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## BioTechCircle News®

May 2007

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Featured May article:

### **Ethical Reputations of Top Pharma Firms Revealed**

Earning power and ethical nature do not necessarily appear to go hand in hand, as quarterly rankings report best ethics, ethics progress and performance. Ethics consists of 45 criteria of business contribution to human development.

<http://www.in-pharmatechnologist.com/news/ng.asp?id=76941-gsk-ethical-revenue>

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**In this articles section: links to 53 free Web articles in 15 major categories.**

The major categories are in alphabetical order and further subdivided to make it easy for you to locate news and developments in technology, the business and the markets in the life science areas of interest to you.

*Note: if the links don't connect you directly, please copy and paste the entire URL into your web browser.*

Here are the major categories and the page where each category starts:

Agri-Biotech (1 article) – Page 2  
Biobusiness Management (3 articles) – Page 2  
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## CLINICAL TRIALS

### *Subcategory: Government/ Approvals*

#### **Trials for Pediatrics and Proteins Under Debate**

Jill Wechsler

Applied Clinical Trials

01-May-07

Amidst the debate over costs and exclusivity, the need for clinical trials on follow-on biologics is emerging as a key issue. Policy makers discuss incentives for trials on children and for generic versions of biotech therapies.

<http://www.actmagazine.com/appliedclinicaltrials/article/articleDetail.jsp?id=424915>

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## CONTRACT SERVICES

### *Subcategory: Miscellaneous*

#### **Outsourcing: Transition from Business Process Outsourcing to Knowledge Process Outsourcing**

Hazel Aranha, Scott M.  
Wheelwright

BioPharma International

01-May-07

The offshoring of high-end, knowledge-intensive work is termed knowledge process outsourcing (KPO). Examples of KPO services include creating, sharing, maintaining, tracking, and disseminating knowledge across a variety of industry segments.

<http://www.biopharminternational.com/biopharm/article/articleDetail.jsp?id=423191>

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## DIAGNOSTIC TOOLS

### *Subcategory: Biomarker*

#### **Quantum Dots Reach Clinical Lab**

Megan McRainey

Georgia Institute of Technology

24-May-07

New research guidelines have been released for using bioconjugated quantum dots, luminescent nanoparticles linked to biological molecules, as tools for disease diagnosis and treatment.

<http://www.gatech.edu/news-room/release.php?id=1384>

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## INDUSTRY

### *Subcategory: Geographic focus*

#### **The Maturing of Europe's Biotechs**

Jennifer L. Schenker

Business Week

22-May-07

Old World biotechs are set to deliver products with big potential for returns as Addex Pharmaceutical enjoyed the biggest biotech initial public offering in either Europe or the U.S. since 2004.

[http://www.businessweek.com/globalbiz/content/may2007/gb20070522\\_399291.htm](http://www.businessweek.com/globalbiz/content/may2007/gb20070522_399291.htm)

### **Danish Biotech Occupies 3rd Position in Europe**

Copenhagen Post

03-May-07

Denmark together with Germany is 3rd in Europe in the number of products that the public biotech companies have in their pipelines.

Privately-held Danish companies are 4th in Europe among their peers.

<http://www.copcap.com/composite-10352.htm>

### **Biotech Mkt in India to Touch Five Bn Dlr by 2010**

The Economic Times

04-May-07

Biotechnology in India is growing at 37% per year and is projected to reach \$5 billion by 2010. In 2007, India contributes about 1.1% share of the global market.

<http://economictimes.indiatimes.com/articleshow/2005155.cms>

### *Subcategory: Miscellaneous*

### **Humanitarian Impact Itanium-Based Research Honored**

Salvatore Salamone

Bio-IT World

01-May-07

Reviews life sciences organizations on the list of Humanitarian Impact Innovation winners. Includes simulation methods to explore the molecular basis for disease, optimizing drug discovery research and genomic profiling.

<http://www.bio-itworld.com/newsitems/2007/april/05-01-07-itanium-contest>

### **Frustration, Hope At Biotech Event**

Rick Mullin

Chemical & Engineering News

14-May-07

Mullin reports on speaker topics at BIO 2007's conference, including financial and regulatory challenges, scientific hurdles to drug development and translational medicine, the process of advancing new science from the laboratory to clinical patient care.

<http://pubs.acs.org/cen/news/85/i20/8520notw1.html>

### **Heads Up, Biotech Investors: Chapter 2**

Mike Havrilla

The Motley Fool

02-May-07

Havrilla has put together a list of companies that are expected to be on the move within the next 9 months due to clinical trial data and FDA decisions and have a market cap ranging from around \$100 million to just beyond \$1 billion.

<http://www.fool.com/investing/high-growth/2007/05/02/heads-up-biotech-investors-chapter->



falling inventories and soaring oil prices are creating conditions for greater energy-dependence.

<http://pubs.acs.org/cen/employment/85/8518employment.html>

### **Metal Complex Acts Like Enzyme**

Steve Ritter

Chemical & Engineering News

30-Apr-07

The first catalytically active nickel-based complex has been developed with a structure that effectively replicates key aspects of the active site in hydrogenases; hydrogenases might be useful for producing hydrogen as a fuel and other industrial uses.

<http://pubs.acs.org/cen/news/85/i18/8518notw5.html>

### *Subcategory: Forensics*

### **Yeast Sniffs Out Explosives**

Sarah Everts

Chemical & Engineering News

14-May-07

7 rat proteins required for sensing and transducing a biochemical signal after exposure to an odorant were placed into genetically engineered yeast. A DNT-detecting protein segment was spliced into the yeast olfactory circuit to complete the sensor.

<http://pubs.acs.org/cen/news/85/i20/8520notw2.html>

### **Gold Particles Can Detect Toxins**

World Gold Council

04-Apr-07

Researchers coated gold nanoparticles with an antibody specific to cotinine, the substance that appears in a person's fingerprints when they metabolize nicotine. The technique may be used by first responders to quickly find out more about a suspect.

<http://www.gold.org/discover/news/article/3747/>

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## **ORGANIZATIONS**

### *Subcategory: Research Labs*

### **Recreating the Lost Science Paradigm**

R & D Magazine

01-May-07

The Janelia Farm Research Campus is a freestanding research component of Howard Hughes Medical Institute (HHMI). Scientists work together in self-assembling, multidisciplinary teams to solve challenging biological problems.

<http://www.rdmag.com/ShowPR.aspx?PUBCODE=014&ACCT=1400000100&ISSUE=0705&RELTYPE=CVS&PRODCODE=00000000&PRODLETT=AZ>

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## **PATENTS**

### *Subcategory: Geographic focus*

## **China Today: Intellectual Property Protection in China: Does it**

Eric Langer

BioPharm International

01-May-07

Reviews China's patent laws, noting that the number of pharmaceutical patent applications filed for Western medicine is experiencing an average growth rate of 27.4% over the past several years.

<http://www.biopharminternational.com/biopharm/article/articleDetail.jsp?id=423187>

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

## **Technology Transfer**

Rick Mullin

Chemical & Engineering News

07-May-07

A report contends that emphasis on money-making deals is impeding the flow of new ideas into the market. Table shows "licensing for royalties" and "intellectual property protection" appear in 79% and 75% respectively, of university mission statements.

<http://pubs.acs.org/subscribe/journals/cen/85/i19/html/8519bus3.html>

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## **PHARMACEUTICALS**

### *Subcategory: Generics*

## **New Critical Path Report Highlights Research Needed to Foster Generic Drug Development**

U.S. Food and Drug Administration

02-May-07

FDA report pinpoints the barriers that are limiting the availability of additional generic drug options in the hope that findings will encourage research collaboration, lower barriers and accelerate access to safe and effective generic drugs.

<http://www.fda.gov/bbs/topics/NEWS/2007/NEW01626.html>

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## **PLATFORM TECHNOLOGIES**

### *Subcategory: Assay Systems*

## **Sensitive, Selective Mercury Sensor**

Mitch Jacoby

Chemical & Engineering News

07-May-07

A new colorimetric method, based on DNA-functionalized gold nanoparticles, provides a simple and sensitive way to detect mercury in aqueous samples. Harmful effects in humans, from brain damage to DNA alteration, are attributed to mercury exposure.

<http://pubs.acs.org/cen/news/85/i19/8519news6.html>

## **DNA-damage Test Could Aid Drug Development**

MIT News

14-May-07

Researchers have developed a cell culture test for assessing a compound's genetic toxicity that may prove dramatically cheaper than existing animal tests. The assay would allow genetic toxicity to be examined far earlier in the drug development process.

<http://web.mit.edu/newsoffice/2007/dna-damage.html>

### *Subcategory: Environment*

#### **Can Our Genes Save Us from Our Environment?**

Technology Review

07-May-07

Researchers call for a massive effort to record data about how, exactly, environmental factors impact genes and physiology, given that some people can be exposed to high levels of toxic chemicals and remain healthy, while others suffer damage.

<http://www.technologyreview.com/blog/duncan/17600/>

### *Subcategory: Evolution Research*

#### **'Junk' DNA Now Looks like Powerful Regulator, Stanford Researcher**

Stanford School of Medicine

28-Apr-07

Gene-free chromosomal expanses once described as “gene deserts” are so clogged with useful DNA bits that they’ve been renamed “regulatory jungles.” Discusses role of transposons that seem to regulate nearby genes.

[http://med.stanford.edu/news\\_releases/2007/april/junk-dna.html](http://med.stanford.edu/news_releases/2007/april/junk-dna.html)

### *Subcategory: Genomics*

#### **Master Regulatory Gene of Epithelial Stem Cells Identified**

Harvard University

03-May-07

The skin’s ability to replace the tissue it sloughs off is controlled by a variety of genes. Researchers identified a “master regulator” of this regeneration process for skin and for epithelial tissues including breast, prostate, and urogenital tract.

<http://web.med.harvard.edu/sites/RELEASES/html/0503Mckeon.html>

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

#### **Technique Monitors Thousands of Molecules Simultaneously**

Washington University in St. Louis

01-May-07

Electrodes on an electrochemically addressable computer chip can be used to monitor the biological behavior of up to 12,000 molecules at the same time.

<http://news-info.wustl.edu/tips/page/normal/9360.html>

### *Subcategory: Misc. Drugs*

#### **Nitric Oxide: Key to Cardiovascular and Pulmonary Function and Drug Effectiveness**

Richard Merritt Duke Med News 03-May-07

SNOs, which are specialized forms of nitric oxide, a naturally occurring molecule in the body, appear to control whether certain medications lose their effectiveness over time.

<http://www.dukemednews.org/news/article.php?id=10051>

*Subcategory: Miscellaneous*

**Advancing Drug Discovery**

R & D Magazine 01-May-07

With drug development cost estimates exceeding \$1 billion per drug, new analytical instruments and methods are being used to increase productivity and cost effectiveness of the entire drug discovery and development process.

<http://www.rdmag.com/ShowPR.aspx?PUBCODE=014&ACCT=1400000100&ISSUE=0705&RELTYPE=FE&PRODCODE=00000000&PRODLETT=BH>

*Subcategory: Nanotechnology*

**Innovation and IT: The Keys to Genomics 2.0**

Kevin Davis Bio-IT World 15-May-07

IT and miniaturization is enabling personalized genomics and an explosion of digital information, says researcher and developer of nanoreactors with quantum dot labeling that are like a personal laboratory system.

<http://www.bio-itworld.com/newsitems/2007/may/05-15-07-rothberg-keynote>

*Subcategory: Proteomics*

**Faithful Mimic of Proteins**

Celia Arnaud Chemical & Engineering News 30-Apr-07

Using a chemical-tagging approach, researchers have chemically modified the bare scaffold of a natural protein such that the product functions like a different protein. Could be helpful in understanding the structure-function relationships of proteins.

<http://pubs.acs.org/cen/news/85/i18/8518notw1.html>

**Alzheimer's, Parkinson's, Type II Diabetes Are Similar at the Molecular Level, UCLA and International Scientists Report**

Univ. of California, Los Angeles 10-May-07

Harmful rope-like structures known as amyloid fibrils, which are linked protein molecules that form in the brains of patients with many types of degenerative diseases, contain a stack of water-tight "molecular zippers."

<http://www.newsroom.ucla.edu/page.asp?RelNum=7899>

*Subcategory: Virology*

**Work with Nanoparticles May Lead to 'On-the-Spot' Virus Detector**  
Ellen Goldbaum University of Buffalo 03-May-07

In a technique called directed assembly, scientists used electrodes separated by just a few micrometers together with electrothermally induced fluid flow to accelerate the transport of viral particles, allowing them to reach high local concentrations.

<http://www.buffalo.edu/news/8594>

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## RESEARCH ADVANCEMENTS

### *Subcategory: Disease Prevention*

**Analysis Reveals Extent of DNA Repair Army**  
Howard Hughes Medical Institute 25-May-07

A new database has been developed that is providing the first detailed portrait of the 700+ proteins that help maintain DNA's integrity by repairing damage to a cell's genetic contents before cancer or another life-threatening condition develops.

<http://www.hhmi.org/news/elledge20050525.html>

### *Subcategory: Musculoskeletal*

**U of T Researchers Develop First Antibody That Detects Only Known Cause of ALS**  
University of Toronto 07-May-07

The first antibody that detects the only known cause of amyotrophic lateral sclerosis (ALS), also called Lou Gehrig's disease, provides the world's first tool for recognizing misfolded conformations of the enzyme superoxide-dismutase-1 (SOD1).

<http://www.news.utoronto.ca/bin6/070507-3121.asp>

### *Subcategory: Neurology*

**Study Led by Scripps Research Scientist Reveals Little-Known Cell Networks Vital to Circadian Rhythm**  
Scripps Research Institute 03-May-07

New findings could have important implications for future circadian studies, and point researchers toward new ways to manipulate human circadian rhythm at the molecular level to treat diseases such as bipolar disorder.

<http://www.scripps.edu/news/press/050307.html>

**University of Pennsylvania Biologists Reveal Neuronal Channel That Regulates Breathing**  
University of Pennsylvania 16-May-07  
Researchers have found that NALCN, a substantially uncharacterized

member of the sodium/calcium ion channel gene family, plays a key role in respiration.

<http://www.upenn.edu/pennnews/article.php?id=1159>

### **Study Finds Regions of DNA That Appear Linked to Autistic Spectrum Disorders**

Washington University in St. Louis 07-May-07

"Although we once believed you either had this condition or you didn't, we now know that there's a continuous distribution of autism symptoms from very mild to very severe," researchers say, that identified 2 regions of DNA linked to autism.

<http://mednews.wustl.edu/tips/page/normal/9458.html>

### **Scientists Identify Prion's Infectious Secret**

Whitehead Institute of Biomedical Rsch 09-May-07

Findings provide researchers with a new way to approach old questions, such as why some prion diseases can jump from one species to another but others can't. Researchers say it is likely that natural prions contain more than one recognition element.

[http://www.wi.mit.edu/news/archives/2007/sl\\_0509.html](http://www.wi.mit.edu/news/archives/2007/sl_0509.html)

## *Subcategory: Oncology*

### **Ascent Of Quadruplexes**

Chemical & Engineering News 28-May-07

Early research showed that if 4 guanines were close enough together they could form planar hydrogen-bonded arrangements now called guanine quartets (G-quartets). These nucleic acid structures have become promising anti-cancer drug targets.

<http://pubs.acs.org/cen/coverstory/85/8522cover.html>

### **Diabetes Drug Dramatically Boosts Power of Platinum Chemotherapy**

Dana Farber Cancer Research Institute 07-May-07

Combining a platinum chemotherapy agent and the diabetes drug rosiglitazone halted or shrank mouse tumors as much as 3 times more effectively than either of the drugs given alone, according to research.

<http://www.dfci.harvard.edu/abo/news/press/2007/diabetes-drug-dramatically-boosts-power-of-platinum-chemotherapy.html>

### **Cancer Cells “Reprogram” Energy Needs to Grow and Spread, Study**

Johns Hopkins Medicine 07-May-07

Researchers have found that cancer cells can reprogram themselves to turn down their own energy-making machinery and use less oxygen, and that these changes might help cancer cells survive and spread.

[http://www.hopkinsmedicine.org/Press\\_releases/2007/05\\_07a\\_07.html](http://www.hopkinsmedicine.org/Press_releases/2007/05_07a_07.html)

## *Subcategory: Pain Management*

## **Scripps Research Team Sheds Light on Long-Sought Cold Sensation Genes**

Scripps Research Institute

02-May-07

A gene called TRPM8 is responsible for the bulk of cold sensation in mice. Finding might one day lead to the development of drugs that induce cold sensation as an analgesic, or block it to prevent certain forms of chronic pain.

<http://www.scripps.edu/news/press/050207.html>

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## **RESEARCH TOOLS**

### *Subcategory: Collaboration*

#### **Minding the Storage for Web 2.0 and Semantic Web**

Salvatore Salamone

Bio-IT World

29-May-07

Life science researchers are adopting Web 2.0 type technology, for example in microscopy and microarray imaging, where users are tagging, characterizing, and indexing the data... which requires large data storage needs.

<http://www.bio-itworld.com/newsitems/2007/may/05-29-07-storage>

### *Subcategory: Computing Systems*

#### **The Virtual World of Networks, Servers, and Instruments**

Tim Studt

R & D Magazine

01-May-07

Discusses IT virtualization, an abstraction layer that decouples the physical hardware from the operating system to deliver greater resource utilization and flexibility, as it results in a smaller number of servers and lower power requirements.

<http://www.rdmag.com/ShowPR.aspx?PUBCODE=014&ACCT=1400000100&ISSUE=0705&RELTYPE=FE&PRODCODE=00000000&PRODLT=BN>

### *Subcategory: Genome Sequence*

#### **Cataloging the Structural Variations in Human Genetics**

Howard Hughes Medical Institute

10-May-07

A major new effort to uncover the medium- and large-scale genetic differences between humans may soon reveal DNA sequences that contribute to a wide range of diseases. These differences indicate that the "reference" human genome is incomplete.

<http://www.hhmi.org/news/eichler20070510.html>

### *Subcategory: Imaging*

#### **Three's a Charm**

R & D Magazine

01-May-07

Researchers have devised a way to use 3 types of microscopy imaging techniques concurrently to analyze living tissue and discover more about

the molecular mechanisms of multiple sclerosis (MS). They are normally used alone.

<http://www.rdmag.com/ShowPR.aspx?PUBCODE=014&ACCT=1400000100&ISSUE=0705&RELTYPE=FE&PRODCODE=00000000&PRODLTT=BJ>

### **New Technique Will Produce a Better Chromosome Map**

Diana Yates

University of Illinois

07-May-07

New approach includes 2 components: the use of mechanical devices to spread and flatten the cells, and the application of computer-based image processing to analyze hundreds of examples of the same chromosomes.

<http://www.news.uiuc.edu/news/07/0507chromosomes.html>

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## **THERAPEUTIC CATEGORY**

### *Subcategory: Immunology/ Infectious Diseases*

#### **Vaccine Advance**

Lisa Jarvis

Chemical & Engineering News

07-May-07

By July or August 2007, the European Commission is expected to make a final ruling on a vaccine made in mammalian cells, representing a major manufacturing breakthrough that experts say could make the supply of flu vaccines more reliable.

<http://pubs.acs.org/cen/news/85/i19/8519notw5.html>

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