



BioTechCircle News®

February 2010

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In this articles section: links to 53 free Web articles in 11 major categories.

The major categories are in alphabetical order and further subdivided to make it easy for you to locate news and developments in technology, the business and the markets in the life science areas of interest to you.

Note: if the links don't connect you directly, please copy and paste the entire URL into your web browser.

Here are the major categories and the page where each category starts:

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For a brief explanation of how we categorize the articles, please see "Express Guide to Monthly Web Articles at: http://www.techmanage.net/expressguide_articles

AGRI-BIOTECH

Subcategory: Crops

Subcategory: Genome Sequence

First Wild Grass Species and Model System for Energy Crops Sequenced

Doe Joint Genome Institute

10-Feb-10

The complete sequence of the wild grass *Brachypodium distachyon*'s genome has been sequenced, making it an ideal tool for developing grasses specifically tailored for biomass and biofuel production. Link to video of scientist discussing the project.

http://www.jgi.doe.gov/News/news_10_02_10.html

Subcategory: Microorganisms

Fluorinase Success

Stephen K. Ritter

Chemical & Engineering News

28-Jan-10

By reprogramming a deep-sea microbe to make a fluorinated version of the anticancer drug candidate salinosporamide A, scientists have achieved gene cloning of the fluorinase enzyme into a host organism to generate a fluorinated metabolite.

<http://pubs.acs.org/cen/news/88/i05/8805notw1.html>

BIOBUSINESS MANAGEMENT

Subcategory: Cell Therapy

The Challenges And Opportunities Facing Stem Cell Scientists

Jennifer Michalowski

Medical News Today

22-Feb-10

Describes current climate facing stem cell researchers in the U.S., expert viewpoint on whether induced pluripotent stem cells (iPS) (which are derived from adult cells) will have the same potential therapeutic utility as human embryonic stem cells.

<http://www.medicalnewstoday.com/articles/179885.php>

Subcategory: Patent/Intellectual Property Issues

How Patent Vulnerability Impacts Valuation

David Wanetick

R & D Magazine

08-Feb-10

Patent valuation is difficult to determine due to underlying technologies, legal issues, business issues, and context. For example, the market targeted by a patent could become obsolete before the USPTO makes a decision. Table, graphs.

<http://www.rdmag.com/Policy-and-Industry-How-Patent-Vulnerability-Impacts-Valuation/?wnnvz=1737.01298808060>

DIAGNOSTIC TOOLS

Subcategory: Oncology

Small Liquid Sensor May Detect Cancer Instantly, Could Lead to Home Detection Kit

Kelsey Jackson

University of Missouri

17-Feb-10

A tiny sensor, known as an acoustic resonant sensor, that is smaller than a human hair could test bodily fluids for a variety of diseases, including breast and prostate cancers. Could be made into simple home kits or point-of-care systems.

<http://munews.missouri.edu/news-releases/2010/0217-small-liquid-sensor-may-detect-cancer-instantly-could-lead-to-home-detection-kit/>

INDUSTRY

Subcategory: Educational Issues

Professors Cry Foul Over Website

Bethany Halford

Chemical & Engineering News

22-Feb-10

An academic social-networking website, Course Hero, offers students access to more than 6 million documents for a fee; also provides incentives for uploading their own professors' materials, usually without the owners' knowledge or consent.

<http://pubs.acs.org/cen/education/88/8808education.html>

Subcategory: General

Science and Engineering Indicators:2010

National Science Foundation

01-Feb-10

Report covers elementary, secondary, higher education & workforce in sciences and engineering; R&D, domestic and global marketplace, public attitudes and understanding, state indicators. Links to sections, tables, figures, full report.

<http://www.nsf.gov/statistics/seind10/>

Subcategory: Geographic focus

The Intellectual Property Fight That Could Kill Millions

Delthia Ricks

Discover

28-Jan-10

The hothouse environment of Indonesia is ground zero for a potential bird flu pandemic. But a fight over ownership of flu genes is blocking the efforts to track deadly infections on the move, writes Ricks

<http://discovermagazine.com/2009/dec/28-intellectual-property-fight-that-could-kill-millions>

INVESTMENTS/GOV. SUPPORT

Subcategory: Antibodies

Google Pours “Incredible” Computing Power into Antibody Drug Discovery

With Adimab

Luke Timmerman Xconomy 03-Feb-10

With its investment in startup Adimab, Google appears wanting to invent a new computer model for efficiently discovering targeted antibody drugs in-silico.

<http://www.xconomy.com/boston/2010/02/03/google-pours-incredible-computing-power-into-antibody-drug-discovery-with-adimab/>

Subcategory: Federal

R&D Tax Credit Can Turn R&D Investment into Cash

Les Bryson and Peter R & D Magazine 18-Feb-10

Taking full advantage of the R&D tax credit provided by the federal and many state governments to encourage innovation and competitiveness enables companies to achieve remarkable tax savings. Describes who is eligible, case studies.

<http://www.rdmag.com/Featured-Articles/2010/02/Policy-And-Industry-RD-Tax-Credit-Can-Turn-RD-Investment-Into-Cash/>

Feldman

Wanted: Records of Revoked Grants

Jef Akst The Scientist 20-Jan-10

Read both the blog AND the comments that follow to get a picture of the difficulty in tracking what seems like a straightforward issue: numbers of grant terminations. The assumption that all terminations are due to discovery of fraud is just plain naive.

http://www.the-scientist.com/templates/trackable/display/blog.jsp?type=blog&o_url=blog/display/57088&id=57088

Stimulus Funds Harbor Hidden Costs

Bob Grant The Scientist 02-Feb-10

Does it make sense to quadruple reporting requirements for universities receiving stimulus funds for research? Recipients of non-American Recovery and Reinvestment Act (ARRA) funds report once/year, AARA funds quarterly. Comments are good reading too.

<http://www.the-scientist.com/blog/display/57129/>

NOVEL APPLICATIONS

Subcategory: Miscellaneous

Self-powered Sensors

MIT News 11-Feb-10

Describes system to harvest energy from temperature differences; could enable 24-hour-a-day monitoring of heart rate, blood sugar or other biomedical data, through a simple device worn on a patient's arm or a leg

Biology News

12-Feb-10

Proteins p62 and ERK are implicated in adipogenesis, (the development of adipocytes, or fat cells); p62 works to suppress the action of ERK, so without p62, ERK activity goes uncontrolled. Suggests ERK as target for obesity therapies.

http://www.biologynews.net/archives/2010/02/12/research_highlights_role_of_protein_pair_in_obesity_regulation.html

A Molecule That Destroys Normal Metabolism Is Found

Larry Hand

Harvard Science

04-Feb-10

Overeating in mice triggers PKR, a molecule once considered to be only involved in detecting and fighting viruses, to also destroy normal metabolism, which leads to insulin resistance and sets the stage for diabetes.

<http://www.harvardscience.harvard.edu/medicine-health/articles/molecule-destroys-normal-metabolism-found>

Subcategory: Musculoskeletal

Growing Cartilage -- No Easy Task

Megan Fellman

Northwestern University

01-Feb-10

Describes a bioactive nanomaterial that promotes the growth of new cartilage in vivo and without the use of expensive growth factors.

Minimally invasive, the therapy activates the bone marrow stem cells and produces natural cartilage.

<http://www.northwestern.edu/newscenter/stories/2010/02/cartilage.html>

Subcategory: Oncology

Another Piece of Cancer Puzzle Falls into Place

Harvard University Gazette

19-Feb-10

A genome-scale map of 26 cancers reveals more than 100 genomic sites where DNA from tumors is either missing or abnormally duplicated compared to normal tissues. The study finds that most of these genetic abnormalities are shared across multiple cancers.

<http://harvardscience.harvard.edu/foundations/articles/another-piece-cancer-puzzle-falls-place>

New Tool Illuminates Connections between Stem Cells and Cancer

Owen N. Witte

Howard Hughes Medical Institute

20-Feb-10

Many scientists suspect that although tumors are made up of many cells, only the tumor cells derived from stem cells contribute to the growth of the tumor in breast cancer and leukemia. Data is not conclusive in prostate, other cancers.

<http://www.hhmi.org/news/witteaas20100220.html>

Disease Gene Blocker Sneaks past Cell Defenses

Linda Geddes

New Scientist

25-Feb-10

Snippets of RNA that switch off disease-causing genes can now slip into

cells unaided. This could help efforts to use RNA interference (RNAi) to treat diseases such as cancer and diabetes.

<http://www.newscientist.com/article/mg20527494.200-disease-gene-blocker-sneaks-past-cell-defences.html>

Study Suggests Stem Cells Sabotage Their Own DNA to Produce New Tissues

Jennifer Paterson

Ottawa Hospital Research Institute

15-Feb-10

Stem cells may intentionally break their own DNA as a way of regulating tissue development; they intentionally cut and then repair their own DNA as a mechanism of activating genes that promote the development of new tissues.

<http://www.ohri.ca/newsroom/newsstory.asp?ID=207>

What it Might Take to Unravel the 'Lean Mean Machine' That Is Cancer

R & D Magazine

23-Feb-10

Changes within the prostate cancer cell 'epigenome' (biochemical processes that target DNA and affect gene expression) alter the expression of many genes, silencing their expression within large regions of DNA: nearly 3% of the cell's genome.

<http://www.rdmag.com/News/2010/02/life-science-what-it-might-take-to-unravel-the-lean-mean-machine-that-is-cancer/>

Subcategory: Otolaryngology

Researchers Find How Brain Hears the Sound of Silence

University of Oregon

10-Feb-10

A separate set of synapses have been found responsible for handling the signaling of a sound's appearance and its subsequent disappearance. Finding could lead to new, distinctly targeted therapies such as improved hearing devices.

<http://comm.uoregon.edu/archive/news-release/2010/2/researchers-find-how-brain-hears-sound-silence>

RESEARCH TOOLS

Subcategory: Cell Lines

Cancer Lines Contaminated

Jef Akst

The Scientist

14-Jan-10

Akst reports that all 3 contaminated lines, SEG-1, BIC-1, and SK-GT-5, could be traced back to other cell lines -- large cell lung cancer, colorectal adenocarcinoma, and gastric fundus carcinoma, respectively.

<http://www.the-scientist.com/blog/display/56273/>

Subcategory: Computing Systems

Algorithms Pick Out Genetic Regulatory Elements"

Bio-IT World

19-Feb-10

A computational model reveals genetic regulatory elements responsible for development of the human heart and maintenance of its function. May improve understanding of diseases and lays the groundwork for improved medical treatments.

<http://www.bio-itworld.com/2010/02/19/genome-research-heart.html>

Subcategory: Genome Sequence

Desmond Tutu's Genome Sequenced as Part of Genetic Diversity Study

Ian Sample

Guardian

17-Feb-10

Genome data is intended to give pharmaceutical companies the information needed to identify genes that increase the risk of disease and to develop more effective drugs, such as antiviral treatments for HIV in Africa.

<http://www.guardian.co.uk/science/2010/feb/17/desmond-tutu-genome-genetic-diversity>

Subcategory: Oncology

OncoMap Guides Search for Patterns in Tumors

Rob Levy

Dana-Farber Cancer Institute

26-Jan-10

OncoMap program adapts mass spectrometric screening of cell genes to extract highly relevant information from tumors, advancing understanding of adult and childhood cancers.

<http://www.dana-farber.org/res/research/oncomap-guides-search-for-patterns-in-tumors.html>

Scientists Find Donut-Shaped Structure of Enzyme Involved in Energy Metabolism

Science Daily

18-Feb-10

Proline is important for suppression of cancer, cell death and oxidation. Understanding the structure of this enzyme will help scientists better understand how it functions and develop drugs that may inhibit its catalytic function.

<http://www.sciencedaily.com/releases/2010/02/100216101155.htm>

STRATEGIC RELATIONSHIPS

Subcategory: Collaboration

Crowdsource Project Seeks New Diabetes Answers

Eliot Van Buskirk

Wired

03-Feb-10

A crowdsourced, socially networked contest opens the fight against Type 1 diabetes to the public at large, and to Harvard's medical research departments, using InnoCentive's online challenge platform for competition and collaboration.

http://www.wired.com/epicenter/2010/02/crowdsourcing-rewires-harvard-medical-researchers-brain/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+wired%2Findex+%28Wired%3A+I

[ndex+3+%28Top+Stories+2%29%29&utm_content=Google+Feedfetcher](#)

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