Technology Request

Development of a bacteriophage (phage)-based method for biocontrol of specific bacteria

Summary

A UK research centre is working on the development of a novel bacteriophage (phage)-based method for biocontrol of specific bacteria. The centre is looking for a biotech SME specialising in phage solutions to investigate the therapeutic potential offered by these viruses and start a technology collaboration for the joint development of a novel and commercially viable biocontrol method.

Creation Date	05 March 2015
Last Update	08 April 2015
Expiration Date	07 April 2016
Reference	TRUK20150305001

Details

Description

The emergence of antibiotic resistant (ABR) bacteria currently poses problems to clinicians and in the future threatens to negate the use of antibiotics to treat human infections, so sending humanity back to a pre-antibiotic era. While there are many initiatives to try and stop this happening, the development of new antibiotics has dwindled and so alternative approaches are needed. One possible alternative is to employ bacteriophages (phages) to treat ABR bacterial infections.

Phages are sub-micron sized organisms (viruses) that infect and kill bacteria specifically, by means that are independent of the mode of action of antibiotics and hence cross-protection should not occur. They are easy to isolate and characterise to ensure that they themselves pose no threat to human health.

The research centre has experience in phage isolation and the ways in which they can be used effectively to kill bacteria in various applications. It is therefore seeking an SME to partner and jointly develop a phage-based method for the biocontrol of one or more of these organisms:

- Extended spectrum β-lactamase producing Escherichia coli and/or Klebsiella
- Methicillin resistant Staphylococcus aureus
- Vancomycin-resistant enterococci
- Multi-resistant Salmonella

Technical Specification or Expertise Sought

Biotech SME specialising in phages solutions to investigate the therapeutic potential offered by

these viruses and start a technology collaboration for the joint development of a novel and commercially viable biocontrol method.

Keywords

Technology

006001019	Virus, Virology / Antiobiotics / Bacteriology
006002006	Microbiology
006002010	Enzyme Technology

Market

004006	Microbiology
004008	Biochemistry / Biophysics
005002001	Therapeutic services
005002005	Other therapeutic (including defibrillators)

NACE

M.72.1.1	Research and experimental development on biotechnology

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Turnover

10 - 20M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Client Country

United Kingdom

Partner Sought

Type and Role of Partner Sought

Type: SME
Activity: Biotech
Partner role: jointly develop a phage-based method for the biocontrol of one or more of these organisms:
•Extended spectrum β-lactamase producing Escherichia coli and/or Klebsiella;
•Methicillin resistant Staphylococcus aureus;
•Vancomycin-resistant enterococci;

Type of Partnership Considered

Technical cooperation agreement

Technology Request

Looking for process production of recombinant enzyme in baculovirus /sf9 cell system.

Summary

A French biotech company is looking for an innovative process production of recombinant enzyme in baculovirus /sf9 cell system. Its aim is to develop new drug to treat rare disorders and cancers. This company is looking for a joint venture or a manufacturing agreement with a biotech manufacturer specialised in production with baculovirus /sf9 cell system. The technology requested can either be at the laboratory stage or fully developed.

Creation Date	12 December 2013
Last Update	07 April 2015
Expiration Date	06 April 2016
Reference	TRFR20131212001

Details

Description

This French pharmaceutical company develops treatments for rare diseases.
New patented vectors and nanoparticules are developed to target orphan diseases such as lysosomal diseases or for a focal therapy of several types of cancers.

The technology looked for is an innovative process production of recombinant enzyme in baculovirus /sf9 cell system.
The company wants to add its DNA fragments to this process to be able to develop new drugs to treat lysosomal diseases and some types of cancers.
So it is looking for a joint venture or a manufacturing agreement with a manufacturer which uses baculovirus /sf9 cell system to produce recombinant enzymes.

Technical Specification or Expertise Sought

Innovative process production of recombinant enzyme using baculovirus /sf9 cell system.

Stage of Development

Prototype available for demonstration

IPR Status

Granted patent or patent application essential

Comment Regarding IPR status

Worldwide patents

Keywords

Technology

006001004	Cytology, Cancerology, Oncology
006001013	Medical Research
006002002	Cellular and Molecular Biology
006002010	Enzyme Technology
006004	Micro- and Nanotechnology related to Biological sciences

Market

004001003	Medical genetic engineering applications
004003	Gene Splicing and Manufacturing Equipment
004007	Micro- and Nanotechnology related to Biological sciences
005002004	Drug delivery and other equipment (including kidney dialysis machines)
005003002	Pharmaceuticals/fine chemicals

NACE

Q.86.9.0	Other human health activities

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2012

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

National and international innovation awards (MESR concours Emergence 2010, Création/développement 2011, CTI start-up 2010, Bern)

Languages Spoken

English
French
Arabic

Spanish
Italian

Client Country

France

Partner Sought

Type and Role of Partner Sought

Manufacturer of enzyme bioproduction in baculovirus /sf9 cell system.

Type and Size of Partner Sought

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

Type of Partnership Considered

Manufacturing agreement
Joint venture agreement