



BioTechCircle News®

August 2010

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Due to earlier technical difficulties, August has fewer articles than usual. We will return to normal numbers of articles in September.

In this articles section: links to 46 free Web articles in 10 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

AGRI-BIOTECH

Subcategory: Animal

Top 10 Most Wanted Lost Amphibian Species

Betsy Mason

Wired

09-Aug-10

Scientists in 14 countries on five continents are teaming up to hunt for as many as 100 species of amphibians that are thought to possibly be extinct, but may be surviving in remote corners. Search could help understand impact of environmental change.

<http://www.wired.com/wiredscience/2010/08/lost-amphibians-gallery/all/1>

Subcategory: Crops

Pest-resistant Soybeans Grow out of MSU Research Lab

Mark Fellows

Michigan State University

20-Aug-10

Two lines of pest-resistant soybean promise healthier harvests for growers, trade name “Sparta – the Soybean Aphid Shield.” Four soybean strains (of 2,000 tested) with different resistant genes were isolated from which seeds were developed.

http://news.msu.edu/story/8137/&keyword_search=Dechun%20Wang.&keyword_action=all_words

BIOBUSINESS MANAGEMENT

Subcategory: Crops

Greenhouse Gas Calculator Connects Farming Practices with Carbon Credits

e! Science News

09-Aug-10

Describes the Farming Systems Greenhouse Gas Emissions Calculator, a simple web-based tool to help users make economically and environmentally sound decisions.

<http://esciencenews.com/articles/2010/08/09/greenhouse.gas.calculator.connects.farming.practices.with.carbon.credits>

INDUSTRY

Subcategory: Geographic focus

Bio Island Dream

Brendan Borrell

The Scientist

01-Aug-10

For 40 years, Puerto Rico has been a pharmaceutical manufacturing powerhouse; Borrell discusses whether the island is ready to move into research and development.

<http://www.the-scientist.com/2010/8/1/60/1/>

INVESTMENTS/ GOV. SUPPORT

Subcategory: Bioterrorism

Telltale Signs of Bioterror

Jade Boyd

Rice University

16-Aug-10

Describes purpose of federal support to develop a genomic test that can quickly determine whether a disease outbreak is caused by a natural pathogen or one that was grown in a lab by terrorists. Natural outbreaks follow epidemiological patterns.

<http://www.media.rice.edu/media/NewsBot.asp?MODE=VIEW&ID=14639&SnID=216078236>

MEDICAL DEVICES

Subcategory: Metabolism: Obesity, Diabetes

Shining a Light — Literally — on Diabetes

Anne Trafton

MIT News

09-Aug-10

Non-invasive technique, using Raman spectroscopy, measures blood glucose levels using light. Could help boost quality of life for diabetes patients, but that to be practical, any device would need to become more affordable and very simple to use.

<http://web.mit.edu/newsoffice/2010/glucose-monitor-0809.html>

ORGANIZATIONS

Subcategory: Energy/ Fuel

Plumes Finger Oil Spill

Elizabeth K. Wilson

Chemical & Engineering News

02-Aug-10

New research that has not yet been submitted for publication in a peer-reviewed journal provides definitive evidence that giant plumes of oil lurking undersea in the Gulf of Mexico have been produced during BP's Deepwater Horizon oil disaster.

<http://pubs.acs.org/cen/news/88/i31/8831notw3.html>

Subcategory: Genome Sequence

BGI Americas Offers Sequencing the Chinese Way

Kevin Davies

Bio-IT World

11-Aug-10

BGI, formerly known as the Beijing Genomics Institute, is about to become the world's largest genome sequencing center. Davies describes the company's business scope which includes a pure fee-for-service as well as a collaborative model.

<http://www.bio-itworld.com/2010/08/11/BGI-exclusive.html>

lymphocytes and myeloid cells.

<http://www.dddmag.com/news-Team-Maps-Epigenetic-Changes-in-Stem-Cells-81710.aspx>

Subcategory: Microorganisms

A 'Kill Switch' for Rogue Microbes

Katherine Bourzac

Technology Review

20-Aug-10

A highly tunable genetic "switch" makes it possible to stop production of a protein and restart it again. Switch could be used to control any gene, can also act as a "dimmer switch" to finely tune how much protein a microbe would produce over time. <http://www.technologyreview.com/biomedicine/26094/>

Subcategory: Misc. Medical Devices

An Implantable Antenna

Jennifer Chu

Technology Review

18-Aug-10

A small antenna of liquid silk and micropatterned gold is designed to spot specific proteins & chemicals in the body, alert doctors wirelessly to signs of disease. Could someday help patients with diabetes track their glucose levels without daily testing.

<http://www.technologyreview.com/biomedicine/26078/>

Subcategory: Nanotechnology

Graphene Could Improve DNA Sequencing

Prachi Patel

Technology Review

19-Aug-10

Atom-thick graphene membrane may be ideal for a new sequencing technique, might allow for more accurate base identification and help make human DNA sequencing faster and cheaper.

<http://www.technologyreview.com/biomedicine/26087/>

Subcategory: Oncology

The Cancer Biomarker Conundrum: Too Many False Discoveries

Eleftherios P. Diamandis

Libby's Hope

12-Aug-10

The boom in cancer biomarker investments over the past 25 years has not translated into major clinical success. Reasons for biomarker failures include problems with study design and interpretation, statistical deficiencies, says report.

<http://healthinfoispower.wordpress.com/2010/08/12/the-cancer-biomarker-conundrum-too-many-false-discoveries/>

Subcategory: Proteomics

Metalloproteins' Ranks Swell

Celia Henry Arnaud

Chemical & Engineering News

26-Jul-10

Metalloproteins may be more numerous and diverse than previously suspected, as most metals associated with proteins are discovered “after the fact” as people study particular proteins. Some elements, such as copper, are notably absent.

<http://pubs.acs.org/cen/news/88/i30/8830notw1.html>

A Cellular Housekeeper, and Potential Target of Obesity Drugs, Caught in Action

Dan Krotz

Lawrence Berkeley

01-Aug-10

A giant enzyme called tripeptidyl peptidase II keeps cells tidy and disease free. A closely related enzyme in the brain can cause people to feel hungry even after they eat a hearty meal. Could lead to new obesity-fighting drugs.

<http://newscenter.lbl.gov/news-releases/2010/08/01/cellular-housekeeper/>

Researchers Discover Protein that Shuttles RNA into Cell Mitochondria

University of California Los Angeles

06-Aug-10

Scientists show a new role for a protein called polynucleotide phosphorylase (PNPASE) in regulating the import of RNA into mitochondria. Implications for studying and treating certain cancers, mitochondrial disorders such as neuromuscular diseases.

<http://www.cancer.ucla.edu/Index.aspx?page=644&recordid=389&returnURL=%2Findex.aspx>

RESEARCH ADVANCEMENTS

Subcategory: Cardiology/ Vascular Diseases

Turning Scar Tissue Into a Beating Heart

Gretchen Vogel

Science Daily

05-Aug-10

When a heart is injured by a heart attack, it forms scar tissue dominated by fibroblasts instead of cardiomyocytes. As a result, the heart doesn't fully recover its pumping capacity. Scientists reprogrammed structural cells into beating muscle cells.

<http://news.sciencemag.org/sciencenow/2010/08/turning-scar-tissue-into-a-beati.html>

Scientists Identify 95 Genetic Variants Associated with Cholesterol,

Laura Bailey

University of Michigan

04-Aug-10

Combining results from 46 different studies representing more than 100,000 people, research shows many of the variants identified in European-origin populations were shown to influence lipid traits across Asian, African populations as well.

<http://www.ns.umich.edu/htdocs/releases/story.php?id=7910>

Subcategory: Food

Chocolate Linked to Lower Risk of Heart Failure

Pharmaceutical Discovery & Devel.

17-Aug-10

Nine-year study of 31,823 middle-aged and elderly Swedish women shows

those who ate 1-2 servings (2/3 to 1 oz.) per week of chocolate with at least 30% cocoa content had lower risks of heart failure. NOTE: more servings did NOT help. Darn!

<http://www.pharmpro.com/News/2010/08/Chocolate-Linked-to-Lower-Risk-of-Heart-Failure/>

Subcategory: Genomics

Bad News for the Genetics of Personality

Neurocritic

10-Aug-10

That genes strongly influence how we act is beyond question. Research study shows that no genetic variants that significantly contribute to personality variation. Also see video.

http://www.youtube.com/watch?v=c_5xb5MTSfc&feature=player_embedded
<http://neurocritic.blogspot.com/2010/08/bad-news-for-genetics-of-personality.html>

Subcategory: Geriatrics

Proteins Linked to Longevity Also Linked to Alzheimer's

Anne Trafton

MIT News

27-Jul-10

Proteins called sirtuins play a vital role in longevity and stress response in organisms as diverse as humans, yeast and mice. Sirtuins also appear to control production of the protein fragments that form plaques in the brains of Alzheimer's patients.

<http://web.mit.edu/newsoffice/2010/sirtuins-0727.html>

Proteins Linked with Alzheimer's, Other Neurodegenerative Diseases Found to Clump in Normal Aging

Kristen Bole

University of California San Francisco

10-Aug-10

Many of the proteins present as minor components of disease aggregates actually clump together as a normal part of aging in healthy individuals. May influence both lifespan and neurodegenerative disease.

<http://news.ucsf.edu/releases/proteins-linked-with-alzheimers-other-neurodegenerative-diseases-found-to-c/>

Subcategory: Immunology/ Infectious Diseases

Research Concludes Vitamin D May Treat or Prevent Allergy to Common Mold

EurekAlert!

16-Aug-10

Adding vitamin D not only substantially reduced the production of the protein called OX40L that drives an allergic response, but it also increased production of the proteins that promote tolerance.

http://www.eurekalert.org/pub_releases/2010-08/lsuh-rcv080610.php

Meningitis Mysteries Unravel

Leah Whiting

Meningitis Research

09-Aug-10

Genetic variation in a group of proteins, called Factor H and Factor-H related proteins, are particularly important in determining susceptibility and resistance to meningococcal infection, study shows.

Subcategory: Oncology

Super-sizing a Cancer Drug Minimizes Side Effects

Anne Trafton

MIT News

28-Jul-10

Cisplatin does a good job of killing tumor cells, but it can also seriously damage the kidneys, which receive high doses of cisplatin because they filter the blood. Describes new way to package cisplatin into nanoparticles too big to enter the kidneys.

<http://web.mit.edu/newsoffice/2010/cisplatin-0728.html>

Subcategory: Wound/Tissue Repair

New Gel Could Speed Wound Healing

Maria Cheng

Fox News

12-Aug-10

Describes gel named Nexagon that works by interrupting how cells communicate and prevents the production of a protein that blocks healing. Allows cells to move faster to the wound to begin healing it. Potential for treating leg or diabetes ulcers.

<http://www.foxnews.com/health/2010/08/12/new-gel-speed-wound-healing/>

RESEARCH TOOLS

Subcategory: Bioethics

Patients, Hospitals Wrestle over Tumor Tissue

Stacey Burling

The Philadelphia Inquirer

29-Jul-10

Individualized care is spurring higher demand for cancer tissue, creating tensions between research and treatment. Trend has huge fiscal, medical, and social implications. Who owns the tissue, has rights to make decisions about it?

http://www.philly.com/inquirer/local/20100729_Patients_hospitals_wrestle_over_tumor_tissue.html

Citations: Too Many, or Not Enough?

William J. Pearce

The Scientist

01-Aug-10

Inaccurate citations inappropriately augment citation counts, compromise estimates of a publication's influence, and introduce error into calculations of journal impact factors, writes Pearce. Suggests critical reading of each cited paper in its entirety.

<http://www.the-scientist.com/2010/8/1/29/1/>

Subcategory: Biomarker

Merck Proteomics Research Matches Drugs to Activated Pathways

Allison Proffitt

Bio-IT World

05-Aug-10

Biomarkers for the PI3 signaling pathway can predict the sensitivity of cancer cells to AKT-inhibiting drugs. Implications for using appropriate

pathway-specific drugs to treat many human cancers including ovarian, breast and lung.

<http://www.bio-itworld.com/2010/08/05/merck-phosphoproteomics.html>

Subcategory: Environment

Long, Hot Summer of Fire, Floods Fits Predictions

Chicago Sun-Times

12-Aug-10

Experts now see an urgent need for better ways to forecast extreme events like Russia's heat wave and wildfires and the record deluge devastating Pakistan. Supercomputer modeling would enable more detailed linking of warming and jet streams.

http://www.suntimes.com/news/nation/2592762_global-warming-weather-prediction-081210.article

Subcategory: Evolution Research

Sponge Shines Light on Life's Origin

Mike Williams

Rice University

04-Aug-10

A draft genome sequence for *Amphimedon queenslandica*, a sponge found off the coast of Australia, is helping evolutionary biologists connect the dots as they look for DNA sequences shared by metazoans, or multicelled animals.

<http://www.media.rice.edu/media/NewsBot.asp?MODE=VIEW&ID=14583&SnID=2061986963>

Subcategory: Geriatrics

Longevity Debate: Chips to Blame?

Jennifer Welsh

The Scientist

14-Jul-10

Discusses debate over the validity of a recent genome-wide association study (GWAS) of centenarians is the authors' possible misuse of gene chips in different testing groups, part of an ongoing issue affecting other GWAS research.

<http://www.the-scientist.com/blog/display/57558/>

Subcategory: Miscellaneous

Breakthroughs from the Second Tier

The Scientist

01-Aug-10

Some of the most important findings have been published in considerably less prestigious titles. Examples include seminal research on fat containing pluripotent stem cells and T-cells keeping the immune system in check.

<http://www.the-scientist.com/2010/8/1/30/1/>

Robot Climbs Walls

University of Utah

05-Aug-10

A small robot named ROCR ("rocker") is the first to climb efficiently and move like human rock climbers or apes swinging through trees. Mimics efficient systems found both in nature (apes) and a grandfather's clock

(man-made). <http://www.unews.utah.edu/p/?r=080310-1>

Subcategory: Nanotechnology

Curious about Nanoscience? Encyclopedia Has Answers

Arizona State University

09-Aug-10

Two-volume Encyclopedia of Nanoscience and Society isn't designed for the scientist or engineer, but rather for the rest of us who have plenty of questions about nanotechnology – and what it means for our lives – but are afraid to ask.

http://asunews.asu.edu/20100805_nanoencyclopedia

Subcategory: Proteomics

Probing Proteins

Jeffrey M. Perkel

The Scientist

01-Aug-10

Describes proteomics databases. How confident can biologists be that a reported protein really existed in the analyzed sample and that the acquired spectrum truly matched the identified protein? Look at the false discovery rate (FDR).

<http://www.the-scientist.com/2010/8/1/55/1/>

STRATEGIC RELATIONSHIPS

Subcategory: Geriatrics

Rare Sharing of Data Leads to Progress on Alzheimer's

Gina Kolata

The New York Times

12-Aug-10

ADNI (Alzheimer's Disease Neuroimaging Initiative) collaboration is not just to do research on a vast scale, but also to share all data, make every single finding public immediately, available to anyone with a computer anywhere in the world.

http://www.nytimes.com/2010/08/13/health/research/13alzheimer.html?_r=3&pagewanted=1&hp

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