabling communication with a wide range of territories.

Ref: BRUK20190812002

The UK company can also provide extensive marketing support in the following areas, merchandising and promotional activities, and in the development of new products, in the design, packaging and technical product development.

### **Advantages and Innovations**

- more than 25 years of experience operating in these markets.
- advise on the legal requirements and license agreements to enter into new territories.
- knowledge of quality management systems in the food industry
- experience in the development of new food products
- well established network of clients.

### **Technical Specification or Expertise Sought**

Producers/suppliers of agricultural products, baby and milk products, vegetable oils, bakery, and solar equipment.

### **Stage of Development**

Already on the market

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## **Network Contact**

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### **Contact Person**

Laura Valle Cerezo

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## **Partner Sought**

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

Companies from the food, agricultural and solar energy sector to deliver the requested products, with the aim of a long term commercial agency agreement giving exclusive rights to the UK company.

### **Type of Partnership Considered**

Commercial agency agreement

## Partnering Opportunity

### Research & Development Request

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## H2020-CE-FNR-09-2020 : Technological providers for removal of marine plastic and litter sought

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### Summary

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*A French aquaculture and marine resources cluster is looking for companies from Northern, Eastern and Central Europe which are able to develop automatic or remotely controlled wireless devices capable of collecting plastics and other litter from oceans, to complete their consortium for the Horizon 2020 CE-FNR-09-2020 call "Pilot action for the removal of marine plastics and litter".*

**Expiration Date** 30 November 2019  
**Reference** RDFR20190723001

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### Details

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#### Description

The French cluster will be coordinating a proposal during the next months in order to reply to a topic of the Horizon 2020 working programme Societal Challenge 2 on bio-economy. The topic of interest is the FNR-09: Pilot action for the removal of marine plastics and litter.

The FNR-09 is an innovation action which has to achieve a TRL of 6.

The co-financing rate is 70% for companies (small or large).

An urgent action is needed both for the prevention and for the removal of existing marine litter, notably plastics and microplastics. For this topic, a demonstration of the removal of marine litter and research is being proposed, highlighting how the environment is impacted by the removal, and the corresponding impacts in terms of ecosystem and economic recovery.

The consortium's goal for this topic is to demonstrate approaches and technologies to improve marine spatial planning and conservation (and even restoration) of coastal ecosystems.

EOI deadline: 30th of November 2019.

Call deadline: 22nd of January 2020.

The consortium is looking for companies with automatic or remotely controlled wireless technologies targeting the removal of marine plastic and litter. The proposed solutions must be able to work at the sea surface and on the seafloor/beach.

The solutions will be implemented and it is expected of the project to achieve in treated areas:

- the removal of 90% of macro-plastic litter and a substantial fraction of micro-litter
- 80% reduction of micro-plastics in shellfish
- 80% reduction of micro-plastics and plastics in non-migratory birds species

### Stage of Development

Proposal under development

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## Network Contact

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### Contact Person

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## Partner Sought

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### Type and Role of Partner Sought

The French cluster has already built an almost complete consortium that is now looking for targeted technology providers able to develop automatic or remotely controlled wireless devices for litter removal from beaches/seafloor, the ocean surface and shellfish.

In addition to this, companies that have the capacity to develop or that have already developed a solution capable of sorting and reusing the collected plastics are more than welcome to contact the coordinator.

Partners from Northern, Eastern and Central Europe are sought : most current partners are from Southern and Western Europe. Greece is also already strongly represented.

### Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE,251-500,SME 51-250,>500

### Type of Partnership Considered

Research cooperation agreement

## Partnering Opportunity

### Technology Offer

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## Biomass detection system in aquaculture based on optical sensors and neural networks

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### Summary

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*A Spanish university has developed a system for estimating the biomass in aquaculture. The estimation is made through the use of optical sensors and neural networks to establish the optimum amount of biomass in intensive aquaculture facilities with the smallest possible margin of error. Also, the fish count is especially indicated in the case of rivers where it is needed to have control of the fish population. Aquaculture companies are sought to develop applications under license agreements.*

Reference TOES20190917001

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### Details

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#### Description

In aquaculture, the food costs represent approximately 45% of the operating costs. Thus, the reduction of food costs is essential to achieve the sustainability of such industry, existing great potential both in the reduction of food costs per unit and through the adoption of appropriate food management strategies. The present invention solves typical technical problems in estimating biomass (variable fish speed, low resolution or measurement errors in the calculation of the weight and height of the fish) through the use of new high-resolution optical systems, low-cost electronics and algorithms with neural networks.

Researchers from a Spanish university working in electronic engineering provide a novel biomass estimation system in aquaculture based on optical sensors and neural networks comprising two identical optical barriers. Each of these barriers comprises a first emitter block of photoemitters in the infrared spectrum and a second receiving block of photoreceptors in the infrared spectrum and also means for identifying the fish by radiofrequency, in such a way that a unique identification of each fish occurs when passing through the optical barriers thanks to a radiofrequency identifier. A subsequent classification of the fish identified will be done through neural networks.

The researchers would like to reach license agreements with companies operating in the aquaculture field with the aim to develop applications of the described technology.

### Advantages and Innovations

- Through 2D image processing, the system of the invention allows to identify the fish even when they pass in groups of two or more, and also to differentiate them from other objects.
- The system of the invention uses a high-resolution optical system, and due to current smaller and more powerful technology, the optical transmitters and receivers can be placed at a smaller distance from each other and thus obtain a more real fish profile.
- Real time measurement. By incorporating radio frequency (RFID), the system of the invention makes possible to identify at every moment the fish that is going through the barriers. This novelty provides a substantial improvement in the estimation of biomass, since it allows knowing in real time the biomass present in the cage and, depending on it, managing online the automatic feeding system.
- Through the use of neural networks, the system allows the unambiguous identification of the object that passes through the barriers, discarding false positives.

### Stage of Development

Available for demonstration

### IPR Status

Patent(s) applied for but not yet granted

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## Network Contact

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### Contact Person

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## Partner Sought

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### Type and Role of Partner Sought

Type of partner sought: Industry.

Specific area of activity of the partner: Companies that operate in the aquaculture field.

Task to be performed: Development of applications of the described invention under license agreements.

**Type and Size of Partner Sought**

SME 11-50, SME <10, >500 MNE, 251-500, SME 51-250, >500

**Type of Partnership Considered**

License agreement

## Partnering Opportunity

### Technology Offer

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## Biomass estimation system in aquaculture based on 3D images

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### Summary

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*A Spanish university has developed a system for estimating the biomass necessary for feeding in aquaculture. The estimation is made through the reconstruction of 3D images to establish the optimum amount of biomass for feeding fish in intensive aquaculture facilities with the smallest possible margin of error. In addition, it is useful to perform fish counting, growth tracking and for monitoring their behaviour. Aquaculture companies are sought to develop applications under license agreements.*

Reference TOES20190918001

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### Details

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#### Description

In aquaculture, the food costs represent approximately 45% of the operating costs in a fish farm. Thus, the reduction of food costs is essential to achieve the sustainability of such industry, existing great potential both in the reduction of food costs per unit and through the adoption of appropriate food management strategies. The present invention solves typical technical problems in this area (variable fish speed, low resolution or measurement errors in the calculation of the weight and height of the fish) through the reconstruction of 3D images.

Researchers from a Spanish university working in electronic engineering provide a system for estimating biomass in aquaculture based on reconstructions of images in three dimensions. The system comprises a frame that defines a cube whose interior is divided into two different zones: the first one is a passage for the fish and a second one is configured to prevent the access of fish to its interior and where several sensors for oxygen, pH, conductivity and turbidity are provided, as well as an RFID reader device connected with an RFID antenna arranged in a frame at the entrance of the fish passage zone. Unlike current systems, this technology works out the biomass in real time based on the volume of the fish and its density. It also uses a discretization and tracking algorithm and, with the use of all the obtained variables from the sensors and the use of neural networks, predictions of the state and behavior of the fish can be performed.

The researchers would like to reach license agreements with companies operating in the



aquaculture field with the aim to develop applications of the described technology.

### Advantages and Innovations

- Accuracy. Current systems base the calculation of biomass on models that characterize the relationship between the length of the fish and their mass. This system makes the estimation based on the volume of the fish and its density by 3D image reconstruction with two cameras and stereographic technology.
- Low cost equipment. New low-cost stereo cameras allow to calculate depth and enable devices to see, understand, interact with, and learn from their environment — powering intuitive, natural interaction and immersion. The onboard processor performs all the depth calculations on the camera, allowing for low power, platform agnostic devices.
- Unlike other systems, in which the selection of the fish is done manually by a technician, this technology uses a fish discretization and tracking algorithm, which can also help to follow the fish even when they overlap each other.
- Real time biomass estimation. The system has an antenna that, together with a reader, constitutes a radio frequency (RFID) system that allows real-time identification of the fish. This novelty, not present in current commercial equipment, provides a substantial improvement in the estimation of biomass as it allows the individual fish biomass to be monitored and compared with the global calculation.
- Record the physical variables of the farm. The system has a set of sensors that check the state of the medium at all times (oxygen, pH, conductivity and turbidity). Being a system that works continuously, with the use of all those inputs and the use of neural networks, predictions of the state and behaviour of the fish can be obtained.

### Stage of Development

Under development/lab tested

### IPR Status

Patent(s) applied for but not yet granted

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## Network Contact

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### Contact Person

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## Partner Sought

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### Type and Role of Partner Sought

Type of partner sought: Industry.

Specific area of activity of the partner: Companies that operate in the aquaculture field.

Task to be performed: Development of applications of the described invention.

### Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE,251-500, SME 51-250,>500

### Type of Partnership Considered

License agreement

## Partnering Opportunity

### Technology Offer

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## Legally binding counterfeit protection with micro colourcodes against product piracy

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### Summary

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*A German firm has developed an inimitable counterfeit protection based on colour-codified micro particles. The technology ensures legally binding counterfeit protection against product piracy, effective defence of unjustified liability claims and cost saving product protection through easy application. The company looks for partners to integrate the technology within commercial agreements with technical assistance.*

Reference           TODE20190823001

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### Details

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#### Description

The German company has developed a counterfeit protection system based on a technology counterfeiters do not possess: micro colour-codes, microscopically small particles in which four to ten colour coatings are combined to form a unique code. Every user receives his individual colour-code. Over 4.35 billion different colour-codes are possible.

The particles are extremely heat resistant as well as resistant to solvents, chemicals and many acids. They can be applied by all established printing processes and via dispenser. Another possibility is to integrate the particles into plastics or liquids, gritting and bulk material, granulate or any loose substances.

The inimitable consistency of the colour-codes enables an easy application, insertion, admixture or addition to all customary materials so that any product can be directly secured. The counterfeit protection system is accepted as evidence by international courts and fulfils all security requirements.

Due to its food safety characteristics, it is particularly suitable for use in the food and pharmaceutical industries. The microparticles do not form any organic compounds and are excreted via the intestine. They are therefore not harmful to the health of children or adults.

The company is looking for partners that implement the system with their advice and support. Partners could be all kind of product manufacturers, also companies that produce product for the end-consumer like beverages, food, medicines, textiles, electrical equipment and have problems with product piracy and/or unjustified liability claims.

### Advantages and Innovations

This is a unique technology that is more effective than other solutions on the market.

The innovative characteristics and advantages include:

- Inimitable security technology
- Legally binding counterfeit protection
- Heat resistant as well as resistant to solvents, chemicals and many acids
- enables efficient distribution monitoring from production to the end consumer
- Effective defence of unjustified liability claims, accepted evidence by international courts
- Cost-saving product protection through high productivity
- Specific industry solutions available
- Applicable in objects, documents, liquids, packaging, medicines
- Suitable for use in the food industry because food safe and harmless for children and adults

The company sees itself as a "problem solver" that determines the individual needs of its partners and offers tailor-made solutions. Thus, the microparticles can also be magnetized or made suitable for infrared and UV light.

### Stage of Development

Already on the market

### IPR Status

Other

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## Network Contact

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### Contact Person

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## Partner Sought

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**Type and Role of Partner Sought**

The German firm is looking for industrial partners from any area/sector requiring authentication of products or increased security. They should integrate the technology into their production process with the technical consultancy of the German company. The German firm will assist the implementation process.

**Type of Partnership Considered**

Commercial agreement with technical assistance

## Partnering Opportunity

### Technology Offer

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## Platform based on QR codes for dynamic content management.

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### Summary

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*A Spanish research centre, involved in industrial innovation processes, has developed a platform, based on dynamic QR codes, that allows companies to manage and connect the dynamic production processes, adding value to offline products. Dynamic QR codes are processed automatically and transparently; they can be edited from anywhere, without any physical involvement; codes allow to standardize processes and integrate product traceability. Technical and research cooperation agreements are sought.*

Reference TOES20190828001

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### Details

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#### Description

A Spanish technology centre works with the objective of bringing solutions to companies within the industry 4.0 techniques: internet of things (IoT), big data, artificial intelligence, data processing...

Companies need simple and cheap systems that allow them to identify and connect the starting materials and the products they develop individually with their production process and also with their customers and suppliers. It is also very important for them to find a tool to standardize their production process.

The existing technological solutions and approaches for this problem are based on the use of static and non-dynamic QR codes. For this reason the center has developed a platform, based on dynamic QR codes, which give an answer to the individual traceability, standardization needs for all types of companies. Companies can manage, with the platform, all the content: materials, machinery, tools, personnel, etc. adding value to their products. The information is associated through dynamic QR codes which facilitates the adoption of its widespread use in many of its management and industrial processes.

QR codes enable the intelligent management associating products and processes. The platform gives special attention to traceability using technologies such as blockchain.

The platform gives access to tools and mechanisms for the management and treatment of QR codes, such as:

- Use of templates: creation and management of contents that are linked to QR codes.
- Creation of groups and ranges of QR codes
- Use control: who scans the QR code? (geolocation) where? how often? etc.
- Roles: matching the type of content with the type of user.
- Usage statistics
- Modules: the platform offers functionalities such as; documentation, user manuals, specific content, multimedia, news, incidents or management of spare parts; and it is also possible to include custom modules.
- Traceability of its products to see the information captured throughout the life of the QR code.
- Manage the tasks of the operator to use the QR code as an information gateway between users.
- Integration with ERP(enterprise resource planning) platforms, capturing and sending data from your ERP to the QR
- Custom design: modules with special features.

The research centre expects industrial partners who are able to integrate the platform into their management. The centre can support in realizing the integration with other systems in the company.

Cooperation with partners would be in the frame of a technical agreement.

Also the centre would like to collaborate on joint research and development projects, under research cooperation agreement, in programs such as Horizon 2020.

## Advantages and Innovations

This technology:

- saves time and resources when taking records and performing audits
- offers more information about products that can be shared with customers and consumers
- guarantees the authenticity of the product
- is monetizable thanks to business micro marketing campaigns based on the traceability process through segmented promotions aimed at consumers
- tracks production batches in real time, from their origin to their destination
- uses interface design focused on the user's experience. This contributes to simplify processes and optimize traceability tasks
- companies don't need to further spend money on modifying packaging, neither will they need to add new barcodes to use this technology. This platform works on the original branding of the product.
- has capability of integration with IoT (Internet of things) devices and other traceability software through the API (application program interface) of this technology.
- it is not necessary to regenerate QR codes or updating their content, the platform adapts old codes, which save time and money.

## Stage of Development

Already on the market

## IPR Status

Secret Know-how

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## Network Contact

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### Contact Person

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## Partner Sought

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### Type and Role of Partner Sought

The Research institution is looking for:

Potential users who would be interested in jointly developing use cases for their industry via a technology cooperation agreement.

The centre is also interested in research cooperation agreement with industry and other research institutes. The centre is also open to collaborate in the frame of European Projects such as Horizon 2020 projects.

### Type and Size of Partner Sought

SME 11-50,R&D Institution,SME <10,SME 51-250

### Type of Partnership Considered

Technical cooperation agreement  
Research cooperation agreement



## Partnering Opportunity

### Technology Offer

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**A Spanish biotechnology SME with in vitro cell-free assays expertise for the screening of biological activities of natural extracts seeks technical or research agreements with agro-food, nutraceutical and cosmetic industries or R&D institutions**

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#### Summary

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*A Spanish biotechnology company specialized in the extraction, characterization and application of natural extracts in the formulation of healthier food and cosmetics seeks to reach research or technical cooperation agreements with companies in the agro-food, nutraceutical or cosmetic sectors, R&D institutions or universities. By identifying biofunctional properties of products or extracts the company offers access to new functional food and nutraceutical markets or natural cosmetics markets*

**Reference** TOES20190912001

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#### Details

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##### Description

The Spanish biotechnology SME, established in 2013, is specialized in in vitro cell-free assays for the screening of biological activities of active principles from nature. The company has also experience in the production and commercialization of superfoods with functional ingredients.

The in vitro assays that the company offers are useful as screening tools of biological activities for the development and optimization of new natural extracts and single compounds to be used for nutraceutical and functional foods or cosmetic formulations, among others. The tests being performed allow to reject samples and select those that have the best properties, quickly and economically.

The range of in vitro assays to determine biological activities the company is specialised in are the following:

a) In vitro antioxidant capacities assays:

- Free radical scavenging activity (H-ORAC, L-ORAC, DPPH, ABTS)
- Ferric reducing antioxidant power (FRAP)
- Superoxide dismutase activity; inhibition of lipid oxidation.

b) Enzyme inhibitor screening assays related to:

- Diabetes
- Hypertension
- Hyperlipidemia
- Hypercholesterolemia
- Inflammatory processes

c) Evaluation of the efficacy of cosmetic products:

- Antioxidant potential
- Anti-Pigment efficacy : In vitro tyrosinase inhibitory activity.
- Anti-Wrinkle efficacy: In vitro elastase inhibitory activity.
- Anti-inflammatory efficacy: In vitro COX-1 (ovine) and COX-2 (human recombinant) inhibitory activity.
- Solar Protection Factor (SPF)

Additionally, the company can perform chemical composition analysis and characterization of raw materials, natural extracts, single compounds or final products, as well as other analytical services on request.

Therefore, the company offers its technological expertise and seeks to reach research cooperation agreements or technical cooperation agreements with companies in the agro-food, nutraceutical or cosmetic sectors, R&D institutions or universities in order to help them enhance existing or new products. In this sense the company offers access to new functional food and nutraceutical markets or natural cosmetics markets by identifying biological properties of products or extracts and optimizing biotechnological process (such as fermentation).

## Advantages and Innovations

The in vitro cell-free assays the company is specialised in present several advantages compared to in vivo assays. Firstly, they are more economical and less time consuming. Secondly, they allow the conservation of experimental animals.

The strength of the company is represented by the broad scientific background of the founders that range from chemistry to biotechnology and food technology.

Additionally, the company has collaborated, among others, with The Spanish National Research Council and it has been granted a national innovation seal certifying it as a highly innovative SME.

## Stage of Development

Already on the market

## IPR Status

Secret Know-how

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## Network Contact

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### Contact Person

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## Partner Sought

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### Type and Role of Partner Sought

The company seeks to reach research cooperation agreements or technical cooperation agreements with companies in the agro-food, nutraceutical or cosmetic or sectors, R&D institutions and universities. Potential partners should be looking for innovative solutions to be applied to healthy food, functional and nutraceutical products or cosmetics.

### Type and Size of Partner Sought

SME 11-50, University, R&D Institution, SME <10, SME 51-250

### Type of Partnership Considered

Technical cooperation agreement  
Research cooperation agreement

## Partnering Opportunity

### Technology Offer

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**Consortium is looking for an industrial partner producer of lactic acid or of surfactant to take up the industrialization of the production process of new molecules to be developed within the project**

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#### Summary

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*A research consortium is preparing a project proposal for a Bio-based Industries Joint Undertaking (BBI JU) call next year. They are looking for an industrial partner, a producer of lactic acid or a producer of surfactant to take up the industrialization of the production process of the new molecules that will be developed within the project. These new bio-based molecules are expected to have a high added value in the food sector (as an emulsifier) and in cosmetics or pharmaceutical areas.*

**Reference** TOBE20190830001

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#### Details

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##### Description

The Consortium is preparing a project proposal to submit under a future Bio-based Industries Joint Undertaking (BBI JU) call next year. The Consortium will propose the production of a high-value biobased product coming from the treatment of oily wastewater, and in particular from olive oil mill factory. Six partners have confirmed their interest in taking part in the project. The main countries involved (although subject to change) are Belgium, France and Spain or Greece.

The project will generate new bio-based molecules with high added value which could be used in the food sector (as an emulsifier) and in cosmetics or even pharmaceutical areas.

The Consortium is looking for an industrial partner producer of lactic acid or producer of surfactant already active on the market, and interested in expanding its catalogue with bio-based products.

This partner should be willing to share its processes and technological constrains in order to suitably fine tune the properties of the newly developed molecules. The new bio-based surfactant molecules developed and characterised by the Consortium should be tested under

industrial process conditions and in marketable formulations, and validated in relevant environments. Industrial partner should contribute to technology transfer to enable production of the new surfactant molecules at pilot scale.

Possible estimated deadline: second semester of 2020.

### **Advantages and Innovations**

The aim of the project is to produce a new surfactant from a co-product and thus establishing a sustainable bioeconomy. This surfactant molecule is synthesized using biocatalists. In other words, these molecules can broaden the range of industrial products in the agri-food (emulsion), detergency or pharmaceutical field. In addition, some of these designed molecules can be anti-microbial or even insecticidal.

The producer of lactic acid or of surfactant participating in this project will have the opportunity to enlarge their product portfolio with new and innovative molecules developed during the project. This will significantly contribute to its technical development with state-of-the-art products giving it a competitive advantage.

### **Stage of Development**

Concept stage

### **IPR Status**

Copyright

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## **Network Contact**

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### **Contact Person**

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## **Partner Sought**

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**Type and Role of Partner Sought**

A producer of lactic acid or of surfactant already active on the market who would like to enlarge their product range or a surfactant. The partner should have expertise in organic acids industrial production, and commercialization. Besides contributing to the technological development, this partner should ensure the consortium addresses actual market needs, and covers the entire surfactant value chain.

The company should be willing to take up the industrialization of the production process of the new molecules that will be developed within the project that will be submitted in a future BBI call next year.

**Type and Size of Partner Sought**

SME 11-50, SME <10, >500 MNE, 251-500, SME 51-250, >500

**Type of Partnership Considered**

Research cooperation agreement

## Partnering Opportunity

### Technology Request

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## Herbal tea manufacturer is looking for a disinfection technology for killing bacteria and fungi found on raw herbal tea material

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### Summary

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*Lithuanian manufacturer of herbal teas is a small-size enterprise. The company produces high quality medicinal herbal teas made of different combinations of around 100 plant species. The manufacturer is looking for a disinfection technology for killing bacteria and fungi that contaminate raw material. The technology must not corrupt the tea-character of the raw materials. Technical cooperation agreement is sought with partners who have experience in disinfecting food products.*

Reference                      TRLT20190822001

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### Details

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#### Description

Lithuanian herbal tea manufacturer produces wide variety of teas. The assortment of teas comprises around 200 different products which are all high quality medicinal herbal teas. The variety of products are composed of around 100 different types of plants. The tea ingredients are usually herbs, but they can also be a specific part of a tree or bush: bark, roots, fruits, leaves, blossoms and buds.

The company is looking for a disinfection technology for killing bacteria and fungi that contaminate raw material. Raw material is collected directly from wild nature and might contain pathogens or other bacteria and fungi. In order to reach high quality standards imposed on food products it is required to kill all pathogens and to reduce the total amount of bacteria and fungi.

The specificity of the raw materials requires delicate treatment and therefore the disinfection process should be dry and not too high temperature. More precisely, when raw material arrives at the processing plant, it has already been dried; the disinfection technology therefore shall not corrupt the tea-character of the raw materials.

Technical cooperation agreement is sought with partners who have experience in disinfecting food products. The partner should provide a complete solution to the problem.

### Technical Specification or Expertise Sought

Expertise in disinfecting or sterilizing food products.

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### Network Contact

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### Partner Sought

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#### Type and Role of Partner Sought

Industrial or technological partner with a proven know-how of solving similar issues is sought. Partner is expected to provide an analysis of the issue and identify a suitable technical solution. The companies will collaborate under a technical cooperation agreement in the design and test of the new equipment.

#### Type and Size of Partner Sought

SME 11-50,>500 MNE,251-500,SME 51-250,>500

#### Type of Partnership Considered

Technical cooperation agreement