Profile Status: Published

Technology Offer

Early classification of aggressive prostate cancers

Summary

A German university has discovered a protein that can be used as a marker to determine the tendency of prostate tumors to metastasize. The university offers a license and research cooperation agreement.

Creation Date	11 October 2018
Last Update	19 October 2018
Expiration Date	20 October 2019
Reference	TODE20180921002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/f01ec134-a3db-4458-b38a-c84800a097c1

Details

Description

Prostate cancer is the second most common cancer in males. An estimated 1.1 million men worldwide were diagnosed with prostate cancer in 2012, accounting for 15% of the cancers diagnosed in males. The selection of the therapeutic strategy depends on the risk classification. There is a strong medical need to precisely identify those patients whose disease allows monitoring without therapeutic intervention, in order to avoid overtreatment, which comes along with high medical costs and loss of life quality.

The diagnosis, classification and therapy of prostate cancer are based on the prostate-specific antigen (PSA) test value, the Gleason score from histology obtained by prostate biopsies and an imaging diagnosis from computer tomography (CT) and bone scintigraphy. The variability of prostate cancer ranges from low-risk tumors without progression over many years to high-risk tumors with rapid local progression and high metastasis potential. There is a correlation with the risk for metastasis and the Gleason score, however there is an ongoing search for new biomarkers that directly correlate with the risk for metastasis.

A German university discovered vimentin 3 (Vim3) as biomarker, which correlates with the risk of progression of prostate cancer. Results show high expression of Vim3 in cells of metastatic prostate and low expression in non-metastatic cancer, thus demonstrating the potential of Vim3 for risk stratification of localized prostate carcioma to enable personalized therapy planning.

Vim3 is a truncated and biologically active variant of vimentin. healthy cells express the vimentin full-length variant (Vim-fl) and are characterized by a functional cytoskeleton. If Vim-fl is no longer expressed in the cells, Vim3 is predominantly detectable. In this case the intracellular structure of the cell is disordered due to the loss of the normal cytoskeletal architecture with the consequence that cells become deformable and consequently mobile.

The university offers a license agreement to companies in the diagnostics industry, specialized in tissue detection and those specialized in detection techniques for liquids (blood, serum e.g.). The results generated in the German university still need to be validated in the form of larger studies and need a further development for clinical use. Therefore a research cooperation agreement can be included in the agreement.

Advantages and Innovations

This new marker improves the decision support of a physician regarding a therapy plan. The special feature compared to the currently used markers is that the tendency of the tumor to metastasize can be determined.

Stage of Development

Under development/lab tested

Comments Regarding Stage of Development

To date, 200 serum samples from prostate cancer patients, resectates and biopsies have been examined. A validation on about 800 serum samples is planned. Data on additional tumor types are available, including urethel cancer and breast cancer.

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

A European patent has been applied for.

Profile Origin

Private (in-house) research

Keywords

Technology

06001003	Cytology, Cancerology, Oncology
06001005	Diagnostics, Diagnosis

Market

05001005	Molecular diagnosis
05004005	Diagnostic equipment
05005014	Oncology

NACE

M.72.1.9	Other research and experimental development on natural sciences and engineering

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Bio Chem Tech

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

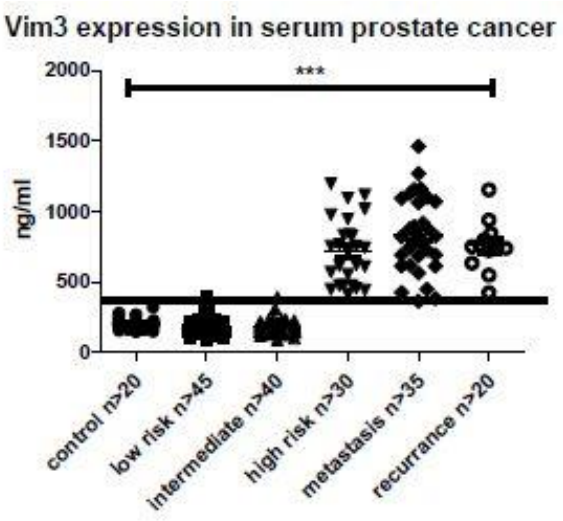
The university offers a license agreement to companies in the diagnostics industry, specialized in tissue detection and those specialized in detection techniques for liquids (blood, serum e.g.). The results generated in the German university still need to be validated in the form of larger studies. Therefore a research cooperation agreement can be combined with it.

If the invention is to be used as a diagnostic agent, the results generated at the university must be validated in larger studies, which will be the task of the company sought. This is where the scientists are involved (sample material, previous test procedure). It may also be necessary to develop the potential diagnostic agent into a mature product (e.g. a kit with corresponding reagents or test strips). This will probably also be done by the sought-after partner and will also involve the university.

Type of Partnership Considered

License agreement
Research cooperation agreement

Attachments



Vim3 ELISA, cut-off value is between 320-350 ng. ***
p<0.0001

Profile Status: Published

Technology Offer

Method for measuring lipoprotein lipase activity in human plasma for drug development and hypertriglyceridemia research

Summary

An Estonian research group has developed a novel calorimetric method for quantitative measurements of lipoprotein lipase activity and interactions in human plasma. The research group is looking for partnerships with drug development companies, research groups that explore metabolism of plasma triglycerides, and hospitals researching hypertriglyceridemia in patients. Preferred forms of collaboration are licencing, service and research agreements.

Creation Date	16 April 2018
Last Update	12 June 2018
Expiration Date	17 May 2019
Reference	TOEE20180412001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/30820372-9683-46ff-b1fb-ddc48d05436a

Details

Description

Recent studies suggest that hypertriglyceridemia (elevated levels of plasma triglycerides) is an independent risk factor for atherosclerosis. Hypertriglyceridemia has been identified as an early event in the development of type 2 diabetes. It is also common in the case of metabolic syndrome, obesity and renal diseases.

It has been estimated that about 30% of Western population suffers from hypertriglyceridemia. One possible reason for hypertriglyceridemia is reduced hydrolytic degradation of plasma triglycerides by lipoprotein lipase, a key enzyme in the metabolism of triglyceride-rich lipoproteins.

Due to the complex regulation mechanism, it has been difficult to mimic in vitro the physiological conditions under which lipoprotein lipase acts. Up until now, most studies on lipoprotein lipase have been done using artificial substrate systems of radiolabeled, fluorogenic or chromogenic substrates, or isolated triglyceride-rich lipoproteins. However, these measurements are not sufficient to understand how lipoprotein lipase acts in vivo and how activators and inhibitors influence its activity in this situation.

Thus, there is an urgent demand for novel methods that allow to examine lipoprotein lipase activity and interactions in human plasma in real time. The Estonian research group is

developing a calorimetric method that overcomes a number of limitations of other techniques for measurement of lipoprotein lipase activity.

The method provides a continuous assay using the observable heat rate that is directly proportional to the rate of the lipolysis. Measurements can be performed in non-diluted human plasma. Raw data obtained by this method are presented as thermograms in which the changes in the heat rate (heat flow, thermal power, heat flux) are monitored at a constant temperature. The method is easily automated. Effect of regulators and drug candidates on lipoprotein lipase activity can be tested in a human plasma environment.

In the clinical lab, the method can be used to find out whether hypertriglyceridemia in patients is caused by reduced amounts of active, heparin-releasable lipoprotein lipase or by an unfavorable composition of the patient's plasma. Thus, using this method, it is possible to characterize plasma samples according to their properties as lipoprotein lipase substrate. This is a new way to analyse dysfunction in plasma lipoprotein metabolism that is not attainable by other technique.

The research group is looking for the following types of collaboration:
1) Out-licensing or service agreements with drug companies developing drug candidates for treatment of hypertriglyceridemia.

2) Collaborative research with research groups that explore metabolism of plasma triglycerides.

3) Service agreement or collaborative research with hospitals investigating the reasons of hypertriglyceridemia in patients.

The research group is also open to other types of collaboration.

Advantages and Innovations

The uniqueness of the method is that it enables measurements in non-diluted human plasma in real time. This means the results obtained are more complex and give more information, making testing of drug candidates and regulators more efficient. Currently, there are no know alternative technologies enabling that.

Stage of Development

Under development/lab tested

Comments Regarding Stage of Development

The method is available for demonstration

IPR Status

Secret Know-how,Patent(s) applied for but not yet granted

Profile Origin

Other

Keywords

Technology

06001012	Medical Research

06002001	Biochemistry / Biophysics

Market

05001001	Diagnostic services
05005003	Endocrinology
05005022	Other clinical medicine

NACE

M.72.1.1	Research and experimental development on biotechnology

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Bio Chem Tech

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The research group is already collaborating with the private sector as well as R&D institutions abroad.

Languages Spoken

English
Estonian

Client Country

Estonia

Partner Sought

Type and Role of Partner Sought

The research group is looking for different types of collaboration:

- either service or licensing agreements with drug development companies working with candidates to treat hypertriglyceridemia. The research group can offer drug screening services, and is interested in out-licensing their technology in the long run.

- collaborative research with universities and research institutions working with metabolism of plasma triglycerides. The research group is also open to developing and submitting joint project applications.

- joint research or service agreements with hospitals investigating the reasons of hypertriglyceridemia in their patients.

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

Services agreement
License agreement
Financial agreement
Research cooperation agreement

Profile Status: Published

Technology Offer

A Japanese university is offering a new technology for polymer synthesis aiming at joint development of new applications

Summary

The Japanese university is aiming to achieve joint research, technical cooperation or patent licensing agreements with EU companies so to find new applications for a polymer synthesis technology they have developed. The technology is currently applied in manufacturing of colour materials and they would like to develop it for chemical and resin material manufacturing fields. The main feature is its reduced costs, 1/100, compared to existing technology.

Creation Date	08 June 2018
Last Update	14 June 2018
Expiration Date	15 June 2019
Reference	TOJP20180608001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1052a0c8-0b9f-470d-8442-f91678c64624

Details

Description

The company developed a new monomer molecule as a material of chemosynthesis which applies in polymerisation with acrylic ester. The synthetic polymer with this monomer molecule enables to control 3D dimensions structure in a stable condition.

Their polymer synthesis technique the university developed is currently applied in manufacturing of colour materials, and through the partnership, they wish to find further possibilities of new applications in the field of chemical and resin material manufacturing.

They already have collaborated with companies on research and development worldwide. Based on their previous partnership agreements, they wish to collaborate with EU-based companies under the form of joint research cooperation agreement, technical cooperation agreement or licensing agreements. Financial agreements proposed by funding bodies will be considered where it is appropriate.

Once the partnership works well, they would like to evaluate the technology and discuss commercialisation options together with their potential partner.

Advantages and Innovations

Their polymer techniques has following features:

1) Low Cost
□By applying their new technique of polymer synthesis, it reduces cost to approximately one-hundredth (1/100) comparing to the existing technology utilizing common raw material.
□It also allows to reduce cost on synthetic monomer by utilising of organic catalyst, carbon, nitrogen, alcohol, halogenated alkali metal compounds, and so on.

2) Low environmental impact
□By utilising of low-toxicity catalyst it minimises environmental impact.

3) Easy operation
□Their polymer can be used without special manufacturing equipment.

4) Accessibility
□The polymer can be accessible to a wide-range of polymer design such as Block, Star, Comb, Hyper-branch, and Bruch type, etc.
□It also accessible to various monomers.

Stage of Development

Already on the market

Comments Regarding Stage of Development

Their technology is commercially used for manufacturing colour materials for the time being.

IPR Status

Patent(s) applied for but not yet granted,Patents granted

Comment Regarding IPR status

7 patents are granted in Europe, US, Japan and China etc.
Some new patents are applied but not yet granted.

Profile Origin

Private (in-house) research

Keywords

Technology

02007014	Plastics, Polymers
03004	Chemical Technology and Engineering

Market

08001	Chemicals and Materials
08001016	Commodity chemicals and polymers
08001018	Polymer (plastics) materials

NACE

M.72.1.9	Other research and experimental development on natural sciences and engineering

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Bio Chem Tech

Restrict Dissemination to Specific Countries

Austria, Belgium, Bulgaria, Croatia, Cyprus, CzechRepublic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, UnitedKingdom,

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1869

Turnover

>500M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The University has a joint research agreement for their technology with the US partner for more than 2 years.

Languages Spoken

English

Client Country

Japan

Partner Sought

Type and Role of Partner Sought

They are looking for partner(s) in the field of manufacturing of chemical and / or resin who would be working together with the Japanese university to develop further applications of their technique.

The partner can be an industrial company of any size that is in the field of manufacturing of chemical and /or resin.

The partner is expected to have a basic knowledge on living radical polymerisation.

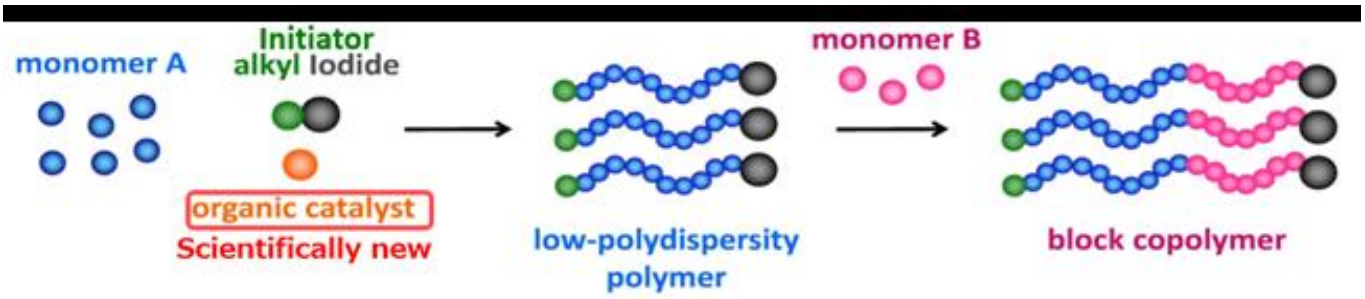
Type and Size of Partner Sought

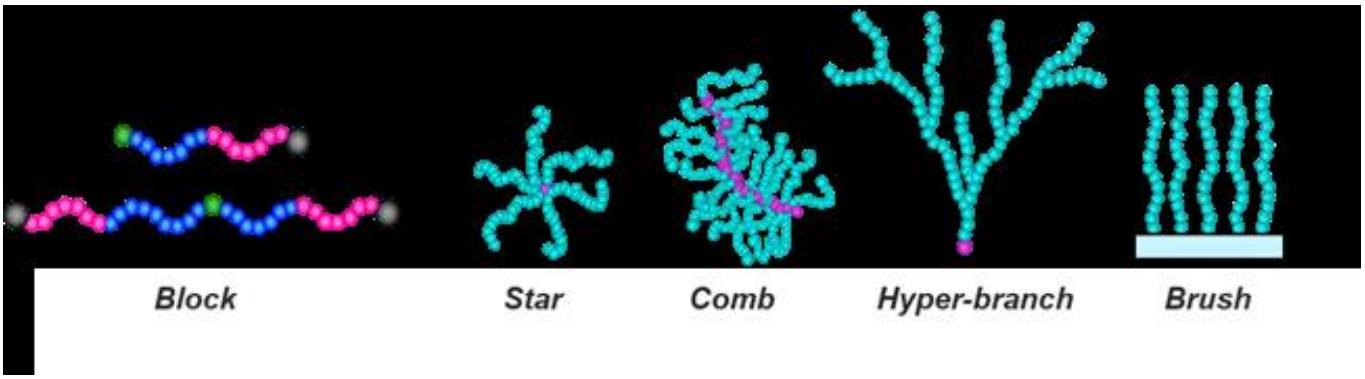
SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement
Financial agreement
Technical cooperation agreement
Research cooperation agreement

Attachments




Block
Star
Comb
Hyper-branch
Brush