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Biotecnología y Salud

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Research & Development Request

Horizon2020 - SC1-PM-02-2017 - A Czech research centre is looking for partners and a coordinator for project to be submitted under "New concepts in patient stratification" call

Summary

A Czech research centre is looking for various partners and a coordinator for project to be submitted under Horizon2020 - SC1-PM-02-2017 - New concepts in patient stratification call (RIA) with 2 stage application process. The project idea is to use cohort of well-defined sepsis patients for detail analysis of activation of innate cell responses as a marker of future sepsis development and severity.

Creation Date	17 June 2016
Last Update	21 June 2016
Expiration Date	21 June 2017
Reference	RDCZ20160520001

Details

Description

Concept of the project:
The research teams intend to use cohort of well-defined sepsis patients for detail analysis of activation of innate cell responses as a marker of future sepsis development and severity. Further, it aims to analyse the peripheral blood monocytes and serum from subject endangered with sepsis development for functional properties, which will allow to predict the sepsis development (susceptibility) after the operation procedures. Main skills: innate signaling pathways analysis using receptor agonists and antagonists, advance flow cytometry and sorting, proteome analysis (MaldiTOF), analysis of transcription factors activation/translocation using reporter assays. Expertise of genetic engineering induced pluripotent stem cells derived myelopoiesis and preparation of induced pluripotent stem cells from patient (in clinical setting of GMP facility) can be involved.

Programme conditions:
H2020 call: SC1-PM-02-2017: New concepts in patient stratification
Research and Innovation action (100 % cofinancing)

Expresssion of Interest deadline: 31 August 2016
Call deadline - 1st stage: 4 October 2016
Call deadline - 2nd stage: 11 April 2017

Type of the partner sought:
- R&D Institution and/or university
- hospitals

- small and medium sized enterprises/large company

Role of the partner:
- Providing samples from peripheral blood mononuclear cells from cohort of patients with well defined sepsis (before, during and after sepsis recovery).
- offering panel of methods to analysis of activation/translocation of transcription factors linked with inflammatory response (NFkB, NFAT, HIF1a).
- Analysis of proteome using mass spectrometry – MaldiTOF.
- providing myelopoiesis derived from induced pluripotent stem cells.

Advantages and Innovations

The Czech research centre has an expertise in innate signaling pathways analysis using receptor agonists and antagonists, advance flow cytometry and sorting, proteome analysis (MaldiTOF), analysis of transcription factors activation/translocation using reporter assays. The research team also has an expertise in genetic engineering of induced pluripotent stem cells derived from myelopoiesis and preparation of induced pluripotent stem cells from patient (in clinical setting of GMP facility).

Technical Specification or Expertise Sought

Type of the partner sought:
- R&D Institution and/or university
- hospitals
- small and medium sized enterprises/large company

Role of the partner:
- Providing samples from peripheral blood mononuclear cells from cohort of patients with well defined sepsis (before, during and after sepsis recovery).
- offering panel of methods to analysis of activation/translocation of transcription factors linked with inflammatory response (NFkB, NFAT, HIF1a).
- Analysis of proteome using mass spectrometry – MaldiTOF.
- providing myelopoiesis derived from induced pluripotent stem cells.

Stage of Development

Concept stage

Keywords

Technology

06001002	Clinical Research, Trials
06001012	Medical Research
06001013	Medical Technology / Biomedical Engineering
06001019	Stem cell Technologies

Market

05007007	Other medical/health related (not elsewhere classified)

NACE

Q.86.1.0	Hospital activities

Q.86.9.0 Other human health activities

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Healthcare

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

2011

Turnover

10 - 20M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The research centre is a new generation science and research center focusing on finding new methods, technologies and medicaments for effective prevention, early diagnostics and individualized treatment of cardiovascular and neurological diseases.

Languages Spoken

English
Czech

Client Country

Czech Republic

Partner Sought

Type and Role of Partner Sought

Type of the partner sought:
- R&D Institution and/or university
- hospitals
- small and medium sized enterprises/large company

Role of the partner:
- Providing samples from peripheral blood mononuclear cells from cohort of patients with well defined sepsis (before, during and after sepsis recovery).
- offering panel of methods to analysis of activation/translocation of transcription factors linked with inflammatory response (NFkB, NFAT, HIF1a).
- Analysis of proteome using mass spectrometry – MaldiTOF.
- providing myelopoiesis derived from induced pluripotent stem cells.

Type and Size of Partner Sought

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

Type of Partnership Considered

Research cooperation agreement

H2020 call for proposal under topic IMI2-2016-09-01, addressing the burden of clostridium difficile infection (CDI): Partners sought from research institutes, SMEs and academia

Summary

A toxin group of a UK research organisation specialising in public health seeks research partners for topic IMI2-2016-09-01 proposal. The project focus is to address the clinical burden of clostridium difficile infection (CDI) including evaluation of the burden, current practices and set-up of a European research platform. Partners sought are research institutions, SMEs and academia with relevant active research/expertise or capabilities to support the project.

Creation Date	01 June 2016
Last Update	03 June 2016
Expiration Date	03 June 2017
Reference	RDUK20160601001

Details

Description

Infection with clostridium difficile, a gram-positive spore-forming anaerobe, is the most common cause of nosocomial diarrhoea in developed countries and leads to symptoms that range from self-limiting mild to moderate watery diarrhoea to severe fulminant diarrhoea, abdominal pain and pseudomembranous colitis. In some patients it may progress to toxic megacolon, colonic perforation and death. Over 500,000 new cases of C. difficile infection occur each year in the US and estimates suggest greater than 400,000 diagnosed CDI events occur annually in Europe, although the true incidence is likely to be much higher. Furthermore, the burden of CDI outside of the acute care hospital environment, particularly in nursing homes and long-term care facilities, is under-estimated. There is therefore a need to develop a robust assessment of the burden of CDI and current practices in Europe.

The scope of the project is to develop a detailed understanding of the epidemiology and clinical impact of CDI and more specifically to:

• align and understand the unmet public health needs relating to CDI;
• identify the direct and long term burden on healthcare systems;
• set up an EU research platform that will provide support for potential proof of concept studies of new prevention and treatment strategies.

The organisation seeking partners focuses on public health research and encourages discussions, advises government and supports action by local government, the National Health Service and other organisations. With significant experience in previous FP7, H2020 and other

EU funding streams, they are actively engaged in applied research in microbiology and working across a range of aspects of microbial translational research. Key skills and expertise include protein chemistry, protein expression and purification, molecular biology, anaerobic microbiology, cellular assays and models, animal models for healthcare associated infections. Able to contribute significantly to work package 3 of the topic 'build a research network and platform' they have an established a toolbox of reagents and techniques which could contribute to basic and translational research related to CDI. These include:

• highly purified C. difficile toxins
• polyclonal and monoclonal antitoxins
• recombinant toxin fragments and bacterial surface proteins
• quantitative toxin-neutralisation assays
• animal models for CDI

The organisation would be able to contribute to the project in the following ways:

• facilitating research in partner(s) labs through the provision of reagents and model systems.
• facilitating varied research at partner lab(s) e.g. pathogenesis research, diagnostics or translational research into interventions.
• provide reagents (e.g. toxins, antibodies) and\or model systems (in vitro or in vivo assays)

Alternatively to collaborate on the development of an oral vaccine as follows:
• collaborate on an orally delivered vaccine in which partner(s) have expertise in oral vaccine formulation\delivery or novel vectors
• provide candidate antigens (gene\protein), other reagents and\or model systems (in vitro or in vivo assays)

They are seeking partners from other research institutes, SMEs and academia and research activities carried out by interested organisations can be diverse as they in the early stages of forming consortia and would be open to negotiating the scope of the project to ensure that all consortium partners are represented.

The deadline for the stage 1 of the two-stage call is 26 July 2016 and the deadline for expressions of interest from interested institutions should be made no later than by 24 June 2016. The deadline for the second stage of the call is 10 January 2017 and the project is expected to start in Q3 2017.

Advantages and Innovations

The project impact can be expected to result in the support of adequate public health intervention and practices. It will help in speeding up the development of alternative prevention and treatment approaches.

Key capabilities offered by the organisation relevant to the intended project include:

• optimisation of recombinant protein downstream processing and purification including optimisation of expression.
• development and qualification of in vitro assays (including cell-based assays)
• animal model development.
• production of highly purified bacterial protein toxins and other native proteins.

It is also envisaged that consortium will be formed alongside a group of highly experienced research institutions from the UK who represent national experts in:

• pathogenesis and structural studies on C. difficile toxins/surface proteins and on various virulence factors associated with gram-negative HCAIs (E. coli, Klebsiella pneumoniae).

• research into development of C. difficile immunotherapeutics.
• convalescent sera from ExPEC patients and epidemiological trends and characterisation of key HCAI-related bacterial strains
• clinical aspects of C. difficile immunotherapeutics.

Negotiations in this respect are on-going at this stage.

Stage of Development

Proposal under development

Keywords

Technology

06001012 Medical Research

Market

05007007 Other medical/health related (not elsewhere classified)

NACE

Q.86.9.0 Other human health activities

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Open for EOI : Yes

Dissemination

Send to Sector Group

Healthcare

Client

Type and Size of Organisation Behind the Profile

Other

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Client Country

United Kingdom

Partner Sought

Type and Role of Partner Sought

Research institutions, academia, industrial partners and SMEs from EU and other eligible countries are sought. The research activities carried out by interested organisations can be diverse as the UK organisation is in the early stages of forming consortia and would be open to negotiating the scope of the project to ensure that all consortium partners are represented. Potential partners with relevant research expertise and capabilities in the following fields would be welcomed:

• pathogenesis research, diagnostics or translational research into interventions.
• oral vaccine formulation\delivery or novel vectors

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

Research cooperation agreement

Technology Offer

New treatment concept for stabilization of remission in Acute Myeloid Leukemia (AML)

Summary

Researchers at a Bavarian university hospital developed a novel immune-modulatory drug combination for the stabilization of remission after therapy of AML (Acute Myeloid Leukemia). The new treatment concept was successfullly tested in vitro and in vivo in a rat model. The university is now searching for licensees or partners to conduct clinical trials to establish second medical use.

Creation Date	09 May 2016
Last Update	03 June 2016
Expiration Date	03 June 2017
Reference	TODE20160509001

Details

Description

80 % of successfully treated patients with AML (Acute Myeloid Leukemia) suffer a relapse in the next two years. Although stem cell transplantation (SCT) in the AML patients after high-dose chemotherapy is a curative treatment option, relapses of the disease occur. Therefore, treatment strategies for stabilizing remissions before or after SCT are urgently needed. A research group at a Bavarian university hospital active in hematopoetic transplantation developed a novel drug combination for stabilization of remission after therapy of AML.

The novel immune-modulatory drug combination of GM-CSF (Granulocyte-macrophage colony-stimulating factor) with PGE1 (Prostaglandin E1) (called "M") developed by the research group was shown in patient's whole blood test and in a rat model in vivo to stabilize remissions after therapy of AML (see picture). Myeloid blasts can be differentiated to leukemia-derived dendritic cells (DCleu) presenting the whole leukemic antigen repertoire to T-cells, thereby activating them to antileukemically directed T-cells. The addressed effects of the strategy are in detail:
- generation of DC/DCleu in the patient's body, which support the patient's T-cell answer in vivo against tumour by presentation of the complete leukemic antigenic repertoire
- amplification of the anti-leukemic T-cell response
- long-term effect by improvement of the immunological T-cell memory and reduction of regulatory T-cells

A first patient study will be conducted to support these results. Partners are searched for further testing, i. e., conducting clinical trials to establish second medical use of this combination of the two already approved drugs. This could be done based on a research cooperation agreement, commercial agreement with technical assistance, or a license agreement.

Advantages and Innovations

The drug combination addresses residual AML blasts in the body with the aim to convert them to a vaccine in vivo ("leukemia-derived dendritic cells"), that activates the immune system - resulting in blast kill and the establishment of an immunological memory, that could mediate permanent remissions and perhaps avoid stem cell transplantation.

Advantage of the novel drug combination is its applicability for all AML patients before or after stem cell transplantation independent of age and MHC (Major Histocompatibility Complex) type of patients.

The usage of already approved drugs allows a simplified registration process based on the second medical use principle.

Stage of Development

Under development/lab tested

Comments Regarding Stage of Development

The drug combination is tested already in vitro and in vivo with positive results. A first patient study will be conducted to support these results.

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Strong patent protection (PCT filed, worldwide nationalization until April 9, 2017)

Patent claims: second medical use of GM-CSF and one selection out of OK-432, INTRON, PGE1 PGE2, CALCIMYCIN and TNFalpha, treatment of myeloid leukemia

Patent application privately held, thus short decision making process

Profile Origin

Private (in-house) research

Keywords

Technology

03004007	Pharmaceutics
06001002	Clinical Research, Trials
06001003	Cytology, Cancerology, Oncology
06001012	Medical Research
06001015	Pharmaceutical Products / Drugs

Market

05005014	Oncology
05007002	Pharmaceuticals/fine chemicals

NACE

M.72.1.1	Research and experimental development on biotechnology

M.72.1.9	Other research and experimental development on natural sciences and engineering
Q.86.1.0	Hospital activities
Q.86.9.0	Other human health activities

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Healthcare

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

A pharmaceutical company is sought as licensee or as partner for further development (e. g. design and execution of clinical trials) up to commercialization of the novel treatment concept.

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement
Commercial agreement with technical assistance
Research cooperation agreement

Attachments

Picture1.JPG

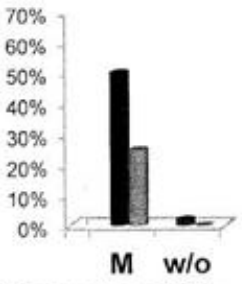
Proof-of-Principle already shown *in vitro* and *in vivo*

a) In vitro

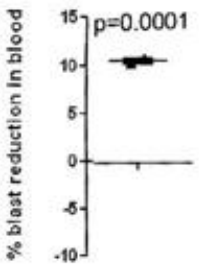
Induction of antileukemic activity in 100% of cases. Excellent (black bar) or very good (grey bar) generation of DC / DC_{leu} from human AML-whole blood in 75% of cases. No induction of blast proliferation.

b) In vivo (rat)

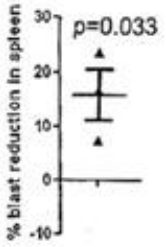
Significant blast reduction compared to untreated control rats by 10.7% in blood (p= 0.0001) and by 15.8% in spleen (p=0.03) in spite of heavily leukemically diseased and immune-compromised rats in only 9 days. Concurrent increase of CD8+/CD4+ CD62L + Tmem in blood/spleen by 10-22% (p=0.07), reduction of Treg by 59%.



Generation of DC



Blast reduction in blood



Blast reduction in spleen

Characteristic Impedance Matching System

Summary

A Korean SME is specialized in medical diagnosis and treatment system and U-healthcare system development has developed an impedance matching system. U-helathcare is one of ubiquitous service to provide seamless medical treatment.The company is looking for a partner for research and technical cooperation on further product development.

Creation Date	07 June 2016
Last Update	15 June 2016
Expiration Date	15 June 2017
Reference	TOKR20160607001

Details

Description

A Korean SME is a venture company established in 2011. The company offers service of commercializing ICT open embedded platform and IP (Intellectual Property) licensing required for medical device and health care business systems.

[Impedance matching system]
An impedance matching system is a device that extracts pulse information from the transmission pulse and the received pulse and calculates the optimal impedance value according to the characteristic analysis of the medium and system information.

[Purpose & Use]
The purpose of this technology is to improve the lowest signal detection function of current ultrasound diagnostic/therapeutic device. This device visualizes the therapeutic ultrasonic beam and beam field, which allows real-time noninvasive therapy and prevents large area of surgical procedure. The technology can be apply to noninvasive ultrasound therapy and nondestructive inspection.

[Technology Detail]
The system sets the optimal impedance matching value for characteristics of the medium and frequency, and it also performs a switch of R-L-C matrix in the R-L-C switching matrix function part which changes the impedance matching circuit to R-L-C array matrix structure. The system applies to optimal matching variable depending on the probe and system changes and characteristics of the medium. The system automatically performs verification and conventional manual probe.

Advantages and Innovations

- Implements the optimal impedance matching according to the characteristics of the medium and variable frequency to enable the realization of high-quality diagnostic imaging and therapy beams.
- Consistently maintains uniformity of the probe or signals detected in the system.

- Detects the optimal signal even for medium and variable frequencies
- Resolves disadvantages of the manual impedance matching
- Maximizes the matching efficiency of the probe, ultrasonic diagnostic and therapeutic device systems
- Maximizes image properties of the impedance matching optimization through an automatic impedance matching device

Stage of Development

Already on the market

IPR Status

Patents granted

Profile Origin

Private (in-house) research

Keywords

Technology

01003008	Data Processing / Data Interchange, Middleware
01003013	Information Technology/Informatics
06005001	Safety & systems
06005003	Health information management

Market

05004001	Electromedical and medical equipment
05007006	Computer-aided diagnosis and therapy
05007007	Other medical/health related (not elsewhere classified)

NACE

Q.86.9.0	Other human health activities

Network Contact

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Open for EOI : Yes

Dissemination

Send to Sector Group

Healthcare

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2011

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

South Korea

Partner Sought

Type and Role of Partner Sought

Type of partner sought
- SME, Universities, Research institution, larger company

Specific area of activity of partner
- Medical Equipment, ICT

Tasks to be performed by the partner sought
- Further product development related to impedance matching system.

Type and Size of Partner Sought

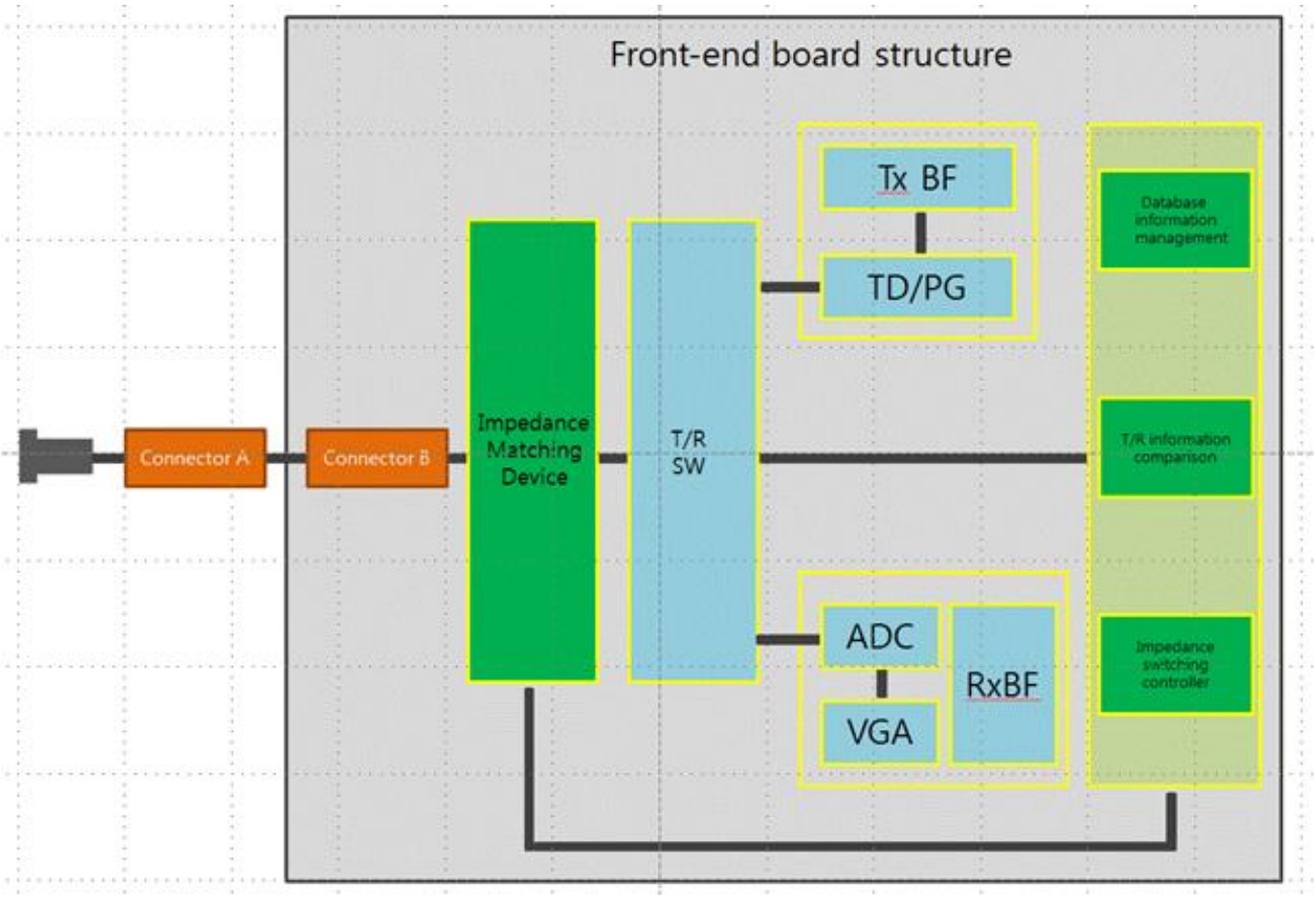
SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

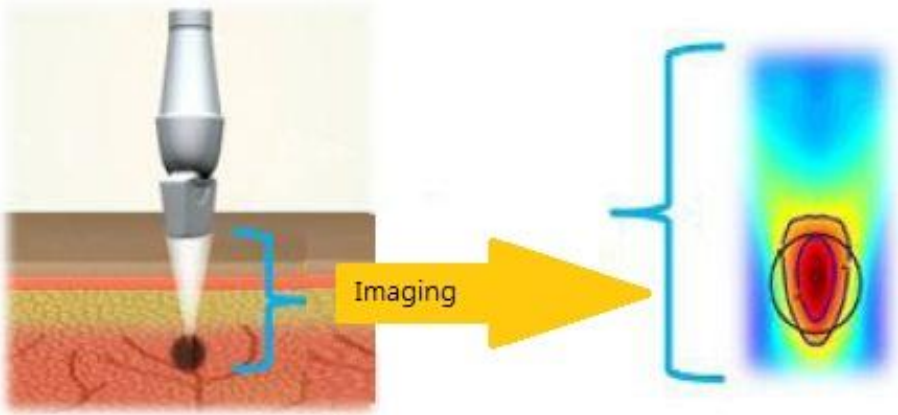
Technical cooperation agreement
Research cooperation agreement

Attachments

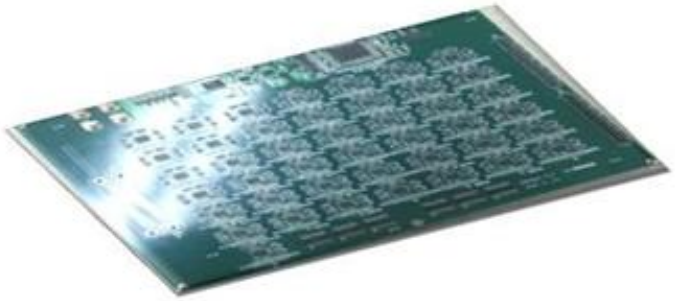
1.GIF



2.JPG



3.jpg



Guinea pig monoclonal antibodies: a promising new tool for the immunoassays market

Summary

A monoclonal antibody manufacturing centre, spin-off from a Belgian university has unique expertise in providing and generating hybridomas/monoclonal antibodies to the research, biopharmaceutical and in vitro diagnostic markets. This center has opted to develop guinea pig monoclonal antibodies. The center is looking for technical cooperation.

Creation Date	17 June 2016
Last Update	28 June 2016
Expiration Date	28 June 2017
Reference	TOBE20160616001

Details

Description

A spin-off from a Belgian university is involved in the production of innovative monoclonal antibodies. The spin-off has a unique expertise in providing and generating rat, mouse monoclonal antibodies as well as rat polyclonals for the research and in vitro diagnostics.
The spin-off offers now guinea pig monoclonal antibodies (mAbs) complementing its unique Rat mAbs expertise.
For technical reasons related to the fusion, cell lines used to obtain hybridomas producing an antibody continuously, the development of monoclonal antibodies has been limited for a long time to only two species: mice and rats. The mouse technology was developed some 40 years ago , whereas the rat technology was developed a few years later However, the immune systems of mice and rats are not the most suitable in terms of humoral response to certain antigens, such as human antigens like glucagon, the protein sequence of which is the same in mice and rats. This is also the case for some small-molecule antigens that are not very immunogenic, such as antibiotics or toxins. This is why some companies have recently developed fusion cell lines to develop monoclonal antibodies in other species. For instance, companies now offer rabbit monoclonal antibodies and others offer sheep monoclonal antibodies. However, these two tools are not totally satisfactory whether in terms of cost or productivity.
Meanwhile the spin-off has developed guinea pig monoclonal antibodies.
Generating monoclonal antibodies from the guinea pig is a breakthrough. Moreover this cutting edge technology could rapidly take the market share of the disappointing rabbit monoclonals, featuring sometimes good affinity but often very poor productivity and being unstable.
On the contrary, guinea pig Mabs are the best of both worlds, offering stability together with a non-murine immune repertoire (outbreed). The Guinea pig model should be used when the target is :
- highly conserved between mouse/rat/rabbit/human
- a glycemic hormone, proven to be different in the guinea pig
- an aflavirus antigen, the guinea pig being used as a preclinical model

The spin-off is currently focusing the research on improving methods for immunising guinea pigs, whose immune response seems closer to that of rabbits than mice or rats. Their development work is focused on antigens for which it is difficult to obtain murine antibodies. Their areas of research and development are essentially infectious diseases and human glucoregulatory hormones, areas in which the spin-off is open to technical cooperation.

Advantages and Innovations

The guinea pigs have some distinct advantages:
- guinea pigs are phylogenetically distant from other rodents (rats, mice). Based on genetic studies, many publications have shown that the guinea pig separated from the rodent phylogenetic tree at a very early stage of evolution (ref. 3). This difference means that the amino acid sequence homologies of many human proteins are much weaker with guinea pigs than they are with those of the other animals currently used to develop monoclonal antibodies.
- it has been observed on many occasions that the humoral response to a particular antigen was on average at least two times higher in guinea pigs than in rats or mice.
- guinea pigs are used as the animal model to study many infectious diseases, such as tuberculosis, Legionnaires' disease, brucellosis and even cytomegalovirus (CMV).
It would therefore be very interesting to be able to develop monoclonal antibodies from these experimental models so that we can better study the regions of the pathogen potentially recognised by neutralising antibodies in order to develop therapeutic antibodies.
- guinea pigs are very docile animals, they are easy to manipulate and are similar in size to rats. In addition, they are significantly cheaper to use in laboratories than rabbits or sheep. Their size means that it is also easier to get access to the secondary lymphoid organs (i.e. lymph nodes) to prepare the cells to immortalise.

Stage of Development

Already on the market

Comments Regarding Stage of Development

Further developments needed :
> Characterization
> Humanization
> Applications to immunoassays eg insulin, glucagon,...

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Keywords

Technology

06001005	Diagnostics, Diagnosis
06001013	Medical Technology / Biomedical Engineering
06002002	Cellular and Molecular Biology
06002007	In vitro Testing, Trials

Market

04002	Monoclonal Antibodies and Hybridomas
04009	In vitro Testing, Trials
05001002	In-vitro diagnostics

NACE

Q.86.9.0	Other human health activities

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Bio Chem Tech

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
French

Client Country

Belgium

Partner Sought

Type and Role of Partner Sought

Type of partners sought: Research laboratories, companies.
specific area of the activity partner: In vitro diagnostics and biotechnology companies.
task to be performed: technical cooperation for the research and development in infectious diseases and human glucoregulatory hormones

Type of Partnership Considered

Technical cooperation agreement