



BioTechCircle News®

July 2009

In this articles section: links to 70 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:

Agri-Biotech (9 articles) – Page 2
Biobusiness Management (7 articles) – Page 4
Drug Delivery (2 articles) – Page 4
Industry (5 articles) – Page 5
Novel Applications (2 articles) – Page 7
Organizations (2 articles) – Page 7
People Profiles (2 articles) – Page 7
Personalized Medicine (1 article) – Page 8
Platform Technologies (12 articles) – Page 8
Research Advancements (16 articles) – Page 10
Research Tools (10 articles) – Page 12
Therapeutic Category (1 article) – Page 14

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

Fanged Frogs and Giant Rats Found in Remote Papua New Guinea

Telegraph

07-Sep-09

Strange spiders, a rat the size of a cat and a frog with fangs have been co-habiting in a pristine giant volcano in the highlands of Papua New Guinea.

<http://www.telegraph.co.uk/earth/wildlife/6148102/Fanged-frogs-and-giant-rats-found-in-remote-Papua-New-Guinea-wilderness.html>

Subcategory: Crops

Protein Reveals How Insects Smell

Victoria Gill

BBC News

01-Oct-09

X-rays have revealed the structure of a protein that shows how insects smell, detecting pheromones which plants release to attract insects.

Applications for controlling specific plant pests and for development and refinement of biosensors.

<http://news.bbc.co.uk/2/hi/science/nature/8282395.stm>

Getting By On Little Water

Mitch Jacoby

Chemical & Engineering News

28-Sep-09

By probing the biological, chemical bases of some plants' innate ability to flourish in regions and periods of limited precipitation, researchers can confer drought tolerance to major food, feed, and fiber crops including rice, corn, and cotton.

<http://pubs.acs.org/cen/science/87/8739sci1.html>

New Computing Tool Could Lead to Better Crops and Pesticides Say

Imperial College London

22-Sep-09

New computing tool helps predict how the genes inside plants will react when they are subjected to different conditions. Important for developing new strains of crops such as drought resistant wheat, new pesticides that are more environmentally friendly.

http://www3.imperial.ac.uk/newsandeventspggrp/imperialcollege/newssummary/news_22-9-2009-11-57-55?newsid=73621

Subcategory: Energy/ Fuel

Fungal Map of Mutations Key to Increasing Enzyme Production for Bioenergy Use

DOE Joint Genome Institute

01-Sep-09

The fungus *Trichoderma reesei* is one of the mutant high cellulase-producing fungal strains that produce large quantities of biomass-degrading enzymes.

http://www.jgi.doe.gov/News/news_09_09_01.html

Subcategory: Environment

The Earth Is Warming? Adjust the Thermostat

John Tierney

New York Times

10-Aug-09

Discusses climate engineering, originally called geoengineering, which attempts to cool the planet with sun-blocking particles or shades; tinker with clouds to make them more reflective; remove vast quantities of carbon from the atmosphere.

<http://www.nytimes.com/2009/08/11/science/11tier.html>

Subcategory: Environmental

Bioremediation Bacteria: Systems Biology Reveals Diversity in Key Microbes Used for Environmental Cleanup

Georgia Research Technology News 31-Aug-09

Gene sequences, proteins expressed and physiology of 10 strains of *Shewanella* will help choose the best strain for bioremediation projects based on each site's environmental conditions and contaminants.

Subcategory: Food

Crafting A Better Brewery

Luke Simpson IMPO 22-Sep-09

Brewing has traditionally been a trade-off between speed and efficiency. Simpson describes a brewmaster's new facility that strikes a balance between hands-on brewing and full automation.

<http://www.impomag.com/scripts/ShowPR~RID~11896.asp>

Subcategory: Microorganisms

New Genomic Model Defines Microbes by Diet—Provides Tool for Tracking Environmental Change

DOE Joint Genome Institute 08-Sep-09

Model demonstrates how the microbial diversity of the oceans can be analyzed without necessarily cultivating samples in the laboratory. Some microbes thrive in nutrient-rich waters often associated with warmer regions; others prefer nutrient-poor waters.

http://www.jgi.doe.gov/News/news_09_09_08.html

BIOBUSINESS MANAGEMENT

Subcategory: Bio Pharma

Biotech Stocks

Ann Thayer Chemical & Engineering News 28-Sep-09

Reports that more than a dozen small drug companies received notice that their share prices had fallen so low that their stocks might cease trading. As a result, it's been difficult for many firms to find capital to build their businesses.

<http://pubs.acs.org/cen/news/87/i39/8739notw5.html>

Subcategory: Collaboration

Should You 'Friend' Your Doctor on Facebook?

Elizabeth Cohen

CNN

03-Sep-09

Study of nearly 9,000 U.S. adults showed that last year, 5% of respondents had sent or received an e-mail message to a doctor and that 49% were interested in doing so in the future. "Patients are hungry for it, but doctors not so much."

<http://www.cnn.com/2009/HEALTH/09/03/friending.your.doctor/index.html>

Health Insurer Deploys Social Media

Mitch Wagner

Information Week

10-Sep-09

Insurer is using Twitter, Facebook, and YouTube to connect with patients, fielding complaints about customer service and putting out information on healthy lifestyles in conjunction with one of the stars of the TV show The Biggest Loser.

<http://www.informationweek.com/news/healthcare/leadership/showArticle.jhtml?articleID=219>

Subcategory: Gene Sequences

Genetic Testing of African Refugees Raises Outcry From Scientists

Discover

30-Sep-09

The program will be tried out on asylum seekers from the Horn of Africa, and will seek to establish whether applicants from Kenya or Ethiopia are masquerading as refugees from war-torn Somalia. Experts say tests aren't accurate enough.

<http://blogs.discovermagazine.com/80beats/2009/09/30/genetic-testing-of-african-refugees->

Subcategory: Genotyping

Software Glitch Scrambles Personal Genomics Data

Kevin Davies

Bio-IT World

27-Aug-09

Describes an intermittent but potentially alarming glitch in the presentation of dozens of variants in a reporter's genotyping results from a major consumer genomics firm.

<http://www.bio-itworld.com/news/08/27/09/software-glitch-scrambles-personal-genomics->

Subcategory: Government/ Approvals

Drug Makers Could Face EU Antitrust Probes

Manufacturing.net

29-Sep-09

Describes the European Union's broad inquiry into the pharmaceutical sector that aimed to find out why generic versions of branded drugs were slow to come to the market and if innovation is held back.

<http://www.manufacturing.net/article.aspx?id=220104>

Subcategory: Miscellaneous

A True Assessment of Risk

Laura Bush

BioPharm International

01-Sep-09

Formalizing risk management will be of value if it improves product quality through 1) minimizing waste by reducing deviations, lot rejections, and investigations and 2) averting a major, but so far unforeseen, quality disaster that could harm patients.

<http://biopharminternational.findpharma.com/biopharm/From+the+Editor/ArticleStandard/Article/detail/624452>

Subcategory: Patent/Intellectual Property Issues

Patenting Biotechnology Inventions Will Become More Challenging

Astrid R. Spain

BioPharm International

01-Sep-09

Patentability questions for DNA sequence inventions are being raised. The US Court of Appeals for the Federal Circuit held that claims to a specific DNA sequence were obvious and that it was "obvious to try" known methods to obtain the sequence.

<http://biopharminternational.findpharma.com/biopharm/Business+Articles/ArticleStandard/Article/detail/624458>

DRUG DELIVERY

Subcategory: Miscellaneous

Delivering The Promise

Lisa Jarvis

Chemical & Engineering News

07-Sep-09

Developing drugs based on RNA interference hinges on finding better ways to safely and potently get molecules into cells. Reviews latest advancements in developing new delivery agents.

<http://pubs.acs.org/cen/coverstory/87/8736cover.html>

Subcategory: Nanotechnology

Nanodiamonds for Safer Gene Therapy

R & D Magazine

01-Sep-09

Engineered surface-modified nanodiamond particles successfully and efficiently delivered DNA into mammalian cells. The delivery efficiency was 70 times greater than that of a conventional standard for gene delivery.

<http://www.rdmag.com/News/2009/09/Life-Sciences-Nanodiamonds-For-Safer-Gene-Therapy/>

INDUSTRY

Subcategory: Education

FDA Consumer Health Information Updates: New Web Videos Educate Consumers about Food and Medical Product Safety

FDA News 30-Sep-09

Some video titles: Food Allergies: Reducing the Risks; Fortify Your Knowledge about Vitamins; Avoiding Drug Interactions; FDA 101: Product Recalls.

<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm184536.htm>

What's Wrong with U.S. Science Education?

Chris Mooney Science Progress 05-Aug-09

U.S. science education occurs in the context of an American culture that has very deep problems with science - problems that are manifested in many spheres other than the educational system, but are certainly reflected there, too, Mooney writes.

<http://www.scienceprogress.org/2009/08/what%E2%80%99s-wrong-with-us-science->

Subcategory: Environment

Cleantech: Selfishness Sells

Sarah Lacy Business Week 15-Sep-09

The cleantech companies that emerge in the best shape from the economic decline will be those that learn to play not only to our collective conscience but to our liking for what's cool, convenient, money-saving, or superior in performance.

http://www.businessweek.com/technology/content/sep2009/tc20090915_213031.htm?link_position=link32

Subcategory: Miscellaneous

3 Questions: Phillip Sharp Calls for 'New Biology' Push

Anne Trafton MIT News 25-Sep-09

The U.S. needs an ambitious biology research initiative to tackle broad challenges involving food, energy, the environment and health, says Nobel laureate, with life sciences innovation being a major force in addressing those challenges.

<http://web.mit.edu/newsoffice/2009/qasharp-092509.html>

Subcategory: Patent/Intellectual Property Issues

U.S. Inventors Top International Patent Filings

Eliane Engeler Manufacturing.net 18-Sep-09

Under the Patent Cooperation Treaty, for a flat fee of about \$1,300

companies can file a request for patent protection in any of the 139 countries that subscribe to WIPO'S patent system; U.S. lead appears to be slipping against China, other countries.

<http://www.manufacturing.net/article.aspx?id=218514>

NOVEL APPLICATIONS

Subcategory: Environment

To Near-space and Back on \$150

R & D Magazine

22-Sep-09

Tells how a group of MIT students spent only \$150 and used strictly off-the-shelf items to send a helium balloon 17.5 miles into near space to take stunning photos of Earth.

<http://www.rdmag.com/General-Science-To-near-space-and-back-on-150/>

Subcategory: Ophthalmology

Bionic Eyesight, Cell-phone Microscopes

Chemical & Engineering News

28-Sep-09

Slivers of plastic that clarify vision could also project weather maps, other information. Glucose-monitoring lenses could be useful to diabetics. See also

<http://www.economist.com/sciencetechnology/tm/displayStory.cfm?sto>

<http://pubs.acs.org/cen/newscrip/87/8739newscrip.html>

ORGANIZATIONS

Subcategory: Research Labs

Where Have You Gone, Bell Labs?

Adrian Slywotzky

ECN Magazine

31-Aug-09

Name an industry that can produce 1 million new, high-paying jobs over the next three years. You can't, because there isn't one. And that's the problem. Slywotzky bemoans the loss of Bell Labs and other legendary institutions.

<http://www.ecnmag.com/blog-innovation-needed-083109.aspx?menuid=0>

Energy Secretary Steven Chu: Hire Brash Young Turks to Create the New Bell Labs

Luke Timmerman

XConomy

11-Aug-09

The national laboratories have an opportunity to make groundbreaking fundamental discoveries while being mission-driven for things like national security, or toxic cleanup, just as Bell Labs made fundamental discoveries while delivering products to AT&T.

<http://www.xconomy.com/seattle/2009/08/11/hire-brash-young-turks-create-the-new-bell-labs-for-energy-says-secretary-steven-chu/>

PEOPLE PROFILES

Subcategory: Crops

These Things We Do

Jeff Reinke

IMPO

22-Sep-09

Tells of nearly-unknown man who developed revolutionary types of disease-resistant wheat, higher-yielding corn, and many other history-altering agricultural practices, is credited with preventing the possible starvation of up to one billion people.

<http://www.impomag.com/scripts/ShowPR.asp?RID=11895>

Subcategory: Miscellaneous

For MacArthur Grants, Another Set of ‘Geniuses’

Felicia R. Lee

New York Times

22-Sep-09

Reviews some of the 24 recipients of the \$500,000 “genius awards by the John D. and Catherine T. MacArthur Foundation. Includes a scientist developing theories of global climate change.

http://www.nytimes.com/2009/09/22/arts/22macarthur.html?_r=1

PERSONALIZED MEDICINE

Subcategory: Lab-on-a-chip/ DNA Chips/

Analyzing Cancer Cells to Choose Treatments

Emily Singer

Technology Review

30-Sep-09

A new phase of personalized medicine for cancer, enabled by microfluidics technologies, can isolate scarce cancer cells and detect very small changes in gene expression. Chips costing about \$300 generate about 9,000 simultaneous reactions.

<http://www.technologyreview.com/biomedicine/23551/page1/>

PLATFORM TECHNOLOGIES

Subcategory: Collaboration

InformationWeek 500: Cincinnati Children's Hospital's Niche Specialties Are Key To Global Goals

Marianne Kolbasuk McGee

Information Week

15-Sep-09

Fetal Care Portal lets doctors at the hospital share information with physicians at nearby hospitals where the actual surgery is often done. The portal draws in patient data, including electronic medical records and digitized radiology images and reports.

<http://www.informationweek.com/news/healthcare/EMR/showArticle.jhtml?articleID=2197005>

Subcategory: Environment

New Findings Could Help Hybrid, Electric Cars Keep Their Cool

Purdue News

22-Sep-09

Understanding precisely how fluid boils in tiny "microchannels" has led to formulas and models that will help engineers design systems to cool high-power electronics in electric and hybrid cars, aircraft, computers and other devices.

<http://www.purdue.edu/newsroom/research/2009/sep/090922GarimellaBoiling.html>

Subcategory: Gene Therapy

Junk DNA May Prove Invaluable in Quest for Gene Therapies

University of Edinburgh

21-Sep-09

How a protein enables sections of so-called junk DNA to be cut and pasted within genetic code has been identified; rearrangement of antibody genes can enable the immune system to target infection more effectively.

<http://www.biology.ed.ac.uk/news/pages/154/>

Subcategory: Geriatrics

Intel Wants You to Age Gracefully, at Home

Arlene Weintraub

Business Week

21-Sep-09

The Intel Health Guide is a device to let doctors monitor seniors remotely. Such systems could save billions in health care by cutting the rate of medical complications forcing seniors into hospitals, other intensive-care facilities.

http://www.businessweek.com/technology/content/sep2009/tc20090921_041069.htm

Subcategory: Lab-on-a-chip/ DNA Chips/

Blood Simple

Economist

11-Aug-09

Many proteins will not work properly unless they are coated with the right mixture of sugar molecules. Discusses artificial Golgi apparatus, which is the part of a cell that sweetens the proteins, to counter inappropriate sugaring.

http://www.economist.com/sciencetechnology/tm/displaystory.cfm?story_id=14207319

Subcategory: Materials

Silk-Based Optical Waveguides Meet Biomedical Needs

Tufts University

30-Aug-09

Describes a new method for fabricating silk-based optical waveguides using Bombyx mori silk fibroin inks that are biocompatible, biodegradable and can be readily functionalized with active molecules.

<http://news.tufts.edu/releases/release.php?id=119>

Subcategory: Microorganisms

UWE Scientists Design First Robot Using Mould

University of the West of England

27-Aug-09

Grant awarded to develop an amorphous non-silicon biological robot, plasmobot, using plasmodium, the vegetative stage of the commonly occurring slime mold *Physarum polycephalum*, which lives in forests, gardens and most damp places in the UK.

<http://info.uwe.ac.uk/news/UWENews/article.asp?item=1553&year=2009>

Subcategory: Neurology

Photoswitches Shed Light on Burst Swimming in Zebrafish

University of California

16-Sep-09

Targeted insertion of light-sensitive switches into nerve cells in the spinal cord of awake zebrafish larvae causes the periodic tail twitching typical of larvae. Strategy could be used to study all types of neurons, e.g. smell, vision, touch and hearing.

http://www.berkeley.edu/news/media/releases/2009/09/16_optogenetics.shtml

Subcategory: Proteomics

DNA Nanostructures By Design

Elizabeth K. Wilson

Chemical & Engineering News

07-Sep-09

In what some researchers are calling a seminal achievement, a group of scientists have succeeded in creating self-assembled crystalline DNA structures in three dimensions.

<http://pubs.acs.org/cen/news/87/i36/8736notw5.html>

Sculpting Cells with Light

Howard Hughes Medical Institute

13-Sep-09

Switch using a light-sensitive protein from *Arabidopsis thaliana* gives biologists exquisite control over cell behavior they can now use brief pulses of laser light to start and stop cell movement or to restrict movement to specific regions of a cell.

<http://www.hhmi.org/news/lim20090913.html>

All Tied Up: Tethered Protein Provides Long-sought Answer

Jade Boyd

Rice University

22-Sep-09

Many proteins are highly flexible, forming different types of structures when they interact with something else, often another protein or DNA. Clearer picture of what a protein looks like in its native environment using single-molecule techniques.

<http://www.media.rice.edu/media/NewsBot.asp?MODE=VIEW&ID=13078&SnID=1994916704>

Subcategory: Research Supplies

Six Tips for More Successful Cell Cultures

Ed Sullivan

Bioscience Technology

19-Aug-09

For those who perform cell culture experiments, it pays to be meticulous. Even seemingly minor handling techniques and lab equipment features can make a difference in achieving success.

<http://www.biosciencetechnology.com/ShowPR.aspx?PUBCODE=090&ACCT=9000005575&ISSUE=0908&RELTYPE=PAA&PRODCODE=00000995&PRODLETT=A>

RESEARCH ADVANCEMENTS

Subcategory: Disease Prevention

Letters from the Past Shed Light on Human Activity Patterns

Luís A. Nunes Amaral

Howard Hughes Medical Institute

25-Sep-09

Modeling human activity patterns can have important ramifications, from predicting disease spread and optimizing resource allocations, to predicting demand for certain services and patient compliance with their doctors' orders.

<http://www.hhmi.org/news/amaral20090925.html>

Subcategory: Immunology/ Infectious Diseases

Bacteria Say NO To Drugs

Laura Cassiday

Chemical & Engineering News

14-Sep-09

Many species of bacteria express enzymes that synthesize nitric oxide (NO) from arginine, which protects bacteria from a broad spectrum of natural and synthetic antibiotics. Inhibiting NO synthase in disease-causing bacteria could help.

<http://pubs.acs.org/cen/news/87/i37/8737notw6.html>

DARPA-Funded Duke Study to Detect Viral Infection Before Symptoms Appear

Duke Med News

17-Sep-09

A genomic "signature" of infection -- a set of changes in gene expression that occurred in people who became symptomatic after exposure to a virus -- became apparent in some cases hours or even days before symptoms arose.

http://www.dukehealth.org/HealthLibrary/News/darpa_funded_duke_study_to_detect_viral_infection_before_symptoms_appear

Subcategory: Metabolism: Obesity, Diabetes

Modeling Diabetes with Stem Cells

Jocelyn Rice

Technology Review

01-Sep-09

Describes a way to create induced pluripotent stem (iPS) cells from ordinary adult cells taken from patients with type 1 diabetes. These stem cells then can be reprogrammed to produce all of the cell types relevant to the disease.

<http://www.technologyreview.com/biomedicine/23335/>

Subcategory: Microorganisms

Right-handed Amino Acids Help Bacteria Adapt

Howard Hughes Medical Institute

18-Sep-09

In the overwhelmingly “left-handed” world of amino acids, the “right-handed” (D) versions of a few of these molecules act as signals that can spur bacteria to adapt to changing environmental conditions, for example, when it is time to slow growth.

<http://www.hhmi.org/news/waldor20090918.html>

Subcategory: Musculoskeletal

New Bond In Biology

Sarah Everts

Chemical & Engineering News

07-Sep-09

The mechanical strength of epithelial tissue found in multicellular organisms as diverse as fruit flies, worms, and humans is likely reinforced by the newly unearthed sulfilimine bond: S=N.

<http://pubs.acs.org/cen/news/87/i36/8736notw3.html>

Subcategory: Neurology

Alzheimer's Gene Alters Brain Function in Young Adults

Duke Med News

10-Sep-09

APOE4 , the gene most closely linked to an increased risk of developing Alzheimer's disease affects brain activity in young adults -- much earlier in life than previously reported: in their mid-20's.

http://www.dukehealth.org/HealthLibrary/News/lzheimers_gene_alters_brain_function_in_you

Subcategory: Obstetrics/ Gynecology

A New Rx for Cancer: Ignore It (Sometimes)

Andrew Grant

Discover

25-Sep-09

Dr. H. Gilbert Welch says cancer treatments are often worse than the tumors, especially because some of them go away naturally. Breast, lung and prostate offered as examples. Question is knowing who needs treatment and who should be left alone.

<http://discovermagazine.com/2009/new-science-of-health/new-rx-for-cancer-ignore-it-sometimes>

DNA swap could cure inherited diseases

Times Online

27-Aug-09

The prospect of a human baby with three biological parents has moved

closer after scientists created monkeys using a technique that one day could stop children from inheriting severe genetic diseases.

<http://www.timesonline.co.uk/tol/news/science/article6811080.ece>

Subcategory: Oncology

Found: Protein That Stops Spread of Cancer

Richard Saltus Dana-Farber Cancer Institute 28-Sep-09

When cells detach themselves from their neighborhood and drift away, the body assigns a molecular "death squad" to kill them. Some cancer cells have been found to evade this process when the SIK1 protein is disabled.

<http://www.dana-farber.org/res/research/found-protein-that-stops-spread-of-cancer.html>

The Big Idea That Might Beat Cancer and Cut Health-Care Costs by 80 Percent

Andrew Grant Discover 30-Sep-09

Evolutionary biologist Paul Ewald: Once we identify the viruses that trigger cancer, we can work to prevent their transmission and force them to evolve from fatal scourges into mere nuisances, eventually turning cancer into a manageable disease.

<http://discovermagazine.com/2009/new-science-of-health/big-idea-beat-cancer-cut-health-care-costs-80-percent>

Identifying the Enemy Within

Economist 22-Sep-09

Doped implant technique is showing promise in training the immune system to recognize and attack cancers. The implants are tiny biodegradable discs impregnated with granulocyte-macrophage colony-stimulating factor, attracting dendritic cells.

http://www.economist.com/sciencetechnology/tm/displaystory.cfm?story_id=14490433

NIH Study Reveals New Genetic Culprit in Deadly Skin Cancer

NIH News 30-Aug-09

A new group of genetic mutations of the protein tyrosine kinase (PTK) gene family are found to be involved in the deadliest form of skin cancer, melanoma.

<http://www.genome.gov/27533287>

Subcategory: Ophthalmology

A Brighter Future for Retinal Implants

Duncan Graham-Rowe Technology Review 29-Sep-09

Trials of the Argus II series retinal implants have shown that some limited vision can be restored to blind patients, helping them to recognize objects and make out doorways or roadsides.

<http://www.technologyreview.com/biomedicine/23539/>

Scientists Cure Color Blindness in Monkeys

University of Florida 16-Sep-09

Gene therapy cured 2 squirrel monkeys of color blindness; potential for gene therapy to treat adult vision disorders involving cone cells.

<http://news.ufl.edu/2009/09/16/colorblind/>

Subcategory: Psychiatry/ Psychology

Daily Sweets 'Linked to Violence'

BBC News

30-Sep-09

Children who ate sweets daily were significantly more likely to have a violence conviction by age 34, U.K. researchers found. Some explanations: "difficult" children are more likely to be given sweets, do not learn delayed gratification.

<http://news.bbc.co.uk/2/hi/health/8281147.stm>

RESEARCH TOOLS

Subcategory: Computing Systems

Whose Internet Is It, Anyway?

Larry Hardesty

MIT News

28-Sep-09

One of the Internet's chief architects looks at the FCC's proposed Net neutrality rules, discusses implications for consumer and education users.

<http://web.mit.edu/newsoffice/2009/fcc-neutrality.html>

Subcategory: Databases

50 Million Compounds & Counting

Paul Livingstone

ChemInfo

28-Sep-09

More than 50 million organic and inorganic compounds are now characterized and catalogued within the Chemical Abstracts Service database. More than 100,000 compounds are examined daily with the help of a distributed computing network.

http://www.chem.info/ShowPR.aspx?PUBCODE=075&ACCT=0000100&ISSUE=0909&ORIG_RELTYPE=TJI&RELTYPE=PR&PRODCODE=0000&PRODLETT=LL

Subcategory: Evolution Research

Evolution Is Not a Two-Way Street

Howard Hughes Medical Institute

24-Sep-09

By analyzing the molecular evolution of the glucocorticoid receptor (GR), a hormone receptor found in virtually all vertebrates, researchers have concluded that protein evolution is irreversible.

<http://www.hhmi.org/news/thornton20090924.html>

Subcategory: Genome Sequence

A Turning Point for Personal Genomes

Computational Process Zeroes in on Top Genetic Cancer Suspects

Johns Hopkins Medicine

01-Sep-09

Describes innovative computer software that can sift through hundreds of genetic mutations and highlight the DNA changes that are most likely to promote cancer. Will enable scientists to focus attention on the mutations most likely to trigger tumors.

<http://releases.jhu.edu/2009/09/01/computational-process-zeroes-in-on-top-genetic-cancer->

Subcategory: Proteomics

Mapping The Epigenome

Laura Cassiday

Chemical & Engineering News

14-Sep-09

Each of us has one genome but many epigenomes, chemical modifications of DNA and its packaging proteins, known as histones, that vary with tissue type, development, environmental conditions, aging, and cancer. Discusses new tools.

<http://pubs.acs.org/cen/coverstory/87/8737cover.html>

THERAPEUTIC CATEGORY

Subcategory: Metabolism: Obesity, Diabetes

Late-Night Snacks: Worse Than You Think

Megan Fellman

Northwestern University

03-Sep-09

Study shows that eating at irregular times, such as the middle of the night for humans when the body wants to sleep, influences weight gain. The regulation of energy by the body's circadian rhythms may play a significant role.

<http://www.northwestern.edu/newscenter/stories/2009/09/turek.html>

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