



## BioTechCircle News®

**March 2010**

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**In this articles section: links to 61 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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For a brief explanation of how we categorize the articles, please see "Express Guide to Monthly Web Articles at: [http://www.techmanage.net/expressguide\\_articles](http://www.techmanage.net/expressguide_articles)

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## AGRI-BIOTECH

### *Subcategory: Animal*

#### **Odd Man Out - Do Fish Have Personalities?**

Alla Katsnelson

The Scientist

01-Mar-10

Animal personality researchers say they've observed meaningful and consistent individual differences in organisms including hermit crabs, squirrels, sheep, spiders, lizards and others. When is it personality, and when is it just "noise"?

<http://www.the-scientist.com/2010/3/1/34/1/>

#### **Emerging Tick-borne Diseases: a Domestic Ecological Mystery**

Diana Lutz

University of Washington, St. Louis

01-Mar-10

New tick-borne diseases are probably being unleashed by human-mediated environmental change, say experts, likely due to “unnaturally large populations of deer” resulting from deer-protection programs.

<http://news.wustl.edu/news/Pages/20343.aspx>

### *Subcategory: Crops*

#### **Feeding the World: Panel of Renowned Experts Discusses Biotech Options**

Biotech Now

12-Mar-10

Why does the world embrace biomedical technologies but tend to fear advancements in agricultural biotechnology? Scientists, policymakers seek ways to increase research, improve public understanding of ag-bio’s potential contributions to feeding the world.

<http://biotech-now.org/2010/03/12/feeding-world-panel-renowned-experts-discusses-biotech-options>

### *Subcategory: Energy/ Fuel*

#### **Seafarers’ Scourge Provides Hope for Biofuel Future**

The University of York

08-Mar-10

Unlike termites and other wood-eating animals, gribble have no helpful microbes in their digestive system. Its digestive system contains enzymes which could hold the key to converting wood and straw into liquid biofuels.

<http://www.york.ac.uk/news-and-events/news/2010/gribble/>

### *Subcategory: Microorganisms*

#### **Microscopic Photography Reveals Bacteria Destroying Cell Wall in Wine Grape Vines**

Kathleen Phillips

Agri Life News

15-Mar-10

Electron microscopy is used to watch a deadly bacteria break down cell walls in wine grape plants. The bacteria that causes Pierce’s Disease, *Xylella fastidiosa*, colonizes a plant over a period of time causing it to weaken and die.

<http://agnews.tamu.edu/showstory.php?id=1807>



gene patenting. BIO, other organizations warn it will harm the life sciences industry and compromise patient care.

<http://biotech-now.org/2010/03/08/hindering-progress-gene-patent-limits-could-impede-innovation>

### *Subcategory: Startups*

#### **Support Network Seeks to Grow Biotech Companies**

Jon Van

The New York Times

12-Mar-10

Discusses several biotech startups in the Chicago area and the efforts of iBio, Propel and others to assist in filing for patents on their technology and securing increased financing.

<http://www.nytimes.com/2010/03/14/us/14cncbiotech.html>

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## CLINICAL TRIALS

### *Subcategory: Phase 3*

#### **Regulatory Infrastructure Fosters Globalization of Drug Development**

Doug Peddicord, PhD

Drug Discovery & Development

09-Mar-10

Globalized trials can reduce development time by half while lowering costs and maintaining quality and safety. Phase III cancer trials are conducted 3 times as fast if both U.S. and global sites are used, compared to U.S.-only sites. Link to whitepaper.

<http://www.dddmag.com/article-Regulatory-Infrastructure-Fosters-Globalization-of-Drug-Development-021610.aspx>

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## DRUG DELIVERY

### *Subcategory: Nanotechnology*

#### **McGill Researchers Create DNA Nanotubes Able to Carry and Selectively Release Materials**

McGill University

17-Mar-10

Researchers develop tiny "magic bullet" DNA nanotubes that could one day deliver drugs to specific diseased cells. The nanotubes encapsulate and load cargo, and then release it rapidly and completely when a specific external DNA strand is added.

[http://www.mcgill.ca/newsroom/news/item/?item\\_id=115523](http://www.mcgill.ca/newsroom/news/item/?item_id=115523)

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## INDUSTRY

### *Subcategory: Bioterrorism*

#### **Bioinsecurity**

Ted Agres

Drug Discovery & Development

01-Mar-10



## ORGANIZATIONS

### *Subcategory: Bio Pharma*

#### **Pancreatic Cancer Vaccine Receives Orphan Drug Status**

Drug Discovery & Development

16-Mar-10

The FDA gives orphan drug status to drugs aimed at rare conditions or conditions that have a lack of treatments on the market. Announces orphan drug status for potential pancreatic cancer treatment.

<http://www.dddmag.com/news-Pancreatic-Cancer-Vaccine-Receives-Orphan-Drug-Status-31610.aspx>

### *Subcategory: Regulatory/ Government*

#### **Supreme Court to Rule on Vaccine Suit**

Drug Discovery & Development

08-Mar-10

Reviews legal battles on whether drug makers can be sued by parents who claim their children suffered serious health problems from vaccines.

Supreme Court will decide on one such case in Q3, 2010.

<http://www.dddmag.com/news-Supreme-Court-to-Rule-on-Vaccine-Suit-3910.aspx>

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## PEOPLE PROFILES

### *Subcategory: Miscellaneous*

#### **Nature Rejects Krebs's Paper, 1937**

Brendan Borrell

The Scientist

01-Mar-10

What would be the perfect revenge for a scientist whose paper is turned away from Nature? A Nobel Prize, of course, writes Borrell. Reproduces 1937 note to Hans Krebs (citric acid cycle) suggesting Dr. Krebs may prefer "to submit...to another periodical."

<http://www.the-scientist.com/2010/3/1/88/1/>

### *Subcategory: Neurology*

#### **It's Electric**

Karen Hopkin

The Scientist

01-Mar-10

Describes Erwin Neher's pioneering work in electrophysiology, which was totally transformed by his patch-clamp technique for observing ion channels as they opened and closed in real time in a living cell.

<http://www.the-scientist.com/2010/3/1/56/1/>

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## PERSONALIZED MEDICINE

### *Subcategory: Cardiology/ Vascular Diseases*

#### **Gene Testing Lowers Risk of Warfarin Complications**

Drug Discovery & Development 17-Mar-10

People given gene testing had a 30% lower risk of being hospitalized in their first 6 months on the blood thinner warfarin compared to other patients whose dose was set by trial and error.

<http://www.dddmag.com/news-Gene-Testing-Lowers-Risk-of-Warfarin-Complications-31710.aspx>

*Subcategory: Educational Issues*

**Improvements Needed in Communicating Cancer Recurrence Risks and Treatment Decisions with Patients**

The Medical News 08-Mar-10

Study reveals 33% of early-stage breast cancer patients who received genomic testing when deciding about treatment options felt they did not fully understand their discussions with physicians about their test results and their risk of recurrence.

<http://www.news-medical.net/news/20100308/Improvements-needed-in-communicating-cancer-recurrence-risks-and-treatment-decisions-with-patients.aspx>

*Subcategory: Genomics*

**Personalized Medicine Could Shake Up Pharma**

David Bogoslaw Business Week 02-Mar-10

While the benefits of personalized medicine are already apparent to pharmacy benefit managers like Medco Health Solutions, genomic testing is just beginning to enable physicians to choose the best treatment for a patient with less guesswork.

[http://www.businessweek.com/investor/content/mar2010/pi2010032\\_007178.htm](http://www.businessweek.com/investor/content/mar2010/pi2010032_007178.htm)

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## PLATFORM TECHNOLOGIES

*Subcategory: Cell Therapy*

**Breakthrough Reveals Blood Vessel Cells Are Key to Growing Unlimited Amounts of Adult Stem Cells**

Weill Cornell Medical College 04-Mar-10

Endothelial cells, the most basic building blocks of the vascular system, produce growth factors that can grow copious amounts of adult stem cells over the course of weeks. Until now, adult stem cell cultures would die within 4 or 5 days.

[http://weill.cornell.edu/news/releases/wcmc/wcmc\\_2010/03\\_04\\_10.shtml](http://weill.cornell.edu/news/releases/wcmc/wcmc_2010/03_04_10.shtml)

*Subcategory: Genomics*

**Surprising mtDNA Diversity**

Jef Akst The Scientist 03-Mar-10

Mitochondrial genomes are not uniform across cells of the body as



## **Glue, Fly, Glue**

University of Utah

01-Mar-10

Caddisfly larvae spin silk, but they do so underwater instead on dry land. Researchers have discovered why the fly's silk is sticky when wet and how that may make it valuable as an adhesive tape during surgery.

<http://www.unews.utah.edu/p/?r=022210-1>

### *Subcategory: Proteomics*

## **New Function For tRNA**

Sophie L. Rovner

Chemical & Engineering News

19-Mar-10

New findings indicate that transfer RNA (tRNA) has another function in addition to its long-established role in gene expression. tRNA also helps control apoptosis, or programmed cell death, eliminating unwanted, damaged, or harmful cells.

<http://pubs.acs.org/cen/news/88/i12/8812notw7.html>

## **MSU Scientists Unlock Key Enzyme**

Drug Discovery & Development

01-Mar-10

Understanding how the TauD enzyme works can help scientists design inhibitors to prevent diseases. TauD is a bacterial enzyme that is important in metabolism. Enzymes in this family repair DNA, sense oxygen and help produce antibiotics.

<http://www.dddmag.com/news-MSU-Scientists-Unlock-Key-Enzyme-3110.aspx>

## **Mouse Work: New Insights on a Fundamental DNA Repair Mechanism**

NIST

02-Mar-10

Discovery of specific activity of the protein NEIL3, one of a group responsible for maintaining the integrity of DNA in humans and other mammals, sheds new light on a potentially important source of harmful DNA mutations.

[http://www.nist.gov/public\\_affairs/techbeat/tb2010\\_0302.htm](http://www.nist.gov/public_affairs/techbeat/tb2010_0302.htm)

## **Long Polymer Chains Dance the Conga**

University of Illinois

15-Mar-10

Long chains of the actin molecule form filaments that are a key component of the matrix that give cells structure. They play a role in cellular processes, including signaling and transport. Movement is like a conga line on a crowded dance floor.

<http://www.news.illinois.edu/news/10/0315polymer.html>

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## **RESEARCH ADVANCES**

### *Subcategory: Immunology/ Infectious Diseases*

## **Vitamin D Crucial to Activating Immune Defenses**

Bioscience Technology

07-Mar-10

T cells must be triggered into action to transform from inactive into killer cells that seek out and destroy a foreign pathogen. Without sufficient intake of Vitamin D, T cells are unable to react to and fight off serious infections in the body.

<http://www.biosciencetechnology.com/News/Feeds/2010/03/disease-research-vitamin-d-crucial-to-activating-immune-defenses/>

### **Radical Kind Of Methyl Transfer**

Amanda Yarnell

Chemical & Engineering News

25-Mar-10

Bacteria have been found to use radical chemistry to methylate otherwise unreactive C–H bonds in the RNA of their ribosomes to evade antibiotics. May aid those hunting for ways to quell antibiotic resistance.

<http://pubs.acs.org/cen/news/88/i13/8813news13.html>

### **AIDS Virus Can Hide In Bone Marrow"**

Drug Discovery & Development

07-Mar-10

The HIV virus can infect long-lived bone marrow cells that eventually convert into blood cells. The virus kills the new blood cells and then moves on to infect other cells. The first step is to understand where a latent infection can continue.

<http://www.dddmag.com/news-AIDS-Virus-Can-Hide-In-Bone-Marrow-3910.aspx>

### *Subcategory: Metabolism: Obesity, Diabetes*

### **Scientists Try to Break Fat-and-disease Link**

Lauran Neergaard

wtop.com

02-Mar-10

Inflammation that the immune system normally uses to fight infection runs uncontrollably with weight gain, simmering inside fat tissue before spreading to harm blood vessels and spur insulin resistance. Implications for diabetes therapies.

<http://wtop.com/?nid=106&sid=1900629>

### *Subcategory: Neurology*

### **A Protein That Aids Forgetting**

Sophie L. Rovner

Chemical & Engineering News

25-Feb-10

The act of forgetting is essential for clearing space in the brain for new information, yet the biochemistry underlying this process has never been ascertained. Researchers discover a molecular eraser in the brain, Rac, a small G-protein.

<http://pubs.acs.org/cen/news/88/i09/8809notw3.html>

### **Molecule Tells Brain Cells to Grow Up, Get to Work, Study Shows**

Bruce Goldman

Stanford School of Medicine

10-Mar-10

Defects in maturation process of brain cells have been observed in both multiple sclerosis and the most common kind of brain cancers in adults,

known as gliomas. Discovery of a molecular master switch may have implications for medical treatment.

<http://med.stanford.edu/ism/2010/march/barres.html>

### **No Circ. Clock for Reindeer?**

Edyta Zielinska

The Scientist

11-Mar-10

Arctic reindeer, which live most of the year in 24-hour darkness or daylight, may lack an internal clock common to most organisms. May help understand how changes in circadian clocks due to jet lag or jobs might affect people.

<http://www.the-scientist.com/blog/display/57213/>

### ***Subcategory: Oncology***

### **Berkeley Scientists Find New Way to Get Physical in the Fight Against**

Lynn Yarris

Berkeley News

11-Mar-10

The biochemical activity of a cellular protein system, which plays a key role in cancer metastasis, can be altered by the application of a direct physical force. Suggests how the activity of cancer cells can be affected by surrounding tissue. Video.

<http://newscenter.lbl.gov/news-releases/2010/03/11/berkeley-scientists-get-physical-with-cancer/>

### **Leukemia Hijacks Normal Protein**

Drug Discovery & Development

01-Mar-10

A particularly aggressive type of blood cancer, mixed lineage leukemia (MLL), has an unusual way to keep the molecular motors running: the cancer cells rely on the normal version of an associated protein to stay alive.

<http://www.dddmag.com/news-Leukemia-Hijacks-Normal-Protein-3110.aspx>

### **Common Bacteria Linked to 3X Increase in Pancreatic Cancer**

Drug Discovery & Development

05-Mar-10

Discusses role of Helicobacter pylori in the onset of pancreatic cancer, 4th most frequent cancer death cause. Finding provides an estimation of the risk of developing the disease, lays foundation for in-depth exploration of the pathway of the disease.

<http://www.dddmag.com/news-Common-Bacteria-Associated-With-3X-Increase-in-Pancreatic-Cancer-310.aspx>

### **Blocking Cancer in its Path: New Cellular Defect Discovered**

University of California San Francisco

16-Mar-10

Key cellular defect that disturbs the production of proteins in human cells can lead to cancer susceptibility. Discovery has broad clinical implications in the fight against cancer, could affect treatment of lymphoma and many other forms of the disease.

<http://news.ucsf.edu/releases/blocking-cancer-in-its-path-new-cellular-defect-discovered/>

### **New Omega-3 Preparation Protects Against Bowel Polyps**

University of Leeds

18-Mar-10

Further research is needed to find out if a new agent, EPA (eicosapentaenoic acid), a preparation of an omega-3 polyunsaturated fatty acid found naturally in fish, could help prevent the non-hereditary, as well as hereditary, form of bowel cancer.

[http://www.leeds.ac.uk/news/article/764/new\\_omega-3\\_preparation\\_protects\\_against\\_bowel\\_polyps](http://www.leeds.ac.uk/news/article/764/new_omega-3_preparation_protects_against_bowel_polyps)

### **UW-Madison Biochemists Take a Bead on Gene-controlling Code**

Chris Barncard

University of Wisconsin

02-Mar-10

If a mutation is over-expressed in certain types of cancer, there's not a whole lot you can do to reverse that mutation. But if you could turn down that over-expression, perhaps you could disrupt that disease specifically, says scientist.

<http://www.news.wisc.edu/17752>

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## **RESEARCH TOOLS**

### *Subcategory: Cell Lines*

#### **Embryonic Stem Cell Research Stalled Despite Obama's Try at Lifting Restrictions**

Rob Stein

The Washington Post

15-Mar-10

Stein discusses why some scientists are complaining that so far the new policy is actually hindering their work: the original 21 "lines of cells" which were derived 10+ years ago may not meet strict new ethical criteria.

<http://www.washingtonpost.com/wp-dyn/content/article/2010/03/14/AR2010031402353.html>

### *Subcategory: Computing Systems*

#### **IBM supercomputer to benefit Rice, Medical Center**

ERIC BERGER

Houston Chronicle

01-Mar-10

The information age has deluged biology in data as scientists seek to characterize the inner workings of the body cell-by-cell and gene-by-gene. IBM, Rice combine to form 'Blue BioU' system, designed to be partitioned out to run many smaller tasks.

<http://www.chron.com disp/story.mpl/metropolitan/6892273.html>

### *Subcategory: Databases*

#### **NIH Announces Genetic Testing Registry**

NIH News

18-Mar-10

The Genetic Testing Registry (GTR) aims to enhance access to information about the availability, validity, and usefulness of genetic tests. The public database allows the public to search for information submitted voluntarily by genetic test providers.

<http://www.nih.gov/news/health/mar2010/od-18.htm>

### *Subcategory: Energy/ Fuel*

#### **High-Speed Pipeline Revs Up Biomass Analysis**

National Renewable Energy

08-Mar-10

The Energy Independence and Security Act requires that the United States produce 36 billion gallons of biofuel by 2022. Reports on the high throughput Biomass Recalcitrance Pipeline, which analyzes 1,000 samples of biomass at a time.

[http://www.nrel.gov/features/20100308\\_pipeline.html](http://www.nrel.gov/features/20100308_pipeline.html)

### *Subcategory: Evolution Research*

#### **Scientists Find Signs of "Snowball Earth" Amidst Early Animal Evolution**

National Science

04-Mar-10

Sea ice extended to the equator 716.5 million years ago, bringing new precision to a "snowball Earth" event long suspected to have taken place around that time. Supports theory that our planet has, at times in past, been ice-covered at all latitudes.

[http://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=116410&org=NSF&from=news](http://www.nsf.gov/news/news_summ.jsp?cntn_id=116410&org=NSF&from=news)

### *Subcategory: Food*

#### **Routine Testing of Seafood to Verify Species and Labeling**

Agilent Technology

01-Mar-10

Describes system that speeds and simplifies the use of DNA to identify fish species in food products, making this highly-accurate technique feasible for routine verification of seafood labeling and detecting species substitutions.

<http://www.agilent.com/about/newsroom/presrel/2010/01mar-ca10014.html>

### *Subcategory: Genome Sequence*

#### **Next-Generation Genome Sequencing Identifies Disease Genes**

Kevin Davies

Bio-IT World

10-Mar-10

Whole-genome sequencing of individual patients or affected families can reveal the 1 gene/~ 25,000 in the human genome bearing a deleterious mutation. Filtering focuses on just those that are novel, predicted to cause a significant phenotypic change.

<http://www.bio-itworld.com/2010/03/10/Lupski-sequencing.html>

### *Subcategory: Imaging*

#### **New Technique Allows Study of Protein Folding, Dynamics in Living Cells**

University of Illinois

01-Mar-10

Discusses "Fast Relaxation Imaging," which allows scientists to observe the dynamics of a protein folding in a live cell. Technique combines fluorescence microscopy and fast temperature jumps.

<http://www.news.illinois.edu/news/10/0301protein.html>

### *Subcategory: Mouse/ Rat Models*

#### **Intentional Variation Increases Result Validity in Mouse Testing**

Purdue News

08-Mar-10

Study shows that adding as few as 2 controlled environmental variables to preclinical mice tests can greatly reduce costly false positives, the number of animals needed for testing and the cost of pharmaceutical trials.

<http://www.purdue.edu/newsroom/research/2010/100308GarnerVariability.html>

### *Subcategory: Oncology*

#### **Light Used Activate Protein Destruction**

Drug Discovery & Development

11-Mar-10

New technique, which uses a “warhead” molecule capable of inactivating nearby proteins when triggered by light, could help to accelerate the development of new therapies. Increases protein-killing potency by a thousand fold.

<http://www.dddmag.com/news-Light-Used-Activate-Protein-Destruction-31110.aspx>

### *Subcategory: Research Supplies*

#### **Creating Niches in Chemical Libraries**

Mike May

Drug Discovery & Development

01-Mar-10

May reports on commercial chemical libraries offering researchers a diversity of compounds to purchase for drug discovery and development.

<http://www.dddmag.com/article-Creating-Niches-in-Chemical-Libraries-31610.aspx>

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