



BioTechCircle News®

January 2008

Featured January articles:

Mandatory Open Access

Researchers supported by the National Institutes of Health will be required to submit all resulting peer-reviewed articles to the agency for posting on its publicly accessible database, PubMed Central, within 12 months of publication.

<http://pubs.acs.org/cen/news/86/i03/8603notw2.html>

Cancer Data? Sorry, Can't Have It

Reports that most scientists doing research on how best to help those in pain, or at risk of death, want to keep their data a secret, citing patient privacy (easily solved by changing names to numbers), the difficulty of putting together the data, etc.

http://www.nytimes.com/2008/01/22/health/views/22essa.html?_r=1&ref=health&oref=slogin

In this articles section: links to 69 free Web articles in 12 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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AGRI-BIOTECH

Subcategory: Energy/ Fuel

Better Bugs for Making Butanol

Alexandra M. Goho Technology Review 16-Jan-08

Scientists have genetically engineered E. coli that is highly efficient in producing butanol, a promising new type of biofuel. The new technology could speed up the development of butanol biofuels into a cost-effective alternative to ethanol.

<http://www.technologyreview.com/Energy/20073/>

Subcategory: Food

Introducing the Absolute Scale of Food Healthfulness

Brittany Grayson Discover 15-Jan-08

Discusses a food-measuring formula that purports to categorize a food with space-age precision and assign to it a single numerical value that denotes its ultimate healthfulness.

<http://discovermagazine.com/2008/jan/introducing-the-absolute-scale-of-food-healthfulness>

Keeping Food Safe

Bernard Tulsi Laboratory Equipment 01-Jan-08

Rapid growth in international commerce and trade has resulted in a dramatic increase in the variety of foods crossing national and regional boundaries. Discusses analytical tools, techniques for monitoring food safety.

http://www.laboratoryequipment.com/ShowPR.aspx?PUBCODE=020&ACCT=2000000100&IS_SUE=0801&RELTYPE=FE&PRODCODE=00000000&PRODLETT=B

FDA Says Cloned Animals Safe for Food

Lauran Neergaard Wired Science 15-Jan-08

Explains that cloned cow would be used primarily for breeding, to produce a steady supply of cattle that are particularly tender, for instance, or for prize dairy cows. It would be offspring of clones that consumers would eat.

http://news.wired.com/dynamic/stories/C/CLONED_MEAT?SITE=WIRE&SECTION=HOME&TEMPLATE=DEFAULT&CTIME=2008-01-15-22-44-14

There are several proven business principles that are specific to the biotech industry. If put into practice, they can greatly increase your chances of creating a healthy, vital company, instead of a non-profitable "Zombie" entity.

<http://biopharminternational.findpharma.com/biopharm/Business/How-to-Avoid-Becoming-a-Biotech-Zombie-Part-1/ArticleStandard/Article/detail/481929>

Subcategory: Government/ Approvals

Changes and Challenges in the Year Ahead

Peter O'Donnell Applied Clinical Trials 01-Jan-08

Sponsors of new drugs and medical products will be busy in coming months as they face continued scrutiny of drug safety and other challenges by the FDA and implementing FDAAA.

<http://actmagazine.findpharma.com/appliedclinicaltrials/View+from+Washington/Changes-and-Challenges-in-the-Year-Ahead/ArticleStandard/Article/detail/483702>

Pharma Outlook 2008

Drug Discovery & Development 01-Jan-08

The FDA is likely to continue its cautionary approach by delaying approval of new drugs, requiring additional clinical studies, limiting claims for newly approved medicines and mandating new safety warnings, "black box" label changes to existing drugs.

<http://www.dddmag.com/article-Pharma-Outlook-2008.aspx>

Subcategory: Miscellaneous

Mandatory Open Access

Susan Morrissey Chemical & Engineering News 21-Jan-08

Researchers supported by the National Institutes of Health will be required to submit all resulting peer-reviewed articles to the agency for posting on its publicly accessible database, PubMed Central, within 12 months of publication.

<http://pubs.acs.org/cen/news/86/i03/8603notw2.html>

Subcategory: Personnel Issues

Satisfied, Well Paid, and Secure

Laura Bush BioPharm International 01-Jan-08

Salary survey of the biopharmaceutical industry shows respondents are paid well, like their work and feel pretty secure in their jobs, despite the

constant ups and downs of small biotech companies, and increasing pressures at some bigger biotech's.

<http://biopharminternational.findpharma.com/biopharm/article/articleDetail.jsp?id=481927&pageID=1&sk=&date=>

Subcategory: Privacy/ Records Management

Cancer Data? Sorry, Can't Have It

Andrew Vickers

The New York Times

20-Jan-08

Reports that most scientists doing research on how best to help those in pain, or at risk of death, want to keep their data a secret, citing patient privacy (easily solved by changing names to numbers), the difficulty of putting together the data, etc.

http://www.nytimes.com/2008/01/22/health/views/22essa.html?_r=1&ref=health&oref=slogin

CLINICAL TRIALS

Subcategory: Government/ Approvals

ACT Summit Highlights First-in-Man Trials

Philip Ward

Applied Clinical Trials

01-Jan-08

The European Union's new guideline for first-in-man studies with high-risk products requires sponsors to make a more detailed risk assessment and risk estimation before trials begin.

<http://actmagazine.findpharma.com/appliedclinicaltrials/Show+Report/ACT-Summit-Highlights-First-in-Man-Trials/ArticleStandard/Article/detail/483700>

CONTRACT SERVICES

Subcategory: Contract Research

Challenges Opportunities in the World of Independent Research

Tim Studt

R & D Magazine

01-Jan-08

Interviews with the chief executive officers of the leading independent research and development laboratories in North America discuss challenges such as recruitment, product and process commercialization, uncertainty in Federal budget among others.

http://www.rdmag.com/pdf/RD712_IRDO.pdf

INDUSTRY

Subcategory: General

Biotech Manufacturers Face a Challenging 2008

Jill Wechsler BioPharm International 01-Jan-08

Biotech manufacturers are predicted to be busy in 2008 as they face continued scrutiny of safety signals, pressure to discover important new treatments, and push back on high prices for medical products.

<http://biopharminternational.findpharma.com/biopharm/issue/issueDetail.jsp?id=13737>

Subcategory: Geographic focus

A Model City

Victoria Gill Chemistry World 01-Jan-08

Reviews how the Chinese city of Shanghai is developing into a center for technology, including biopharmaceuticals, through investments and joint ventures with overseas partners.

<http://www.rsc.org/chemistryworld/Issues/2008/January/AModelCity.asp>

INVESTMENTS/ GOV. SUPPORT

Subcategory: Cell Therapy

Exclusive Interview: California Stem Cell Chief Prepares to Dole Out

David Jensen Wired Science 16-Jan-08

The California Institute for Regenerative Medicine will be providing \$263 million for construction of new stem cell labs around the state.

Discusses objectives for the Institute, plans to reach out to for-profits and to drive new therapies into use.

http://www.wired.com/medtech/stemcells/news/2008/01/trounson_qa

Subcategory: Energy/ Fuel

New World For Biofuels

Jeff Johnson Chemical & Engineering News 07-Jan-08

Ethanol production standards contained in energy legislation enacted into law late in 2007 will result in \$170 billion in new technology development projects, infrastructure equipment and construction, and biofuel refineries.

<http://pubs.acs.org/cen/news/86/i01/8601notw6.html> biofuel refineries.

Subcategory: Miscellaneous

Report Indicates Decline In U.S. R&D

David Hanson Chemical & Engineering News 21-Jan-08

Declines in support for basic research by the federal government and by industry raise serious questions about the ability of the U.S. to remain competitive in a rapidly changing world, according to the National Science Board (NSB).

Subcategory: Market Research

Look Beyond Biopharmaceutical Industry Hype

Jim Miller

BioPharm International

01-Jan-08

Discusses inhaled insulin Exubera's removal from the market. Is it being the first generation of a novel concept and Pfizer's clumsiness in launching it? Or was it because inhaled insulin is a solution looking for a problem?

<http://biopharminternational.findpharma.com/biopharm/Outsourcing+Insights/Look-Beyond-Biopharmaceutical-Industry-Hype/ArticleStandard/Article/detail/481923>

PLATFORM TECHNOLOGIES

Subcategory: Cardiology/ Vascular Diseases

Growing New Hearts from Old

Amanda Schaffer

Technology Review

14-Jan-08

New hearts have been created from a complex architecture of white extracellular matrix, created from rat and pig hearts decellularized with detergents.

<http://www.technologyreview.com/Biotech/20058/>

Subcategory: Cell Therapy

Organ Transplants: A Successful Mixture

Economist

24-Jan-08

Transplanting immune-system stem cells along with kidneys has been found to stop rejection by tricking the body into thinking that a foreign organ is really a native one, so that its immune system refrains from rejecting the foreigner.

http://www.economist.com/science/displaystory.cfm?story_id=10559720

Embryonic Stem Cells Created Without Harming Embryo, for Real This Time

Brandon Keim

Wired Science

10-Jan-08

Researchers plucked single cells from two-day-old human embryos without harming them, then transformed them into embryonic stem cells, also known as ESCs, which could be used to replace diseased or failing tissue.

http://www.wired.com/medtech/stemcells/news/2008/01/blastocyst_biopsy

Subcategory: Drug Discovery

Knocking Down Disease

Alan Sachs, MD, PhD

Drug Discovery & Development

01-Jan-08

The activity of synthetic small interfering RNA (siRNA) has created

great interest in developing a new class of drugs based on RNA therapeutics.
<http://www.dddmag.com/article-RNAi-research-at-Merck.aspx>

Knocked Down or Out ???

Ashok Patel Drug Discovery & Development. 01-Jan-08

Developments in biological science, chemical modifications, and drug delivery developments have shown the promise of bright futures for antisense technologies. Discusses basic mechanism of antisense techniques.

<http://www.dddmag.com/article-Antisense-technology-knocked-down-or-knocked-out.aspx>

Subcategory: Epigenetics

Creating a Symphony

Laurie Sullivan Pharmaceutical Discovery 01-Jan-08

Epigenomics focuses on how heritable modification of DNA or DNA packaging proteins can have profound effects on gene expression. Research is focusing on epigenetically-effective drugs and methylation-based biomarkers.

http://www.pharmadd.com/archives/Jan_2007/NF%20Symphony.asp

Subcategory: Genomics

Bacterial Genome Made From Scratch

Stu Borman Chemical & Engineering News 28-Jan-08

Researchers purchased 101 DNA sequences, combined them into quarter-genome pieces in vitro, and assembled the pieces in yeast cells. The genome is 583 kb (kilobase pairs)-much larger than the longest synthetic DNA reported previously.

<http://pubs.acs.org/cen/news/86/i04/8604notw8.html>

Next Steps for Stem Cells

Emily Singer Technology Review 07-Jan-08

It is now possible to create novel cell models that capture all the genetic quirks of complex diseases, allowing scientists to study disease with unprecedented accuracy, from its earliest inception to a cell's final biochemical demise.

<http://www.technologyreview.com/Biotech/20007/>

Scientists Advance in Effort to Create Synthetic Organism

Gautam Naik Wall Street Journal 25-Jan-08

Researchers replicated a bacterium's genetic structure entirely from laboratory chemicals, moving one step closer to creating the world's first living artificial organism. "It's the second significant step of a 3-step process..." says Craig Venter.

<http://online.wsj.com/article/SB120120137587114037.html>

Subcategory: Immunology/ Infectious Diseases

Designer Proteins: Engineering Drug-Like Properties

Vicki Glaser Pharmaceutical Discovery 01-Jan-08

Discusses the potential to engineer monoclonal antibodies to be more active, more potent, and better tolerated by optimizing how they interact with and recruit the immune system.

http://www.pharmadd.com/archives/Jan_2007/TT%20Designer.asp

Subcategory: Misc. Drugs

Excipients

Steve Ritter Chemical & Engineering News 07-Jan-08

Explains the multiple roles of excipients, the inactive ingredients that help hold a dose of the active pharmaceutical ingredient (API) together and keep it stable for a long shelf life.

<http://pubs.acs.org/cen/whatstuff/86/8601sci3.html>

Subcategory: Miscellaneous

A DNA Crane for Molecular Building Sites

Chemistry World 31-Jan-08

Researchers used the cantilever of an atomic force microscope (AFM) to move molecules around. The carrier strand is attached to a so-called DNA 'chip' or array and forms a double helix with another 'support' strand attached firmly to the chip.

<http://www.rsc.org/chemistryworld/News/2008/January/31010801.asp>

Subcategory: Nanotechnology

DNA Helps Nanoparticles Crystallize

Chemistry World 30-Jan-08

Researchers show a simple way to build designer crystals from nanoparticles, using DNA as 'glue'. Two methods show promise as a cheap way of mass-producing complex materials.

<http://www.rsc.org/chemistryworld/News/2008/January/30010802.asp>

Subcategory: SNP

It's Your Call

James Netterwald Drug Discovery & Development 01-Jan-08

Discusses SNP genotype calling algorithms for reducing noise and improving accuracy in ever-more important SNP genotype calling programs.

<http://www.ddmag.com/article-SNP-genotype-calling-programs.aspx>

Subcategory: Tissue Engineering

Discredited Korean Stem Cells' True Origins Revealed

Children's Hospital 02-Aug-07

Researchers show the Koreans unwittingly created the world's first human embryonic stem cell to be derived by parthenogenesis, a process that creates an embryo containing genetic material only from the donor egg.
<http://www.childrenshospital.org/newsroom/Site1339/mainpageS1339P1sublevel326.html>

RESEARCH ADVANCEMENTS

Subcategory: Bioethics

Synthetic DNA on the Brink of Yielding New Life Forms

Rick Weiss

Washington Post

17-Dec-07

The cobbling together of life from synthetic DNA, scientists and philosophers agree, will be a watershed event, blurring the line between biological and artificial -- and forcing a rethinking of what it means for a thing to be alive.

<http://www.washingtonpost.com/wp-dyn/content/article/2007/12/16/AR2007121601900.html>

Subcategory: Cardiology/ Vascular Diseases

Seven New Cholesterol Genes Discovered

Ed Edelson

Arkansas Foundation for Medical Care

13-Jan-08

In an international study of almost 20,000 people in Italy, Sweden and Finland, researchers found 7 new cholesterol-regulating genes, some of which influence the risk of heart disease.

http://www.afmc.org/HTML/health_news/article_display.aspx?ID=611680

Subcategory: Gastroenterology

Enzyme Opens For Business

Stu Borman

Chemical & Engineering News

07-Jan-08

A new structure of transglutaminase 2 (TG2) may pave a new route to developing treatments for celiac disease, a condition that damages the small intestine and prevents nutrient absorption.

<http://pubs.acs.org/cen/science/86/8601sci2.html>

Subcategory: Geriatrics

How to Live Forever

Economist

03-Jan-08

Discusses components of ageing: cell loss, apoptosis-resistance, gene mutations in the cell nucleus and in the mitochondria, accumulation of junk inside and outside cells, accumulation of inappropriate chemical links in the material that supports cells.

http://www.economist.com/science/displaystory.cfm?story_id=10423439

Subcategory: Immunology/ Infectious Diseases

Receptor Shape Matters

Celia Henry Arnaud Chemical & Engineering News 14-Jan-08

Scientists have identified a key molecular feature of respiratory-system cells that may influence the ability of flu viruses to be transmissible from birds to humans and from person to person.

<http://pubs.acs.org/cen/news/86/i02/8602notw8.html>

Why Doesn't the Immune System Attack the Small Intestine?

Dana-Farber Cancer Institute 09-Jan-08

Researchers have found that lymph node cells instruct key immune system cells to leave healthy tissue alone. May lead to new forms of treatment for autoimmune diseases such as Type 1 diabetes and multiple sclerosis.

<http://www.dana-farber.org/abo/news/press/2007/why-doesnt-the-immune-system-attack-the-small-intestine-new-study-provides-unexpected-answer.html>

Subcategory: Metabolism: Obesity, Diabetes

A Role For C-Peptide

Celia Henry Arnaud Chemical & Engineering News 14-Jan-08

A peptide formed as part of insulin biosynthesis may have biological activity of its own and could have therapeutic benefits for patients with type 1 diabetes, who don't make sufficient insulin.

<http://pubs.acs.org/cen/science/86/8602sci1.html>

Subcategory: Neurology

Proton Power

Sophie Rovner Chemical & Engineering News 14-Jan-08

New evidence suggests protons behave like neurotransmitters, the compounds released by neurons to stimulate other neurons or to contract muscles.

<http://pubs.acs.org/cen/news/86/i02/8602notw3.html>

Subcategory: Oncology

The New Anticancer Weapon: Fetal Cells

Dr. Robert W. Lash Discover 07-Jan-08

Scientists hypothesize that the persistence of fetal cells in the maternal circulation might protect mothers from breast cancer in a manner similar to the protection afforded by a bone marrow transplant.

http://discovermagazine.com/2008/jan/01_07_the-new-anticancer-weapon-fetal-cells

Killing Skin-Cancer Stem Cells

Katherine Bourzac Technology Review 16-Jan-08

Not all cancer cells are equal: only a few cells, called cancer stem cells,

Bioscience Technology

14-Jan-08

BioMedExperts is a social networking community that will promote collaborative medical research and development among 1.4 million biomedical experts with 12 million pre-established network connections from more than 120 countries.

<http://www.biosciencetechnology.com/ShowPR.aspx?PUBCODE=090&ACCT=9000000100&ISSUE=0801&RELTYPE=RLSN&PRODCODE=00000000&PRODLETT=E>

Subcategory: Computing Systems

Drug Testing: The Invisible Man

Economist

31-Jan-08

Researchers are using both Britain's national supercomputer grid and America's TeraGrid supercomputer grid to test the Virtual Physiological Human (VPH), designed to simulate the human body... a huge undertaking.

http://www.economist.com/science/displaystory.cfm?story_id=10601453

How Supercomputers Enhance Our Understanding of Genes

Christine Evans-Pughe

The Guardian

24-Jan-08

Complex modelling by powerful hardware is helping shape scientists' thinking on disease, to try to see what effect different genes really have on our bodies.

<http://www.guardian.co.uk/technology/2008/jan/24/it.research>

Subcategory: Databases

NIH Helps Scientists Sleuthing for Clues in the Human Genome

Deborah Borfitz

Bio-IT World

28-Jan-08

A new research approach involves scanning the human genome looking for variations, or markers, that raise the risk of disease. Results of these genome-wide association studies (GWAS) are being posted in a database for use by scientists.

<http://www.bio-itworld.com/newsitems/2008/jan/28-gwas>

Subcategory: Gene Sequences

Genetic Testing in a Shoe-Box

Gavin Armstrong

Chemistry World

18-Jan-08

Scientists have succeeded in building the least expensive portable device for rapid genetic testing ever made, by integration and cost reduction that includes using a consumer-grade digital camera.

http://www.rsc.org/Publishing/ChemScience/Volume/2008/02/Genetic_testing_shoe-box.asp

Subcategory: Genomics

Letting the Genome out of the Bottle — Will We Get Our Wish?

David J. Hunter, Muin J.

The New England Journal of Medicine

10-Jan-08

