



BioTechCircle News®

July, 2006

Quote of the month:

A researcher gave babies an anti-diarrheal derived from rice genetically engineered to produce two key proteins in mother's milk. Hailed both as a "revolutionary development" and a target of a criminal investigation.

<http://www.mercurynews.com/mld/mercurynews/business/15039822.htm>

In this articles section: links to 82 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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AGRI-BIOTECH

Subcategory: Food

Diarrhea Treatment Grown in Transgenic Rice Raises Uproar in Peru

The Mercury News

14-Jul-06

A researcher gave babies an anti-diarrheal derived from rice genetically engineered to produce two key proteins in mother's milk. Hailed both as a "revolutionary development" and a target of a criminal investigation.

<http://www.mercurynews.com/mld/mercurynews/business/15039822.htm>

Subcategory: Genomics

Landmark Research Shows Genetic Link to Community Makeup and Ecosystem Evolution

Bio.com

24-Jul-06

Scientists have found that the genes of one organism not only control the characteristics of that individual but also dictate the behavior of thousands of other organisms in a community. Example: genes that control the level of tannins in cottonwoods.

<http://www.bio.com/realms/research.jhtml?realmId=1&cid=20400001>

BIOBUSINESS MANAGEMENT

Subcategory: General/ Administrative

A Lean Version Of Lean

Chris Driscoll

Contract Pharma

01-Jun-06

In Biotech, Driscoll says we still have the opportunity to improve efficiency and effectiveness because it's the right thing to do. Then, when cost pressure intensifies down the road, we'll already be leaner and we'll already be versed in the tools.

<http://www.contractpharma.com/articles/2006/06/a-lean-version-of-lean.php>

Subcategory: Miscellaneous

Emotions in the Workplace

Julie Fuimano, MBA, BSN,
RN

Biospace

06-Jul-06

There is now a whole field of study dedicated to emotions called Emotional Intelligence (EI), defined as the capacity to effectively perceive, express, understand, and handle your emotions and the emotions of others in a positive and productive manner.

http://www.biospace.com/news_story.aspx?StoryID=23608&full=1

CONTRACT SERVICES

Subcategory: Clinical Trials

Toxicology & Biotechnology at the Crossroads

Steve Barkyoub, DVM, Contract Pharma
Ph.D.; Chris Springall,
M.D.; Friedhelm Vogel,
Ph.D. and Richard Crowley

01-Jun-06

There is a wide array of scientific and regulatory issues that are being addressed concerning the safety and efficacy of a new generation of biotechnology-derived compounds. Discussion and 5 tables on impact of drug studies, other research.

<http://www.contractpharma.com/articles/2006/06/toxicology-biotechnology-at-the->

DIAGNOSTIC TOOLS

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

Scientists Develop a New Diagnostic Approach for Carriers of Recessive Genetic Disorders

Bio.com

03-Jul-06

Scientists have developed a new approach for the diagnosis of medical disorders that are inherited in a recessive manner. The method is based on identifying subtle but distinct differences in genome-wide expression profiles using microarray technology.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=19900057>

Scientists Develop a New Diagnostic Approach for Carriers of Recessive Genetic Disorders

EurekAlert!

03-Jul-06

Even though most recessive diseases are rare, many individuals are carriers for recessive genetic disorders: on average, each person is a carrier for 3 or 4 deleterious, disease-causing mutations. Describes approach to effectively identify carriers.

http://www.eurekalert.org/pub_releases/2006-07/cshl-sda062706.php

Subcategory: Oncology

Simple Blood Test Detects Lung Cancer Before It's Too Late

News-Medical

17-Jul-06

Researchers have developed a blood test that is able to correctly predict non-small-cell lung cancer in patients years before any CT scan can trace it. Promises to become the first blood test to predict cancer since the PSA test.

Investment to Boost Bioscience in East of England

Laboratorytalk

07-Jul-06

Bioscience is one of the fastest growing sectors of the East of England economy which is bringing international recognition and investment to the region.

<http://www.laboratorytalk.com/news/eas/eas102.html>

INVESTMENTS/ GOV. SUPPORT

Subcategory: Geographic focus

Tax-Finance Changes Aid Biotech Jobs

Charlotte Observer

27-Jul-06

Legislators in North Carolina approved changes in their law to speed up building of a biotech research campus.

http://www.charlotte.com/mld/charlotte/news/15132113.htm?source=rss&channel=charlotte_bu

Subcategory: Miscellaneous

Support for Orphan Diseases

Ted Agres

Drug Discovery & Development

01-Jul-06

Medical foundations and disease advocacy groups are increasingly sponsoring their own research and clinical trials, and are also acting as venture capitalists to not only develop therapies but bring them to market affordably.

<http://www.ddmag.com/ShowPR.aspx?PUBCODE=016&ACCT=1600000100&ISSUE=0607&RELTYPE=PNP&PRODCODE=00000000&PRODLETT=AE>

PERSONALIZED MEDICINE

Subcategory: Miscellaneous

Systems Biology's Clinical Future

Celia Henry Arnaud

Chemical & Engineering News

31-Jul-06

Systems biology, currently used only as a research tool, is moving toward clinical applications, including personalized medicine. Arnaud notes that only a systems approach can effectively treat obesity, diabetes hypertension and many heart diseases.

<http://pubs.acs.org/cen/coverstory/84/8431systemsbiology.html>

PLATFORM TECHNOLOGIES

Subcategory: Cell Therapy

BioEden, Inc. Launches the First Baby Tooth Stem Cell Bank

Biospace

27-Jun-06

Stem cells found in children's primary teeth may be used to treat debilitating conditions. The company isolates and stores cells and return them to the original donor if they are ever needed.

http://www.marketwire.com/mw/release_html_pressroom?id=F65B254181F3F030&release_id=1

New Source of Multipotent Adult Stem Cells Discovered in Human

EurekaAlert!

12-Jul-06

Researchers have shown that human embryonic stem cell media could be used to isolate and expand a novel population of multipotent adult stem cells from human hair follicles.

http://www.eurekaalert.org/pub_releases/2006-07/uops-nso071206.php

UCLA AIDS and Stem Cell Researchers Discover Way to Develop T-cells From Human Embryonic Stem Cells

University of California

03-Jul-06

Study results indicate that it is possible to decipher the signals that control the development of embryonic stem cells into mature T-cells, eventually repopulating the immune system in patients needing T-cells.

<http://newsroom.ucla.edu/page.asp?RelNum=7166>

Subcategory: Epigenetics

Pulling Genes' Strings

Ivan Amato

Chemical & Engineering News

17-Jul-06

Genes would be hardly more than molecular dead weight if not for the 'epigenetic' context that turns them on and off. Discusses epigenetic advancements in molecular biology and medicine.

<http://pubs.acs.org/cen/coverstory/84/8429chromatin.html>

Subcategory: High Throughput Screening

Protein Initiative Spurs Innovation

Neil Canavan

Genomics & Proteomics

01-Jul-06

Canavan discusses innovations in overcoming the bottlenecks to the high-throughput commercial determination of protein structures: protein production and crystallization.

<http://www.genpromag.com/ShowPR.aspx?PUBCODE=018&ACCT=1800000100&ISSUE=0607&RELTYPE=PR&ORIGRELTYPE=CVS&PRODCODE=00000000&PRODLETT=AB>

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

Large-scale Cross-platform Study of Research Microarrays Uncovers High Concordance Across Platforms

Bio.com

02-Jul-06

The diversity of available platforms and analytical methods for gene expression microarrays has made comparison of data from multiple platforms challenging for application in clinical practice.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=19900055>

Protein Microarrays in Cancer Research

James Netterwald

Genomics & Proteomics

01-Jul-06

High-throughput multiplexed microarrays have been used extensively to identify and quantify tumor biomarkers from a variety of samples.

Reviews new uses.

<http://www.genpromag.com/ShowPR.aspx?PUBCODE=018&ACCT=1800000100&ISSUE=0607&RELTYPE=PR&ORIGRELTYPE=PRO&PRODCODE=00000000&PRODLETT=AD>

Subcategory: Miscellaneous

Mimicking Enzyme Oxidation

Bethany Halford

Chemical & Engineering News

03-Jul-06

Describes an enzyme-inspired catalyst that regioselectively oxidizes saturated C-H bonds in ibuprofen and 4-methylcyclohexylacetic acid.

<http://pubs.acs.org/cen/news/84/i27/8427notw8.html>

Spontaneous Assembly Revealed

Mitch Jacoby

Chemical & Engineering News

10-Jul-06

Molecules that arrange themselves spontaneously into neat films and other structures are convenient and useful in many research areas.

Describes study elucidating key steps in molecular nucleation and growth mechanism.

<http://pubs.acs.org/cen/news/84/i28/8428notw1.html>

Subcategory: Nanotechnology

Nanotechnology Presents Opportunities and Challenges for FDA and Manufacturers

Jill Wechsler

BioPharm International

01-Jul-06

The goal for exploring the physical and chemical characteristics of nanoparticles. is to develop new test methods, characterization protocols, and standards that will help manufacturers move nanoproducts from preclinical testing to commercialization.

<http://www.biopharm-mag.com/biopharm/article/articleDetail.jsp?id=353127>

Subcategory: Proteomics

Scientists at NYU's Center for Comparative Functional Genomics Begin Second Phase of Project to Better Understand Disease

New York University

27-Jun-06

Reports on collaborative research to predict shape and folding

structures of key proteins, which in turn shed light on their roles in diseases and offer pathways for cures.

<http://www.nyu.edu/public.affairs/releases/detail/1128>

Aussie Scientists Crack DNA Mystery

Sydney Morning Herald

30-Jun-06

Scientists have tried to understand the final step in the copying of DNA in cells that are about to divide. Researchers announced they had discovered why a small protein, TUS, stopped DNA duplication in some cases but not others.

<http://www.smh.com.au/news/National/Aussie-scientists-crack-DNA-mystery/2006/06/30/1151174384743.html>

Subcategory: Reproduction

New Research Reveals Unexpected Post-mating Gene Expression in Model Lab Insect

Bio.com

27-Jun-06

Understanding mating-responsive genes that are activated in *Drosophila* gives new insights into production and could also provide methods to safely control the spread of insect pests by interfering with their reproduction.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=19900018>

RESEARCH ADVANCEMENTS

Subcategory: Cardiology/ Vascular Diseases

New Motor Protein Mechanism Linked to Heart Disease and Strokes

Bio.com

20-Jul-06

Researchers have identified a possible mechanism used by an important motor protein SecA, which acts as a catalyst that enables bacteria outside the human body to travel through the blood stream and infect organs such as the heart.

<http://www.bio.com/realm/research.jhtml?realmId=2&cid=20200008>

Penn Researchers Enlist Cell-Cycle Proteins to "Switch on" Heart Tissue Repair System in Animal Models

Penn Medicine

07-Jul-06

By triggering the cell-cycle signal, researchers can manipulate cells in animal models to regenerate damaged heart tissue. If this research is someday successfully translated to humans, it could change the approach to treating heart disease, some say.

http://www.uphs.upenn.edu/news/News_Releases/jul06/CVI_regen.htm

Cell Protection Mechanism Points to Therapies to Prevent Heart

Attacks and Strokes

Queen's News Center

19-Jul-06

A gene called heme oxygenase-1 (HO-1) markedly protects the arteriosclerosis-prone human aortic smooth muscle cells from death after exposure to high concentrations of reactive oxygen species (ROS).

http://qnc.queensu.ca/story_loader.php?id=44be2c15f407c

Landmark Genetic Discovery Unlocks Cause of a Common Form of Heart Disease

University of Ottawa

22-Jun-06

Researchers have discovered that atrial fibrillation (AF), one of the most common forms of heart disease, is caused by a genetic mutation that occurs during in-utero development.

http://www.ottawaheart.ca/UOHI/doc/News_June22_2006.pdf

UT Southwestern Researchers Find Gene Mutation That Leads to 'Broken Hearts'

UT Southwestern Medical

20-Jul-06

Researchers have identified a group of fruit fly gene mutations responsible for "broken hearts" in the embryonic stages of development, a discovery that could help identify genes that cause human heart defects.

<http://www8.utsouthwestern.edu/utsw/cda/dept37389/files/305809.html>

Subcategory: Endocrinology

Johns Hopkins Lab Scientists Tame Overactive Cf Protein

Johns Hopkins Medicine

23-Jun-06

Using RNA interference on cells in the laboratory, researchers successfully intercepted signals sent out by VCP/pr 97 (valosin containing protein) and prevented cell damage by the protein, effectively returning the cell to normal.

http://www.hopkinsmedicine.org/Press_releases/2006/06_29_06.html

Subcategory: Evolution Research

Molecular DNA Switch Found to be the Same for All Life

Berkley Laboratory

17-Jul-06

Researchers have shown that the core machinery for initiating DNA replication is the same for all three domains of life: Archaea, Bacteria and Eukarya.

<http://www.lbl.gov/Science-Articles/Archive/LSD-molecular-DNA.html>

Mouse, Frog and Bird Put Snail and Slug to Different Uses

The Jackson Laboratory

27-Jun-06

Scientists have demonstrated both a confirmation of the consistent role of Snail genes in vertebrates, but found that Snail family gene function relating to neural crest cells is different in mice, indicating species-specific differences.

http://www.jax.org/news/snail_family.html

Subcategory: Genomics

How Can Identical Twins Be Genetically Different?

Bio.com

25-Jul-06

Identical twins who grow up together share just about everything, including their genes. But sometimes only one twin will have health problems such as rheumatoid arthritis when genetics predicts both of them should.

<http://www.bio.com/realms/research.jhtml?realmId=1&cid=20400035>

Subcategory: Immunology/ Infectious Diseases

Flick of a Protein Switches Immune Response

Bio.com

27-Jul-06

A single protein can turn on and off a key component of the immune system by changing partners in an elegant genomic dance, say researchers. The finding offers the first strong evidence in favor of the "combinatorial control" theory of gene expression.

<http://www.bio.com/realms/research.jhtml?realmId=2&cid=20400050>

Brittle Prions are More Infectious

Bio.com

28-Jun-06

Researchers have discovered that brittle prion particles break more readily into new "seeds," which spread infection much more quickly. Finding could help design drugs that discourage or prevent prion seeding.

<http://www.bio.com/realms/research.jhtml?realmId=2&cid=19900034>

Silver Bromide Shines In Bacteria-Fighting Coating

Bethany Halford

Chemical & Engineering News

12-Jul-06

A new type of antimicrobial coating could make it easier and cheaper to endow biomedical implants with the bacteria-fighting power of silver. The material is a cationic polymer embedded with AgBr nanoparticles.

<http://pubs.acs.org/cen/news/84/i29/8429coating.html>

Prion Disease Agent Causes Heart Damage in Mouse Study

The Scripps Research

06-Jul-06

Findings raise the possibility that heart infection could be a new aspect of prion diseases, including those that affect humans and livestock, and that these diseases could travel through the blood.

<http://www.scripps.edu/news/press/070606.html>

Subcategory: Miscellaneous

Open-Source Science

Chemical & Engineering News

24-Jul-06

Tropical diseases are low priority for big pharma because the return on drug development is so small. Online research communities aim to unite

scientists worldwide to find cures for these neglected diseases.
<http://pubs.acs.org/cen/science/84/8430sci1.html>

Scientists Discover a Genetic Code for Organizing DNA Within the

Weizmann Institute of

19-Jul-06

The precise location of nucleosomes along the DNA is known to play an important role in the cell's function, defining the segments in which these processes can and can't take place. New findings may help understand the mechanisms behind many diseases.

<http://www.weizmann-usa.org/site/News2?page=NewsArticle&id=7156>

Subcategory: Nephrology/ Urology

Discovery of Agile Molecular Motors Could Aid in Treating Motor Neuron Diseases

EurekaAlert!

17-Jul-06

Research shows proteins that function as molecular motors are surprisingly flexible and agile, able to navigate obstacles within the cell.

These observations could lead to better ways to treat motor neuron diseases.

http://www.eurekaalert.org/pub_releases/2006-07/uops-doa071706.php

Subcategory: Neurology

Production of Key Alzheimer's Protein Monitored for First Time in

Bio.com

26-Jun-06

A new testing process opens a valuable window into the genesis of Alzheimer's disease that, in addition to helping scientists better understand the origins of the condition, will likely help them improve its diagnosis and treatment.

<http://www.bio.com/realm/research.jhtml?realmId=2&cid=19800001>

'Friend' Protein Keeps Nerve Signals in Check

Bio.com

24-Jul-06

Among the many thousands of proteins in the cell, some are essential players while some are "hangers-on." A protein called tomosyn hangs on to syntaxin, which appears to play a key role in regulating the synaptic release of neurotransmitter chemicals.

<http://www.bio.com/realm/research.jhtml?realmId=2&cid=20400021>

Growing Spinal Cord Nerves After Injury

News-Medical

18-Jul-06

Experimental nerve injuries in rats have been treated with an enzyme called sialidase, isolated from bacteria. More than twice as many nerves in the spinal cords of the rats grew new nerve fibers compared to untreated rats.

<http://www.news-medical.net/?id=18910>

Dopamine Drug Leads to New Neurons and Recovery of Function in Rat Model of Parkinson's Disease

NI of Neurological

04-Jul-06

Researchers have shown that a drug which mimics the effects of the nerve-signaling chemical dopamine causes new neurons to develop in the part of the brain where cells are lost in Parkinson's disease (PD), suggesting new ways of treating PD.

http://www.ninds.nih.gov/news_and_events/press_releases/Pressrelease_dopamine_neurogenesis_070406.htm

Scientists Discover New Frontotemporal Dementia Gene

NIH News

17-Jul-06

Understanding how the mutations of the two different genes on chromosome 17 cause neuronal death might help better understand the different pathways that cause a form of familial frontotemporal dementia (FTD).

<http://www.nih.gov/news/pr/jul2006/nia-17.htm>

Drug Triggers Body's Mechanism to Reverse Aging Effect on Memory Process

Univ. California Irvine

27-Jul-06

A class of drugs made to enhance memory, ampakines, appears to trigger a natural mechanism in the brain that fully reverses age-related memory loss, even after the drug itself has left the body, according to researchers.

http://today.uci.edu/news/release_detail.asp?key=1509

Researchers Identify Very First Neurons in the "Thinking" Brain

Yale University

17-Jul-06

Researchers have identified the very first neurons, in place 31 days after fertilization, in what develops into the cerebral cortex, the part of the brain that is largely responsible for human cognition, including perception, memory, thought and language.

<http://www.yale.edu/opa/newsr/06-07-17-02.all.html>

Subcategory: Obstetrics/ Gynecology

Scientists Uncover Rules for Gene Amplification

Georgia Tech

29-Jun-06

Researchers have discovered that the location of a hairpin-capped break relative to the end of the chromosome will determine the fate of the amplification event, an important role in causing cancers via activation of oncogenes.

<http://www.gatech.edu/news-room/release.php?id=1028>

Subcategory: Oncology

Novel Connection Found Between Biological Clock and Cancer

Bio.com

29-Jun-06

Geneticists have discovered that DNA damage resets the cellular circadian clock, suggesting links among circadian timing, the cycle of cell division, and the propensity for cancer.

http://www.eurekalert.org/pub_releases/2006-06/dms-ncf062806.php

Cell Survival Depends on Chromosome Integrity

Bio.com

06-Jul-06

Researchers have discovered protein machinery important for cells to keep chromosomes intact. Broken chromosomes and DNA damage in human cells are well known to lead to cancer.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=19900075>

Researchers Take New Look at Cellular Suicide

Bio.com

06-Jul-06

A protein whose regular job is to help repair severed DNA molecules will, in some cases, join forces with another protein to do the opposite and chop up the DNA. This appears to be a way to kill the cell before it can become dysfunctional or cancerous.

<http://www.bio.com/realm/research.jhtml?realmId=2&cid=19900072>

Unusual Mechanism Keeps Repair Protein Accurate

Bio.com

25-Jul-06

Cancer researchers have discovered that a recently identified protein critical for repairing damaged genes uses an otherwise ordinary-looking portion of its molecular structure to keep its repairs accurate.

http://www.bio.com/newsfeatures/newsfeatures_research.jhtml?cid=20400032

Quadruplex In Its Element

Stu Borman

Chemical & Engineering News

31-Jul-06

Protein-and-DNA assemblies known as telomeres protect the ends of your chromosomes from fraying. Structures of human telomeric quadruplex in cell-like solution have implications for anticancer therapeutics.

<http://pubs.acs.org/cen/science/84/8431sci1.html>

Researchers Unveil Strategy for Creating Actively-programmed Anti-cancer Molecules (also covered at:

<http://www.sciencedaily.com/releases/2006/07/060714174847.htm>)

EurekaAlert! And Science

11-Jul-06

By bringing together chemistry and biology, a new approach provides a way to break the traditional one antibody-one target axiom of immunochemistry. Researchers used it to create a novel compound to combat metastatic breast cancer.

http://www.eurekalert.org/pub_releases/2006-07/sri-rus071006.php

Attacking Cancer's Sweet Tooth Is Effective Strategy Against Tumors; Mice Lacking Sugar-Metabolizing Pathway Outlive Four-Month Experiment

Harvard University 06-Jul-06
An ancient avenue for producing cellular energy, the glycolytic pathway, could provide a surprisingly rich target for anti-cancer therapies. One of the pathway's enzymes is LDHA. Most LDHA-deficient mice survived implantation of breast cancer cells.
http://web.med.harvard.edu/sites/RELEASES/html/6_29Leder_Fantin.html

MIT Sheds Light on How Tumor Cells Form

Massachusetts Institute of 20-Jun-06
"Checkpoint proteins" within cells work to prevent cells from dividing with an abnormal number of chromosomes. Interrupting the normal function of APC and EB1 tumor suppressor proteins will cause the cell to become aneuploid.
<http://web.mit.edu/newsoffice/2006/tumor-cells.html>

Mayo Researchers Discover Immune System Blocker at Work in Kidney Cancer

Mayo Clinic 28-Jun-06
The molecule B7-H4 helps renal cell carcinoma (RCC) grow and spread by blocking the immune system. When B7-H4 is active, RCC patients are three times as likely to die from their cancer as RCC patients whose tumors don't express B7-H4.
<http://www.mayoclinic.org/news2006-rst/3525.html>

Bubbles Go High-tech to Fight Tumors

Univeristy of Michigan 20-Jul-06
Using gas bubbles to block blood flow to a tumor is a new technique in embolotherapy. The technique allows doctors to control exactly where the bubbles are formed, so blockage of blood flow to surrounding tissue is minimal.
<http://www.umich.edu/news/index.html?Releases/2006/Jul06/r072006>

Subcategory: Pain Management

Columbia University Researchers Discover On/Off Switch for Chronic

Columbia University 19-Jul-06
Researchers have discovered a protein in nerve cells that acts as a switch for chronic pain. A new class of drugs that will block chronic pain by turning this switch off will be focused on "first order" neurons that send messages to the spinal cord.
http://www.cumc.columbia.edu/news/press_releases/Chronic_pain.html

Subcategory: Proteomics

Asthma And Obesity Linked By Protein Called AP2

Medical News Today 15-Jul-06
Adipocyte/macrophage fatty acid-binding protein aP2 (aP2) not only helps bring about obesity, diabetes type 2, hardening of the arteries, but also plays a vital role in allergic respiratory diseases such as asthma, say

scientists.

<http://www.medicalnewstoday.com/healthnews.php?newsid=47356>

Subcategory: Wound/Tissue Repair

Researchers Discover Communication Signal For Tissue Development

Science Daily

12-Jul-06

Researchers have discovered a communication signal between cells, providing new information about how cells and tissues determine when to let go from surfaces during new growth. Implications for the basic mechanisms of inflammation and wound healing.

<http://www.sciencedaily.com/releases/2006/07/060712181126.htm>

RESEARCH TOOLS

Subcategory: Computing Systems

Computers Band Against Cancer

IBM

20-Jul-06

Help Defeat Cancer is the 3rd project to use the huge computational power offered by World Community Grid, the world's largest humanitarian grid that works as a virtual supercomputer. It will be used to analyze large numbers of cancer tissue microarrays.

http://www.ibm.com/news/us/en/2006/07/2006_07_20.html

New NIAID Program Aims to Model Immune Responses and Key Infectious Diseases

NIH News

12-Jul-06

The Program in Systems Immunology and Infectious Disease Modeling (PSIIM) will employ computational systems biology to develop a deeper understanding of how pathogens cause disease and how the immune system responds to them.

<http://www3.niaid.nih.gov/news/newsreleases/2006/systemsbio.htm>

Subcategory: Databases

Mining Data for Better Drugs

Mike May

Drug Discovery & Development

01-Jul-06

A variety of data-mining techniques could provide early indications of human toxicity. May reviews techniques for mining of unstructured data.

<http://www.dddmag.com/ShowPR.aspx?PUBCODE=090&ACCT=1600000100&ISSUE=0607&RELTYPE=DEV&PRODCODE=00000000&PRODLETT=AH>

Subcategory: Drug Discovery

Hopkins Researchers Develop New Tool to Watch Realtime Chemical Activity in Cells

Bio.com 21-Jul-06
A new tool and new experimental approach allow researchers to see multiple, realtime chemical reactions in living cells, helping to identify potential drugs that interfere with the action of an enzyme linked to heart disease and similar health problems.
<http://www.bio.com/realm/research.jhtml?realmId=3&cid=20400010>

Subcategory: Genome Sequence

NHGRI Announces Latest Sequencing Targets
NIH News 19-Jul-06
The gibbon genome sequence will provide researchers with crucial information when comparing it to the human genome sequence and other primate genomes, shedding light on molecular mechanisms implicated in human health and disease.
<http://www.genome.gov/19517271>

Subcategory: Imaging

3D Model Reveals Secrets of Metastasis
Whitehead Institute of 10-Jul-06
Three-dimensional study helps explain why two-dimensional assays for metastasis-inhibiting drugs do not effectively predict their effects in tissue.
http://www.wi.mit.edu/news/archives/2006/pm_0707.html

Subcategory: Miscellaneous

Minimizing Drug Toxicity
Stu Borman Chemical & Engineering News 03-Jul-06
Highlights advances in mechanistic studies and in methods to predict drug toxicity, including bioactivation, toxicogenomics and metabonomics.
<http://pubs.acs.org/cen/science/84/8427sci3.html>

Subcategory: Nanotechnology

Rice Scientists Make First Nanoscale pH Meter
Bio.com 29-Jun-06
Using unique nanoparticles that convert laser light into useful information, scientists have created the world's first nano-sized pH meter, allowing a means of measuring accurate pH changes over a wide pH range in real-time inside living tissue and cells.
<http://www.bio.com/realm/research.jhtml?realmId=3&cid=19900044>

Sandia Work Launched on Space Shuttle Shows Live Cells Influence Growth of Nanostructures
Bio.com 21-Jul-06
Cheap, tiny, and very lightweight sensors of chemical or biological

agents could be made from long-lived cells that require no upkeep, yet sense and then communicate effectively with each other and their external environment, says researcher.

<http://www.bio.com/realm/research.jhtml?realmId=5&cid=20200011>

Subcategory: Reagents

In Vivo RNAi Silencing

Carolyn Riley Chapman

Drug Discovery & Development

01-Jul-06

The use of RNAi as a research tool for target identification and validation, though relatively new, has now become common practice at pharmaceutical and biotechnology companies. Reviews remaining technical hurdles such as in vivo delivery.

<http://www.ddmag.com/ShowPR.aspx?PUBCODE=090&ACCT=1600000100&ISSUE=0607&RELTYPE=DIS&PRODCODE=00000000&PRODLETT=AA>

THERAPEUTIC CATEGORY

Subcategory: Gastroenterology

Celiac Success: New Enzyme Efficiently Degrades Gluten In 'Human Stomach' Environment

Bio.com

30-Jun-06

There now is a realistic chance that oral supplementation with an enzyme can ensure gluten degradation in the stomach before reaching the small intestine, where it causes problems for people with celiac disease.

<http://www.bio.com/realm/research.jhtml?realmId=4&cid=19900049>

Subcategory: Miscellaneous

UCLA Study Finds Same Genes Act Differently in Males and Females; Discovery May Explain Gender Gap in Disease Risk, Drug Response

Univ. of California Los

07-Jul-06

Researchers report in a new study that thousands of genes behave differently in the same organs of males and females, which may explain why the same disease often strikes males and females differently and genders respond differently to drugs.

<http://www.newsroom.ucla.edu/page.asp?RelNum=7177>

Australian Scientists Say 'Molecular Assassin' Drug in Development

Yahoo

04-Jul-06

Researchers report a smart drug that has the potential to treat a range of illnesses including cancer, heart disease and inflammatory illnesses such as arthritis and eye disease.

http://news.yahoo.com/s/afp/20060704/hl_afp/healthaustraliadrugsgene_060704101713;_ylt=A86.I1Ik2atEmz4BHWJJOrgF;_ylu=X3oDMTA5aHJvMDdwBHNIYwN5bmNhdA--

Subcategory: Pain Management

Heat 'Blocks Body's Pain Signals'

BBC News

05-Jul-06

Researchers say temperatures over 40C (104F) switch on the internal heat receptor, TRPV1, blocking the effect of the P2X3 pain receptor chemical messenger that cause the body to detect pain.

<http://news.bbc.co.uk/2/hi/health/5144864.stm>

Snail venom painkiller launched

BBC News

10-Jul-06

Prialt, a drug that harnesses the power of deadly sea snail venom, is a strong painkiller designed for patients suffering from chronic pain who cannot tolerate treatments like morphine.

<http://news.bbc.co.uk/2/hi/health/5165124.stm>

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