WTS

WTS Patent Attorneys

WTS Patent Attorneys specializes in legal assistance in all aspects of industrial property rights management in the life sciences, particularly in pharmacy, biotechnology, agro-biotechnology and chemistry, as well as in trademark cases, utility models and designs. We work for a wide range of clients comprising innovative and generic multinationals, local companies, innovative start-ups, and scientific organizations. With offices in Warsaw and Wroclaw in Poland, and Munich, Germany, we comprise the most competent team of specialists in all aspects of intellectual property relating to life sciences in Poland.

One of our key areas is the support of the investment process in IPR related to biotechnology, medicine, pharmaceutics and chemistry.

WTS Patent Attorneys provides consulting services to investors in innovative enterprises. We assist them in identifying and evaluating the innovativeness of technologies being reviewed.

We carry out complex audits of intellectual property rights, consisting of two primary aspect. We evaluate of the strength of the exclusive property rights portfolio of a given project and the options for augmenting it (patentability).

We also evaluate the freedom to operate (patent purity / freedom-to-operate searches), so as to identify any potential patent barriers which may constitute obstacles to the commercialization of a given product or technology.

According to the needs and requirements of the client, the audit may be enhanced to include:

- protection of industrial property rights,
- assistance in finding extant industrial property rights and in negotiations relating to their purchase and /or licensing,
- preparation of a business plan and determination of the value of IP rights and in finding and evaluating innovativeness of a given product and / or technology.

Our services are used by companies and institutes at various stages of the investment process. The documentation we compile constitutes an offer designed for potential investors. We cooperate closely with seed-capital funds for investment in start-up companies and prepare pre-investment audits. The partners of WTS Patent Attorneys

are also board members in several venture capital funds. We service innovative enterprises wishing to debut on the New Connect trade floor and aid a number of spin-off companies, securing their technologies and drafting tech transfer documents.

Our clients also include large corporate entities looking to radically rejuvenate their product lines and to obtain novel technologies. By regularly evaluating and opining propositions made to them, we aid them in making beneficent business decisions. We also participate in the search, procurement and verification of novel technologies as well as in negotiations with research institutions.

We draft licensing agreements with partners involved in various stages of R&D; starting with the research phase and prototyping, through the construction of distribution network and further development of innovative products and technologies.

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It is our great pleasure to present a short introduction to several of our client companies, along with their offer of innovative projects for commercialization.

SKOTAN S.A.

SKOTAN S.A. is a joint-stock company with verylong traditions. Our goal is simple, to become and be the leader in the biofuel and white biotechnology industries in Poland.

The strategy to achieve the above goals is tripartite, and is based on extantexperience in realizing our biofuel and yeast culturing projects:

- We pursue a scaled investment process to ensure minimal investment risk;
- white biotech (technical development and environmental protection) origins of new technologies due to natural and formal constraints,;
- the potential of using public technology development funds for innovative projects dealing with patented technologies, industrial research, R&D and pilot plants.

Significantly, we continue to be active in the area of the reclamation and recycling of waste biomass from biofuel production. We continue to utilize the national oversupply of these resources in an economically viable fashion, while we seek novel second generation biofuel technologies.

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Medical University of Wrocław

The Medical University of Wrocław started as a faculty of the Wrocław University of Technology in 1945. In 1950, the Academy began life as its own entity, with two faculties: Medicine and Pharmacy. Since then we have grown and now possess 5 faculties and an independent English Division.

MUW now possesses its own clinical center, consisting of almost half a million square metres over 9 buildings housing our university hospital, clinics and research facilities.

Although the Medical University is no longer of a purely technical character, it continues to produce new innovative technologies in various medical fields. About 450 patents for inventions made on its premises have been obtained, including several European patents. In 2007, the University received 12, and our scientists applied for the protection of a further 23 innovations. A number of solutions were created in collaboration with researchers from the Wrocław University of Technology, the Wrocław University of Environmental and Life Sciences, and the University of Wroclaw. Wroclaw Medical University holds utility models as well as evening primrose models. A number of the inventions are new medicinal substances and pharmaceutical products. Materials and devices used in dental prosthetics, gynecology and surgery are patented. New patent applications include cell lines, assay tests, and an extracorporeal blood purification system. Many inventions have been applied in University clinics, and we have signed licensing agreements with a number of pharmaceutical companies.

Currently, the Academy is pursuing a program of assisting the commercialization of inventions, funded in part by Ministry of Science project “Creator of Innovativeness”.

University contacts:

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Institute of Organic Chemistry Polish Academy of Sciences

The Institute of Organic Chemistry of the Polish Academy of Sciences was established in 1964 when the Department of Organic Synthesis of the Polish Academy of Sciences was advanced by the Council of Ministers to the rank of a Research Institute.

The Institute of Organic Chemistry of the Polish Academy of Sciences was established to advance fundamental research in synthesis, transformations, structure and spectral properties of organic compounds. The Institute conducts research in several broad areas:

- development of new synthetic methods and techniques in organic chemistry nucleophilic aromatic substitution molecular catalysis – phase-transfer catalysis, metathesis organofluorine chemistry and fluorination of organic compounds methodology of asymmetric synthesis target oriented synthesis – natural products and their analogues organic synthesis under high pressure cycloaddition reactions synthesis, reactivity, structural and conformational studies of heterocyclic and macrocyclic compounds selected problems of supramolecular chemistry development of NMR methods and their applications IR, CD/UV, MS and X-ray studies on molecular structure quantum-chemical studies of molecular properties.

Besides the basic research programs, the Institute conducts various projects related to applied organic chemistry and technology, particularly oriented towards the pharmaceutical industry.

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Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology

The Oncology Institute in Gliwice was established in 1947 and in 1951 was transformed into the Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology.

From the beginning our main objective has been to comprehensively diagnose and treat in a connected way neoplasm diseases.

Over the last two decades, the Institute has moved to new buildings equipped with several facilities for its patients. A highly qualified and experienced team of specialists in oncology who trained in the most important European and American oncology centers is supported by professional technicians and oncologic care nurses.

The Institute received quality certificates according to ISO norms 9000:2001, 18001:2004, 14001:2004, HACCP.

The Institute is also a Center of Excellence, Division of Experimental Oncology.

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Fax no. (+48 32) 231 35 12
e-mail: onkologia@io.gliwice.pl

Ludwik Hirszfeld Institute of Immunology and Experimental Therapy Polish Academy of Sciences

Institute of Immunology and Experimental Therapy was founded in 1952 by the Polish Academy of Sciences. The main founder and the first director of the Institute was Professor Ludwik Hirszfeld, famous Polish immunologist and microbiologist.

Institute contacts:

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Bio&Technology Innovations Platform (BioTech-IP)

BioTech-IP it is a Technology Transfer Unit established in 2010 within the scientific consortium Biocentrum Ochota, made up of six institutes of the Polish Academy of Sciences which are located in the Ochota Campus in Warsaw:

- Institute of Biochemistry and Biophysics PAS;
- Nencki Institute of Experimental Biology, PAS;
- Mossakowski Medical Research Center, PAS;
- Nalecz Institute of Biocybernetics and Biomedical Engineering, PAS;
- Institute of Fundamental and Technological Research, PAS;
- International Institute of Molecular and Cell.

Apart from promoting the intellectual and infrastructural potential of Biocentrum Ochota institutes, BioTech-IP goal is to encourage and support scientists in applicable R&D projects and then help them commercialize the results. The Technology Transfer Unit also plays the role of a mediator in developing cooperation between scientists and enterprises acting in the field of Bio-Tech-Med.

The activities of Bio&Technology Innovations Platform are supported by the European Social Fund, Operational Programme Human Capital 8.2.1 “Support for bio tech med scientists in technology transfer” and the grant of the Minister of Science and Higher Education.

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International Institute of Molecular and Cell Biology (IIMCB)

The International Institute of Molecular and Cell Biology was founded in 1999. The main goals of IIMCB are: to carry out high quality research in molecular biomedicine; to create the best possible conditions for ambitious, motivated group leaders; to implement modern biotechnology; to teach and popularize molecular medicine and human genetics.

The research focuses on: biology and biochemistry of chaperones; modelling of the structure of restriction enzymes, methyltransferases and photoreceptor proteins; crystallographic structure determination of proteins; studies of molecular basis of neurodegenerative disease and studies of proteins implicated in the mechanism of learning and memory and pathogenesis of Alzheimer disease; interdependence between intracellular endocytic transport and nuclear signal transduction; biology of dendritic tree development; mechanics of the actomyosin cortex; structural and biochemical studies of nucleic acid enzymes. The highest quality of science achieved at IIMCB enabled commercialization of promising inventions by spin-off companies like Proteon Pharmaceuticals developing technology of characterizing the immunotoxic activity of xenobiotic substances.

To further explore commercialisation opportunities IIMCB develops cooperation with industrial partners through: joint research projects, scientific services and expertise, sharing research equipment.

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Institute of Biochemistry and Biophysics Polish Academy of Sciences (IBB PAS)

The Institute of Biochemistry and Biophysics of the Polish Academy of Sciences was founded in 1957. The scientific interests of the Institute have evolved over the years from classical biochemistry, biophysics and physiological chemistry towards up-to-date molecular biology. The topics of special attention are: microbial and yeast molecular genetics, mutagenesis and DNA repair, plant molecular biology, structural biology and

bioinformatics, advanced nucleoside and nucleotide chemistry, biophysics.

The highest quality of fundamental research correlates with IBB PAS R&D projects which are focused on development:

- new drugs and other clinically useful and therapeutic active products (prospective anti-HIV and anti-HCV compounds, drugs metabolism screening system, therapeutic bacteriophages, new probiotics);
- human and veterinary vaccine production, vaccine transfer system;
- genetically modified plants production with better crop features;
- genetically modified fungi production with biocontrol and biotechnological features
- biotechnological useful methods (Ni-dependent protein purification system);
- lactic acid bacteria applications.

IBB PAS submitted over 40 patent applications and received over 20 patents including 1 US patent over the past 5 years.

In addition to basic and development research the Institute provides highly specialized services.

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Mossakowski Medical Research Centre Polish Academy of Sciences (IMDiK PAS)

IMDiK PAS is the main institute of science and research in Poland, dedicated to clinical and experimental medicine. In collaboration with researchers from other countries institute is focused on fundamental and clinical research in:

- physiology and neurophysiology,
- neuroimmunology,
- neurochemistry,
- neuropathology,
- neurology,
- neurosurgery,
- experimental transplantology,
- endocrynology and cellular biology at the ultrastructural (immunocytochemical and histochemical).

Over the past 10 years IMDiK submitted 15 patent applications and received one patent.

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Read-Gene

Read-Gene specialises in chemoprevention, clinical trials and genetic testing, which are all complementary fields.

In chemoprevention, natural and synthetic substances are applied to stop, revert or delay cancer formation, and is Read-Gene's main activity. The company has developed the Read-Gene Anticancer Diet, the details of which will be available on website currently under construction.

Read-Gene offers clinical trials to medical, pharmaceutical, chemical and biotechnological companies. Our ground-breaking CT program focuses on patients with a defined genetic profile. In two clinical trials cycles commissioned by pharmaceutical firms, Read-Gene managed to recruit the largest number of patients worldwide, for which the company received letters of recommendation.

Genetic testing and genetic/cancer consulting are open to all patients. In December 2008 the company launched a web platform in Polish and English, through which genetic mutation tests can be ordered from all over the world. Genetic testing is an important part of Read-Gene's work. It allows early diagnosis of cancer susceptibility and, in effect, the timely application of chemoprevention. Read-Gene produces novel genetic testing technologies, and is in the process of commercializing them. The company's Intellectual Property assets include five foreign and six domestic patents, with more patent applications pending.

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1 PCT appl. no. PCT/PL2008/000077
International Publication no.: WO/2009/061225
Applicant: SKOTAN S.A.
Inventor: Waldemar Rymowicz
Our ref.: PZ/496/PCT

Title: A new strain of Yarrowia lipolytica and its use in the industrial reclamation of glycerol fractions obtained during biodiesel production

This invention relates to an industrial method of reclaiming the glycerol fraction resulting from biodiesel production and the use of the resulting yeast biomass as a high-protein feed additive.

The invention encompasses a specific strain of Yarrowia lipolytica, SKOTAN (accession number KKP 2018 p) for use in this method.

The yeast is cultured on a medium that contains up to of the glycerol fraction. The culturing proceeds until the exhaustion of the fraction. A portion of the post-culture broth seeds the next batch of fresh portion of medium. The invention is specifically designed to be used on batches in excess of 1000 L.

This method results in the increased production of yeast biomass with a protein content of the biomass is in the range 30-50%.

This simple and novel solution disposes of a problematic source material produced in quantity during the production of biodiesel esters.

2 PCT appl. no. PCT/PL2009/050006
International Publication no.: WO/2009/131476
Applicant: SKOTAN S.A.
Inventor: Waldemar Rymowicz
Our ref.: PZ/520/PCT

Title: Microbiological re-processing of by-products of biodiesel production

This invention concerns an industrial method of reprocessing a mixture of by-products produced during biodiesel production containing a glycerol fraction and degumming residue, as well as a high-protein feed additive produced be obtained by this method.

Yarrowia lipolytica SKOTAN yeast is cultured on a medium which contains from up to 70.0 g/L of the glycerol fraction. The culturing proceeds essentially to the exhaustion of the fraction in the medium. The culture is cyclical, and a portion of the post-culture broth seeds the next batch. The invention is designed specifically to be used on batches in excess of 1000 L.

This method results in the increased production of yeast biomass, where the protein content of the biomass is in the range 42% to 49.3%.

This is a simple, yet very novel solution to the problem of utilising an otherwise worthless source material which is produced in quantity during the production of biodiesel.

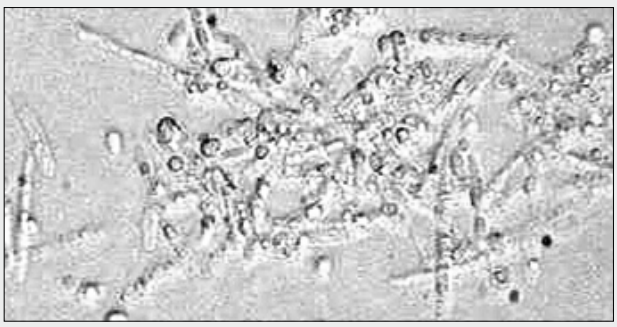

Fig. 1

3 PCT appl. no. PCT/PL2009/050005
International Publication no.: WO/2009/131475
Applicant/s: SKOTAN S.A.
Inventor: Franciszek Baszczok
Our ref.: PZ/570/PCT

Title: Microbiological reprocessing of degumming residue formed during biodiesel production

We offer an industrial method of reprocessing degumming residue from the initial purification of natural fats, as well as a feed additive obtainable using this method from a mixture of by-products of biodiesel production.

Yarrowia lipolytica SKOTAN yeast is cultured on a medium which contains the biodiesel waste glycerol fraction and at least 15% degumming residue until the fraction is essentially exhausted. A portion of the post-culture broth is a seed stock for the next cycle. The invention is designed specifically to be used on batches in excess of 1000 L. Uses claimed for this method are for the reclamation of the biodiesel glycerol fraction and degumming residue, as well as the use of the produced yeast biomass as a high-protein feed additive.

The solutions according to our technology produce a commercially viable product from a substrate that is otherwise difficult and expensive to dispose of.

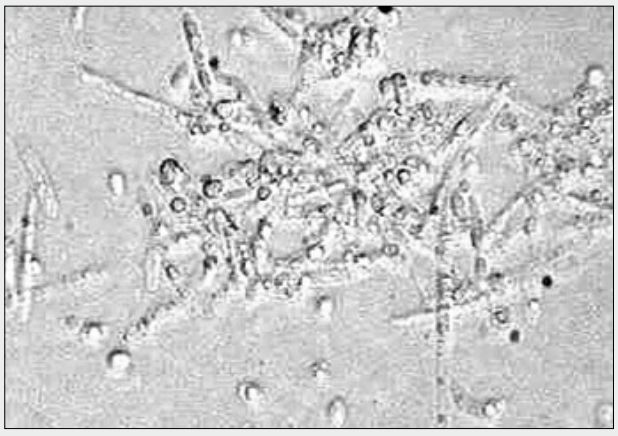

Fig. 2

4 PCT appl. No. PCT/PL2007/000060
International Publication no.: WO/2008/026953
Applicant: Wroclaw Medical University
Inventors: Maciej Siewiński, Marek Bryjak, Tadeusz Sebzda, Ewa Kilar, Ireneusz Calkosiński, Anna Janocka, Anil Kumar, Irena Choroszy-Król, Aleksander Pietkiewicz, Marian Grybos, Tadeusz Trziszka
Our ref.: PZ/472/PCT

Title: A system and method for the extra-corporeal purification of blood of pathogenic enzymes

The invention discloses a method and system for the extra-corporeal elimination of pathogenic enzymes from the blood, in particular cathepsin B and L and calpain.

Known carriers of cysteine peptidases are used in the system. The device contains a column with valves at both ends and two peristaltic pumps, where the column feeds into a porous, granular or fibrous absorbent which is saturated with a cysteine protease inhibitor. On both sides, the column has porous membranes with pores of less than 20 μm.

The method of ex vivo purification of blood is characterised in that blood collected from patients is put into contact with the insoluble carrier bearing cysteine peptidase inhibitors and then the purified blood is separated and reintroduced into the patient or stored using standard methods. The contact time between the blood and inhibitors is adjustable, and the carriers containing cysteine protease inhibitors are exchanged as needed.

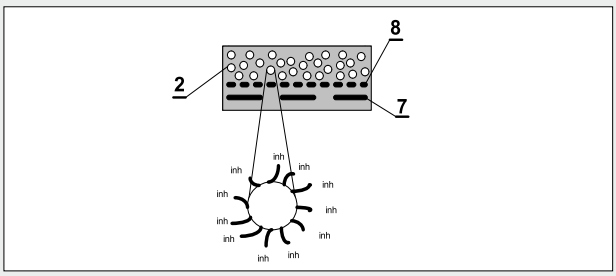

Fig. 3

5 PCT Appl. no. PCT/PL2010/000010

Applicant: Institute of Organic Chemistry Polish Academy of Sciences,

Inventors: Piotr Krajewski, Agnieszka Woźniak

Our ref.: PZ/939/PCT

Title: Enaminocarbonyl compounds and their use

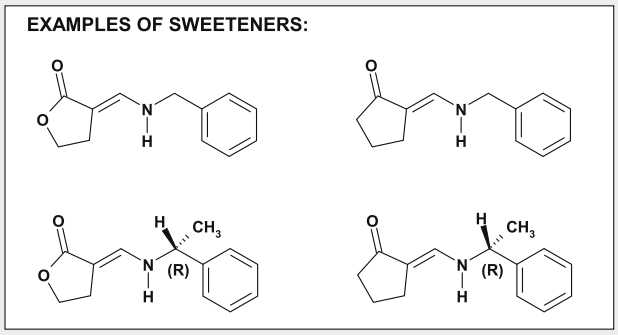

Fig. 5

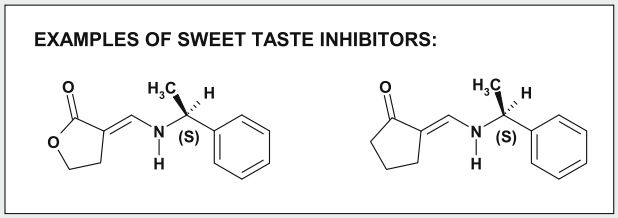

Fig. 6

The invention describes new synthetic sweeteners and sweet taste inhibitors, as well as the use of compounds to modify taste. The invented compounds are produced via an efficient, two-step synthesis from inexpensive commercially available starting materials. The sweeteners are 200-250 times sweeter than a 10% saccharose solution and are characterized by a beneficial taste profile. They may have synergistic effects with known sweeteners and can serve as new model compounds for research.

The inhibitors are tasteless, and inhibit the sweetness of natural and synthetic sweeteners and their combinations. They are structurally related to the sweeteners and are produced essentially in the same way. Sweeteners, if chiral, have an R configuration, and inhibitors have the opposite, S configuration. They may have synergistic effects with known sweet taste inhibitors, like lactisole.

New Synthetic Sweeteners and Sweet Taste Inhibitors", No POIG.01.03.02-00-012/09 part-financed by the European Union within the European Regional Development Fund.

6 European no.: EP 10461504.2

Applicant: Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology, Gliwice Branch

Inventors: Michał Jarząb, Małgorzata Oczko-Wojciechowska, Małgorzata Wiench, Krzysztof Fujarewicz, Aleksandra Pfeifer, Michał Świerniak, Barbara Jarząb

Our ref.: PZ/923/EP

Title: Kit, method and use for the detection of the gene expression profile of anaplastic thyroid cancer

This invention was made under the auspices of Project 1.3.2 of the program entitled "Innovative Economy" at the Institute of Oncology in Gliwice. The goal of the program was to discover RNA markers for thyroid cancer, specifically for the detection it's most common variant, anaplastic thyroid cancer.

Information regarding the gene expression profile of thyroid cancer and its use in diagnostics are thus far insufficient for the effective and certain identification of anaplastic thyroid cancer.

Our invention, based on the genetic signature delivers an excellent molecular tool which allows the differentiation of varius types of cancers, in particular using microarrays.The diagnosis of a particular form of the disease, anaplastic thyroid cancer, allows one to tailor therapy to the variant of the illness, making the treatment not only more efficacious, but greatly reducing the time and funds spent on trial-and-error approaches to treatment selection, as well as cutting down on the side effects of the often ineffective treatments.

7 Polish no. P.391475

Applicant: Institute for Medical Biology & Ludwik Hirszfeld Institute of Immunology and Experimental Therapy, Polish Academy of Sciences,

Inventors: Jolanta Lukasiewicz, Anna Świerzko, Maciej Cedzyński, Czeslaw Lugowski, Anna Maciejewska, Wojciech Jachymek, Tomasz Niedziela

Title: Functional selective ligands of ficolin-3 as a tool for concentration and activity measurements

We offer new, highly specific ligands for human ficolin-3, identified among Hafnia alvei lipopolysaccharides (LPS, endotoxin). Ficolin-3 (ficolin H, Hakata antigen) is involved in the complement activation - an important event of innate immune response. Ficolin-3 concentration in human sera is the highest of all ficolins and significantly exceeds the mannan-binding lectin (MBL) level. The importance of serum ficolin-3 was indicated by several reports concerning diseases related to abnormally low or high concentrations (i.e. systemic lupus erythematosus (SLE), sarcoidosis, febrile neutropenia in pediatric cancer patients, narcotizing enetrocolitis in premature infants, Gram-positive neonatal sepsis). Moreover, a reduced ficolin-3 level in hepatic cirrhosis may be a marker of impaired liver function.

The isolated O-specific polysaccharides can be used as a highly specific diagnostic tool for measurement of ficolin-3 concentration and activity in assays for monitoring therapy. Structural features of these LPSs enable easy isolation of the O-specific PS devoid of main part of core oligosaccharide, that are being bound by other immune factors. Therefore the measurements are not affected by other recognition molecules of the complement, such as MBL, ficolin-1 and -2 or natural antibodies.

The invention provides ligands suitable for purification, depletion as well as concentration and complement activity measurements of functional ficolin-3 in body fluids. Possible applications include a “new functional assay” alternative to „sandwich ELISA”, useful for both scientific and diagnostic purposes.

8 Polish patent appl. no. P-394619, PCT to be submitted in April 2012

Applicant: International Institute of Molecular and Cell Biology

Inventors: Izabela Sabała, Matthias Bochtler

Title: A method of proteolisys, a peptidase, a composytion for use as a bacteriostatic or bacteriricidal agent, a kit and the uses of the acive form of LytM of S. Aureus or a derivative thereof

The subject of the offer is the recombinant catalytic domain of peptidoglycan hydrolase LytM from Staphylococcus aureus, which:

- lyses staphylococcal cells with high efficiency;
- sustains high activity in a wide range of temperatures (0-30°C);
- is unusually active in low conductivity conditions, including pure water;
- is very stable;
- can be produced in high yield and simply purified at low costs.

The enzyme can be very useful in laboratory applications, for decontamination of large surfaces as well as in industrial scale, e. g. to control microbial quality of food.

9 appl. no. WO 2005030970

Applicant: International Institute of Molecular and Cell Biology

Inventors: Erik Ulleras, Gunnar Nilsson, Tove Ringerike, Robert Jan Vandebriel, Aurelia Walczak-Drzewiecka, Khalid Al-Nedawi, Janina Wyczolkowska, Maciej Stepnik, Joanna Arkusz, Konrad Rydzynski, Violetta Adamczewska, Dominka Trzaska, Maciej Olszewski, Urszula Bialek-Wyrzykowska, Jaroslaw Dastych, Martinus Lovik

Title: Tools and methods useful in characterizing the immuntotoxic activity of xenobiotic substances

Fluorescent Cell Chip (FCC) is a novel cost-efficient HTS screen for flagging potential immunomodulators and/or immunotoxicants in early phases of drug development. This assay is utilizing the EL-4 murine lymphoid cell line stably transfected with transgenes coding for fluorescent proteins under the control of several cytokine gene promoters. The FCC technology has been developed by the international research consortium led by the IIMCB in Warsaw. Proteon Pharmaceuticals S. A. is a research spin off company that has further developed the FCC technology into fully automated high throughput screening platform. As a result FCC can be used in the preclinical research for screening chemical libraries to discover novel immunomodulatory compounds that could become candidates for novel antiinflammatory, antiallergic and anticancer drugs.

10 PCT appl. no. PCT/PL2010/000026

Polish appl. no.: P 387 780

PL20090387780, 2009 04 10

Applicant: Institute of Biochemistry and Biophysics Polish Academy of Sciences

Inventors: Ewa Szołajska, Jadwiga Chroboczek, Monika Żochowska

Title: A virus–like particle vector for delivery of pharmaceutical agents, a process for the manufacture thereof, its uses and a pharmaceutical composition

PCT appl. no.: PCT/PL2010/000051

Polish no.: P388 403

PL20090388403, 2009.06.26

Applicant: Institute of Biochemistry and Biophysics Polish Academy of Sciences

Inventors: Jadwiga Chroboczek, Ewa Szołajska, Antonina Naskalska

Title: Virus–like particle vector as a polyvalent platform for intracellular delivery of high-molecular-weight therapeutic substances, method for generating a virus like particle vector and use a virus like particle vector and a pharmaceutical composition containing said virus–like particle vector

The embodiment of both inventions is a virus-like particle vector - an adenoviral dodecahedron (Dd) built from Adenovirus pentons or penton base protein, responsible for virus intracellular penetration. Dd has extraordinary cell entry properties, up to 300000 particles can be observed in one cell in vitro.

The recombinant Dd is obtained with high yield in insect cells in the baculovirus system. The purification protocol consists of a simple two-step procedure. The vector is intended for the delivery of active agents into mammalian cells. According to the method of the invention, the therapeutic substances/agents may be encapsulated

and attached/linked to Dd covalently or noncovalently by means of the universal linker.

Inventions allow for production of human or animal vaccines, delivery of antibodies, antitumour proteins, antitumour agents, nucleic acids, enzymes and immunosuppressive agents, as well as proteins/peptides and lipids determining specific tissue tropism or nucleic acids, to mammalian cells.

11 International appl. no. PCT/PL2006/000026, WO 2007/091907
EPO application 06 747 716.6 - 1223
Polish appl. no.: P378946
Applicant: Institute of Biochemistry and Biophysics Polish Academy of Sciences
Inventors: Wojciech Bal, Edyta Kopera, Artur Krężel, Aleksandra Wysłouch-Cieszyńska

Title: Method of hydrolysis of peptide bond

The invention concerns the method of hydrolysis of a dedicated peptide bond in a recombinant protein. The method of the invention is executed by adding Ni(II) salt to a solution of the said protein, by means of its selective interaction with the designed oligopeptide sequence, directly following the last C-terminal residue of the said protein. The method of the invention serves as a tool of removal of an affinity tag from this protein, following the process of affinity purification of the said protein on a support. According to the method of the invention, the protein purification can be executed with high efficacy and excellent selectivity, and a native protein is obtained.

Inventions allow for production of recombinant proteins under a variety of additives, including low and high salt, denaturing agents, ionic and non-ionic detergents, and reducing agents. It yields proteins of very high purity, free of proteases and at a low unit costs. The method of the invention can be executed in solution or on a support, which adds versatility to its usage.

12 European Patent Application no. EP10191670.8
Applicants: Medical Research Center, Polish Academy of Sciences, Warsaw, Poland
Inventors: Mieczyslaw Pokorski, Agnieszka Rekawek, Dominika Zając, Zbigniew Czarnocki, Edmund Przegalinski, Jolanta Konieczny, Piotr Roszkowski

Title: Medical application of lipid derivatives of dopamine and the methods of their production

The invention is a potential medication for treatment or prophylaxis of neurodegenerative disorders with a deficient dopamine content or dopaminergic transmission induced by disease or genetic factors. These lipophilic compounds penetrate biological barriers, diminish muscle rigidity and are biologically much more stable than dopamine is. Compounds may become an alternative to currently used dopamine prodrugs.

13 PCT appl. no. PCT/PL2007/000035
Applicant: Read-Gene
Inventors: Tomasz Byrski, Jacek Gronwald, Jan Lubiński, Tomasz Huzarski, Steven Narod
Our ref.: PZ/304/PCT

Title: Fast assignment of adequate neoadjuvant chemotherapy for breast cancer patients based on the identification of constitutional BRCA1 mutations

This invention encompasses a mode and means for optimizing breast cancer neoadjuvant chemotherapy using the BRCA1 genotype. It is now possible to identificaty anomalies of germline BRCA1 correlated to a weak clinical response to taxane derivatives in breast cancer patients who have already developed a tumour.

This invention encompasses a method for predicting the response to taxane chemotherapy of breast cancer patients by analysing genetic material. As the method analyses germline founder mutations, the prediction may

be made when a predisposition to breast and ovarian cancer is suspected.

Our solution facilitates BRCA1 germline mutation analysis based on population-specific panels, reliably and rapidly pinpointing the alterations. The mutations may be detected directly or indirectly in DNA, RNA or protein.

The biological material is not necessarily a tumour biopsy, but preferably an easily available biological material, such as peripheral blood or saliva, limiting potential therapies even before tumour development.

14 PCT appl. no. PCT/PL2006/000062
Applicant: Read-Gene
Inventors: Jan Lubiński, Cezary Cybulski, Tadeusz Dębniak, Grzegorz Kurzawski, Janina Suchy
Our ref.: PZ/335/PCT

Title: Determining a predisposition to cancer by identification of genotype combinations of specific variants of the genes CYP1B1, BRCA2 and CHEK2

This invention defines a method and composition for the detection of an inherited predisposition to various cancers, as well as the use of particular germline variant combinations within the CYP1B1, CHEK2 and BRCA2 genes for such a diagnosis. We have made it possible to synthesize DNA and identify genomic abnormalities which are correlated with an increased genetic predisposition to cancers of various organs, with a synergistic effect over the individual variants.

The invention comprises the detection of genetic predispositions to various cancers characterized by the analysis of biological material from a patient. The presence of any of the examined genotype combinations of these three gene variants indicates a high predisposition to breast cancer and, likelihood of colon, kidney, larynx, lung, pancreas, prostate, thyroid, vaginal and ovarian cancers. This is different than the sum of the individual low-risk effects of the mentioned variants of these three genes.

15 PCT appl. no. PCT/PL2009/050011
Applicant: Read-Gene
Inventors: Tomasz Byrski, Jacek Gronwald, Jan Lubiński, Tomasz Huzarski, Steven Narod
Our ref.: PZ/611/PCT

Title: Fast assignment of adequate chemotherapy with platinum based drugs for cancer patients based on the identification of constitutional BRCA1 mutations

The offered invention defines a method for predicting the response of a cancer patient to platinum-based chemotherapy, depending on BRCA1 genotype, based on the analysis of the patient's genetic material. As the method is focused on germline founder mutations, the prediction is already possible at a stage well before cancer development.

A genetic analysis of BRCA1 germline mutations based on population-specific panels of known founder mutations is particularly favourable, since it facilitates the highly reliable identification of the most common BRCA1 mutants with conventional DNA/RNA techniques.

The biological material for genetic analysis is not necessarily a tumour biopsy. The identification of the constitutive BRCA1 genotype is preferably performed on easily available biological material, such as peripheral blood or saliva. An analysis based on constitutive BRCA1 mutations constrains the spectrum of potential therapies already from the outset, even before tumour development.

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