



---

## BioTechCircle News®

January, 2006

---

Quote of the month:

Laughter is a stimulant which can trigger energy inside a person's DNA, potentially helping cure disease. Experiments show that blood glucose levels become lower after laughter compared with listening to a boring lecture.

[http://www.nlm.nih.gov/medlineplus/news/fullstory\\_29249.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_29249.html)

---

**In this articles section: links to 56 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:

Agri-Biotech (1 article) – Page 2  
Biobusiness Management (3 articles) – Page 2  
Clinical Trials (1 article) – Page 3  
Drug Delivery (1 article) – Page 3  
Investments/Government Support (2 articles) – Page 3  
Organizations (1 article) – Page 4  
Platform Technologies (20 articles) – Page 4  
Research Advancements (15 articles) – Page 8  
Research Tools (7 articles) – Page 12  
Strategic Relationships (2 articles) – Page 13  
Therapeutic Category (3 articles) – Page 14

---

## AGRI-BIOTECH

### *Subcategory: Crops*

#### **Bionic Growth For Biotech Crops**

Justin Gillis

Washington Post

12-Jan-06

Genetically modified crops are gaining popularity in middle-income countries such as China, India and Brazil. Small cotton farmers in particular embrace the technology that allows them to grow more cotton while reducing the use of chemical pesticides.

<http://www.washingtonpost.com/wp-dyn/content/article/2006/01/11/AR2006011102210.html>

---

## BIOBUSINESS MANAGEMENT

### *Subcategory: Government/ Approvals*

#### **Pharmacogenomics Regulations Take Flight**

Alan Dove, PhD

Drug Discovery &

01-Jan-06

Drug industry experts say discussions center on "how the industry and FDA together could feel their way towards a meaningful regulatory environment for the new science of pharmacogenetics."

<http://www.ddmag.com/ShowPR.aspx?PUBCODE=016&ACCT=1600000100&ISSUE=0601&RELTYPE=PR&ORIGRELTYPE=CHO&PRODCODE=00000000&PRODLETT=O>

### *Subcategory: Patent/Intellectual Property Issues*

#### **Street Talk: Patent Issues Could Dominate Pharma Industry in 2006**

Brian O'Connell

BioPharm International

01-Jan-06

How much of an impact does patent reform, real or imagined, have on biopharmaceutical stocks? O'Connell looks at the issues.

<http://www.biopharm-mag.com/biopharm/article/articleDetail.jsp?id=284442>

#### **Disgraced Cloning Pioneer Could Keep His Patents**

New Scientist

18-Jan-06

Even if the patent application by disgraced stem cell scientist is now abandoned, or proved worthless in some countries, or found un-enforceable in court, it becomes a permanent prior disclosure.

<http://www.newscientist.com/article.ns?id=dn8601>

---

## CLINICAL TRIALS

### *Subcategory: Computing Systems*

#### **This New Model Standardizes Data Exchange Between the Various Stages of a Research Study.**

P. Fazi, L. Collada Ali, D. Applied Clinical Trials 01-Jan-06  
Luzi, F.L. Ricci, L.D.  
Serbanati, M. Vignetti

A clinical trial (CT) model is proposed that provides a more detailed analysis of the entire CT process to better understand the number of procedures carried out during the trial by integrating research and systems.

<http://www.actmagazine.com/appliedclinicaltrials/article/articleDetail.jsp?id=283029>

---

## DRUG DELIVERY

### *Subcategory: Miscellaneous*

#### **Rutgers Researchers Create Tiny Chemical Cages to Enclose Drug, Pesticide Molecules**

Rutgers 17-Jan-06  
Research could promote safe delivery of drugs and pesticides, filter toxins from wastewater and improve chemical production.

<http://ur.rutgers.edu/medrel/viewArticle.html?ArticleID=4916>

---

## INVESTMENTS/ GOV. SUPPORT

### *Subcategory: State*

#### **Biotech Center to Match VC Funding with Loans**

Bizjournals.com 18-Jan-06  
The North Carolina Biotechnology Center will match venture capital investments with loans of up to \$250,000 to help alleviate funding shortfalls that often occur between seed-funding stages and later venture capital investments.

[http://www.bizjournals.com/industries/health\\_care/biotechnology/2006/01/16/triangle\\_daily2](http://www.bizjournals.com/industries/health_care/biotechnology/2006/01/16/triangle_daily2)

#### **Pataki Announces Biotechnology Grant Program**

Newsday 26-Jan-06

New York state's government aims to generate \$800 million in new investment in biotechnology and medical research at institutions across the state.

[http://www.newsday.com/news/local/wire/newyork/ny-bc-ny--biotechgrants0126jan26\\_0,188754.story?coll=ny-region-apnewyork](http://www.newsday.com/news/local/wire/newyork/ny-bc-ny--biotechgrants0126jan26_0,188754.story?coll=ny-region-apnewyork)

---

## ORGANIZATIONS

### *Subcategory: Bio Pharma*

#### **Profit Soars at Biotech Giant**

SFGate.com

11-Jan-06

Reports Genentech Inc.'s profit rise of 64% in the fourth quarter of 2005. Analysts say Genentech takes significant risks to develop novel drugs with the potential to be the best in their class.

<http://www.sfgate.com/cgi->

---

## PLATFORM TECHNOLOGIES

### *Subcategory: Cloning Techniques*

#### **Cloned Stem Cells Prove Identical To Fertilized Stem Cells**

Bioresearch online

17-Jan-06

Analyzing the complete gene-expression profiles of both cloned and fertilization-derived stem cells in mice, scientists at Whitehead Institute for Biomedical Research now have concluded that the two are, in fact, indistinguishable.

<http://www.bioresearchonline.com/content/news/article.asp?DocID={650F1F01-9992-4532-B0B6-45F9727AB69F}>

### *Subcategory: Computing Systems*

#### **Lack of Adequate and Attentive Support Is Preventing Some Sites from Fully Taking Advantage of EDC and ePRO Technologies.**

Kenneth A. Getz

Applied Clinical Trials

01-Jan-06

In the coming 3 years, the market for electronic data capture (EDC) and electronic patient reported outcomes (ePRO) technologies is expected to grow faster than its historical 23% annual rate.

<http://www.actmagazine.com/appliedclinicaltrials/article/articleDetail.jsp?id=283027>

#### **Computational Biology Field Likely to Grow**



<http://www.bio.com/realm/research.jhtml?realmId=1&cid=16500035>

**Patterns in Genome Organization May Partially Explains How Microbial Cells Work**

Bio.com

24-Jan-06

Researchers report large- and small-scale organizational patterns in the genomes of 135 bacteria ranging from those that cause typhoid fever to organisms that enrich the nitrogen content of soil. The patterns in their genomes are highly nonrandom.

<http://www.bio.com/realm/research.jhtml?realmId=3&cid=16200057>

**Cracking the Genetic Code for Control of Gene Expression**

EurekAlert!

12-Jan-06

In this post-genomic era, the next big goal is to decipher the genetic code of regulation of gene expression. Scientists at the Universtity of Helsinki, Finland came together to advance towards cracking the code for how gene expression is controlled.

[http://www.eurekalert.org/pub\\_releases/2006-01/uoh-ctg011206.php](http://www.eurekalert.org/pub_releases/2006-01/uoh-ctg011206.php)

**Scientists Develop Mechanism to "Switch on" Genes**

Zeenews.com

05-Jan-06

Scientists have worked out a mechanism to "switch on" genes introduced in a plant or an animal that has the potential for treatment of diseases like diabetes and parkinson as also for genetic crop modification.

<http://www.zeenews.com/znew/articles.asp?aid=266935&ssid=28&sid=env>

*Subcategory: Human Therapeutics*

**Regeneration Sans Stem Cells**

Wired News

26-Jan-06

When a worm is chopped in two, the missing part often re-grows. Researchers at several biotech companies are challenging the assumption that humans can't perform a similar feat by developing drugs that encourage self-regeneration.

[http://www.wired.com/news/technology/0.70064-0.html?tw=wn\\_tophead\\_6](http://www.wired.com/news/technology/0.70064-0.html?tw=wn_tophead_6)

*Subcategory: Immunology/ Infectious Diseases*

**Carnegie Mellon Develops Non-invasive Technique To Detect Transplant Rejection at Cellular Level**

- Carnegie Mellon 24-Jan-06
- Scientists have developed a promising tool that uses magnetic resonance imaging (MRI) to track immune cells as they infiltrate a transplanted heart in the early stages of organ rejection.
- [http://www.cmu.edu/PR/releases06/060124\\_transplant.html](http://www.cmu.edu/PR/releases06/060124_transplant.html)
- Subcategory: Lab-on-a-chip/ DNA Chips/*
- Tiny Biosensor to Detect Cancer**
- BBC News 30-Dec-05
- A tiny biosensor uses the same gyroscope technology as navigation systems and car airbags. The aim is to incorporate it into a hand-held device for quick and easy analysis of tissue samples.
- <http://news.bbc.co.uk/1/hi/health/4564604.stm>
- MetaChip for Quick Screens**
- Bioscience Technology 10-Jan-06
- A chip containing human cytochrome P450 enzymes will enable drug candidates, metabolites to be screened for toxicity more efficiently, earlier in the drug development process, allowing companies to weed out toxic compounds sooner, at lower cost.
- <http://www.biosciencetechnology.com/ShowPR~PUBCODE~090~ACCT~9000000100~ISSUE~0601~RELTYPE~PR~ORIGRELTYPE~RLSN~PRODCODE~00000000~PRODLETT~H.htm>
- Subcategory: Proteomics*
- The First Genome-wide Screen For Protein Complexes Is Completed**
- Bio.com 23-Jan-06
- Cells continually dismantle and reassemble their machines at different stages of the cell cycle and in response to environmental challenges, such as infections. Work gives new insights into the dynamic nature of protein complexes.
- <http://www.bio.com/realm/research.jhtml?realmId=1&cid=16200023>
- Flip-flopped Structure**
- Chemical & Engineering 02-Jan-06
- Proteins that pump drugs out of bacterial cells contribute to the problem of multidrug resistance in diseases such as tuberculosis. New research findings may help lead to a solution to this problem.

<http://pubs.acs.org/cen/news/84/i01/8401notw4.html>

### **Yeast Cells Brim With Machinery**

Chemical & Engineering

30-Jan-06

Scientists have shown how 2,760 proteins in budding yeast cells assemble into 491 complexes, 257 of which had not been identified before. "If we are going to understand how a cell works, we need to understand the protein complexes within them."

<http://pubs.acs.org/cen/news/84/i05/8405notw8.html>

### **Peptides Trapped On A Thread**

Chemical & Engineering

25-Jan-06

A rotaxane is a bead-on-a-string type structure. Mechanically interlocked rotaxane peptides display a wealth of intriguing properties such as high resistance to peptidases, unique modes of antimicrobial and antiviral action and others.

<http://pubs.acs.org/cen/news/84/i05/8405peptides.html>

### **Rockefeller Researchers Discover a Biological Clock Within a Clock**

EurekAlert!

12-Jan-06

Explains that individual cells have a network of proteins and genes that maintain their own internal clock that regulates metabolism, cell division, and hormone production, as well as the wake-sleep cycle.

[http://www.eurekalert.org/pub\\_releases/2006-01/ru-rrd011106.php](http://www.eurekalert.org/pub_releases/2006-01/ru-rrd011106.php)

### *Subcategory: Virology*

### **Swiss Researchers Develop All-in-one Remote Control Gene**

Bio.com

23-Jan-06

Researchers have combined several gene manipulation techniques and incorporated them into a single lentiviral vector. An all-in-one tool like this will likely see wide use in genetic research and in clinical gene therapy applications.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=16200034>

---

## **RESEARCH ADVANCEMENTS**

### *Subcategory: Cardiology/ Vascular Diseases*

### **New 'Molecular Switch' Protein Protects the Heart From Major Cardiovascular Damage**

Bio.com 22-Jan-06

Researchers, using genetic engineering technology to replace the amino acid alanine, found in the adult form of troponin I, with a histidine from the fetal form of the same protein, say this could be the key to a new therapy for cardiovascular disease.

<http://www.bio.com/realm/research.jhtml?realmId=2&cid=16200024>

**Oh, Rats! Designer Animals Reveal Possible Heart Disease Genes**  
EurekAlert! 15-Jan-06

Researchers continue to study the panels of designer rat strains, and hope to knock out specific candidate heart disease genes, directly testing their effects. "Science is moving from a microscopic to global perspective of heart disease."

[http://www.eurekalert.org/pub\\_releases/2006-01/tifg-ord011206.php](http://www.eurekalert.org/pub_releases/2006-01/tifg-ord011206.php)

**Science Creates a Living Bandage for Broken Hearts**  
HealthDay 20-Jan-06

Biopolymers might prove especially useful for stem cell therapy for cardiovascular repair, as the fibrin glue comes equipped with special chemical binding sites that a cell can grab on to.

<http://www.healthday.com/view.cfm?id=530478>

*Subcategory: Cell Therapy*

**Taiwan Breeds Green-Glowing Pigs**  
BBC News 12-Jan-06

Green transgenic pigs have been created by adding genetic material from jellyfish into a normal pig embryo. If some of their stem cells are injected into another animal, scientists can track how they develop without the need for a biopsy or invasive test.

<http://news.bbc.co.uk/2/hi/asia-pacific/4605202.stm>

*Subcategory: Disease Prevention*

**New Protein Discovery Nothing To Sneeze At**  
Bio.com 24-Jan-06

Scientists have discovered how the protein, SOCS1, is involved in the body's defense system, and could be manipulated to become a powerful anti-viral drug.

<http://www.bio.com/realm/research.jhtml?realmId=2&cid=16300012>

***Subcategory: Genomics***

**Tandem Transcripts Team Together**

Bio.com

05-Jan-06

Transcription-induced chimerism (TIC) is where 2 adjacent genes produce a single, fused RNA transcript. Implications for drug development and for understanding mechanisms underlying gene evolution, transcription regulation, and genomic organization.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=15800054>

***Subcategory: Immunology/ Infectious Diseases***

**St. Jude Conducts First Large-scale Bird Flu Genome Study**

Bio.com

26-Jan-06

Studies provide the first fundamental insight into the evolution of influenza viruses in nature--the source of all influenza viruses that affect humans, domestic animals and birds.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=16500002>

**Infection-fighting Protein Could Be Key to Autoimmune Disease, Say U-M Scientists**

EurekAlert!

11-Jan-06

Reports a protein called cryopyrin responds to invading bacteria by triggering the activation of a powerful inflammatory molecule called IL-1beta, which signals the immune system to attack pathogens and induces fever to protect the body against infection.

[http://www.eurekalert.org/pub\\_releases/2006-01/uomh-ipc\\_1011006.php](http://www.eurekalert.org/pub_releases/2006-01/uomh-ipc_1011006.php)

**Research Details How a Virus Hijacks Cell Signals to Cause Infection**

EurekAlert!

12-Jan-06

A common virus that causes meningitis and heart inflammation has been found to take a "back door" approach to evade natural barriers, then exploits biological signals to infect human cells.

[http://www.eurekalert.org/pub\\_releases/2006-01/chop-rdh011106.php](http://www.eurekalert.org/pub_releases/2006-01/chop-rdh011106.php)

***Subcategory: Oncology***

**Loosen Leash On Cancer Protein 'Watchdog,' Researchers Say**

Bio.com 05-Jan-06

Scientists have found that one of the proteins found naturally in cells, p53, has the ability to halt the progression of intestinal tumors that arise from genetic predisposition. Another protein is theorized to keep the p53 from becoming too active.

<http://www.bio.com/realm/research.jhtml?realmId=2&cid=15800056>

**Mayo Clinic Collaboration Discovers Protein Amplifies DNA Injury**  
EurekAlert! 19-Jan-06

A research team has discovered that the protein MDC1 amplifies weak DNA injury signals so genetic repair can begin. Once amplified, even low-level damage signals become strong enough to activate the cell's natural repair processes.

[http://www.eurekalert.org/pub\\_releases/2006-01/mc-mcc011706.php](http://www.eurekalert.org/pub_releases/2006-01/mc-mcc011706.php)

**Gene Plays Key Role in Stopping Spread of Some Cancers**  
HealthDay 04-Jan-06

A gene that tells a cell to commit suicide if it wanders into the wrong part of the body gets silenced in some cancer cells, say researchers. The gene involved is called caspase 8.

<http://www.healthday.com/view.cfm?id=530019>

**New Method for Improving Cancer-killing Antibodies**  
Kirsty Barnes in-Pharma Technologist 30-Jan-06

By controlling the sugar structures on antibodies scientists have shown that their ability to kill cancer cells can be significantly improved. The new process can also applied to optimize any therapeutic glycoprotein.

<http://www.in-pharmatechnologist.com/news/ng.asp?id=65449-glycofi-antibodies-sugar->

*Subcategory: Ophthalmology*

**Scientists Link Another Gene To Degenerative Blindnes**  
EurekAlert! 18-Jan-06

Scientists have discovered that a mutation in a common gene called calnexin can derail the light-processing activity of cells and set in motion the gradual breakdown of vision.

[http://www.eurekalert.org/pub\\_releases/2006-01/uow-sla011706.php](http://www.eurekalert.org/pub_releases/2006-01/uow-sla011706.php)

*Subcategory: Pain Management*

## Master Genetic Switch Found for Chronic Pain

Bio.com

25-Jan-06

Researchers have found that eliminating what appears to be a master genetic switch for the development of pain-sensing neurons knocks out the animals' response to "neuropathic pain," abnormal pain that outlasts the injury.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=16400001>

---

## RESEARCH TOOLS

### *Subcategory: Antibodies*

#### What's Next in Antibody Therapy Research

Pam Holland-Moritz

BioPharm International

01-Jan-06

Discusses key methods used in antibody research, including genetic databases, cancer therapy with antibodies and technical advances in chromosome visualization.

<http://www.biopharm-mag.com/biopharm/article/articleDetail.jsp?id=284446>

### *Subcategory: Cardiology/ Vascular Diseases*

#### Carbon Nanotubes That Detect Disease-causing Mutations Developed by Pitt Researcher

Bio.com

25-Jan-06

Carbon nanotubes are rolled-up sheets of graphite only a few nanometers wide-about the width of a molecule of DNA. Researchers used these nanotubes' electrical properties to find a particular mutation in the gene that causes hereditary hemochromatosis.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=16300013>

### *Subcategory: Computing Systems*

#### Stanford/Packard Scientist's Data-Mining Technique Strikes Genetic Gold

Bio.com

10-Jan-06

Researchers used computer programs to automatically categorize the tens of thousands of microarray experiments in a single database based on the terms, or concepts, used by the submitter to describe the experiment.

<http://www.bio.com/realm/research.jhtml?realmId=1&cid=15800096>

### *Subcategory: Databases*

#### University of Alberta Researcher Unveils World's Largest Drug Database

EurekaAlert!

04-Jan-06

Interactive one-stop-shop offers detailed drug information for patients, researchers and health-care professionals.

[http://www.eurekaalert.org/pub\\_releases/2006-01/uoa-uoa010406.php](http://www.eurekaalert.org/pub_releases/2006-01/uoa-uoa010406.php)

***Subcategory: Immunology/ Infectious Diseases***

**Internet Game Provides Breakthrough in Predicting the Spread of**

Bio.com

25-Jan-06

Using a popular internet game that traces the travels of dollar bills, scientists have unveiled statistical laws of human travel in the US, and developed a mathematical description that can be used to model the spread of infectious disease in the US.

<http://www.bio.com/realm/research.jhtml?realmId=3&cid=16300011>

***Subcategory: Proteomics***

**A Real Time Look at Interactions Between RNA and Proteins**

Bio.com

30-Jan-06

"For the first time, we can study how manipulation of cellular physiology, such as administering a drug, changes RNA-binding protein and RNA interactions. This technology allows us to see that in real time in real cells," researcher says.

<http://www.bio.com/realm/research.jhtml?realmId=2&cid=16500011>

**UPLC Achieves Better Resolution, Speed, and Sensitivity than HPLC by Using 1.7 1/4 m Particles and Optimized Instrumentation.**

Jeff Mazzeo, Ph.D., Tom Wheat, Ph.D., Beth Gillece-Castro, Ziling Lu  
BioPharm International

01-Jan-06

Ultra performance liquid chromatography (UPLC) is a new category of liquid chromatography that researchers are using to increase resolution, speed, and sensitivity in a variety of applications, such as peptide mapping.

<http://www.biopharm-mag.com/biopharm/article/articleDetail.jsp?id=284444>

---

**STRATEGIC RELATIONSHIPS**

***Subcategory: Collaboration***

**The Value of a Supplier Alliance**

Leonard J. Goren, Todd Hannigan                      BioPharm International                      01-Jan-06

Life sciences companies are aggressively engaged in finding suppliers who offer integrated and proven technical solutions. Discusses best practices in alliances.

<http://www.biopharm-mag.com/biopharm/article/articleDetail.jsp?id=284447>

*Subcategory: Merger Decisions*

**East Bay Biotechs Hit Sales Block**                      Bizjournals.com                      02-Jan-06

Reports on mergers and acquisitions activities by Novartis AG, Amgen, Pfizer and other large companies as they purchased smaller biotech companies.

[http://www.bizjournals.com/industries/health\\_care/biotechnology/2006/01/02/eastbay\\_focus3](http://www.bizjournals.com/industries/health_care/biotechnology/2006/01/02/eastbay_focus3)

---

## THERAPEUTIC CATEGORY

*Subcategory: Metabolism: Obesity, Diabetes*

**Laughter Really May Well Be Good Medicine**                      Medline Plus                      12-Jan-06

Explains theory that laughter is a stimulant which can trigger energy inside a person's DNA, potentially helping cure disease. Experiments show that blood glucose levels become lower after laughter compared with listening to a boring lecture.

[http://www.nlm.nih.gov/medlineplus/news/fullstory\\_29249.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_29249.html)

*Subcategory: Oncology*

**UQ Scientist Honoured for Developing the World's First Cancer Vaccine**                      EurekAlert!                      23-Jan-06

Final-stage clinical trials of the cancer vaccine showed it to be 100% effective at preventing infection with the types of human papilloma virus (HPV) that are included in the vaccine, which are together responsible for about 70% of cervical cancer.

[http://www.eurekalert.org/pub\\_releases/2006-01/ra-ush012206.php](http://www.eurekalert.org/pub_releases/2006-01/ra-ush012206.php)

**A New Class of Anti-cancer Drugs Based on Platinum**                      VCU News                      02-Jan-06

Researchers have created a new platinum-based, anti-cancer agent able to overcome acquired drug resistance by first modifying the way it is absorbed into cancer cells and then attacking the DNA of those cancer cells.

<http://www.vcu.edu/uns/Releases/2006/jan/010206.html>

---

Copyright 2006, Technology Management Associates, Inc.. All rights reserved. Please do not reprint, e-mail or host on your Web site, without explicit permission. This newsletter is for your use only.