Identified 115 proteins that would allow designing new generation anti-cancer drugs

26/04/2012 10:37:00

The new drugs would be more effective and with fewer side effects

Source: Jose Cano

Researchers from the Research Programme on Biomedical Informatics (GRIB) from the IMIM (Hospital del Mar Research Institute) and the Pompeu Fabra University (UPF) have identified 115 proteins in silico (via computer simulation) that could be highly relevant to treat colon-rectal cancer, since they would make it possible to define the strategy to design new generation anti-cancer drugs. During the last years, it has been proven that drugs are not as selective as it was thought, and that they actually have an affinity for multiple biological targets. For this reason it is important to develop multi-target drugs, meaning drugs that are able to attack several targets simultaneously, that are more effective and with fewer side effects

One of the key aspects of the research in new cancer drugs is determining with what proteins the drug should interact, so as to destroy the tumour cells without affecting healthy ones. In this sense, the work presents a new strategy to identify proteins that are highly relevant in cancer.

According to Jordi Mestres, the coordinator of the Chemogenomics Laboratory of the GRIB "***The basis of this strategy is a list of molecules that, experimentally, have been proven to be significantly more toxic for tumour cells than for healthy ones and another list of molecules that are more toxic for healthy cells than for tumour ones. These two lists of molecules are computationally processed with a methodology that allows predicting those proteins for which each molecule will have an affinity, identifying potential biological targets to develop new anti-cancer drugs***".

The researchers' contributions have been, more specifically, the prediction of proteins that interact with molecules that have experimentally shown a differential cytotoxicity, either for tumour cells or healthy ones. The larges efforts were made in experimental testing of 30,000 molecules and the logistical difficulty this entails. Overall, 119,520 cytotoxicity data were generated for both tumour and healthy cells. Once both groups of molecules with the highest differential cytotoxicity were identified, predicting those proteins with which they interacted was very effective thanks to a methodology that was originally developed by the same researchers participating in the study which then became the foundation of the Chemotargets spin-off.

This study is part of the doctoral theses of students Praveena Kuchipudi and Nikita Remez, from the GRIB, with the collaboration of Prof. Ferran Sanz, the director of the GRIB. It is framed within a project of the 6th European Framework Programme CancerGrid , and was lead by the Hungarian company AMRI, that contributed its compound library (a collection of millions of compounds), and by testing them it was possible to identify molecules with a differential cytotoxicity.

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The Research Programme on Biomedical Informatics (GRIB) has more than 80 researchers from both the IMIM (Hospital del Mar Research Institute), the public organization working in scientific research in the field of Biomedicine and Health Sciences, and the Pompeu Fabra University. The research carried out at the GRIB focuses on biomedical informatics, that is, designing computational methods to analyze biological information. The GRIB is a European reference centre in this field. It is currently

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115 Proteins Identified That Would Allow Designing New Generation Anti-Cancer Drugs

ScienceDaily (Apr. 25, 2012) — Researchers from the Research Programme on Biomedical Informatics (GRIB) from the IMIM (Hospital del Mar Research Institute) and the Pompeu Fabra University (UPF) have identified 115 proteins in silico (via computer simulation) that could be highly relevant to treat colon-rectal cancer, since they would make it possible to define the strategy to design new generation anti-cancer drugs. During the last years, it has been proven that drugs are not as selective as it was thought, and that they actually have an affinity for multiple biological targets.

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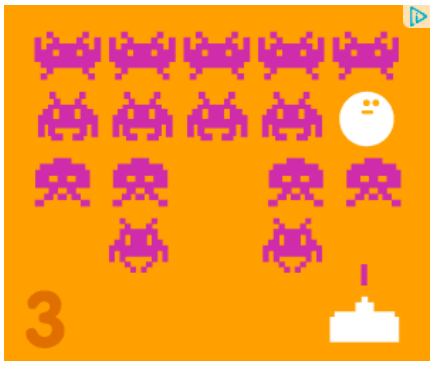

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1. Beáta Flachner, Zsolt Lörincz, Angelo Carotti, Orazio Nicolotti, Praveena Kuchipudi, Nikita Remez, Ferran Sanz, József Tóvári, Miklós J. Szabó, Béla Bertók, Sándor Cseh, Jordi Mestres, and György Dormán. **A Chemocentric Approach to the Identification of Cancer Targets**. *PLoS ONE*, 2012 DOI: 10.1371/journal.pone.0035582

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posted on: april 25, 2012 - 9:30pm

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Source: **IMIM (Hospital del Mar Research Institute)**

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Researchers identify 115 proteins that will allow designing new generation anti-cancer drugs

April 26, 2012 in Cancer

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More information: "A Chemocentric Approach to the Identification of Cancer Targets". Beáta Flachner, Zsolt Lörincz, Angelo Carotti, Orazio Nicolotti, Praveena Kuchipudi, Nikita Remez, Ferran Sanz, József Tóvári, Miklós J. Szabó, Béla Bertók, Sándor Cseh, Jordi Mestres, and György Dormán. *PLoS ONE* 2012, 7: e0035582. **http://dx.plos.org ... pone.0035582**

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Designing New Generation Anti-Cancer Drugs

Main Category: Colorectal Cancer
Article Date: 27 Apr 2012 - 1:00 PDT

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Colorectal Cancer

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Protein identification could lead to new cancer drugs

26 April 2012
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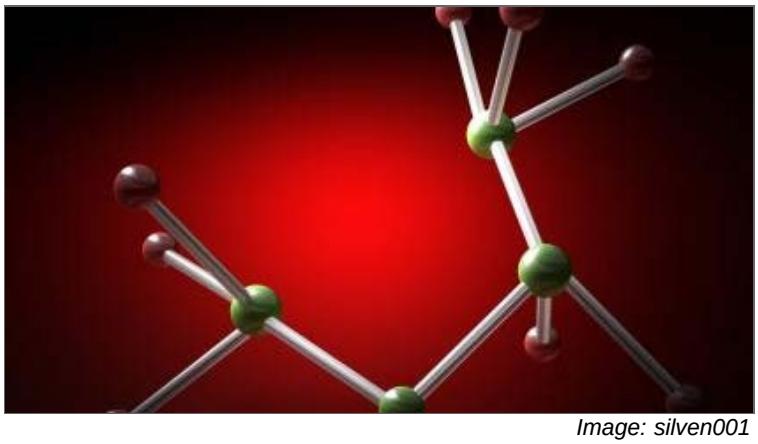

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Jordi Mestres, the co-ordinator of the Chemogenomics Laboratory of the Research Programme in Biomedical Informatics (GRIB) from the Hospital del Mar Research Institute (IMIM) – who conducted the research along with colleagues from Pompeu Fabra University – said: "The basis of this strategy is a list of molecules that, experimentally, have been proven to be significantly more toxic for tumour cells than for healthy ones and another list of molecules that are more toxic for healthy cells than for tumour ones.

"These two lists of molecules are computationally processed with a methodology that allows predicting those proteins for which each molecule will have an affinity, identifying potential biological targets to develop new anti-cancer drugs."

The research team have also predicted proteins that interact with molecules that have experimentally shown a differential cytotoxicity, either for tumour cells or healthy ones.

Given that it has been proven that drugs are not as selective as it was thought, and that they actually have an affinity for multiple biological targets, such research is important, as it will help to pave the way for multi-target drugs that are able to attack several targets simultaneously, are more effective and have fewer side effects.

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Research News

Identified 115 Proteins That Would Allow Designing New Generation Anti-cancer Drugs

Thursday, April 26, 2012

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Reference Article

"A Chemocentric Approach to the Identification of Cancer Targets". Beáta Flachner, Zsolt Lörincz, Angelo Carotti, Orazio Nicolotti, Praveena Kuchipudi, Nikita Remez, Ferran Sanz, József Tóvári, Miklós J. Szabó, Béla Bertók, Sándor Cseh, Jordi Mestres, and György Dormán. *PLoS*

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115 proteins identified that would allow designing new generation anti-cancer drugs

Posted: 25 Apr 2012 04:32 PM PDT

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Some melanomas use cloaking protein to hide from cancer-killing immune cells

Posted: 25 Apr 2012 06:39 AM PDT

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The researchers' contributions have been, more specifically, the prediction of proteins that interact with molecules that have experimentally shown a differential cytotoxicity, either for tumour cells or healthy ones. The larges efforts were made in experimental testing of 30,000 molecules and the logistical difficulty this entails. Overall, 119,520 cytotoxicity data were generated for both tumour and healthy cells. Once both groups of molecules with the highest differential cytotoxicity were identified, predicting those proteins with which they interacted was very effective thanks to a methodology that was originally developed by the same researchers participating in the study which then became the foundation of the Chemotargets spin-off (http://www.chemotargets.com).

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This study is part of the doctoral theses of students Praveena Kuchipudi and Nikita Remez, from the GRIB, with the collaboration of Prof. Ferran Sanz, the director of the GRIB. It is framed within a project of the 6th European Framework Programme CancerGrid (ftp://ftp.cordis.europa.eu/pub/lifescihealth/docs/cancergrid.pdf), and was lead by the Hungarian company AMRI, that contributed its compound library (a collection of millions of compounds), and by testing them it was possible to identify molecules with a differential cytotoxicity.

About GRIB

The Research Programme in Biomedical Informatics (GRIB) has more than 80 researchers from both the IMIM (Hospital del Mar Research Institute), the public organization working in scientific research in the field of Biomedicine and Health Sciences, and the Pompeu Fabra University. The research carried out at the GRIB focuses on biomedical informatics, that is, designing computational methods to analyze biological information. The GRIB is a European reference centre in this field. It is currently located at the Barcelona Biomedical Research Park and is directed by Ferran Sanz. http://grib.imim.es/

Reference Article

"A Chemocentric Approach to the Identification of Cancer Targets". Beáta Flachner, Zsolt Lörincz, Angelo Carotti, Orazio Nicolotti, Praveena Kuchipudi, Nikita Remez, Ferran Sanz, József Tóvári, Miklós J. Szabó, Béla Bertók, Sándor Cseh, Jordi Mestres, and György Dormán. *PLoS ONE* 2012, 7: e0035582.

For further information

Rosa Manaut, Head of Communication at IMIM, Tel.: (+34) 699094833 or Marta Calsina, Communication Services at IMIM, Tel.: (+34) 933160680.

Identified 115 proteins that would allow designing new generation anti-cancer drugs

24th of April 2012 19:00 EST | AAAS

(*IMIM (Hospital del Mar Research Institute)*) Researchers have identified 115 proteins in silico that could be highly relevant to treat colon-rectal cancer, since they would make it possible to define the strategy to design new generation anti-cancer drugs. During the last years, it has been proven that drugs are not as selective as it was thought, and that they actually have an affinity for multiple biological targets. For this reason it is important to develop multi-target drugs, able to attack several targets simultaneously

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Source: IMIM (Hospital del Mar Research Institute)
Wednesday, April 25, 2012

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Identified 115 Proteins That Would Allow Designing New Generation Anti-cancer Drugs

Researchers from the Research Programme in Biomedical Informatics (GRIB) from the IMIM (Hospital del Mar Research Institute) and the Pompeu Fabra University (UPF) have identified 115 proteins in silico (via computer simulation) that could be highly... FULL ARTICLE AT CHECK ORPHAN

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9 hours 38 min ago

Scientists from the Danish Stem Cell Center at the University of Copenhagen and Hagedorn Research Institute have gained new insight into the signaling paths that control the body's insulin production. This is important knowledge with respect to their final goal: The conversion of stem cells into insulin-producing beta cells that can be implanted into patients who need them. The research results have just been published in the well-respected journal PNAS.

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public about dietary supplements and cancer risk, according to a commentary published April 25 in the Journal of the National Cancer Institute.

IDENTIFIED 115 PROTEINS THAT WOULD ALLOW DESIGNING NEW GENERATION ANTI-CANCER DRUGS

Wed, 04/25/2012 - 07:00

Researchers have identified 115 proteins in silico that could be highly relevant to treat colon-rectal cancer, since they would make it possible to define the strategy to design new generation anti-cancer drugs. During the last years, it has been proven that drugs are not as selective as it was thought, and that they actually have an affinity for multiple biological targets. For this reason it is important to develop multi-target drugs, able to attack several targets simultaneously.

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Genes Shed Light on Spread of Agriculture in Stone Age Europe

Biology » Bone, Age »

Uppsala University − One of the most debated developments in human history is the transition from hunter gatherer to agricultural societies. This week's edition of Science presents the genetic findings of a Swedish Danish research team, which show that agriculture spread to Northern Europe via migration from Southern Europe.

First Evaluation of the Clean Water Act's Effects on Coastal Waters Reveals Major Successes

Nature » Eocene, Coale »

University of Southern California − Levels of copper, cadmium, lead and other metals in Southern California's coastal waters have plummeted over the past four decades, according to new research from USC. Samples taken off the coast reveal that the waters have seen a 100-fold decrease in lead and a 400-fold decrease in copper and cadmium. Concentrations of metals in the surface waters off Los Angeles are now comparable to levels found in surface waters along a remote stretch of Mexico's Baja Peninsula.

Scientists Have Demonstrated a New Technique That Will Transform Epigenetics Research

Biology » Stem, Cell »

University of Cambridge − Collaboration between scientists at Cambridge University and the Babraham Institute have demonstrated a new technique that will significantly improve scientists' ability to perform epigenetics research and help unlock the door to understanding how cells develop and function. Epigenetics is a branch of genetics that studies modifications to the DNA which affect gene activity. The research, published today (26 April) in the journal Science, has important implications for stem cell research and the development of regenerative medicines. …

Scholars Debate American Exceptionalism in New Journal

Economics » Religious, Religion »

University of Chicago Press Journals − The inaugural issue of American Political Thought: A Journal of Ideas, Institutions, and Culture features a set of articles titled "American Exceptionalism: Is It Real, Is It Good." The five articles deconstruct the meanings and applications of a term that, somewhat surprisingly, has escaped its academic origins and found its way into modern political parlance.

New Guide for Research on Multiblock Polymers Emerges

Biology » Materials, Polymers »

University of California - Santa Barbara − (Santa Barbara, Calif.) — Thanks to advances in polymer chemistry and a wide variety of monomer constituents to choose from, the world of multiblock polymers is wide open. These polymers can result in an astonishing array of materials, customizable to almost any specification. However, the flood of options could be overwhelming, without a theoretical framework to guide research. UC Santa Barbara scientists Glenn Fredrickson and Kris Delaney address that issue in their paper, "Multiblock Polymers: Panacea or Pandora's Box?" The paper appears in…

Analytic Thinking Can Decrease Religious Belief: UBC Study

Psychology » Atheists, Belief »

University of British Columbia − A new University of British Columbia study finds that analytic thinking can decrease religious belief, even in devout believers. The study, published today in the journal Science, finds that thinking analytically increases disbelief among believers and skeptics alike, shedding important new light on the psychology of religious belief.

Mini Cargo Transporters on a Rat Run

Biology » Aggregates, Huntingtin »

Technische Universitaet Muenchen − Molecular motors are the key to the development of higher forms of life. They transport proteins, signal molecules and even entire chromosomes down long protein fibers, components of the so-called cytoskeleton, from one location in the cell to another. Not unlike trucks on a motorway, there are permanently thousands of these small motor proteins underway at any given point in time – a highly coordinated and extremely fast mode of transport. This highly efficient infrastructure is a prerequisite for the formation of large,…

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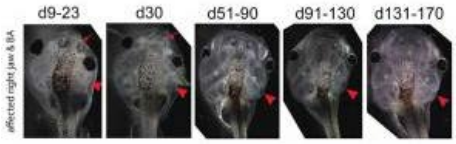


repair

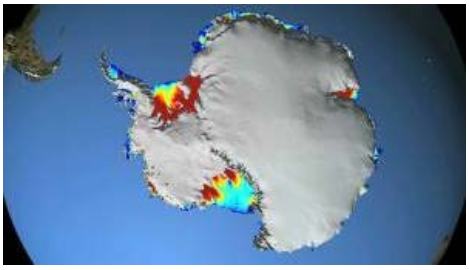
Biology » Tufts, Engineering »

Tufts University − MEDFORD/SOMERVILLE, Mass. (April 25, 2012) – Developmental biologists at Tufts University have identified a "self-correcting" mechanism by which developing organisms recognize and repair head and facial abnormalities. This is the first time that such a mechanism has been reported for the face and the first time that this kind of flexible, corrective process has been rigorously analyzed through mathematical modeling.

Older Age And Free School Meals Are Associated with Increased Likelihood of Substance Use

Psychology » Boys, Girls »

Oxford University Press − Alcohol, tobacco and illegal drug use among young people is a public health concern in the UK. The short and long term risks to health are well known and range from accidental injuries, violence, sexual ill-health and increased rates of chronic conditions and premature death. A range of policies have been directed at reducing substance use among English children. Despite this, the number of children taking substances remains substantial. In 2009, it was reported that 180,000 children aged 11 to 15 years old…



Warm Ocean Currents Cause Majority of Ice Loss from Antarctica

Nature » Ice, Sheet »

NASA/Goddard Space Flight Center − Warm ocean currents attacking the underside of ice shelves are the dominant cause of recent ice loss from Antarctica, a new study using measurements from NASA's Ice, Cloud, and land Elevation Satellite (ICESat) revealed.

Why Do the Different People's Bodies React Differently to a High-fat Diet?

Biology » Bacteria, Microbiota »

INSERM (Institut national de la santé et de la recherche médicale) − Gut flora, otherwise knows as gut microbiota, are the bacteria that live in our digestive tract. There are roughly one thousand different species of bacteria, that are nourished partly by what we eat. Each person has their own specific gut flora and metabolism and these differ according to our dietary habits. Previous studies in mice have shown that a high-fat diet is capable of causing an imbalance in the gut flora, thus causing metabolic diseases such as diabetes or obesity.

Identified 115 Proteins That Would Allow Designing New Generation Anti-cancer Drugs

Technology » Cells, Cell »

IMIM (Hospital del Mar Research Institute) − Researchers from the Research Programme in Biomedical Informatics (GRIB) from the IMIM (Hospital del Mar Research Institute) and the Pompeu Fabra University (UPF) have identified 115 proteins in silico (via computer simulation) that could be highly relevant to treat colon-rectal cancer, since they would make it possible to define the strategy to design new generation anti-cancer drugs. During the last years, it has been proven that drugs are not as selective as it was thought, and that they actually have an affinity for…

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Researchers from the Research Programme in Biomedical Informatics (GRIB) from the IMIM (Hospital del Mar Research Institute) and the Pompeu Fabra University (UPF) have identified 115 proteins in silico (via computer simulation) that could be highly relevant to treat colon-rectal cancer, since they would make it possible to define the strategy to design new generation anti-cancer drugs. During the last years, it has been proven that drugs are not as selective as it was thought, and that they actually have an affinity for multiple biological targets…

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115 proteins identified that would allow designing new generation anti-cancer drugs

Friday, April 27, 2012 - 00:30 in Biology & Nature

Researchers have identified 115 proteins in silico that could be highly relevant to treat colon-rectal cancer, since they would make it possible to define the strategy to design new generation anti-cancer drugs. During the last years, it has been shown that drugs are not as selective as it was thought, and that they actually have an affinity for multiple biological targets. For this reason it is important to develop multi-target drugs, able to attack several targets simultaneously.

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CANCER EVOLUTION

THURSDAY, 26 APRIL, 2012

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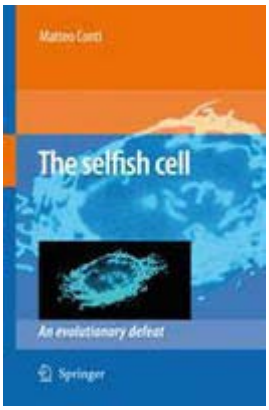
Cancer evolution is an example of competitive evolution. It is a warning that competition (darwinian evolution) is not the way to further evolution. Understand this for the sake of our planet and ourselves...



As a book on cancer evolution, the selfish cell deals with innovative concepts in evolutionary biology. Additionally, new ideas on cancer treatments are forwarded to researchers.

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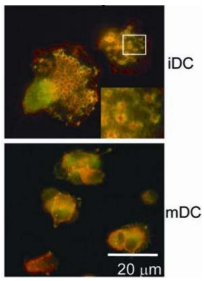
CRM197 A NEW IMMUNOTHERAPY FOR CANCER



Many years ago, diphtheria toxin (DT) showed antitumor activity in mice and in humans, but it was unclear whether this depended on the toxicity of the molecule

Cancer and evolution

EUREKALERT! - CANCER

The premier online source for science news since 1996. A service of the American Association for the Advancement of Science.

- Genetic variants, tobacco exposure and lung cancer risk
  (*Journal of the National Cancer Institute*) There is an association between the rs1051730-rs16969968 genotype and objective measures of tobacco exposure, which indicates that lung cancer risk is largely, if not entirely, mediated by level of tobacco exposure, according to a study published April 25 in the Journal of the National Cancer Institute.

- Fourth IMPAKT Breast Cancer Conference
  (*European Society for Medical Oncology*) Novel technologies and advances in drug development are having an enormous impact on how breast cancer patients are treated. The IMPAKT breast cancer conference aims to teach how to quickly translate laboratory discoveries into clinical practice (which is what patients are asking for) and how to make sure that data collected in the clinic reach back to the researchers allowing them to go into even deeper details of the biological behavior of the tumor.

- UT Dallas bioengineering head to be inducted as Fellow of Royal Society
  (*University of Texas at Dallas*) Dr. Mathukumalli Vidyasagar, an internationally known expert in control and system theory, has been elected a Fellow of The Royal Society, the oldest continuously operating scientific society in the world.

- Centre for Global Non-Communicable Diseases launched to tackle killer diseases
  (*London School of Hygiene & Tropical Medicine*) The London School of Hygiene & Tropical Medicine's new Centre for Global Non-Communicable Diseases will focus research and expertise on this growing global health challenge.

THE DCA SITE

THE DCA SITE

Tumor cells often preferentially use glycolysis to generate adenosine triphosphate (ATP), even in the presence of oxygen, a phenomenon known as aerobic glycolysis, or the "Warburg effect. DCA treatment appears to restore and to boost mitochondrial respiration in cancer cells, consequently causing cancer cell selective killing by a kind of "self-burning" effect.

CELL ENERGY

NEW PAPER ABOUT DCA

We report the publication of a new interesting paper about DCA in the 2011edition of the

only or on its strong inflammatory-immunological property as well. (Buzzi S., Cancer Res. 1982 May;42(5):2054-8). The same researchers, to deal with this open question, planned to treat a group of cancer patients with cross-reacting material 197 (CRM197).

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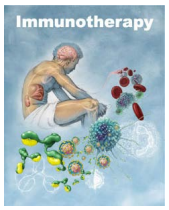
GC-MAF CANCER IMMUNOTHERAPY



...The once-weekly injection of minute amounts of Gc-MAF, just 100 nanograms (billionths of a gram), activates macrophages and allows the immune system to pursue cancer cells with vigor, sufficient to produce total long-term cures in humans..."

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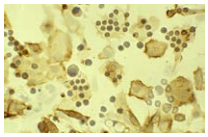

A report on the creation of a virus obtained genetically modifying a common adenovirus which could constitute a therapy against cancer has appeared recently in the scientific news. This virus would selectively infect cancer cells and force them to express a protein which calls for the intervention of macrophages, additionally stimulating them to multiply. This strategy would therefore help the body mounting a strong immune response against cancer cells.

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CANCER IMMUNITY TRICK DISCOVERED

- Research!America says house funding levels for FY13 could undermine medical progress
(*Research!America*) Research!America President and CEO Mary Woolley says the House Appropriations Subcommittee's top-line allocation for the Departments of Labor and Health and Human Services is far from what's needed to maintain a thriving research enterprise that saves lives and spurs new businesses and jobs throughout the country.

- Growing up as a neural stem cell: The importance of clinging together and then letting go
(*University of California - Los Angeles Health Sciences*) Stem cell researchers at UCLA have identified new components of the genetic pathway that controls the adhesive properties and proliferation of neural stem cells and the formation of neurons.

- New diagnostic tool determines aggressiveness of prostate cancer
(*University of Central Florida*) One in six men will be diagnosed with prostate cancer during his lifetime, the second leading cause of death among men in the United States.It's a serious problem and current diagnostic tests aren't very specific. But a research team at the University of Central Florida NanoScience Technology Center has found a more accurate test that not only determines whether a patient has prostate cancer, but also how aggressive it is.

- Supplements and cancer prevention: A cautionary tale
(*Journal of the National Cancer Institute*) Government regulators and the scientific community should work to ensure that they give clear guidance to the public about dietary supplements and cancer risk, according to a commentary published April 25 in the Journal of the National Cancer Institute.

- Identified 115 proteins that would allow designing new generation anti-cancer drugs
(*IMIM (Hospital del Mar Research Institute)*) Researchers have identified 115 proteins in silico that could be highly relevant to treat colon-rectal cancer, since they would make it possible to define the strategy to design new generation anti-cancer drugs. During the last years, it has been proven that drugs are not as selective as it was thought, and that they actually have an affinity for multiple biological targets. For this reason it is important to develop multi-target drugs, able to attack several targets simultaneously.

- Nano nod for lab on a chip
(*University of Alberta*) You wouldn't know it from appearances, but a metal cube the size of a toaster, created at the University of Alberta, is capable of performing the same genetic tests as most fully equipped modern laboratories -- and in a fraction of the time.

- Mayo Clinic identifies gene critical to development and spread of lung cancer
(*Mayo Clinic*) A single gene that promotes initial development of the most common form of lung cancer and its lethal metastases has been identified by researchers at Mayo Clinic in Florida.

- Can weight loss help African-American breast cancer survivors?
(*University of Illinois at Chicago*) Researchers at the University of Illinois at Chicago's Institute for Health Research and Policy have designed a novel community-based weight loss intervention designed for African-American breast cancer survivors.

- Bridging the gap in treatment for older women with breast cancer

(*University of Sheffield*) Sheffield researchers are investigating ways to improve the treatment and survival rate of elderly

Interantional Journal of Cancer

Dichloroacetate (DCA) inhibits neuroblastoma growth by specifically acting against malignant undifferentiated cells

Read more...

PIPERLONGUMINE AND DCA

A small molecule from this plant is a newfound small anticancer molecule.
The research demonstrating this has been recently published in even in the most prestigious journal Nature (vol 475, 14 july 2011). But there could be more on sight, a synergy with the DCA?
Read more...

DCA AND SUGAR

DCA promoters recommend taking caffeine and extra thiamine (vitamin B1), hoping that this will help the DCA work better and reduce potential risks of nerve damage. In a survey conducted by the DCA site (www.thedcasite.com) a certain number of heavy tea or coffee drinkers observed astounding responses, even remissions. Here we propose that it could be the sugar contained in those drinks to have helped the DCA mote than, or maybe instead of, caffeine or theophylline.

Read more...

THE DCA THERAPY

Cancer News, Treatment and Research

Lastest Cancer News: Mesothelioma Lung Cancer, Breast Cancer, Colon Cancer, Skin Cancer, Prostate Cancer & Ovarian Cervical Cancer

CANCER NEWS

- Bladder Cancer (55)
- Brain Tumor Cancer (30)
- Breast Cancer (8025)
- Cancer Bulletins (325)
- Cancer Clinical Trials (3676)
- Cancer Treatment (383)
- Colon Rectal Cancer (5848)
- General Cancer (9402)
- Leukemia Lymphoma Cancer (10405)
- Lung Mesothelioma Asbestos (3688)
- Ovarian Cervical Uterine Cancer (727)
- Pancreatic Cancer (48)
- Prostate Cancer (6557)
- Skin Cancer (5884)
- Uncategorized (52)

CANCER NEWS TOPICS

- Lung cancer: treatment, survival, and resources | Dana-Farber/Brigham and Women's Cancer Center
- Supporting lung cancer patients | Dana-Farber/Brigham and Women's Hospital
- New hope for prostate cancer sufferers
- Metastatic Colon Cancer
- Behind The Science: Colon Cancer Awareness
- Sutter Medical Uses New Breast Cancer Treatment
- 115 proteins identified that would allow designing new generation anti-cancer drugs
- Small molecular bodyguards kill HPV-infected cancer cells by protecting tumor-suppressor
- Boron-nitride nanotubes show

115 proteins identified that would allow designing new generation anti-cancer drugs

by on Friday, April 27th, 2012 | No Comments

Researchers have identified 115 proteins in silico that could be highly relevant to treat colon-rectal cancer, since they would make it possible to define the strategy to design new generation anti-cancer drugs. During the last years, it has been shown that drugs are not as selective as it was thought, and that they actually have an affinity for multiple biological targets. For this reason it is important to develop multi-target drugs, able to attack several targets simultaneously.

Follow this link: 115 proteins identified that would allow designing new generation anti-cancer drugs

Tags: attack, cancer, important, multi, multiple, reason, relevant, shown, simultaneously, target, treat
Posted in General Cancer

Comments are closed.

Cancer News Archives

- April 2012 (1030)
- March 2012 (1187)
- February 2012 (1142)
- January 2012 (1344)
- December 2011 (1488)
- November 2011 (1838)
- October 2011 (4594)
- September 2011 (5348)
- August 2011 (4784)
- July 2011 (4662)
- June 2011 (4231)
- May 2011 (2803)
- April 2011 (5571)
- March 2011 (5751)
- February 2011 (5238)
- January 2011 (4094)

April 2012

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30						

« Mar

Tags

awareness blood **breast cancer** cancer articles cancer information cancer tips cell cells center **Colon** condition **diagnosed** died **disease drug** early form found **health** hospital intervention leukaemia **leukemia** lung **lymphoma** medical men mesothelioma **patients** people **prostate** recruiting **research** researchers risk **skin** sponsor **study** **treatment** university verified women year years

Other News Sites

Cancer Avenues

Home

Welcome to Cancer Avenues

Welcome to my website! I have developed this site in an effort to guide others from cancer diagnosis through the maze of treatment options. And offer some enlightenment to steps you can take along your treatment journey. Here are some key features on our site:

- Darlene's Corner
- Changes To Make In Your Life
- Supplements Information & Education
- Treatment Resources & Links
- Support Resources and Links

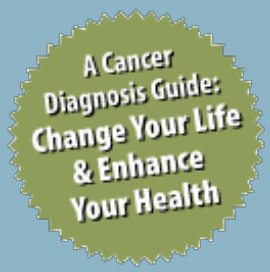
My Cancer Story

At age 39 I found a lump in my left breast and so the journey began …

One night in late October 2005 I was out at a local club having fun dancing and sharing conversation with friends when I noticed that my left breast appeared to be swollen. My concern was not immediate as my left breast was always ...

Read more...

Buy My New eBook!



An integrative guide to steer you through the first steps in regaining your health and enhancing your healing.

Buy eBook...

Cancer News

Read the latest medical research on risk factors for cancer, cancer symptoms, treatments and more. Updated daily.

- **Boron-nitride nanotubes show potential in cancer treatment**
  A new study has shown that adding boron-nitride nanotubes to the surface of cancer cells...
- **Small molecular bodyguards kill HPV-**

The Mission

Our passion for cancer advocacy and one amazing personal journey is at the core of this site.

Cancer Avenues strives to empower patients, their family and friends to be active and informed participants throughout the cancer journey. We are committed to provide a wide range of information, support and advocacy for those afflicted with cancer and affected by cancer personally. We believe that education is paramount and exploring all options will ensure the best decisions. We are hopeful to bring about a higher quality of services for those diagnosed through disseminating pertinent information.

"Awareness is vital and knowing that each and every life need not be lost to this disease." *- Darlene S. Gant*

Additional Tidbits...

In the cancer world, we make important decisions daily regarding our lifestyle, environment and medical care. Everyone reaches that defining moment to either take charge or become a back seat passenger. Cancer Avenues strives to provide information, resources and infinite options to enable you to sit in the driver seat and empower you to become the best advocates for yourself and/or a loved one.

Additionally, an experience with cancer is not only a physical journey but an emotional and spiritual one. It is a time to turn within to find strength and hope in an attempt to over come the many obstacles in place.

We are optimistic in our efforts to plant seeds of HOPE and HEALTH.

Search

search...

Partners In Health

infected cancer cells by protecting tumor-suppressor
Researchers have discovered small molecules that kill cancer cells caused by infection with human papillomavirus....

115 proteins identified that would allow designing new generation anti-cancer drugs
Researchers have identified 115 proteins in silico that could be highly relevant to treat colon-rectal...

Polls

If you are currently under treatment for cancer are you?

- Following a strict conventional treatment plan, including chemotherapy, targeted therapies, radiation and/or various other cancer drugs?
- Following a strictly alternative protocol which does not include any conventional treatments?
- Following an integrative (complementary alternative medicine (CAM) blended with conventional) treatment plan?

Vote Results

Affiliates

H.O.P.E. ORGANIZATION

Health, Opportunity, Peace & Education

Click here to visit our sister site

Disclaimer

Information found on this website is not intended to be used to diagnose and/or treat a health condition or disease. Please consult your healthcare practitioner with concerns you may have regarding your condition. Information provided is for educational purposes and not intended as diagnosis, treatment or prescription of any kind.

Special Thanks

I would like to thank some people/organizations for helping me and inspiring me to do the site ...

Status

We have 2 guests online

Identifiquen les proteïnes que maten les cèl·lules amb càncer de còlon

Actualitzat el 26.04.2012 a les 10:30 **Albert Muñoz**

Comenta »

Investigadors de l'Institut de Recerca de l'Hospital del Mar i la Universitat Pompeu Fabra han identificat 115 proteïnes de les cèl·lules amb càncer de còlon que podrien ser útils per combatre aquesta malaltia. No es tracta encara de cap nou tractament, però les conclusions d'aquesta investigació permetran dissenyar, en el futur, medicaments més efectius contra el càncer amb menys efectes secundaris.

Els investigadors del Programa de Recerca en Informàtica Biomèdica (GRIB) partien d'una

NOTÍCIES MÉS VISTES

- Jutges i advocats desaproven el web "antivàndals"
- Presó provisional sense fiança per a una secretària d'organització de la CGT
- Atrapades quatre persones a l'ascensor de l'estació de metro de Glòries durant tres hores
- La Coordinadora Metropolitana del Taxi aposta per un peatge per accedir al centre de la ciutat
- L'oposició demana que s'aparqui el Blau@Ictinea

DARRERES NOTÍCIES

- 15:42 Declara el principal acusat en la trama del port
- 15:23 La PTP alerta de retallades severes en l'àmbit del transport públic
- 14:04 El Departament d'Ensenyament aplicarà les

experimentació prèvia duta a terme en el marc del programa europeu CancerGrid. Aprofitant la quimioteca de l'empresa hongaresa AMRI, **un altre grup de recerca havia provat 30.000 molècules diferents en laboratori** per veure quines ataquen les cèl·lules tumorals i quines resulten tòxiques per a les cèl·lules sanes. Això va permetre identificar unes 200 molècules que funcionen com a verí per a les cèl·lules del còlon o el recte amb càncer.

La recerca duta a terme a Barcelona ha permès **esbrinar exactament sobre quines proteïnes -de totes les que es troben a les cèl·lules del còlon i el recte- actuen aquestes molècules que maten les cèl·lules amb càncer**. L'anàlisi a aquest nivell també s'hagués pogut fer en un laboratori químic, però hauria estat molt més costosa i només s'haurien pogut provar unes **150 proteïnes** diferents, mentre que els programes informàtics desenvolupats des del GRIB permeten simular en pocs segons la reacció amb **5.000 proteïnes**. Aquesta metodologia de treball va ser la base per a la creació de l'empresa Chemotargets, que des de fa un any comercialitza alguns dels programes desenvolupats per ser usats en laboratoris farmacèutics.

En els darrers temps s'ha evidenciat que els **fàrmacs utlitizats per tractar diferents tipus de càncer no són tan selectius com es creia.** És a dir, que no només ataquen les cèl·lules cancerígenes, sinó que també n'eliminen les sanes. En aquest sentit, la descoberta permetrà dissenyar **fàrmacs més eficients i que només actuïn sobre les cèl·lules malaltes** i, en conseqüència, tiguin menys efectes secundaris.

Sobre el GRIB

El Programa d'Investigació en Informàtica Biomèdica (GRIB) està format per més de 80 investigadors de l'Institut d'Investigació de l'Hospital del Mar (IMIM) i de la Universitat Pompeu Fabra. La investigació que s'hi porta a terme està focalitzada en la informàtica biomèdica. El GRIB és un centre de referència en l'àmbit europeu en aquesta disciplina.

Transcripció del vídeo »

Notícies relacionades

- Detecten una mutació genètica que crea resistència a un fàrmac del càncer de còlon
- Un equip de recerca de la Vall d'Hebron descobreix la proteïna que propicia els tumors cerebrals
- S'avança en la investigació de la leucèmia
- Descarten que l'ús del mòbil augmenti el risc de càncer
- Investigació i tractaments personalitzats per als pacients amb càncer cerebral

Enllaços externs

- Web de Chemotargets

Etiquetes

biotecnologia, càncer, càncer de còlon, Hospital del Mar, IMIM, informàtica, investigació, UPF

Comentaris

El teu comentari

Normes d'ús

Els comentaris publicats expressen l'opinió dels usuaris, no de

retallades imposades per Madrid

- **13:15**
  La Confederació de Comerç, en contra de la liberalització dels horaris

- **12:49**
  Les ONG alerten de les repercussions de les retallades en l'atenció als seropositius