



BioTechCircle News®

September 2008

Featured September articles:

Less Than 1 in 5 Cancer Trials Are Published

John Carey

Business Week

26-Sep-08

Clinical trials in cancer research are never published, maybe because they show the drug or treatment didn't work, leaving the medical community in the dark over what was learned. There are powerful incentives not to publish negative results.

http://www.businessweek.com/technology/content/sep2008/tc20080925_035720.htm

Biologists on the Verge of Creating New Form of Life

Alexis Madrigal

Wired

08-Sep-08

Protocells, built from fatty molecules that can trap bits of nucleic acids that contain the source code for replication could form a self-replicating, evolving system that satisfies the conditions of life, but isn't anything like life on earth now.

<http://blog.wired.com/wiredscience/2008/09/biologists-on-t.html>

Unraveling Breast Milk

Jyllian Kemsley

Chemical & Engineering News

30-Sep-08

A diet of breast milk for babies is correlated with benefits including less diarrhea and lower incidence of diabetes or asthma when compared to formula-fed babies. Kemsley reviews how the complex fluid nourishes infants and protects them from disease.

<http://pubs.acs.org/cen/coverstory/86/8639cover.html>

In this articles section: links to 50 free Web articles in 15 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.

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AGRI-BIOTECH

Subcategory: Energy/ Fuel

Genetically Engineered Bugs Could Produce Cheap Biofuel

Discover

09-Sep-09

A new batch of genetically engineered bacteria that can function at temperatures up to 122 deg F may be able to slash the cost of producing ethanol from tough materials like wood chips and switchgrass.

<http://blogs.discovermagazine.com/80beats/2008/09/09/genetically-engineered-bugs-could-produce-cheap-biofuel/>

The Second Coming of Biofuels

Chris Dannen

Discover

02-Sep-08

High-performance green diesel and gas are perfect substitutes for petroleum-derived fuels; made from plant matter like forest detritus, also known as cellulosic waste, or from algae, they can be refined on the same equipment that refines petroleum.

<http://discovermagazine.com/2008/aug/02-the-second-coming-of-biofuels>

Subcategory: Miscellaneous

Science Food for the Candidates' Thoughts

Rita C. Peters

Drug Discovery & Development

01-Sep-08

Peters provides sampling of questions on science-related issues posed to U.S. presidential candidates, covering areas such as innovation, pandemics, biosecurity, genetics research, stem cells, scientific integrity and research.

<http://www.ddmag.com/Feature-Candidates-Share-Science-Positions.aspx>

CLINICAL TRIALS

Subcategory: Data Integration

HP Selects Kayentis as Solutions Business Partner for the Healthcare and Life Science Industries

Applied Clinical Trials

25-Sep-08

Describes “the unique paper-based e-trial solution” offering the highest quality of data, combined with all the advantages of electronic data management (accurate timestamps, audit trail functionalities, real-time access, alerts, etc.).

<http://appliedclinicaltrialsonline.findpharma.com/appliedclinicaltrials/News/ArticleStandard/Article/detail/553312>

Subcategory: Government/ Approvals

From Paper to Electronic the FDA Way

Applied Clinical Trials

01-Sep-08

Provides a perspective on the Food and Drug Administration's updated guidance on the use of computer systems in clinical research.

<http://appliedclinicaltrialsonline.findpharma.com/appliedclinicaltrials/US/ArticleStandard/Article/detail/546112>

Subcategory: Oncology

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DIAGNOSTIC TOOLS

University and MIT to tackle big interdisciplinary problems related to various diseases.

<http://pubs.acs.org/cen/news/86/i36/8636notw8.html>

ORGANIZATIONS

Subcategory: Bio Pharma

Abcam Shows Biotech Cluster How It's Done

Tony Quested

Business Weekly

09-Sep-09

Rapidly growing bioscience company in the U.K. markets antibodies via its own online catalog. Its product range grew 29.8% to 44,000 antibodies and related products.

<http://www.businessweekly.co.uk/2008090932455/life-sciences/abcam-shows-biotech-cluster-how-it-s-done.html>

PEOPLE PROFILES

Subcategory: Cloning Techniques

Discover Interview: Fighting for the Right to Clone

Pamela Weintraub

Discover

19-Aug-08

Regardless of your views on embryonic stem cell research, you will find Weintraub's interview of Robert Lanza revealing valuable insights into this living example of the saying: "adversity breeds success."

<http://discovermagazine.com/2008/sep/19-fighting-for-the-right-to-clone>

PERSONALIZED MEDICINE

Subcategory: Oncology

Chemotherapy Gets Personal

Nora Schultz

Technology Review

23-Sep-08

Using microarray analysis to discover if looking at many genes in parallel could improve the prediction of how a patient's tumor will react to chemotherapy, scientists showed an accuracy of 94% in predicting growth inhibition by the drug MNNG.

<http://www.technologyreview.com/Biotech/21406/>

Subcategory: Pharmacogenomics

Pharmacogenomics and Its Role In Drug Safety

U.S. Food and Drug Administration 30-Sep-08
Understanding of the genetic variations in drug response leads to "personalized medicine" by identifying patients who are more prone to experience adverse events from a drug and identifying those who are more likely to benefit from a particular therapy.
http://www.fda.gov/cder/dsn/2008_winter/pharmacogenomics.htm

PLATFORM TECHNOLOGIES

Subcategory: Cell Therapy

A Stem-Cell Revolution

Emily Singer Technology Review 27-Aug-08

By exposing a patient's skin cells to four genetic factors found in the developing embryo, scientists can turn back the clock, triggering the cells to look and behave like embryonic stem cells.

<http://www.technologyreview.com/Biotech/21307/>

Cell Type Counts in Spinal Therapy

Jennifer Chu Technology Review 24-Sep-08

Small differences in the type of cells used for transplantation therapies can have a big impact on outcome, Chu reports. Findings illustrate the importance of differentiating stem cells before transplanting them into injured tissue.

<http://www.technologyreview.com/Biotech/21414/>

Subcategory: Evolution Research

Biologists on the Verge of Creating New Form of Life

Alexis Madrigal Wired 08-Sep-08

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<http://blog.wired.com/wiredscience/2008/09/biologists-on-t.html>

Subcategory: Genomics

Merck's Eric Schadt on the Power of Integrative Genomics

John Russell Bio-IT World 11-Sep-08

Provides a snapshot of 'integrative genomics' and how it relates to genome-wide association studies (GWAS). Allows insights into what you should be targeting and tracking to stratify patient populations into disease subtypes and responder groups.

<http://www.bio-itworld.com/pb/2008/09/11/eric-schadt-merck.html>

Genome-Wide Maps of DNA Methylation

Tanuja Koppal, PhD

Bioscience Technology

10-Sep-08

A comprehensive genomic characterization of cells in various stages of reprogramming indicates genes that were slow to respond to reprogramming were ones that were hyper-methylated early in development, thus altering certain genetic functions.

<http://www.biosciencetechnology.com/ShowPR~PUBCODE~090~ACCT~9000000100~ISSUE~0808~RELTYPE~PAA~PRODCODE~00000000~PRODLETT~A.html>

Subcategory: Materials

Biomimetic Technologies Project Will Create First Soft-Bodied Robots

Science Daily

30-Jan-07

Describes a multidisciplinary initiative focused on the science and engineering of a new class of robots that are completely soft-bodied. These devices will make possible advances in such far flung arenas as medicine and space exploration.

<http://www.sciencedaily.com/releases/2007/01/070128105355.htm>

Subcategory: Oncology

Telomerase Component's Structure Solved

Celia Arnaud

Chemical & Engineering News

08-Sep-08

scientists have solved the structure of the catalytic subunit of telomerase. Telomerase activity usually declines as a natural part of aging, limiting cell division, but it reactivates in cancer, allowing cancer cells to continue dividing.

<http://pubs.acs.org/cen/news/86/i36/8636notw1.html>

Subcategory: Proteomics

Protein Survey Upends Understanding Of Cell Death Process

Bioscience Technology

22-Aug-08

Using PROTOMAP, scientists characterized 91 proteins known to play roles in apoptosis and found 170 additional proteins not previously known to be cleaved during apoptosis. Work opens doors for potential new drug discoveries.

<http://www.biosciencetechnology.com/ShowPR.aspx?PUBCODE=090&ACCT=9000000100&ISSUE=0808&RELTYPE=RLSN&PRODCODE=00000000&PRODLETT=AC&CommonCount=0>

RESEARCH ADVANCEMENTS

Subcategory: Geriatrics

Antibiotic Ideas

Carmen Drahl

Chemical & Engineering News

22-Sep-08

Only 2 new classes of antibiotics have been introduced in the last 40 years, despite increasing resistance to existing drugs. Drahl reports on research blocking the protein FtsZ and an alternative biosynthetic pathway for menaquinones.

<http://pubs.acs.org/cen/news/86/i38/8638notw8.html>

Subcategory: Immunology/ Infectious Diseases

Worm 'May Help Treat Arthritis'

BBC News

A substance secreted by parasitic nematode worms may help provide a more effective treatment for inflammatory types of arthritis.

Rheumatoid arthritis and multiple sclerosis tend to be rare in countries where parasitic worm infections are endemic.

<http://news.bbc.co.uk/2/hi/health/7618568.stm>

Cholesterol and Malaria May Use Same Doorway to Liver Cells

Howard Hughes Medical Institute

10-Sep-08

Researchers have identified a receptor on human liver cells that appears to help the malaria parasite sneak inside to fully develop. Study establishes the first clear molecular link between malaria infection and cholesterol uptake pathways.

<http://www.hhmi.org/news/20080910mota.html>

Subcategory: Metabolism: Obesity, Diabetes

Type 1 Diabetes May Result from Good Genes Behaving Badly

National Institute of Allergy

19-Sep-08

Study results suggest that type 1 diabetes may not result from genetic mutations but from differences in how normal genes and gene variants are turned on and off during disease progression.

http://www3.niaid.nih.gov/news/newsreleases/2008/diabetes_genes.htm

Subcategory: Neurology

Restless

Economist

18-Sep-08

Discusses evidence that wakefulness and sleep are not mutually exclusive. In other words, the human brain can be awake and asleep at

http://www.economist.com/science/displaystory.cfm?story_id=12253173

Atypical Evening Cortisol Profile Induces Visual Recognition Memory Deficit in Healthy Human Subjects

Heather Gilpin

Molecular Brain

21-Aug-08

People who are active in the evening, for example those with night jobs or jet lag, show abnormally high levels of cortisol. Could lead to

memory loss, other indications of Alzheimer's.
<http://www.molecularbrain.com/content/1/1/4>

Subcategory: Oncology

The Root of All Evil?

Economist

11-Sep-08

If it is confirmed that cancers grow from stem cells in the way that healthy organs do, those with detectable stem cells might be candidates for aggressive chemical and radiation therapies, while those without might best be treated by surgery alone.

http://www.economist.com/science/displaystory.cfm?story_id=12202589

Subcategory: Otolaryngology

Deafness Cause Pinpointed by Genetic Discovery

Renee Twombly

R&D Magazine

22-Sep-08

Researchers found a mutation in a newly-discovered gene that causes a form of deafness that has nothing to do with structural proteins in the inner ear, commonly altered in hereditary deafness.

<http://www.rdmag.com/ShowPR~PUBCODE~014~ACCT~140000100~ISSUE~0809~RELTYPE~LST~PRODCODE~00000000~PRODLETT~EL.html>

Subcategory: Pediatrics/ Neonatology

Unraveling Breast Milk

Jyllian Kemsley

Chemical & Engineering News

30-Sep-08

A diet of breast milk for babies is correlated with benefits including less diarrhea and lower incidence of diabetes or asthma when compared to formula-fed babies. Kemsley reviews how the complex fluid nourishes infants and protects them from disease.

<http://pubs.acs.org/cen/coverstory/86/8639cover.html>

RESEARCH TOOLS

Subcategory: Energy/ Fuel

Building Better Biofuels

R&D Magazine

22-Sep-08

Although many laboratory instruments can test biodiesel, they are expensive, require skilled operators, generate delays in providing results, and are not available on-site. Describes R&D 100 instrument overcoming these limitations.

<http://www.rdmag.com/ShowPR~PUBCODE~014~ACCT~140000101~ISSUE~0809~RELTYPE~A81~PRODCODE~00000000~PRODLETT~CF.html>

Subcategory: Evolution Research

Phylogenetics Grows a More Sophisticated Evolutionary Tree

R & D Magazine

02-Sep-08

A new computational method has the potential to trace the evolutionary histories of proteins all the way back to either cells or viruses, thus settling the debate once and for all over which of these life forms came first.

<http://www.rdmag.com/ShowPR~PUBCODE~014~ACCT~1400000101~ISSUE~0809~RELTYPE~LST~PRODCODE~00000000~PRODLETT~A.html>

Subcategory: Forensics

A Portable DNA Detector

Belle Dumé

Technology Review

24-Sep-08

A new portable DNA analyzer performs real-time analysis of blood samples left at the scene of a crime. It packs microfluidics, electronics, optics, and chemical detection technology into a single briefcase-sized unit.

<http://www.technologyreview.com/Biotech/21415/>

Subcategory: Genomics

The Holes in Our Genomes

Emily Singer

Technology Review

19-Sep-08

Like a book with torn pages, duplicate chapters, or upside-down paragraphs, everyone's genome is riddled with large mistakes, Singer reports. New tools should generate a more complete picture of the genetic root of common diseases.

<http://www.technologyreview.com/Biotech/21393/>

Subcategory: Reproduction

Looking for Love In All the Right Alleles

Wired

08-Sep-08

People may naturally be attracted to mates with human leukocyte antigen (HLA) profiles different from their own, perhaps guaranteeing the hybrid vigor of their offspring's immune systems and providing a spark that will last through good times and bad.

<http://blog.wired.com/wiredscience/2008/09/looking-for-lov.html>

STRATEGIC RELATIONSHIPS

Subcategory: Collaboration

Playing With the Enemy

Ted Agres

Drug Discovery & Development

01-Sep-08

Agres reports on key members of the pharmaceutical industry that are expanding their pre-competitive research collaborations with academia

and with each other in hopes of reducing development costs.

<http://www.dddmag.com/Feature-Pharma-Increases-Collaboration-with-Academia.aspx>

Subcategory: Nanotechnology

Evaluating Nanomaterials

Britt Erickson

Chemical & Engineering News

15-Sep-08

Researchers from any sector, i.e. academia, government, or industry, are welcome to join an alliance formed to develop means to predict hazards of nanoscale materials, then reach a consensus on protocols for cell culture and animal testing, other areas.

<http://pubs.acs.org/cen/news/86/i37/8637notw1.html>

THERAPEUTIC CATEGORY

Subcategory: Cardiology/ Vascular Diseases

Oleic Acid's Hypotensive Effect

Rachel Petkewich

Chemical & Engineering News

15-Sep-08

Diets rich in olive oil, which contains up to 80% oleic acid, reduce blood pressure. Researchers suggest oleic acid incorporates into the cell membranes of blood vessels where it likely makes the cells more receptive to signals that reduce blood pressure.

<http://pubs.acs.org/cen/news/86/i37/8637notw9.html>

Subcategory: Pain Management

Gene Therapy Painkillers

Jocelyn Rice

Technology Review

22-Sep-08

By delivering the gene for an opiate-like chemical directly to affected nerves, the treatment may circumvent the debilitating side effects normally associated with opiate drugs, Rice reports.

<http://www.technologyreview.com/Biotech/21400/>

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