



BioTechCircle News®

April, 2005

Quote of the month:

”The era of costly, nontargeted oncology trials is drawing to a close as we learn how to select appropriate subjects for specific studies.”

<http://www.actmagazine.com/appliedclinicaltrials/article/articleDetail.jsp?id=154235>

The age of personalized medicine is just dawning. We’re committed to bringing you important information on this emerging practice.

In this articles section: links to 58 free Web articles in 12 major categories.

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

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

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

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BIOBUSINESS MANAGEMENT

Subcategory: Patent/Intellectual Property Issues

Strategies for Extending the Life of Patents

W. Murray Spruill, Ph.D., BioPharm International
J.D., Michelle L. Cunningham, Ph.D., J.D.

01-Mar-05

In light of rising costs of drug development, to maximize patent term, seek patent protection for new formulations, new methods of use, and potential combination products.

<http://www.biopharm-mag.com/biopharm/article/articleDetail.jsp?id=150834>

CLINICAL TRIALS

Subcategory: Subject Enrollment/Management

Molecular and Genomic Research: Assessing the Impact

Bruce Silver Applied Clinical Trials

02-Apr-05

The era of costly, nontargeted oncology trials is drawing to a close as we learn how to select appropriate subjects for specific studies.

<http://www.actmagazine.com/appliedclinicaltrials/article/articleDetail.jsp?id=154235>

DIAGNOSTIC TOOLS

Subcategory: Cardiology/ Vascular Diseases

Blood Test Can Accurately Diagnose Heart Failure in Emergency

EurekAlert!

11-Apr-05

Researchers have found that measuring levels of a protein called NT-proBNP was significantly better at identifying heart failure than was standard clinical evaluation.

http://www.eurekalert.org/pub_releases/2005-04/mgh-btc041105.php

Subcategory: Immunology/ Infectious Diseases

Painless Test Using Teardrops May Speed Diagnosis of Sjögren's

EurekAlert!

11-Apr-05

Researchers are developing a faster, more accurate, noninvasive diagnostic test for Sjögren's (SHOW-grins) syndrome, an incurable

autoimmune disorder characterized by chronically dry eyes and dry mouth.

http://www.eurekaalert.org/pub_releases/2005-04/acs-tu041105.php

Subcategory: Miscellaneous

Test Close to Detect Gene Cheats

Netdoctor

29-Apr-05

Scientists are experimenting with magnetic imaging as a method of detecting the use of gene doping amid fears that techniques used in cloning of champion racehorse in Italy could be used to develop super athletes.

<http://www2.netdoctor.co.uk/news/index.asp?id=118808&D=29&M=4&Y=2005>

Subcategory: Oncology

Test to Spot If Cancer Has Spread

BBC News

12-Apr-05

A test that measures how stretchy cells are could revolutionize the way doctors spot whether cancers have spread. The same technology could also be used to find stem cells in blood.

<http://news.bbc.co.uk/1/hi/health/4435859.stm>

DRUG DELIVERY

Subcategory: Oncology

Electricity Delivers Gene to Fight Melanoma

HealthDay

13-Apr-05

A trial will test the safety of electroporation, which involves the use of a hand-held device applied to the skin that delivers pulses of electricity to deliver plasmid DNA in a gene therapy study in humans.

<http://www.healthday.com/view.cfm?id=525012>

INDUSTRY

Subcategory: Geographic focus

Genomics and Proteomics Advancing in Europe

Bioscience Technology

06-Apr-05

While the United States is still the world leader, Europe is having a good deal of success in the field of advanced genomics and proteomics research, due to significant government funding combined with the presence of large pharmaceutical companies.

<http://www.biosciencetechnology.com/ShowPR~PUBCODE~090~ACCT~9000000100~ISSUE~0504~RELTYPE~PR~ORIGRELTYPE~RLSN~PRODCODE~00000000~PRODLETT~D.htm>

Subcategory: Miscellaneous

Final Word: The Public Side of Science: The Cloning Three Ring

Tamara Zemlo

BioPharm International

01-Mar-05

Discusses views of life scientists on human cloning and embryonic stem cell research.

<http://www.biopharm-mag.com/biopharm/article/articleDetail.jsp?id=150758>

INVESTMENTS/ GOV. SUPPORT

Subcategory: Computing Systems

IBM, UPMC Partner on Development Fund; Plan Will Use Technology to Find 'Future of Health Care'

Post Gazette

28-Apr-05

A \$50 million fund has been established to support joint-development of promising information technology projects. There are implications in biosecurity, in cost control and in quality management.

<http://www.post-gazette.com/pg/05118/495377.stm>

Subcategory: Geographic focus

Madison Biotech Get Commerce Grants

WisconsinTechnology

06-Apr-05

Early-stage Wisconsin high-tech companies, one involved in improved methods of protein analysis and the other in protein-based therapeutics are receiving modest grants.

<http://wistechnology.com/article.php?id=1690>

Subcategory: Venture

StreetTalk: Hello, It's Me: VCs Once Again Wooing Biopharm

Brian O'Connell

BioPharm International

01-Apr-05

Money typically follows strong fundamentals, and there's good reason why the biotech industry continues to draw new investment. With biotech valuations at the lowest point in years, the resulting investment opportunities are multiplying.

<http://www.biopharm-mag.com/biopharm/article/articleDetail.jsp?id=156969>

PERSONALIZED MEDICINE

Subcategory: Subject Enrollment/Management

Rescuing Drugs Through Personalized Medicine

Peter Lenehan, Richard Applied Clinical Trials
Gliklich, Bill Worzel, John
Freshley

02-Apr-05

A new clinical trial design paradigm could potentially transform a failed drug into a successful one by identifying patient subpopulations that are most likely to benefit from the drug.

<http://www.actmagazine.com/appliedclinicaltrials/article/articleDetail.jsp?id=154236>

PLATFORM TECHNOLOGIES

Subcategory: Genomics

Human Chromosomes 2, 4 Include Gene Deserts, Signs of Chimpanzee Chromosome Merger

EurekAlert!

06-Apr-05

The first detailed studies of 2 of the largest human chromosomes have revealed enormous gene "deserts" lacking any protein-coding sequences and relics of the merger of two ape chromosomes to form a single human chromosome.

http://www.eurekalert.org/pub_releases/2005-04/wuso-hc2040605.php

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

Critical Biomarkers Revealed Through Novel Expression Profiling of

David Brown, Emmanuel Pharmaceutical Discovery
Labourier, Sapna Chacko

31-Mar-05

The expression levels of all known miRNAs are evaluated using a proprietary microarray detection system. These high-throughput analysis tools are critical to identifying miRNA function both in normal tissues and during tumorigenesis.

<http://www.pharmagenomicsonline.com/pharmagenomics/article/articleDetail.jsp?id=154153>

Subcategory: Oncology

Method Holds Promise in Identifying Markers of Non-metastatic Vs. Metastatic Breast Cancer

EurekAlert!

22-Apr-05

Describes use of microarrays to analyze variations in gene activity between cancer cell lines with differing capability to spread to distant organs but derived from the same human breast cancer.

RESEARCH ADVANCEMENTS

Subcategory: Cardiology/ Vascular Diseases

A New Blood Test for Heart Risk?

HealthDay

05-Apr-05

A test that measures blood levels of a natriuretic peptide molecule produced by heart muscle appears to be a strong indicator of future cardiac problems among healthy older people, according to research.

<http://www.healthday.com/view.cfm?id=524960>

Subcategory: Disease Prevention

Researchers Identify Protein Crucial for Survival of Lyme-disease

EurekAlert!

25-Apr-05

Researchers have found that when the tick-borne bacterium that causes Lyme disease lacks the protein BptA, that responds to an incoming meal of blood, it is unable to be transmitted from the tick to a new animal host.

http://www.eurekalert.org/pub_releases/2005-04/uots-rip042505.php

Subcategory: Geriatrics

Signs of Aging: Scientists Evaluate Genes Associated with Longevity

EurekAlert!

17-Apr-05

Researchers found that worms that lack fully functional daf-2 gene exhibit significantly extended lives, persisting approximately twice as long as their wild-type counterparts. Dozens of other genes also have been associated with longevity.

http://www.eurekalert.org/pub_releases/2005-04/cshl-soa041105.php

Subcategory: Hematology

Iron Overload Strikes All Races

HealthDay

27-Apr-05

A study found that high iron levels can be found across all races and that Asians and Pacific Islanders had the lowest prevalence of the known genetic mutations to the HFE gene, C282Y and H63D, that cause hemochromatosis.

<http://www.healthday.com/view.cfm?id=525408>

Subcategory: Immunology/ Infectious Diseases

Yale Researchers Identify Molecule for Detecting Parasitic Infection in
EurekAlert! 28-Apr-05

Researchers have identified a specific protein molecule, a new member of the TLR family, TLR 11, that is used by the immune system for detection of parasitic infections, leading the way for development of future vaccines to combat these infections.

http://www.eurekalert.org/pub_releases/2005-04/yu-yri042805.php

Researchers Pioneer New Gene Therapy Technique Using Natural
Medical News Today 09-Apr-05

By artificially initiating a DNA repair process known as homologous recombination, a researcher replaced a mutated version of the gene that encodes a portion of the interleukin-2 receptor (IL-2R) in human cells, associated with immune disease.

<http://www.medicalnewstoday.com/medicalnews.php?newsid=22306>

Researchers Unmask Malaria Parasite's Cloaking Mechanism
Medical News Today 08-Apr-05

Describes study to test the hypothesis that *P. falciparum*, the malaria parasite uses gene silencing to mask its presence. The findings could lead to the development of new drugs for the disease that causes at least one million deaths each year.

<http://www.medicalnewstoday.com/medicalnews.php?newsid=22496>

Subcategory: Metabolism: Obesity, Diabetes

Mouse with Designer Liver Has Enhanced Glucose Tolerance and Improved Insulin Response
EurekAlert! 12-Apr-05

Discusses results of a highly advanced genetic engineering technology, called tissue-specific gene deletion, to create a mouse in which the *Gab1* gene was deleted, or "knocked out", from the liver, and only the liver.

http://www.eurekalert.org/pub_releases/2005-04/bi-mwd041105.php

Liver Protein Points to Anti-Obesity Drugs
HealthDay 12-Apr-05

A protein, called liver X receptor (LXR), helps the body maintain a healthy balance between fat storage and the burning of fat, according to investigators.

<http://www.healthday.com/view.cfm?id=525080>

Human Blood Cells Coaxed to Produce Insulin
New Scientist 04-Apr-05

If insulin-producing cells can be derived from the blood of people with

diabetes, and if they will be stable after re-implantation, it could be a significant advantage as white blood cells are very easy to obtain.

<http://www.newscientist.com/article.ns?id=dn7212>

Subcategory: Miscellaneous

**Researchers Discover Molecular Mechanism That Desensitizes Us to
EurekAlert!**

27-Apr-05

Researchers have discovered how the membrane protein that allows us to sense cold works and how this protein becomes desensitized so that one no longer feels the cold.

http://www.eurekalert.org/pub_releases/2005-04/msh-rdm042705.php

Subcategory: Musculoskeletal

**UCLA Researchers Discover New Method to Generate Human Bone
University of California**

20-Apr-05

Researchers have discovered and isolated a natural molecule, called UCB (University of California Bone), that can be used to heal fractures and generate new bone growth in patients who lack it.

<http://www.engineer.ucla.edu/news/2005/bones.html>

Subcategory: Neurology

Gene Regulates the Need for Sleep

Bioscience Technology

27-Apr-05

A study of mutant flies suggests the amount of sleep needed may be largely controlled by one gene called Shaker. There is a homologue in mammals and humans.

<http://www.biosciencetechnology.com/ShowPR~PUBCODE~090~ACCT~9000000100~ISSUE~0504~RELTYPE~PR~ORIGRELTYPE~RLSN~PRODCODE~00000000~PRODLETT~T.html>

**Discovery in Yeast Provides Leap Forward in Better Understanding and
Future Cure of Devastating Disease, Familial Dysautonomia**

Cornell University

06-Apr-05

A gene, called Elp1, has been found critical in regulating cell polarity, such as directing growth to the tip of a cell so that a "daughter" cell can "bud" off to divide. The finding may help find a cure for a devastating disease of nerve cell failures.

<http://www.news.cornell.edu/stories/April05/cell.polarity.ssl.html>

Subcategory: Oncology

Genetically Altered Virus Slows Brain Tumors in Mice

Bioscience Technology

07-Apr-05

Researchers used a genetically altered herpes simplex virus-1 (HSV-1) in mice with malignant glioma, an incurable human brain tumor, and found that it increased the survival of the mice, even in some animals with advanced disease.

<http://www.biosciencetechnology.com/ShowPR~PUBCODE~090~ACCT~9000000100~ISSUE~0504~RELTYPE~PR~ORIGRELTYPE~RLSN~PRODCODE~00000000~PRODLETT~E.html>

UCF Researcher Uncovers Protein That Could Stop Replication of

EurekAlert!

19-Apr-05

A study found that the protein, called MKRN1, promotes the destruction of an enzyme called telomerase that enables rapid duplication of cells. This is the first example of how the enzyme (telomerase) itself can be turned off.

http://www.eurekalert.org/pub_releases/2005-04/uocf-uru041905.php

Gene Associated with Breast Cancer May Play Major Role in Prostate Cancer Recurrence

EurekAlert!

20-Apr-05

A study indicates that the gene HER-2 is a key culprit in prostate cancer recurrence. The findings also suggest a new treatment strategy for targeting HER-2 in patients with advanced prostate cancer.

http://www.eurekalert.org/pub_releases/2005-04/uonc-gaw042005.php

Northwestern's Cancer Genetics Program Finds Gene Variants That Greatly Increase Breast Cancer Risk

EurekAlert!

15-Apr-05

Decreased activity within the Transforming Growth Factor Beta (TGF-beta) pathway is associated with increased breast cancer risk, according to a study.

http://www.eurekalert.org/pub_releases/2005-04/nmh-ncg041405.php

Scientists Identify Protein That Controls Cancer Cells

EurekAlert!

13-Apr-05

Reports discovery that a little-known protein – called Fra-1 – is present at large amounts in the tumor cells.

http://www.eurekalert.org/pub_releases/2005-04/wfub-sip040805.php

Genetic Defect Calls for Colon Cancer Screening

HealthDay

26-Apr-05

Perhaps half of those who meet the familial criteria for a common form of hereditary nonpolyposis colorectal cancer (HNPCC) don't have the genetic defect that causes the disease. Currently, HNPCC is defined entirely on the basis of family history.

<http://www.healthday.com/view.cfm?id=525365>

Flipping a Switch on Tumor Cell Growth

HealthDay

31-Mar-05

A natural tumor-suppressing compound, PH domain Leucine-rich Protein Phosphatase (PHLPP), is located on chromosome 18 and deletes a specific phosphate molecule that interrupts signaling that controls both the death and growth of cancer cells.

<http://www.healthday.com/view.cfm?id=524813>

Scientists Find Key Player in Cancer's Spread

HealthDay

06-Apr-05

A protein called VEGF-A, already known to stimulate the growth of blood vessels associated with tumors, may also help tumors spread cancer to lymph nodes, according to a new study.

<http://www.healthday.com/view.cfm?id=524902>

New Tumor Suppressor Gene Linked to Cancer Predisposition

Medical News Today

21-Apr-05

Most geneticists believe that less than 5% of cancer is inherited. A new gene, ARLTS1, (ADP - Ribosylation Factor-Like Tumor Suppressor 1) has been found that can also increase a person's chances of developing cancer.

<http://www.medicalnewstoday.com/medicalnews.php?newsid=23173>

Viral Protein Influences Key Cell-signaling Pathway

Ohio State University

27-Apr-05

Research shows that a protein produced by a cancer-causing virus influences a key signaling pathway in the immune cells that the virus infects. This stimulates the cells to divide, helping the virus spread through the body.

<http://researchnews.osu.edu/archive/p12protein.htm>

Penn Researchers Determine Structure of Binding Site of Colon-Cancer Drug and Its Protein Target

University of Pennsylvania

18-Apr-05

Scientists have determined the precise molecular details of how Erbitux, an approved colorectal cancer drug, binds to its target on cancer cells. Knowing this chemical configuration will lead to better drug design for this family of cancer medications.

http://www.uphs.upenn.edu/news/News_Releases/apr05/Erbituxconfig.htm

Subcategory: Pulmonary/ Respiratory Diseases

Lung Disease Therapy Breakthrough

BBC News 04-Apr-05
Working on lung cells, scientists found they could raise levels of an enzyme, HDAC2, - and allow steroids to do their work - by administering low doses of a cheap and widely available drug,

<http://news.bbc.co.uk/1/hi/health/4408107.stm>

SERPINE2 Identified as Novel Candidate Gene for COPD, Especially with Smoking

EurekaAlert! 03-Apr-05
Scientists say SERPINE2 is the only gene proven to modify risk to COPD (chronic obstructive pulmonary disease).

http://www.eurekaalert.org/pub_releases/2005-04/aps-sia033005.php

Subcategory: Reproduction

Gene Causes 'Problem Pregnancies'

BBC News 03-Apr-05
Scientists say they have discovered why a pregnancy complication which can put the lives of mothers and babies at risk runs in families: a version of one particular gene, STOX1, known to be expressed in the placenta.

<http://news.bbc.co.uk/1/hi/health/4400215.stm>

Fifteen-year Hunt Uncovers Gene Behind "Pseudothalidomide"

Johns Hopkins Medicine 11-Apr-05
Researchers have found the Roberts gene, called ESCO2, whose physical manifestations often include cleft lip and palate and shortened limbs.

http://www.hopkinsmedicine.org/Press_releases/2005/04_11_05.html

Subcategory: Wound/Tissue Repair

Master Gene Controls Healing Of "Skin" In Fruit Flies And Mammals

Medical News Today 15-Apr-05
Researchers have discovered that the genetic system controlling the development and repair of insect cuticle also controls these processes in mammalian skin, a finding that could lead to new insights into the healing of wounds and treatment of cancer.

<http://www.medicalnewstoday.com/medicalnews.php?newsid=22860>

RESEARCH TOOLS

Subcategory: Biomarker

Biomarkers Isolated from Saliva Successfully Predict Oral and Breast

Medical News Today 20-Apr-05

Based on a study, biomarkers found in saliva, called salivary transcriptomes, can be exploited for robust, high-throughput and reproducible tools for early disease detection. It predicted oral squamous cell carcinoma in about 9 out of 10 cases.

<http://www.medicalnewstoday.com/medicalnews.php?newsid=23101>

Subcategory: Computing Systems

Cell Modeling Plays Role in Filling the Black Box

Genomics & Proteomics

01-Apr-05

DNA, proteomic, and metabolic databases are rapidly filling with raw data. Researchers are now able to create models of how cells work using high-end algorithms, differential equations, and data-crunching supercomputers.

<http://www.genpromag.com/ShowPR.aspx?PUBCODE=018&ACCT=180000100&ISSUE=050.4&RELTYPE=PR&ORIGRELTYPE=BIO&PRODCODE=00000000&PRODLETT=AG>

Subcategory: Databases

Annotating Genomes with Small-Molecule Interactions

Bioscience Technology

19-Apr-05

A new small-molecule binding annotation and comparison tool that integrates data from the Protein Data Bank (PDB) and GenBank has been released. It provides a way for researchers to search for small-molecule interactions by organism.

<http://www.biosciencetechnology.com/ShowPR~PUBCODE~090~ACCT~900000100~ISSUE~0504~RELTYPE~PR~ORIGRELTYPE~RLSN~PRODCODE~00000000~PRODLETT~N.htm>

Subcategory: Genome Sequence

US-india Research Team Completes Analysis of X Chromosome

EurekAlert!

01-Apr-05

By comparing the human X chromosome to genetic information from chimpanzees, rats and mice, scientists have uncovered dozens of new genes, many of which are located in regions of the chromosome already tied to disease.

http://www.eurekalert.org/pub_releases/2005-04/jhmi-urt040105.php

Subcategory: Immunology/ Infectious Diseases

Visualizing Antibiotic Resistance

Bioscience Technology

25-Apr-05

Using the crystal structure of a ribosome derived from a microorganism of the Dead Sea, researchers were able to visualize a mutation that causes bacteria to become resistant to macrolide antibiotics.

<http://www.biosciencetechnology.com/ShowPR~PUBCODE~090~ACCT~900000100~ISSUE>

Subcategory: Miscellaneous

Human Cells Filmed Instantly Messaging for First Time
EurekAlert! 20-Apr-05
Researchers have captured on video for the first time chemical signals that traverse human cells in response to tiny mechanical jabs. The reporter molecules light up selectively only when the protein Src was activated.
http://www.eurekalert.org/pub_releases/2005-04/uoc--hcf042005.php

Systems Biologists Push Technology to the Edge
Genomics & Proteomics 01-Apr-05
Systems biology is coming of age with the help of key technologies in the fields of informatics, robotics, microfluidics, and nanotechnology. In turn, systems biologists are demanding newer, faster, smarter technologies to carry out their experiments
<http://www.genpromag.com/ShowPR.aspx?PUBCODE=018&ACCT=1800000100&ISSUE=0504&RELTYPE=PR&ORIGRELTYPE=PRO&PRODCODE=00000000&PRODLETT=AE>

The Value of a Proficiency Testing Program to Monitor Performance in Microarray Laboratories
Laura H. Reid, Steve Casey Pharmaceutical Discovery 31-Mar-05
Describes a method to test data sets generated in multiple labs and evaluate their comparative performance.
<http://www.pharmagenomicsonline.com/pharmagenomics/article/articleDetail.jsp?id=154145>

Subcategory: Oncology

Ovarian Cancer: New Frontiers in Detection Technology
Pharmaceutical Discovery 31-Mar-05
New, sensitive technologies for molecular analysis, such as mass spectrometry-based techniques have been developed as a novel, rapid ways of detecting ovarian cancer.
<http://www.pharmagenomicsonline.com/pharmagenomics/article/articleDetail.jsp?id=154148>

STRATEGIC RELATIONSHIPS

Subcategory: Collaboration

Quality Agreements Between Pharmaceutical/Biopharmaceutical Companies and Their Contractors
Roby P. Blasini BioPharm International 01-Apr-05

Discusses sound quality agreements (QAG). QAGs that clearly delineate good manufacturing practice (GMP) responsibilities between a sponsor and a contractor can help companies and their contractors avoid certain conflicts.

<http://www.biopharm-mag.com/biopharm/article/articleDetail.jsp?id=157266>

THERAPEUTIC CATEGORY

Subcategory: Cardiology/ Vascular Diseases

Human Kidney Protein Found That Regulates Heart Contraction and Blood Pressure

EurekaAlert!

08-Apr-05

Researchers have identified a novel human kidney protein called renalase that regulates both heart contraction and blood pressure; it is a strong candidate for easily administered treatment of advanced kidney and cardiovascular disease.

http://www.eurekaalert.org/pub_releases/2005-04/yu-hkp040705.php

Subcategory: Oncology

Altering Food and Light Schedules Affects Cancer Genes in Mice

Medical News Today

06-Apr-05

Scientists have found that meal timing reversed the disrupted circadian clock gene expression patterns and slowed tumor growth in chronic jet lagged mice.

<http://www.medicalnewstoday.com/medicalnews.php?newsid=22370&nfid=mnf>

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