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## BioTechCircle News®

July 2009

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Because of the importance of environmental technology, we have highlighted their titles for you in **green**. Other articles that particularly attracted our attention are highlighted in **yellow**.

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**In this articles section: links to 63 free Web articles in 13 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 (5 articles) – Page 1  
Biobusiness Management (3 articles) – Page 3  
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**AGRI-BIOTECH**

### *Subcategory: Animal*

#### **Toxic Molecule May Help Birds "See" North and South**

University of Illinois

22-Jun-09

A toxic molecule, superoxide, known to damage cells and cause disease may also play a pivotal role in bird migration. Superoxide recently has been recognized for its role in cellular signaling.

<http://news.illinois.edu/news/09/0622birds.html>

### *Subcategory: Energy/ Fuel*

#### **Fuels from Biomass: New Technique Can Fast-Track Better Ionic Liquids for Biomass Pre-Treatments**

Lynn Yarris

Berkeley News

08-Jul-09

Understanding how ionic liquids dissolve lignocellulose will help scientists find new and better ways of producing advanced fuels from biomass in the second generation biofuels called "grassoline."

<http://newscenter.lbl.gov/feature-stories/2009/07/08/fuels-from-biomass-ionic-liquids/>

#### **Dow Plans Algae Biofuels Pilot**

Melody Voith

Chemical & Engineering News

06-Jul-09

Biofuel process uses CO<sub>2</sub>-hungry, single-cell cyanobacteria to produce sugar and contain enzymes that enable one-step conversion into ethanol, which the algae then excrete. The algae are engineered to survive high alcohol levels.

<http://pubs.acs.org/cen/news/87/i27/8727notw5.html>

### *Subcategory: Environmental*

#### **A Researcher at the UPS's Terrassa Campus Has Patented a New Material Made from Paper Sludge**

Universitat Politècnica de Catalunya

06-Jul-09

New material is low density, mouldable, fire resistant, impermeable, porous and highly resistant, and it may replace less environmentally friendly materials, such as plasterboard and expanded polystyrene, in many industry and production sectors.

<http://www.upc.edu/eng/noticies/a-researcher-at-the-upc2019s-terrassa-campus-has-patented-a-new-material-made-from-paper-sludge>

### *Subcategory: Microorganisms*

#### **Scientists Track Chemical Changes in Cells as They Endure Extreme Conditions**

Berkeley News

07-Jul-09

How do some bacteria survive conditions that should kill them? Advanced Light Source tracks chemical changes in individual cells as they adapt to extreme environments.

<http://newscenter.lbl.gov/feature-stories/2009/07/07/cells-endure-extremes/>

## BIOBUSINESS MANAGEMENT

### *Subcategory: Bioethics*

#### **Conflict With My Interests**

Kate Maternowski                      Inside Higher Ed                      10-Jul-09

Presents an "opposing viewpoint" to high-profile conflict of interest cases: the perceived risks of physician-industry relationships are too often demonized instead of assessed for value and that damages are imaginary or speculative.

<http://www.insidehighered.com/news/2009/07/10/acre>

### *Subcategory: Employment/Jobs*

#### **Flexible Work Arrangements**

Susan Ainsworth                      Chemical & Engineering News                      29-Jun-09

Ainsworth reports on family-friendly, flexible work arrangements designed by companies such as Merck, Dow Corning, DuPont and others.

<http://pubs.acs.org/cen/employment/87/8726employment.html>

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

#### **Patent Rights and Civil Wrongs: The ACLU Lawsuit**

Andrew W. Torrance                      Bio-IT World                      06-Jul-09

ACLU lawsuit ostensibly focuses on the legitimacy of the infamous BRCA1 and BRCA2 breast cancer gene patents granted to Myriad Genetics, but it seeks nothing less than the elimination of human genes as patentable subject matter.

<http://www.bio-itworld.com/comment/2009/07/06/ACLU-lawsuit.html>

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## CLINICAL TRIALS

### *Subcategory: Bioethics*

#### **The Origins of Research Ethics**

John F. Kouten                      Applied Clinical Trials                      13-Jul-09

Links to The National Institutes of Health, Office of Human Subjects Research, Regulations & Ethical Guidelines ([bioethics.od.nih.gov/IRB.html](http://bioethics.od.nih.gov/IRB.html)) and article "A Ten Step Trial Crisis Plan."

<http://appliedclinicaltrialsonline.findpharma.com/appliedclinicaltrials/ArticleStandard/Article/detail/610780>

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## DIAGNOSTIC TOOLS

### *Subcategory: Genotyping*

## **Coping with Bad Genetic News**

Emily Singer

Technology Review

16-Jul-09

New research suggests that most people can cope with learning that they are at high genetic risk for disease, showing no greater anxiety over their long-term prospects for developing Alzheimer's disease than do those who don't know their risk.

<http://www.technologyreview.com/biomedicine/23010/>

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## **INDUSTRY**

### *Subcategory: Bio Pharma*

#### **Biotech Shows Glimmer of an Upward Trend**

G. Steven Burrill

BioPharm International

01-Jul-09

Although the markets closed on a positive note in May, it will still take many more months before biotech starts on the road to full recovery, Burrill says.

<http://biopharminternational.findpharma.com/biopharm/ArticleStandard/Article/detail/608690>

### *Subcategory: Education*

#### **I'm a Celebrity Diagnosis, Get Me a Teachable Moment**

Kevin Davies

Bio-IT World

25-Jun-09

Describes CelebrityDiagnosis.com, a site intended to provide accurate and actionable medical information by capitalizing on the media's fascination with everything celebrity.

<http://www.bio-itworld.com/news/06/25/09/teachable-moments-celebrity-diagnosis.html>

### *Subcategory: General*

#### **Third Time Lucky**

Economist

04-Jun-09

Industrial biotech: A "third wave" of biotechnology is arriving. Will it be able to avoid the poor reception from the general public that the first wave (medicine) and second wave (agriculture) received?

[http://www.economist.com/sciencetechnology/tq/displayStory.cfm?story\\_id=13725783](http://www.economist.com/sciencetechnology/tq/displayStory.cfm?story_id=13725783)

### *Subcategory: Generics*

#### **Moving Toward a Biosimilars Pathway: The Lines are Drawn in Congress**

Brian J. Del Buono, PhD

BioPharm International

01-Jul-09

Two competing bills were introduced into the US House of Representatives, and one into the US Senate, that would create a pathway for the US Food and Drug Administration to approve generic biologic drugs, or biosimilars.

<http://biopharminternational.findpharma.com/biopharm/ArticleStandard/Article/detail/608685>

### *Subcategory: Geographic focus*

#### **Novartis' Patent Case in India**

Jean-François Tremblay                      Chemical & Engineering News                      13-Jul-09

India's Intellectual Property Appellate Board rules that Novartis' patent on the cancer drug Gleevec is not valid in that country. The decision is the third time in four years that Novartis has failed in attempts to legally enforce its patent on the drug.

<http://pubs.acs.org/cen/news/87/i28/8728notw5.html>

#### **NHS Not Ready to Take Advantage of Breakthroughs in Genetic Sequencing**

Mark Henderson                      Times Online                      07-Jul-09

The NHS needs to revamp its provisions for genetic testing, the training of doctors and nurses, and its IT and laboratory services, if understanding of the human genome is to deliver health benefits to its patients, according to a House of Lords report.

[http://www.timesonline.co.uk/tol/life\\_and\\_style/health/article6653139.ece](http://www.timesonline.co.uk/tol/life_and_style/health/article6653139.ece)

### *Subcategory: Government/ Approvals*

#### **European Union To Investigate Drug Makers**

Aoife White                      Manufacturing.net                      08-Jul-09

The European Union warned of a wave of antitrust investigations into major drug makers, saying they were deliberately stalling cheaper generic versions of their own medicines once exclusive patents expire.

<http://www.manufacturing.net/article.aspx?id=206448>

### *Subcategory: Miscellaneous*

#### **Americans Favor Science, But Less Than Before**

Randolph E. Schmid                      ECNmag.com                      10-Jul-09

The share of Americans who see science as the nation's greatest achievement is down sharply, to 27% from 47% in 1990, even as the public continues to hold scientists in high regard. Link to Pew Research Study.

<http://www.ecnmag.com/news-Americans-Favor-Science-071009.aspx?menuid=0>

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## **INVESTMENTS/ GOV. SUPPORT**

### *Subcategory: Research Labs*

#### **Physician-Scientists Get Spark From HHMI Early Career Award**

Howard Hughes Medical Institute                      07-Jul-09

Awards give promising physician-scientists at the start of their faculty careers the time and resources they will need to more fully commit themselves to research. The support should help them set up their labs and begin making discoveries.

<http://www.hhmi.org/news/ecps20090707.html>

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## NOVEL APPLICATIONS

### *Subcategory: Environment*

#### **University Has Grand Designs to Build a House of Straw**

University of Bath

16-Jul-09

Researchers are constructing a "BaleHaus" to assess use straw bales and hemp as building materials so that they can be used more widely in the building industry for housing. Watch its progress online via "Strawcam."

<http://www.bath.ac.uk/news/2009/07/16/balehaus-2/>

#### **Mysterious, Glowing Clouds Appear Across America's Night Skies**

Alexis Madrigal

Wired

16-Jul-09

Formed by ice literally at the boundary where the earth's atmosphere meets space 50 miles up, ice clouds shine because they are so high that they remain lit even after sunset. Could portend global changes caused by global warming.

<http://www.wired.com/wiredscience/2009/07/nightclouds/>

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

#### **Music Is the Engine of New U-M Lab-on-a-chip**

University of Michigan

22-Jul-09

Music, rather than electromechanical valves, can drive experimental samples through a lab-on-a-chip. Could significantly simplify the process of conducting experiments in microfluidic devices. "Music video" demonstration.

<http://www.ns.umich.edu/htdocs/releases/story.php?id=7247>

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## PEOPLE PROFILES

### *Subcategory: Government/ Approvals*

#### **Obama Picks Francis Collins as NIH Director**

David Brown

Washington Post

08-Jul-09

A physician and scientist who helped guide the Human Genome Project to completion, Collins developed an important technique for identifying genes involved in cystic fibrosis and neurofibromatosis.

<http://www.washingtonpost.com/wp-dyn/content/article/2009/07/08/AR2009070802769.html>

### *Subcategory: Miscellaneous*

#### **Axel Ullrich, Janet Rowley Win Prestigious 2009 Biomedical Awards**

Bio-IT World

01-Jul-09

Ullrich was selected for his molecular biology research for the treatment of a wide range of diseases. Rowley was cited for her discoveries of recurrent chromosomal abnormalities in leukemia and lymphoma.

<http://www.bio-itworld.com/2009/07/01/Ullrich-Rowley-awards.html>

### **The League of Extraordinary Stem Cell Biologists**

Tom Matlack

Boston Magazine

01-Jul-09

What it's like to be young, brilliant, fawned over by multimillionaire investors, courted by universities and corporations around the world, and forever racing—sometimes as teammates, sometimes as rivals—to change medicine as we know it.

[http://www.bostonmagazine.com/articles/the\\_league\\_of\\_extraordinary\\_biologists](http://www.bostonmagazine.com/articles/the_league_of_extraordinary_biologists)

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## **PERSONALIZED MEDICINE**

### *Subcategory: Oncology*

#### **The Avastin Paradox**

David Ewing Duncan

Technology Review

13-Jul-09

The rational idea behind designing the drug has given way to an unexpectedly complex range of outcomes. "The problem is that we don't know how to identify which patients will respond" to a given drug.

<http://www.technologyreview.com/biomedicine/22979/>

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## **PLATFORM TECHNOLOGIES**

### *Subcategory: Cell Therapy*

#### **Provoking Our Inner Stem Cells**

Lauren Gravitz

Technology Review

17-Jul-09

Rather than developing cell transplants to replace diseased or damaged tissue, which is the focus of a great deal of stem-cell research, start-up is searching for molecules that can control the behavior of adult stem cells in different parts of the body.

<http://www.technologyreview.com/business/23017/>

### *Subcategory: Drug Discovery*

#### **Only Moore's Law Can Save Big Pharma**

Bill Frezza

Bio-IT World

29-Jun-09

Economically, Big Pharma continues to deliver less and less for more and more, Frezza writes. The only way to escape this downward spiral is new science: Digital Chemistry.

<http://www.bio-itworld.com/2009/06/29/save-pharma-comment.html>

## **Signaling Self-Renewal**

James Netterwald, PhD, MT      Drug Discovery & Development      01-Jun-09  
New reporter proteins, imaging, and biochemical tools for measuring signaling activities in stem cells have potential to improve drug studies.  
<http://www.dddmag.com/Article-Signaling-Self-Renewal-060109.aspx>

### *Subcategory: Genomics*

**Mystery E. Coli Genes Essential for Survival of Many Species**      13-Jul-09  
BBSRC

Three previously unknown genes are essential for the survival of E. coli and one out of the three could also be implicated in cancer or developmental abnormalities in humans. These mystery genes are also found in numerous other creatures.

[http://www.bbsrc.ac.uk/media/releases/2009/090713\\_mystery\\_ecoli\\_genes\\_essential\\_for\\_survi](http://www.bbsrc.ac.uk/media/releases/2009/090713_mystery_ecoli_genes_essential_for_survi)

**Research Sheds Light on Cause of Down Syndrome and Other Genetic Disorders**      16-Jul-09  
Berkeley News

Researchers find that if a mother's egg cell has a mutation in just one copy of a gene, called Bub1, then she is more likely to have fewer offspring that survive to birth. Sheds light on cause of Down syndrome and other genetic disorders.

<http://newscenter.lbl.gov/feature-stories/2009/07/16/genetic-cause-aneuploidy/>

### *Subcategory: High Throughput Screening*

#### **Protein Structures Revealed at Record Pace**

Dan Krotz      Berkeley News      20-Jul-09

High-throughput protein pipeline could allow scientists to expedite the development of biofuels, decipher how extremophiles thrive in conditions that kill most organisms, and better understand how proteins carry out life's vital functions.

<http://newscenter.lbl.gov/press-releases/2009/07/20/fast-protein-structures/>

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

#### **febit First to Offer Newly Published Mouse Genome on a Chip for DNA/RNA Detection and Enrichment**

febit      29-Jun-09

The first biochip on the market covering the newly published whole mouse genome enables up-to-date profiling and enrichment of genes and SNPs of interest using Gene Expression Profiling, SNP-Detection, ncRNA analysis.

<http://www.febit.com/go/en/news-events/news-and-press-releases/febit-first-to-offer-newly-published-mouse-genome-on-a-chip-for-dnarna-detection-and-enrichment/>

### *Subcategory: Microorganisms*

#### **Exploring Standards to Advance Microbial Genomics**

Doe Joint Genome

09-Jul-09

Far more could be done with microbial genomics, says scientist, if researchers would embrace the world of possibilities that lie beyond the present anthropocentric focus and would also institute shared standards for genomic data collection and analysis.

[http://www.jgi.doe.gov/News/news\\_09\\_07\\_09.html](http://www.jgi.doe.gov/News/news_09_07_09.html)

**By Manipulating Oxygen, Scientists Coax Bacteria into a Wave**

Rockefeller University

13-Jul-09

When oxygen penetrates a sample of oxygen-deprived Escherichia coli bacteria, they accumulate to form a solitary propagating wave that moves with constant velocity, without changing shape, but each bacterium in the wave isn't moving at all.

<http://newswire.rockefeller.edu/?page=engine&id=947>

*Subcategory: Miscellaneous*

**Biom mineralization on an Ancient Sculpture of the Apoxyomenos:  
Effects of a Metal-Rich Environment on Crystal Growth in Living Organisms**

American Chemical Society

21-May-09

Biom mineralization is currently an area of intense interest due to the potentially wide ranging technological benefits that may result from a greater understanding of those processes. Describes findings on submerged bronze sculpture.

<http://pubs.acs.org/stoken/presspac/presspac/full/10.1021/cg900402b>

*Subcategory: Monofluidics*

**Stirred, Not Shaken: Bio-inspired Cilia Mix Medical Reagents at Small**

University of Washington

30-Jun-09

Reservoirs that hold liquids are now so small that forces between molecules on the liquid's surface dominate. To enable mixing of two fluids, researchers manufactured underwater tiny beating rods that mimic cilia.

<http://uwnews.org/article.asp?articleID=50683>

*Subcategory: Nanotechnology*

**The World's Smallest Trumpeter**

London Center for Nanotechnology

01-Jul-09

Describes student project aimed at both nanofabrication of three-dimensional artificial structures with plasma technologies and their engineering applications. Includes images.

<http://www.london-nano.com/content/newsmedia/recentnews/2009/trumpeter/>

**Making Nanoparticles in Artificial Cells**

Max Planck Society

26-Jun-09

Cells and microorganisms are absolute masters when it comes to

working in the smallest possible dimensions, producing particles and structures from inorganic material that are only a few nanometers in size.

<http://www.mpg.de/english/illustrationsDocumentation/documentation/pressReleases/2009/pressRelease20090626/index.html>

*Subcategory: Proteomics*

**Spontaneous Assembly: A New Look at How Proteins Assemble and Organize Themselves into Complex Patterns**

Berkeley News

06-Jul-09

Scientists show how thousands of bacterial membrane proteins are able to assemble into clusters that direct cell movement to select chemicals in their environment.

<http://newscenter.lbl.gov/feature-stories/2009/07/06/spontaneous-assembly/>

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## RESEARCH ADVANCEMENTS

*Subcategory: Bioterrorism*

**Researchers Image Crucial Anthrax Protein**

Argonne National Laboratory

14-Jul-09

Researchers have determined the structure of a protein crucial to the virulence of anthrax bacteria. Called CapD, the protein helps the bacteria form its protective coating once it enters the body.

[http://www.anl.gov/Media\\_Center/News/2009/news090714.html](http://www.anl.gov/Media_Center/News/2009/news090714.html)

*Subcategory: Geriatrics*

**Alzheimer's Gene Discovery May Help Predict Age Disease Hits**

Michelle Fay Cortez

Bloomberg.com

12-Jul-09

A newly discovered gene variant may help determine who is going to get Alzheimer's disease, and at what age the symptoms of the fatal condition that destroys the mind will start to develop.

<http://www.bloomberg.com/apps/news?pid=20601087&sid=a0kkLHdYJCU4>

**Eat Less, Live Longer: Unraveling the Connection**

Howard Hughes Medical Institute

24-Jun-09

Researchers have identified two proteins that begin to provide a new molecular explanation for how eating less leads to living longer. Could offer new clues about the molecular mechanisms that living organisms employ when food is scarce.

<http://www.hhmi.org/news/dillin20090624.html>

**Can Aging Be Solved?**

Emily Singer

Technology Review

01-Jul-09

Discusses why research directed at the fundamental processes of aging will yield greater returns than studying diseases of aging, such as

Alzheimer's and cardiovascular disease.  
<http://www.technologyreview.com/biomedicine/22954/>

### *Subcategory: Immunology/ Infectious Diseases*

#### **Killer Parasites' Genes Decoded**

BBC News

16-Jul-09

Scientists have decoded the genetic blueprint of two parasitic flatworms responsible for thousands of deaths worldwide every year, schistosomiasis, otherwise known as Bilharzia.

<http://news.bbc.co.uk/2/hi/health/8151199.stm>

#### **Carbohydrate Size Control**

Stuart A. Borman

Chemical & Engineering News

06-Jul-09

Researchers have identified a new target for anti-TB medications also uncovering a molecular mechanism that enzymes use to control the length of biosynthesized carbohydrates.

<http://pubs.acs.org/cen/news/87/i27/8727notw6.html>

#### **Slime City: Where Germs Talk to Each Other and Execute Precise Attacks**

Wendy Orent

Discover

17-Jul-09

99% of bacteria live in biofilms. The unifying factor in all these biofilms is that their cooperation is, in a sense, verbal. They “talk” incessantly using streams of chemicals that they pump outside their cell walls and membranes.

<http://discovermagazine.com/2009/jul-aug/17-slime-city-germs-talk-each-other-plan-attacks>

### *Subcategory: Neurology*

#### **Nanotechnology Combats Fatal Brain Infections**

Agency for Science, Technology and Research

29-Jun-09

Engineered peptide nanoparticles are shown to have high antimicrobial activity and are highly effective in killing microbes. The treatment damages the structure of the pathogen and literally breaks it apart.

[http://www.a-star.edu.sg/a\\_star/189-Press-Release?iid=679](http://www.a-star.edu.sg/a_star/189-Press-Release?iid=679)

#### **Gene Clues to Schizophrenia Risk**

BBC News

09-Jul-91

Scientists have identified thousands of tiny genetic variations which together could account for more than a third of the inherited risk of schizophrenia. Condition is genetically similar to bipolar disorder also known as manic depression.

<http://news.bbc.co.uk/2/hi/health/8128005.stm>

### *Subcategory: Oncology*

#### **Study Pinpoints Novel Cancer Gene and Biomarker**

Dana-Farber Cancer Institute 24-Jun-09  
Research underscores need to combine genomics and basic biology in cancer gene hunt as scientists demonstrate that a surplus of a gene known as GOLPH3 can spur cancer cell growth in a variety of tissues.  
<http://www.dana-farber.org/abo/news/press/2009/study-pinpoints-novel-cancer-gene-and-biomarker>

**Study Pinpoints Genetic Drivers of Lung Cancer's Spread**

Howard Hughes Medical Institute 02-Jul-09  
Research identifies a factor that gives lung cancer cells the extra impulse to go above and beyond just being tumor cells to becoming metastatic cells.  
<http://www.hhmi.org/news/massague20090702.html>

**Systems Biology as a Clinical Approach to Cancer**

Virginia Tech 09-Jul-09  
A systems biology approach could result in the development of improved diagnostic tools and treatment options, as well as potential new drug targets to help combat the many potentially fatal types of cancer.  
[https://www.vbi.vt.edu/public\\_relations/press\\_releases/sysbiology\\_clinical\\_approach\\_to\\_cancer](https://www.vbi.vt.edu/public_relations/press_releases/sysbiology_clinical_approach_to_cancer)

*Subcategory: Reproduction*

**Healthy Embryos Show Chromosome Flaws**

Nora Schultz Technology Review 08-Jul-09  
A study involving higher-resolution genetic screening of 3-4 day old embryos shows that 90% of the cells had some chromosomal abnormalities. Suggests that healthy embryos may be wasted during in vitro fertilization (IVF).  
<http://www.technologyreview.com/biomedicine/22959/>

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## RESEARCH TOOLS

*Subcategory: Cell Lines*

**Site-Directed Engineering of Defined Chromosomal Sites for Recombinant Protein and Virus Expression**

D. Wirth, PhD, L. Gama-Norton, R. Schucht, PhD, K. Nehlsen, PhD BioPharm International 01-Jul-09  
Reports on the exploitation of defined chromosomal sites for the consistent production of highly biologically relevant proteins, namely the expression of viral vectors and antibodies.  
<http://biopharminternational.findpharma.com/biopharm/ArticleStandard/Article/detail/608684>

**Guiding Stem Cell Research**

Britt E. Erickson Chemical & Engineering News 09-Jul-09

The National Institutes of Health has released its final guidelines for work on human embryonic stem cells (hESCs). The guidelines address concerns about preexisting cell lines and establish a registry that will list all approved hECs.

<http://pubs.acs.org/cen/news/87/i28/8728notw7.html>

### *Subcategory: Computing Systems*

#### **CSHL Scientists Harness Logic of “Sudoku” Math Puzzle to Vastly Enhance Genome-sequencing Capability**

Cold Spring Harbor

25-Jun-09

Describes “DNA Sudoku,” allowing tens of thousands of DNA samples to be combined, and their sequences – the order in which the letters of the DNA alphabet (A, T, G, and C) line up in the genome – to be determined all at once.

[http://www.cshl.edu/public/releases/09\\_sudoku.html](http://www.cshl.edu/public/releases/09_sudoku.html)

### *Subcategory: Evolution Research*

#### **DNA Template Could Explain Evolutionary Shifts**

Baylor College of Medicine

21-Jun-09

Rearrangements of all sizes in genomes, genes and exons can result from a glitch in DNA copying that occurs when the process stalls at a critical point and then shifts to a different genetic template, duplicating genes or deleting part of their code.

<http://www.bcm.edu/news/item.cfm?newsID=1466>

### *Subcategory: Imaging*

#### **Caltech Physicists Create First Nanoscale Mass Spectrometer**

California Institute of Technology

21-Jul-09

Researchers have developed a technique to determine the mass of a single molecule, the protein bovine serum albumin (BSA), in real time.

[http://media.caltech.edu/press\\_releases/13277](http://media.caltech.edu/press_releases/13277)

#### **The Sound of Light: Innovative Technology Shatters the Barriers of Modern Light Microscopy**

Helmholtz Zentrum

30-Jun-09

Using a combination of light and ultrasound, scientists visualize fluorescent proteins that are seated several centimeters deep into living tissue. May facilitate the examination of tumors or coronary vessels in humans.

<http://www.helmholtz-muenchen.de/en/press-and-media/press-releases/press-releases-2009/press-releases-2009-detail/article/12021/9/index.html>

### *Subcategory: Microorganisms*

#### **New Lab-on-a-chip Measures Mechanics of Bacteria Colonies**

University of Michigan

30-Jun-09

Describes a microscale tool to help researchers understand the mechanical behavior of biofilms, slimy colonies of bacteria involved in most human infectious diseases by measuring biofilms' resistance to pressure.

<http://www.ns.umich.edu/htdocs/releases/story.php?id=7220>

*Subcategory: Nephrology/ Urology*

**Artificial Liver for Drug Tests**

Fraunhofer

01-Jun-09

Researchers have developed a model of the liver, which is viable outside the body and which is suitable for testing drugs. The functioning system of blood vessels creates a natural environment for cells.

<http://www.fraunhofer.de/en/press/research-news/2009/06/ResearchNews06s2009Topic1.jsp>

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## STRATEGIC RELATIONSHIPS

*Subcategory: Energy/ Fuel*

**Exxon Mobil Invests in Algae Biofuel Project**

Google.com

29-Jun-09

Oil giant ExxonMobil has alliance with biotech firm Synthetic Genomics to make a new biofuel from photosynthetic algae. Dow Chemical plans to join Algenol Biofuels in a pilot-scale project to use algae and carbon dioxide to produce ethanol fuel.

<http://www.google.com/hostednews/afp/article/ALeqM5gaKs6antc-yzgr2AEZj2gcIKb4Cw>

*Subcategory: M&A Activities*

**The Obama Biotech Boost**

Paul R. La Monica

CNNMoney.com

23-Jul-09

Fears about what President Obama's health care reform plan may do to the earnings of drugmakers has caused many Big Pharma to purchase biotechs with growth potential. Cites takeover deals.

<http://money.cnn.com/2009/07/23/markets/thebuzz/?postversion=2009072313>

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