



BioTechCircle News®

November 2009

In this articles section: links to 58 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: Animal

In Wolf's Clothing

Economist

19-Nov-09

DNA analyzed from feces, collected where sheep farmers in Spain reported attacks on their animals, indicate that feral dogs were responsible for most of the attacks. Notes that compensation has been paid solely for reported wolf attacks.

http://www.economist.com/sciencetechnology/displayStory.cfm?story_id=14902751

New Insights into the Surprising Physiology of Cockroaches

Scientific Computing

17-Nov-09

Cockroaches eliminate excess nitrogen by excreting ammonia, in contrast to most terrestrial insects that commonly produce uric acid as a waste compound. Finding may help to design new strategies in pest control.

<http://www.scientificcomputing.com/news-IN-New-Insights-into-the-Surprising-Physiology-of-Cockroaches-111709.aspx>

Subcategory: Crops

Key Seed Size Gene Identified

BBSRC

05-Nov-09

Researchers have uncovered a gene in plants that is responsible for controlling the size of seeds, which could lead to ways of improving crops to help ensure food security in the future.

<http://www.bbsrc.ac.uk/media/releases/2009/091105-key-gene-identified.html>

A View to A-Maize

Iowa State University

19-Nov-09

The maize genome nearly as large as that of the human, containing about the same number of genes but is substantially more complex. Sequence variability among individuals will be studied to learn adaptability to different environments.

<http://www.news.iastate.edu/news/2009/nov/maize>

Subcategory: Energy/ Fuel

Modified Algae Produce Clean, Easy Hydrogen

Clay Dillow

Popsci.com

16-Nov-09

Researchers produce clean, sustainable quantities of hydrogen by isolating the photosynthesizing parts of a thermophilic blue-green algae that thrives at higher temperatures and catalyzing it with light and platinum.

<http://www.popsci.com/science/article/2009-11/process-deriving-hydrogen-algae-paves-way-hydrogen-fueled-future>

UC Riverside Researchers Create First Synthetic Cellulosome in Yeast

University of California

29-Oct-09

A synthetic cellulosome in yeast could enable efficient one-step “consolidated bioprocessing” and make the production of bioethanol from biomass more efficient and economical.

http://newsroom.ucr.edu/news_item.html?action=page&id=2205

Subcategory: Food

Learning About Sushi

Sarah Everts

Chemical & Engineering News

02-Nov-09

Everts reviews "Sushi: Food for the Eye, the Body & the Soul," a 330-page volume that includes the biochemistry of a fish's flavor and color along with culinary art, culture and extensive visuals.

<http://pubs.acs.org/cen/books/87/8744books.html>

BIOBUSINESS MANAGEMENT

Subcategory: Geographic focus

EDC Acceptance in Japan

Andy Brock, Kevin

Applied Clinical Trials

01-Nov-09

McNulty, Maria Sumner

Globalizing clinical development activities is vital for successful pharmaceutical companies in the 21st century. It increases speed to market by opening up diverse new populations for recruitment and lowers the overall cost of conducting trials.

<http://appliedclinicaltrialsonline.findpharma.com/appliedclinicaltrials/ArticleStandard/Article/detail/640460>

Subcategory: Government/ Approvals

FDA Promotes Integrity and Compliance

Jill Wechsler

Applied Clinical Trials

01-Oct-09

Food and Drug Administration is announcing new rules and policies and strengthening enforcement of research, manufacturing, and marketing requirements, aiming to restore the public's confidence in agency actions.

<http://appliedclinicaltrialsonline.findpharma.com/appliedclinicaltrials/US/ArticleStandard/Article/detail/632984>

At FDA, Safety Takes Center Stage

Ann Neuer

Bio-IT World

03-Nov-09

Huge databases relating to pharmaceuticals, biologics, and medical devices will be queried for specific questions related to the frequency and severity of adverse events in various populations and therapeutic areas.

<http://www.bio-itworld.com/2009/11/3/eclin-FDA.html>

UK Starts Study on Using Human DNA in Animals

ECNmag.com

10-Nov-09

Scientists are trying to determine where the line should be drawn on experiments that use human material in animals. At the moment, the regulation on how much human DNA can be put into an animal is vague.

<http://www.ecnmag.com/news-uk-study-human-dna-animals-111009.aspx?menuid=0>

perturbed network" of many genes and proteins, could work in minutes and could be used to detect neurological disorders and other diseases at early, more treatable stages.

<http://www.technologyreview.com/business/23776/page1/>

INDUSTRY

Subcategory: Bio Pharma

Financial Snapshot For September 2009: The Road To Recovery

Satomi Degami

Signals

09-Oct-09

Clickable table classifies 192 publicly traded biotechnology companies into 17 categories, based largely on either technology or disease focus, provides detailed financial data.

<http://www.signalsmag.com/signalsmag.nsf/0/2D283C353AE8B7B7882576490080E67F>

Subcategory: Education

Revisiting The Premed Curriculum

Celia Henry Arnaud

Chemical & Engineering News

02-Nov-09

Medical school entrance requirements drive much of the undergrad science curriculum, but many educators have grown concerned that the requirements have not kept pace with modern science, Arnaud writes.

Discusses report recommending 16 competencies.

<http://pubs.acs.org/cen/education/87/8744education.html>

Subcategory: Energy/ Fuel

Demonstrating a CO₂ Recycler

Tyler Hamilton

Technology Review

23-Nov-09

The "Sunshine to Petrol" system could ultimately prove a practical way to recycle CO₂ from power and industrial plants into gasoline, diesel, and jet fuel, assuming the process can become at least twice as efficient as natural photosynthesis.

<http://www.technologyreview.com/energy/23996/page1/>

Subcategory: Miscellaneous

Promises, Promises

Stuart Blackman

The Scientist

01-Nov-09

The central role of science has become less about security and more about economy, with science and technology becoming central to many nations' economic strategy, Blackman writes. Table of famous and infamous technology predictions.

http://www.the-scientist.com/templates/trackable/display/article1.jsp?a_day=1&index=1&year=2009&page=28

[&month=11&o_url=2009/11/1/28/1](#)

Subcategory: Nanotechnology

Nanoparticles Used in Common Household Items Caused Genetic Damage in Mice

Biology News

16-Nov-09

Titanium dioxide (TiO₂) nanoparticles, found in cosmetics, sunscreen, vitamins, caused systemic genetic damage in mice, say researchers. The TiO₂ nanoparticles accumulate in different organs because the body has no way to eliminate them.

http://www.biologynews.net/archives/2009/11/16/nanoparticles_used_in_common_household_items_caused_genetic_damage_in_mice.html

Subcategory: Proteomics

The Gene Bubble: Why We Still Aren't Disease-Free

David H. Freedman

Fast Company

01-Nov-09

Scientists have indeed been superb at finding connections between disorders and various strips of DNA, writes Freedman, but they generally have little or no idea how those chunks of DNA are causing problems.

<http://www.fastcompany.com/magazine/140/the-gene-bubble.html?page=0%2C0>

INVESTMENTS/ GOV. SUPPORT

Subcategory: Education

Grants Push Grad Schools to Bring Research and Medicine Together

Howard Hughes Medical Institute

17-Nov-09

Many graduate students want to be involved in curing diseases and improving human health; program assists schools to integrate medical knowledge and an understanding of clinical practice into their biomedical Ph.D. curricula.

<http://www.hhmi.org/news/medintograd20091117.html>

Unique Biology Lab Gives Freshmen the Chance to Do Real Research

Oregon State University

05-Nov-09

Describes an undergraduate genomics lab for freshmen and sophomore students that specifically researches and catalogues phage DNA. Research is published and could be used by other researchers to develop treatments for tuberculosis.

<http://oregonstate.edu/dept/ncs/lifeatosu/2009/unique-biology-lab-gives-freshmen-the-chance-to-do-real-research/>

Subcategory: Energy/ Fuel

High-Risk Energy Projects Get Funds

Susan R. Morrissey Chemical & Engineering News 02-Nov-00
The Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) has awarded \$151 million in grants to 37 energy-related projects. Table of awardees, projects at:
<http://pubs.acs.org/cen/news/87/i44/8744notw1a.html>
<http://pubs.acs.org/cen/news/87/i44/8744notw1.html>

Subcategory: Federal

NIH Continues to Support the Best Science through R01s
Walter Schaffer and Sally The Scientist 01-Nov-09
Rockey

Provides context around accusations that NIH (National Institutes of Health) is biased against senior scientists and why publication believes the flow of new talent is essential for the maintenance of a productive scientific enterprise.

<http://www.the-scientist.com/2009/11/1/25/1/>

Give Young Scientists a Break
Steven Wiley The Scientist 01-Nov-09

"I don't know if I could have even started my career in today's funding environment," Wiley writes. "There is only a rough correlation between the quality of the science in an application and the priority score."

<http://www.the-scientist.com/2009/11/1/27/1/>

ORGANIZATIONS

Subcategory: Bio Pharma

Lost Dollars in Gene Research
Stephanie Schomer Fast Company 01-Nov-09

Billions of R&D dollars flowed to companies promising to cure our ills. Most of those companies are now dead or forgotten. Table of 9 companies, their founding purpose and current status.

<http://www.fastcompany.com/magazine/140/a-very-slow-fix.html>

PLATFORM TECHNOLOGIES

Subcategory: Computing Systems

Google Gives a First Look at the Chrome OS
Erica Naone Technology Review 19-Nov-09

Spore-forming bacteria, present almost everywhere in our environment, can also cause serious infectious diseases, such as tetanus, anthrax, and botulism. New understanding may lead to new methods for sterilizing food and medical equipment.

http://www.biologynews.net/archives/2009/11/12/new_explanation_for_natures_hardest_life

Penn Study Finds that Antioxidant Found in Vegetables has Implications for Treating Cystic Fibrosis

University of Pennsylvania School of Medicine

16-Nov-09

The antioxidant thiocyanate found in such vegetables as broccoli and cauliflower protects cells from damage caused by chemicals generated during the body's inflammatory response to infection and injury.

Implications for diabetes, heart and other disease.

http://www.uphs.upenn.edu/news/News_Releases/2009/11/antioxidant-cystic-fibrosis/

Subcategory: Geriatrics

Longevity Tied to Genes That Preserve Tips of Chromosomes

Biology News

11-Nov-09

A clear link has been found between living to 100 and inheriting a hyperactive version of an enzyme that rebuilds telomeres (the tip ends of chromosomes). Very old people are spared age-related diseases such as cardiovascular disease and diabetes.

http://www.biologynews.net/archives/2009/11/11/longevity_tied_to_genes_that_preserve_tips_of_chromosomes.html

Subcategory: Immunology/ Infectious Diseases

Delivering a Virus Imposter Quicker

David Dobbs

Technology Review

22-Oct-09

The "virus-like particle," or VLP, vaccine uses little protein shells, grown in either plants or insect cells, that look just like real viruses to the body's immune system but that contain no influenza genetic material. Production takes just 3-4 months.

<http://www.technologyreview.com/biomedicine/23782/page1/>

Subcategory: Metabolism: Obesity, Diabetes

Holy Shit!

Economist

12-Nov-09

Obesity is associated with having a high proportion of bacteria called Firmicutes, whereas the lean favour another group, the Bacteroidetes. Discusses a new way of finding out how diet affects gut microbes.

http://www.economist.com/sciencetechnology/displayStory.cfm?story_id=14843803

Subcategory: Neurology

Scientists Decipher the Formation of Lasting Memories

Karolinska Institute 10-Nov-09
In experiments on genetically manipulated mice, researchers were able to switch on and off the animals' ability to form lasting memories. Findings are of potential significance to the future treatment of Alzheimer's and stroke.
<http://ki.se/ki/jsp/polopoly.jsp?a=86899&d=2637&l=en&newsdep=2637>

Tracking down the Causes of Multiple Sclerosis

Max Planck Society 10-Jun-09
Multiple sclerosis is a very complex disease of the nervous system. A new animal model significantly improves insights into its emergence and progress. B cells play an unexpected role and aggressive T cells are activated by different proteins.
<http://www.mpg.de/english/illustrationsDocumentation/documentation/pressReleases/2009/pressRelease20090610/>

Findings Show Nanomedicine Promising for Treating Spinal Cord

Purdue News 09-Nov-09
Synthetic copolymer micelles are drug-delivery spheres about 60 nanometers in diameter, could be injected into the blood shortly after an accident. The micelles themselves repair damaged axons, fibers that transmit electrical impulses in the spinal cord.
<http://news.uns.purdue.edu/x/2009b/091108ChengSpinal.html>

Subcategory: Obstetrics/ Gynecology

'Fly Paper' to Capture Circulating Cancer Cells

University of California 20-Nov-09
Just as fly paper captures insects, an innovative new device with nano-sized features is able to grab cancer cells in the blood that have broken off from a tumor.
<http://www.newsroom.ucla.edu/portal/ucla/ucla-researchers-create-fly-paper-112652.aspx>

Subcategory: Oncology

Promoter Quadruplexes

Stu Borman Chemical & Engineering News 02-Nov-09
Designers of cancer drugs have begun to aim at an up-and-coming series of targets in the human genome: quadruplexes, a family of DNA structures that form in sites that switch genes on and off.
<http://pubs.acs.org/cen/science/87/8744sci1.html>

Stabilized Helix Cracks Cancer Target

Carmen Drahl Chemical & Engineering News 16-Nov-09
With the help of a helix-stabilizing strategy, researchers have developed the first direct inhibitor of the Notch transcription factor complex, which is implicated in a range of cancers. The work may

inspire a new class of cancer drugs, Drahl writes.

<http://pubs.acs.org/cen/news/87/i46/8746notw8.html>

Researchers ‘NOTCH’ a Victory in War on Cancer

Nicole Davis

Harvard University Gazette

12-Nov-09

Discovery lays the foundation for a new therapy aimed directly at a critical human protein — one of a few thousand so-called transcription factors — that could someday be used to treat diseases, especially multiple types of cancer.

<http://harvardscience.harvard.edu/medicine-health/articles/researchers-notch-victory-war-cancer>

Testicular Tumours May Explain Why Genetic Diseases Tend to Be More Common in Children of Older Fathers

Wellcome Foundation

26-Oct-09

Link between several serious conditions that affect childhood growth and development and rare testicular tumors occurring in older men: the germ cells that make the mutant-gene-carrying sperm also seem to be the same cells that produce the tumor.

<http://www.wellcome.ac.uk/News/Media-office/Press-releases/2009/WTX057182.htm>

New Synthetic Molecules Trigger Immune Response to HIV and

Yale University

05-Nov-09

Synthetic molecules capable of enhancing the body’s immune response to HIV and HIV-infected cells, as well as to prostate cancer cells, could lead to novel therapeutic approaches for these diseases.

<http://opa.yale.edu/news/article.aspx?id=7061>

Subcategory: Pulmonary/ Respiratory Diseases

Gene Patch Job Gets Bad Lungs Transplant-ready

MSNBC News

28-Oct-09

Researchers took donated lungs deemed too damaged to transplant and repaired them with outside-the-body gene therapy. Lung specialists are hopeful they can boost the number of lungs available for people desperately in need.

http://www.msnbc.msn.com/id/33509688/ns/health-more_health_news/

Subcategory: Rheumatology

Study Unveils Mechanism Behind the Fish Oil Effect

Wellcome Foundation

29-Oct-09

Our bodies convert docosahexaenoic acid (DHA), an omega-3 fatty acid found in fish oils, into Resolvin D2, which causes the endothelial cells to produce small amounts of nitric oxide. This acts as a chemical signal, preventing inflammation.

<http://www.wellcome.ac.uk/News/2009/News/WTX057226.htm>

sequencing and biomarker discovery.

<http://www.the-scientist.com/2009/11/1/57/1/>

Subcategory: Nanotechnology

Inhaled Nanotubes Reach Lung Lining In Mice

Bethany Halford

Chemical & Engineering News

29-Oct-09

If inhaled, multiwalled carbon nanotubes are shown to travel to the lung lining of mice and cause scarring. The results suggest extra caution should be exercised to avoid inhaling carbon nanotubes when handling the material.

<http://pubs.acs.org/cen/news/87/i44/8744notw2.html>

STRATEGIC RELATIONSHIPS

Subcategory: Drug Discovery

Partnering For Global Health

Lisa M. Jarvis

Chemical & Engineering News

09-Nov-09

It isn't enough to find a drug that works and is cheap, Jarvis writes. A medicine's effectiveness depends on a complicated matrix of disease, poverty level, environment, and cultural mores.

<http://pubs.acs.org/cen/coverstory/87/8745cover.html>

THERAPEUTIC CATEGORY

Subcategory: Disease Prevention

Flu Epidemic Poses Potential Threat to Congresses

Philip Ward

Applied Clinical Trials

16-Nov-09

Organizers of large conferences prepare for risks of H1N1 and other flu virus spread among attendees, advising delegates with flu-like symptoms not to attend, making hand-sanitizing gels widely available.

<http://blog.appliedclinicaltrials.com/2009/11/16/flu-epidemic-poses-potential-threat-to->

Skin Colour Gives Clues to Health

BBSRC

16-Nov-09

Researchers have found that the color of a person's skin affects how healthy and therefore attractive they appear, and have found that diet may be crucial to achieving the most desirable complexion.

<http://www.bbsrc.ac.uk/media/releases/2009/091116-skin-colour-gives-clues-to-health.html>

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