Science-USA (Boston+), April 2013

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swissnex Boston welcomes you to the 7th edition of the monthly newsletter *Science-USA (Boston+)*. This electronic publication is designed to report on trends in education, research, innovation and art. Created for busy people in Switzerland, the newsletter will consist of two spotlights on outstanding Swiss talents and a concise overview of the developments in the science and innovation industries on the US East Coast. Additionally, we will provide you with a taste of swissnex Boston activities throughout the year.

Swiss Spotlight

Scientist: Prestigious fellowship for world's first leaky-wave antenna

(Christophe Caloz, April 01, 2013)

Dr. Christophe Caloz is a scientist at the École Polytechnique de Montréal and an Alumnus of the École Polytechnique Fédérale de Lausanne (EPFL). He conducts research in the field of electromagnetic engineering and is developing a new generation of artificial semiconductor substances. He is also a 2013 recipient of the prestigious NSERC Steacie Fellowship awarded annually to 6 promising scientists from Canadian universities. Dr. Caloz's innovative research led to the creation of a spin-off company, ScisWave, which is developing commercial applications for one of his research breakthroughs—the world's first leaky-wave antenna capable of efficiently scanning full spaces, for a wide range of applications outside the laboratory. His future research is aimed at tackling the challenges associated with wider adoption of analog signal processing in wireless radio.
http://swissinnovation.org/newsUS/web/2013/00-130401-85.html

Startup: Neuro-Rehabilitation Expert MindMaze to enter US market

(MindMaze, April 02, 2013)

MindMaze combines immersive virtual reality, brain imaging and 3D technologies in real time to build novel interfaces for Neuro-Rehabilitation, Game Training and 3D Imaging. The first product offers a novel cost-effective, interactive motor rehabilitation platform for stroke and brain injury patients with a unique neuro-feedback feature to monitor their performance. MindMaze has worked with swissnex Boston in 2010 through the venture leaders program to explore the different funding and regulatory/legal milestones towards translation to the US market. The hope is to establish a presence in the US in 2013.
http://swissinnovation.org/newsUS/web/2013/00-130402-33.html

swissnex Boston Events

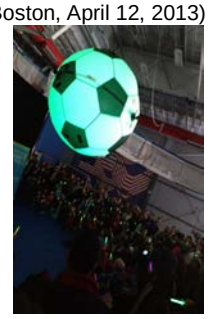
swissnex Boston Annual Report 2012

(swissnex Boston, April 01, 2013)

From the Giant Inflatable Cell to the 12th edition of the venture leaders program, 2012 at swissnex Boston brought about many changes and exciting new ventures. The 2012 swissnex Boston Annual Report provides readers with an in depth look into some of the most successful swissnex Boston partnerships as well as an overview of our day to day activities. Connecting the dots between Switzerland and North America, swissnex Boston is the world's first science consulate and aims to facilitate knowledge exchange and foster partnerships in the areas of science, education, art and innovation.
http://swissinnovation.org/newsUS/web/2013/00-130401-f9.html

It's a bird! it's a plane! No, it's Skye!

(swissnex Boston, April 12, 2013)



From April 10 - 17, swissnex Boston had the pleasure to host ETH Zurich's Project Skye. Known around Boston as the giant soccer ball, Project Skye presents a novel concept combining the elegant and energy efficient flight of a blimp with the precise handling characteristics of a quadrocopter. Team Skye headlined the Cambridge Science Festival's (CSF) Science Carnival and Robot Zoo. As the star of the Opening Ceremony, Team Skye delighted kids and adults of all ages with a spectacular surprise entrance with City of Cambridge Mayor Henrietta Davis kicking off the Carnival. Throughout the rest of the day, Carnival attendees got the chance to interact with the giant soccer ball blimp and talk with Team Skye about their project. The bell of the ball, Skye drew many smiles and provided numerous photo opportunities for all of the Carnival participants and presenters.
http://swissinnovation.org/newsUS/web/2013/00-130412-13.html

Lecture on the "swissnex Model" in Tokyo

(swissnex Boston, April 17, 2013)

On April 17, Felix Moesner, the director of swissnex Boston, was invited to present the "swissnex Model" at the GRIPS Innovation, Science and Technology Policy (GIST) Seminar during his trip to Japan. The National Graduate Institute for Policy Studies (GRIPS) is a national graduate university in Tokyo and governmental think-tank with focus on policy studies. For 90 minutes, he lectured on Swiss initiatives in science diplomacy, the swissnex model with the sample of swissnex Boston and its position in the Swiss S&T and diplomatic policy. Participants included members from the Japanese Cabinet Office, Ministries, funding agencies, future policy leaders and researchers as well as members of the S&T diplomatic circle. An audience of nearly 40 people has attended, which is far more than the usual average of 20. — Boston Strong: As the lecture took place in the week of the Boston bombings, a strong message was placed that "Life in Boston goes on"!
http://swissinnovation.org/newsUS/web/2013/00-130417-c4.html

swissnex Boston @ Swiss Pavilion at BIO 2013 in Chicago

(swissnex Boston, April 25, 2013)

The world's largest bioindustry event BIO was held at McCormick convention center in Chicago from April 22-25. It was the 20th edition of a long established international bioindustry event in the US. The Biotechnology Industry Organization (BIO) represents more than 1,100 biotechnology companies, academic institutions, state biotechnology centers and related organizations across the United States and in more than 30 other nations. Switzerland was represented by the Swiss Pavilion which hosted 20 co-exhibitors, such as BioAlps Association, BioArk, Biopôle, CERBIOS PHARMA, Debiopharm, ExcellGene, GlycoVaxyn, Greater Zurich Area, Hutman Diagnostics, Inflamalps, Life Science Zurich, Med Discovery, Molecular Partners, PhytoArk, Preclin Biosystems, Sensile Medical, TransCure Biosciences, TRB Chemedica International, Venture Valuation and swissnex Boston. The event drew 13,594 academic and industry leaders from 47 US states and 62 countries. It was a successful event for the swissnex Boston crew and all participants at the Pavilion who created and fostered new partnerships and collaborations.
http://swissinnovation.org/newsUS/web/2013/00-130425-20.html

ETH President Ralph Eichler visited Boston

(swissnex Boston, April 29, 2013)

Prof. Ralph Eichler, President of ETH Zurich, and Prof. Roland Siegwart, Vice President Research and Corporate Relations, visited Cambridge and Boston from April 29-30, 2013. Their dense program focused on high-impact visits to the Wyss Institute for Biologically Inspired Engineering at Harvard University (meeting with Founding Director Donald E. Ingber and lab tour), the Cambridge Innovation Center (meeting with CEO Tim Rowe and facility tour), the Massachusetts Institute of Technology (meeting with MIT President L. Rafael Reif, MIT Vice President for Research Maria Zuber, the edX team and Director Daniela Rus at Computer Science and Artificial Intelligence Laboratory), the Massachusetts State House (meeting with 'Sustainable Future' Senator Marc R. Pacheco) and the Baker Design Group (meeting on 'Avatar based Learning').
http://swissinnovation.org/newsUS/web/2013/00-130429-0a.html

The Boston Marathon Bombing

(swissnex Boston, April 15, 2013)

On April 15, three people were killed and 264 people were injured by the two bombs that struck near the Marathon finish line in the city of Boston. The bombs were suspectedly planted by two brothers, Tamerlan and Dzhokhar Tsarnaev. After a massive manhunt for the brothers who carjacked a Mercedes three days later and tried to flee to New York, Tamerlan Tsarnaev, 26, was killed after a shootout with police. On April 19, Dzhokhar Tsarnaev, 19, was apprehended. Massachusetts Governor Deval Patrick and Boston Mayor Tom Menino have announced the formation of The One Fund Boston, Inc. to help the people most affected by the tragic events.
http://swissinnovation.org/newsUS/web/2013/00-130415-24.html

>> More past events at swissnex Boston:
http://www.yourswissnexboston.org/

1. Policy

Immigration bill to solve the problem of illegal residents

(The Boston Globe, April 17, 2013)

A sweeping immigration bill that a bipartisan group of eight senators seeks not only to fix chronic problems in the system and bring an estimated 11 million immigrants to the right side of the law. It would also reorient future immigration with the goal of bringing foreigners to the country based increasingly on the job skills and personal assets they can offer. The part of the bill expected to draw the most controversy is a 13-year pathway to citizenship for immigrants who have been living here illegally. President Obama praised the legislation as ''largely consistent'' with the principles he had laid out for an immigration overhaul. After a meeting with two senators from the group, Charles Schumer and John McCain, the president said in a statement that the provisions of their bill are ''all common-sense steps that the majority of Americans support.''
http://swissinnovation.org/newsUS/web/2013/01-130417-01.html

Voluntary measures on cybersecurity standards

(The Boston Globe, April 26, 2013)

The White House has backed away from its push for mandatory cybersecurity standards in favor of an approach that would combine voluntary measures with incentives for companies to comply with them. That approach reflects recognition of the political reality of a divided Congress that makes mandated standards difficult to push through, and a belief that an executive order President Obama signed in February could improve companies' cybersecurity. The order directed the Commerce Department's National Institute of Standards and Technology to lead a process in which critical industry sectors and the government jointly develop a set of standards to enhance the companies' cybersecurity. Obama issued the order after a failed effort to pass legislation to ensure that computer systems in critical private-sector operations met security standards.

http://swissinnovation.org/newsUS/web/2013/01-130426-bd.html

2. Education

Common market for online education

(The Boston Globe, April 11, 2013)

A "proposed compact" among the states unveiled by educational organizations and state officials would create a kind of common market for online education and make it easier for institutions to enroll students anywhere in the country. The proposal would also set some uniform consumer protections, which could give students in some states more recourse to complain to regulators, though it could weaken state oversight in places that already have strict rules. The "proposed compact" — a kind of treaty among the states — will require voluntary buy-in from all the states, which in some cases will require legislation. Some states that imposed tighter requirements may prove reluctant to join. But organizers said the agreement represented extensive work with input from all constituencies, and they were hopeful that representatives of 47 states meeting in Indianapolis would start taking steps to implement it back home.
http://swissinnovation.org/newsUS/web/2013/02-130411-a4.html

Medical student selection based on holistic review

(The Boston Globe, April 11, 2013)

Medical schools traditionally have accepted students with the highest test scores and best science grades. But in an article published online by the New England Journal of Medicine, Dr. Robert Witzburg of Boston University School of Medicine writes about what he considers a better approach to choosing future physicians: holistic review. Medical schools that use this method give potential students points for overcoming adversity, showing resilience, and being empathetic -- as well as for academic achievement. Admissions officers consider letters of reference, interviews, and community service experience to evaluate these qualities. Since BU medical school adopted this approach in 2003, the profile of its entering class has changed dramatically, Witzburg writes. Students from groups under-represented in medicine -- African Americans, Native Americans, Pacific Islanders, and Hispanics -- make up 20 percent of the class now, up from 11 to 12 percent. Faculty also believe students are more supportive of one another, he said.
http://swissinnovation.org/newsUS/web/2013/02-130411-8c.html

Free online access to 2.4 million works

(The Boston Globe, April 19, 2013)

Millions of digitized books, pictures, and manuscripts from the nation's top public and academic libraries are now available in one spot. The privately funded Digital Public Library of America was now launched and provides users with access to the digital archives of institutions ranging from national the Library of Congress and the Smithsonian Institution to local historical societies. Among 2.4 million works, visitors to the site, dp.la, can find a Boston Public Library picture of Babe Ruth in a Red Sox jersey taken in 1915 or more than 32,000 maps from collector David Rumsey in San Francisco. The project began two years ago under the guidance of Harvard University's Berkman Center for Internet and Society, with more than $5 million in funding from the Alfred P. Sloan Foundation of New York.
http://swissinnovation.org/newsUS/web/2013/02-130419-6c.html

New Hampshire universities seeking state aid to address enrollment decline

(The Boston Globe, April 23, 2013)

The University System of New Hampshire says it needs the state government to be a better partner if it is going to keep tuition down and reverse the perception among many students and guidance counselors that the system is in decline. Members of the board of trustees told the Senate Finance Committee they are troubled that the number of in-state applicants dropped by 13 percent in the last year. They also cited a similar drop in first-time student enrollment.Any aid they receive will go toward addressing the declines. The university system pledged to freeze tuition in return for a larger increase in state aid dollars that Governor Maggie Hassan included in her budget proposal. That increase was cut $12 million by the House in its budget. The universities said the House cuts jeopardize their pledge to freeze tuition.
http://swissinnovation.org/newsUS/web/2013/02-130423-fe.html

Teaching software development by coding for open source projects

(MIT, April 24, 2013)

In a new course, students participate in large, ongoing, open-source-software development projects, mentored by industry professionals. The new course was introduced at MIT, in which rather than developing small projects from scratch, students participate in large, ongoing, open-source-software development initiatives, mentored by industry professionals. And as is the case with much modern commercial software development, they collaborate online with geographically dispersed colleagues — in this case, their fellow students at some 15 universities around the world. Not only does working on real development projects impart practical skills that are difficult to acquire in a conventional classroom setting, but it also engages the students in a way that readings and problem sets rarely do.
http://swissinnovation.org/newsUS/web/2013/02-130424-c3.html

Massachusetts lacks part-time students

(The Boston Globe, April 25, 2013)

Massachusetts lags the nation in part-time time enrollment in colleges and community colleges as well as the rate at which these students complete degrees. These findings were cited by the Commonwealth Corp. a quasipublic organization that funds worker training programs, in a study that examined why workers' skills are not meeting the demands of employers. Part-time programs are a popular way for workers to updates skills and add degrees that can advance their careers, but in Massachusetts, part-time enrollment grew at two-year public colleges by 1.4 percent between 2000 and 2010, compared to 1.9 percent nationally. Part-time enrollment at four-year institutions in Massachusetts declined by 3.3 percent while increasing 3.5 percent nationwide . Part-time students' completing degrees also fell below national numbers.
http://swissinnovation.org/newsUS/web/2013/02-130425-f2.html

University of Massachusetts Amherst aiming to raise $300 million

(The Boston Globe, April 27, 2013)

The University of Massachusetts Amherst plans to launch a new capital campaign to raise $300 million, a bid to make up for dwindling state funding and build the kind of alumni loyalty that some state flagships have enjoyed for generations. The state funded only $105 million of the capital spending over the last eight years, so the campus has borrowed heavily. Next year's debt service will be $73 million, a huge burden for a school with an endowment of only $259 million. Priorities for the capital campaign, which has already raised $183 million during its quiet phase, are research and technology, merit and need-based scholarships, buildings and infrastructure, and improving the faculty.
http://swissinnovation.org/newsUS/web/2013/02-130427-bb.html

$50 million gift for Harvard on Life Science entrepreneurship

(The Boston Globe, April 28, 2013)

Harvard University has received a $50 million gift from businessman and alumnus Len Blavatnik to support a major initiative aimed at bridging the "valley of death" — the gap between basic biomedical research and the emergence of new therapies for patients. The gift from the Blavatnik Family Foundation is one of the largest individual gifts to the university in recent years. The gift will be used to support grants to researchers from across Harvard. The money will also launch a fellowship at Harvard Business School to support life science entrepreneurship among the students there, increasing their exposure to technologies and basic research. Blavatnik attended Harvard Business School and founded Access Industries, an international company with investments in natural resources, media and telecommunications, and real estate.
http://swissinnovation.org/newsUS/web/2013/02-130428-e5.html

3. Life Science

Overuse of ADHD medication

(The Boston Globe, April 01, 2013)

Nearly 1 in 5 high school-age boys in the United States and 11 percent of school-age children overall have received a medical diagnosis of attention deficit hyperactivity disorder, according to new data from the federal Centers for Disease Control and Prevention. These rates reflect a marked rise over the last decade and could fuel growing

concern among many doctors that the ADHD diagnosis and its medication are overused in American children. ADHD is described by most experts as resulting from abnormal chemical levels in the brain that impair a person's impulse control and attention skills. And even more teenagers are likely to be prescribed medication in the near future because the American Psychological Association plans to change the definition of ADHD to allow more people to receive the diagnosis and treatment.
http://swissinnovation.org/newsUS/web/2013/03-130401-0e.html

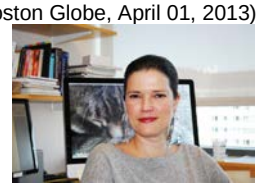
Promising research for gastric bypass surgery

(The Boston Globe, April 01, 2013)

Stomach-shrinking gastric bypass surgery is a powerful, though risky, way to combat extreme obesity. Researchers from Massachusetts General Hospital and Harvard University showed that if they transplant the gut microbes from a mouse that has received gastric bypass surgery into a mouse whose gut is a blank slate, that mouse will lose weight. This suggests that the surgery's success might depend in part on changing the mix of bacteria in the gut. Many questions remain about whether such a procedure could work in people — and if it did, how often it would have to be repeated, since the researchers expect that the gut flora will begin to revert back toward its normal state. But it is a promising step toward understanding how gastric bypass works and possibly developing an intervention that could mimic it.
http://swissinnovation.org/newsUS/web/2013/03-130401-b3.html

Health strongly depends on diet

(The Boston Globe, April 01, 2013)



Usually, we think of food as fuel — a source of calories and nutrients that have obvious effects on our health if we overindulge or are malnourished. Now, researchers at the University of Massachusetts Medical School have found in a laboratory study that the precise composition of a diet can have profound health effects, suggesting that exactly what's in each mouthful may matter more than anyone anticipated. The findings, reported in two studies in Cell, point to the existence of a still-unidentified substance, such as a hormone, that alters the health of microscopic roundworms dramatically. Worms given a diet spiked with even a little bit of a particular soil-dwelling bacteria matured more quickly, had fewer offspring, and died earlier than worms on a standard laboratory diet.
http://swissinnovation.org/newsUS/web/2013/03-130401-25.html

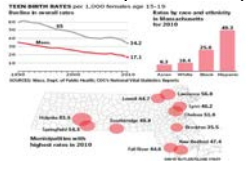
Low-fat diet before surgery could help recovery

(The Boston Globe, April 01, 2013)

A study, led by researchers at Brigham and Women's Hospital, shows that a short-term switch to a low-fat diet can change the way fat responds to the trauma of surgery — and perhaps could reduce complications and speed recovery. The researchers raised three groups of mice: one on a low-fat diet, another on a high-fat diet, and a third group that was raised on the high-fat diet and then switched to the healthier low-fat diet three weeks before surgery. Then, the researchers mimicked surgical procedures on each mouse. In the high-fat group, genes involved in inflammation were very active compared with those in the mice raised on the low-fat diet. But the mice that had eaten the low-fat diet for just three weeks had fat that behaved more favourably.
http://swissinnovation.org/newsUS/web/2013/03-130401-3a.html

Record low teenage birth rate

(The Boston Globe, April 02, 2013)



Fewer Massachusetts teenagers are having babies, pushing the state's teen birth rate to its lowest level in the 25 years that health officials have been reporting on birth rates. Teenagers are typically not as likely as older women to get adequate prenatal care, jeopardizing their babies' health. The Department of Public Health report — which covers 2010, the latest data available — also shows the lowest rate of smoking among pregnant women on record. The percentage of mothers who reported smoking during pregnancy declined to 6.3 percent; back in 1990, it was roughly 19 percent. Disparities persisted in infant mortality, with the rate for black infants at 8.2 per 1,000 births: more than twice the rate for white infants. The Hispanic rate was 6.1, while Asian infant mortality was 4.3.
http://swissinnovation.org/newsUS/web/2013/03-130402-28.html

$100 million for brain-mapping project BRAIN

(The Boston Globe, April 02, 2013)

President Obama on proposed an effort to map the brain's activity in unprecedented detail, as a step toward finding better ways to treat such conditions as Alzheimer's, autism, stroke, and traumatic brain injuries. He asked Congress to spend $100 million next year to start a project that will explore details of the brain, which contains 100 billion cells and trillions of connections. Obama said the so-called BRAIN Initiative could create jobs, and told scientists gathered in the White House's East Room that the research has the potential to improve the lives of billions of people worldwide. BRAIN stands for Brain Research through Advancing Innovative Neurotechnologies. The initial investment would support research at the National Institutes of Health, the Defense Advanced Research Projects Agency, and the National Science Foundation.
http://swissinnovation.org/newsUS/web/2013/03-130402-64.html

Eating fish lowers risk of dying from heart disease significantly

(Harvard, April 03, 2013)

Older adults who have high blood levels of omega-3 fatty acids — found almost exclusively in fatty seafood — may be able to lower their overall mortality risk by as much as 27 percent and their mortality risk from heart disease by about 35 percent, according to a new study from Harvard School of Public Health (HSPH) and the University of Washington. Researchers found that older adults who had the highest blood levels of the fatty acids lived, on average, 2.2 years longer than those with lower levels. Although eating fish has long been considered part of a healthy diet, few studies have assessed blood omega-3 levels and total deaths in older adults. The findings suggest that the biggest benefit is for going from no intake to modest intake, or about two servings of fatty fish per week.
http://swissinnovation.org/newsUS/web/2013/03-130403-c1.html

A step towards AIDS vaccine

(The Boston Globe, April 03, 2013)

US researchers have tracked one individual's powerful immune response to the virus to see how a series of mutations led to an antibody that can defeat many HIV strains. A vaccine still remains far off, but the research illuminated one complex path that may someday be followed to that distant goal. "The beauty of this is that it's a big clue as to the sequential steps the virus and the antibody take as they evolve,'' said Dr. Anthony S. Fauci, director of the National Institute of Allergy and Infectious Disease, which financed the research. The study, led by scientists at Duke University, was published online in the journal Nature.
http://swissinnovation.org/newsUS/web/2013/03-130403-ce.html

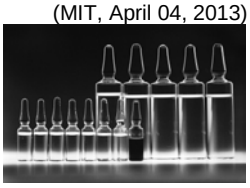
Morning-after contraception soon over counter for all

(The Boston Globe, April 04, 2013)

Consumers may soon find Plan B emergency contraception on supermarket and drugstore shelves next to condoms, tampons, and pregnancy tests after a federal judge ruled that the product must be made available for purchase over the counter, without any age restrictions. If the federal government chooses not to appeal the decision, the US Food and Drug Administration must, within 30 days, allow pharmacies to stock Plan B One-Step on their shelves, rather than behind the counter, and to sell it without verifying the buyer's age with an ID check.
http://swissinnovation.org/newsUS/web/2013/03-130404-71.html

Minimizing the side effects of chemotherapy

(MIT, April 04, 2013)



Measuring enzyme levels in patients may reveal healthy cells' ability to survive chemotherapy. New research from MIT may allow scientists to develop a test that can predict the severity of side effects of some common chemotherapy agents in individual patients, allowing doctors to tailor treatments to minimize the damage. The study focused on powerful cancer drugs known as alkylating agents, which damage DNA by attaching molecules containing carbon atoms to it. Because they can kill tumor cells, very reactive alkylating agents are used to treat cancer. The findings reveal that the amount of cellular damage that alkylating agents produce in healthy tissues can depend on how much of a certain DNA-repair enzyme is present in those cells.
http://swissinnovation.org/newsUS/web/2013/03-130404-f9.html

Curing epilepsy with laser surgery and high-tech imagery

(The Boston Globe, April 07, 2013)

After nearly seven hours of preparation, Dr. Joseph Madsen turned on the laser at Boston Children's Hospital that would burn a tiny hole in the brain of 13-year-old Justin Griffin. The laser was on for only a minute, but scored a direct hit on the area Madsen thought was causing Justin's weekly epileptic seizures. Once a last resort for epilepsy because it was so difficult and risky, surgery is now a more viable option for patients of all ages. Recent advances in imaging have enabled Madsen and other surgeons to be more certain where seizures originate in the brain, which tissue they can cut safely, and how to minimize damage along the way.
http://swissinnovation.org/newsUS/web/2013/03-130407-3e.html

$9.35 million in grants for Boston Life Sciences

(The Boston Globe, April 08, 2013)

The Massachusetts Life Sciences Center gave out $9.35 million in grants, with the bulk of it going to Boston Children's Hospital and Harvard Medical School. The quasi-public state agency — charged with implementing Governor Deval Patrick's life sciences initiative signed into law nearly five years ago — also gave out grants for education and training to Bunker Hill Community College, Quincy College, and Regis College. The center also allocated money to five vocational schools and high schools aimed at increasing access to the so-called STEM subjects — science, technology, engineering and math. Those schools included Norfolk County Agricultural High School, Quincy High School, and Revere High School.
http://swissinnovation.org/newsUS/web/2013/03-130408-01.html

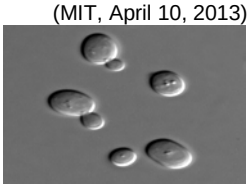
Advances in treatment for dengue virus

(MIT, April 08, 2013)

MIT team presents a novel approach to developing a treatment using mutated antibodies. Nearly half of the world's population is at risk of infection by the dengue virus, yet there is no specific treatment for the disease. Now a therapy to protect people from the virus could finally be a step closer, thanks to a team at MIT. The researchers have developed a novel computational method for predicting protein-protein interaction that captures the essential chemical and physical features of interacting surfaces. When they tested the mutated antibody they found through their model on samples of the four dengue serotypes in the laboratory, they found it had a 450-fold increase in binding to dengue 4, a 20-fold increase in binding for dengue 2, and lesser improvements in binding for dengue 1 and 3.
http://swissinnovation.org/newsUS/web/2013/03-130408-d8.html

Predicting population collapse

(MIT, April 10, 2013)



Spatial measurements of population density could reveal when threatened natural populations are in danger of crashing. Many factors can push a wild animal population to the brink of collapse. Ecologists have long sought ways to measure the risk of such a collapse, which could help to protect endangered populations. Last year, MIT physicists demonstrated that they could measure a population's risk of collapse by monitoring how fast it recovers from small disturbances, such as a food shortage or overcrowding. However, this strategy would likely require many years of data collection. The same research team now describes a new way to predict the risk of collapse, based on variations in population density in neighboring regions. Such information is easier to obtain than data on population fluctuations over time, making it potentially more useful, according to the researchers.
http://swissinnovation.org/newsUS/web/2013/03-130410-36.html

New insights into human walking evolution

(The Boston Globe, April 11, 2013)

A thorough study of this unusually complete skeleton of a nearly 2-million-year-old female helped Jeremy DeSilva, a professor at Boston University, piece together a puzzle about how this species — with a confusing mosaic of human- and chimpanzee-like features — got around. His presumption-shattering finding: The popular notion of how humans evolved is flawed. Most people have seen the tidy cartoon often used to illustrate evolution, as a clear progression from stooped-over, chimp-like prehumans to modern people who stride around on two legs. But DeSilva's research muddies the picture, suggesting that evolution wasn't a straight line toward upright walking, but could have led to a number of prehuman species that got around in different ways. He concludes that this creature had a body built to walk upright, but with a distinctive foot that also allowed it to climb trees efficiently.

http://swissinnovation.org/newsUS/web/2013/03-130411-54.html

Lab Kidney successfully transplanted into live animal

(The Boston Globe, April 14, 2013)

Researchers from Massachusetts General Hospital announced an important advance in the effort to build replacement organs: a bioengineered rat kidney that, when transplanted into a rat, was capable of producing urine. Much research remains before scientists even contemplate testing such a transplant in a person, but the team plans to take a step toward that goal in the next month, transplanting bioengineered pig kidneys into live animals. The researchers used a shortcut to engineer the kidneys, starting with a scaffold of collagen, which is what remained after living cells were washed away from another rat's kidney. They then seeded this matrix with a cocktail of cells, which grew into a functioning organ.
http://swissinnovation.org/newsUS/web/2013/03-130414-3b.html

Bone structure modelling

(MIT, April 16, 2013)

The bones that support our bodies are made of remarkably complex arrangements of materials — so much so that decoding the precise structure responsible for their great strength and resilience has eluded scientists' best efforts for decades. But now, a team of researchers at MIT has finally unraveled the structure of bone with almost atom-by-atom precision, after many years of analysis by some of the world's most powerful computers and comparison with laboratory experiments to confirm the computed results. Ultimately, this work could also lead to the synthesis of new bone-like materials, either as biomedical materials to substitute for bone or as new structural materials for engineering uses.
http://swissinnovation.org/newsUS/web/2013/03-130416-69.html

High-tech prosthetics simulating natural gait

(The Boston Globe, April 17, 2013)

The bombings at the Boston Marathon cost 14 people at least one limb. But for many, it will not mean a total loss of mobility. Those maimed in the attack face long and arduous recoveries but will likely return to active lives, thanks to rapidly advancing prosthetic technologies, some of which are being developed in and around Massachusetts. A Bedford company, iWalk, is revolutionizing lower-leg prosthetics with a battery-powered bionic ankle that propels its wearer forward, simulating a natural gait more closely than other artificial joints.
http://swissinnovation.org/newsUS/web/2013/03-130417-5e.html

New stem-cell based drug screening

(Harvard, April 18, 2013)

Using a new, stem cell-based, drug-screening technology that could reinvent and greatly reduce the cost of developing pharmaceuticals, researchers at the Harvard Stem Cell Institute (HSCI) have found a compound that is more effective in protecting the neurons killed in amyotrophic lateral sclerosis (ALS) than are two drugs that failed in human clinical trials after large sums were invested in them. The new screening technique developed by Lee Rubin, a member of HSCI's executive committee and a professor in Harvard's Department of Stem Cell and Regenerative Biology (SCRB), had predicted that the two drugs that eventually failed in the third and final stage of human testing would do just that.
http://swissinnovation.org/newsUS/web/2013/03-130418-b8.html

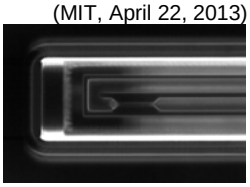
Linguistic deficits behind autistic children's difficulties understanding other people

(MIT, April 19, 2013)

One of the defining characteristics of autism is difficulty communicating with others. However, it is unclear whether those struggles arise only from the poor social skills commonly associated with autism, or whether autistic children suffer from more specific linguistic impairments. In a study Kenneth Wexler, a professor of brain and cognitive sciences at MIT, reports that some autistic children do have a specific linguistic deficit: They are unable to understand a specific type of grammatical construction involving reflexive pronouns. This finding suggests that there may be a biological basis for the language impairments seen in autism, and paves the way for genetic studies that could reveal new targets for treating the disease, Wexler says.
http://swissinnovation.org/newsUS/web/2013/03-130419-1c.html

New methods measures physical changes in tumor cell

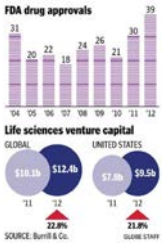
(MIT, April 22, 2013)



Most cancer deaths are caused by metastatic tumors, which break free from the original cancer site and spread throughout the body. For that to happen, cancer cells must undergo many genetic and physical changes. MIT researchers have developed a way to study three key physical properties of cancer cells — their mass, stiffness and friction. Inside the suspended microchannel resonator (SMR), cells flow through a channel carved into a tiny slab that vibrates at a resonant frequency that can be measured with a laser beam. As each cell flows through the channel the researchers can calculate the cell's mass and density. For the new study, the researchers modified the system so they can also track each cell's velocity. Once the metastatic cells were captured, scientists could do many more types of tests on them, including analysis of genes expressed and proteins produced, to learn more about how they break free from tumors.
http://swissinnovation.org/newsUS/web/2013/03-130422-36.html

Opportunities and challenges in biopharma industry

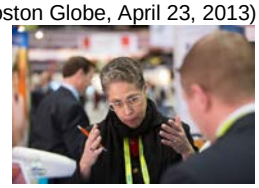
(The Boston Globe, April 22, 2013)



Most of the trends in the biopharma business have been upbeat recently. The number of drugs approved by the Food and Drug Administration hit a 16-year high of 39 last year, venture capital outlays for life sciences firms climbed nearly 23 percent, and many biotechnology stocks are trading at or near record levels. Despite those tailwinds, however, sweeping changes transforming the health care field have created a mood of uncertainty throughout the industry. The national health care overhaul, the shift toward personalized medicines targeting smaller patient populations, and tougher reimbursement standards by commercial health insurers in the United States and government payers in Europe are changing the game for biotechnology start-ups and pharmaceutical giants alike.
http://swissinnovation.org/newsUS/web/2013/03-130422-72.html

Successful Massachusetts pavilion at BIO 2013

(The Boston Globe, April 23, 2013)



Around the tables at the Massachusetts pavilion at the BIO convention in Chicago, there was the buzz of deals in the making. State officials, along with representatives from Boston, Cambridge, and Quincy, huddled in meetings with executives from biotech companies in Israel, Northern Ireland, and New Zealand. While there are nonstop roundtables and panel discussions at BIO, the real business of the convention might be called bio-wooing. It is a networking process where executives from 48 states and 65 countries talk about possible mergers or collaborations while economic development officials dangle loans, grants, and tax incentives to try to lure businesses from other states or countries. Massachusetts officials disclosed one success: Hemarina SA, a seven-year-old biotech start-up in Morlaix, France, agreed to establish a US subsidiary in Boston.
http://swissinnovation.org/newsUS/web/2013/03-130423-84.html

More effective treatment of diabetes

(Harvard, April 25, 2013)

Researchers at the Harvard Stem Cell Institute (HSCI) have discovered a hormone that holds promise for a dramatically more effective treatment of type 2 diabetes, a metabolic illness afflicting an estimated 26 million Americans. The researchers believe that the hormone might also have a role in treating type 1, or juvenile, diabetes. The hormone, called betatrophin, causes mice to produce insulin-secreting pancreatic beta cells at up to 30 times the normal rate. The new beta cells only produce insulin when called for by the body, offering the potential for the natural regulation of insulin and a great reduction in the complications associated with diabetes, the leading medical cause of amputations and non-genetic loss of vision.
http://swissinnovation.org/newsUS/web/2013/03-130425-d6.html

Genome of "living fossil" investigated

(The Boston Globe, April 25, 2013)

For over a century, the coelacanth has been known by a popular nickname that makes biologists wince: the "living fossil" fish. Now, the genome, published by a large team including Jessica Alfoldi, a research scientist at the Broad Institute in Cambridge, reveals that there's a tiny kernel of truth in that misnomer. First, the bad news for those who see this fish as a creature frozen in time: the coelacanth's genome as a whole is evolving at the normal rate. But the

individual genes themselves, the part of the genome that codes for proteins, are evolving very slowly. In fact, the genes are changing more slowly than those of just about any other organism researchers looked at, including dogs, humans, mice, elephants, armadillos, chickens, turkeys, zebra finches, zebrafish, tilapia, and the elephant shark.
http://swissinnovation.org/newsUS/web/2013/03-130425-42.html

Gene patents hinder research

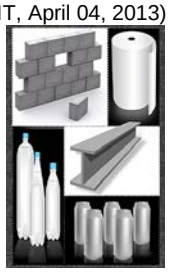
(The Boston Globe, April 28, 2013)

A study of two sets of genes sequenced during the Human Genome Project a decade ago suggests that intellectual property rights protecting gene sequences reduced scientific research and product development by 20 to 30 percent. The effort to sequence the blueprint of a human being famously turned into a race between a large, publicly funded team and the private company Celera. Celera used a form of intellectual property protection that allowed academic researchers to use its data, but restricted redistribution of data. Celera's genes were examined in an average of 1.2 scientific papers by 2009, compared with 2.1 papers for genes from the public project during the same time period. Three percent of the Celera genes were used in diagnostic tests by 2009, compared with 5.4 percent of the publicly available genes.
http://swissinnovation.org/newsUS/web/2013/03-130428-f8.html

4. Nano / Micro Technology / Material Science

Energy efficient material production

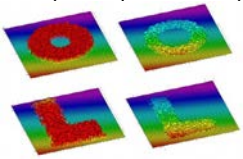
(MIT, April 04, 2013)



A new report by researchers at MIT and elsewhere finds that the global manufacturing sector has made great strides in energy efficiency. The manufacturing of materials such as steel, cement, paper and aluminum has become increasingly streamlined, requiring far less energy than when these processes were first invented. However, despite more energy-efficient manufacturing, the researchers found that such processes may be approaching their thermodynamic limits. There are increasingly limited options available to make them significantly more efficient. The result, the team observed, is that energy efficiency for many important processes in manufacturing is approaching a plateau.
http://swissinnovation.org/newsUS/web/2013/04-130404-e0.html

Cutting graphene patterns with DNA templates

(MIT, April 09, 2013)



DNA's unique structure is ideal for carrying genetic information, but scientists have recently found ways to exploit this versatile molecule for other purposes. By controlling DNA sequences, they can manipulate the molecule to form many different nanoscale shapes. Chemical and molecular engineers at MIT and Harvard University have now expanded this approach by using folded DNA to control the nanostructure of inorganic materials. After building DNA nanostructures of various shapes, they used the molecules as templates to create nanoscale patterns on sheets of graphene. This could be an important step toward large-scale production of electronic chips made of graphene, a one-atom-thick sheet of carbon with unique electronic properties.
http://swissinnovation.org/newsUS/web/2013/04-130409-38.html

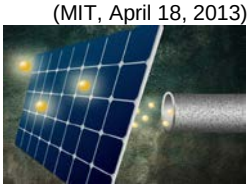
Custom made running shoes with 3-D printing

(The Boston Globe, April 14, 2013)

Having trouble finding a running shoe that fits just right? That may not be a problem for much longer. If experiments underway at New Balance are borne out, within a few years customers may be able to go a store to have key portions of a shoe custom-made to provide optimal fit and support based on their individual biomechanics, such as how their foot strikes the ground. The breakthrough comes courtesy of 3-D printing, a relatively new technology that is not really printing in the traditional sense; it is a machining process that lays out thin layers of materials — in this case, a nylon polymer — to build a three-dimensional product in the exact form of a digital model.
http://swissinnovation.org/newsUS/web/2013/04-130414-84.html

Breaking the limits of solar-cell efficiency

(MIT, April 18, 2013)



New technique developed at MIT could enable a major boost in solar-cell efficiency. Throughout decades of research on solar cells, one formula has been considered an absolute limit to the efficiency of such devices in converting sunlight into electricity. Called the Shockley-Queisser efficiency limit, it posits that the ultimate conversion efficiency can never exceed 34 percent for a single optimized semiconductor junction. In a standard photovoltaic (PV) cell, each photon knocks loose exactly one electron inside the PV material. But in the new technique, each photon can instead knock two electrons loose. This makes the process much more efficient. In a standard cell, any excess energy carried by a photon is wasted as heat, whereas in the new system the extra energy goes into producing two electrons instead of one.
http://swissinnovation.org/newsUS/web/2013/04-130418-bc.html

5. Information & Communications Technology

Facebook purchasing more personal data

(The Boston Globe, April 01, 2013)

Facebook is purchasing even more information on its members from data brokers — companies that collect huge amounts of sensitive information about the everyday activities of millions of Americans. Facebook will use the data, as well as information provided voluntarily by members, to target them with more relevant — and profitable — advertisements. Originally, Facebook partnered with a single data broker, Colorado-based Datalogix, which resells customer information obtained from retailers. In late February, Facebook said it would also obtain data from three more providers: Acxiom Corp., Epsilon of Dallas, and BlueKai Inc.
http://swissinnovation.org/newsUS/web/2013/05-130401-1e.html

Kickstarting young programmers at Startup Institute

(The Boston Globe, April 07, 2013)

Startup Institute, a Cambridge-based organization that up until now has trained recent college grads to fill jobs at start-ups, has now offered its first educational program for high schoolers. Startup Institute chief executive Aaron O'Hearn cites estimates that by 2020, the United States will have about 1 million more programming jobs than it has computer science students. High School RampUp targets "folks who have had zero exposure to coding — let's call them the nonnerdy students," he said. They'll spend two Saturdays getting comfortable with the Python programming language, and building simple Web applications that pull in and manipulate data from social networks like Twitter and Facebook.
http://swissinnovation.org/newsUS/web/2013/05-130407-3b.html

Cellphone networks unable to cope with traffic after bombings

(The Boston Globe, April 17, 2013)

Widespread problems with cellphone service around Boston after the Marathon bombings put the limits of the nation's wireless network into sharp relief, as the nation's top carriers were unable to cope under the heaviest loads during the most crucial moments. Verizon Wireless, AT&T, and Sprint were all overwhelmed by the surge in traffic, leaving many at the scene of the explosions unable to contact family or friends, and blocked other callers in the area or outside Boston from checking on those attending the Marathon. Hari Balakrishnan, a computer science professor at the Massachusetts Institute of Technology, said the shortcomings demonstrate that wireless networks have to be upgraded to function better during disasters, when authorities and people most need to use mobile phones.
http://swissinnovation.org/newsUS/web/2013/05-130417-e0.html

Internet-connected glass prototypes

(The Boston Globe, April 18, 2013)

Google Inc. is starting to distribute its new Internet-connected glasses, something seen as the next breakthrough in mobile computing. Google has started making the glasses available to 8,000 people in the United States who entered a contest. They will have to pay $1,500 apiece for a test version of Google Glass. The company also took an unspecified number of orders from programmers. The excitement stems from a belief that Google Glass is at the forefront

of a new wave of technology known as ‘‘wearable computing.’’ Published reports say that Google, Apple Inc. and others also are working on Internet-connected wristwatches.
http://swissinnovation.org/newsUS/web/2013/05-130418-a8.html

6. Energy / Environment

Strobe-like effect of wind turbines

(The Boston Globe, April 05, 2013)

A "shadow flicker" is the phenomenon of whirling blades of wind turbines casting shadows and reflections in their vicinity. In some cases, that vicinity could even be 1,000 feet from the house, as a resident of Kingston, MA, complained of stripes of shadow whipping across her living room, kitchen, and bedroom, a pulse of flashing light and dark that can continue more than an hour. Studies have shown no direct health effects, and wind power supporters downplay the phenomenon as a nuisance that typically lasts for just minutes — and one that is a small price to pay for environmental and economic benefits. Resistance to wind turbines has generally focused on noise and visual impact of large towers. But for some who live with the strobe-like effect, those complaints become secondary. Kingston residents have demanded that town officials shut down the turbines, and have been angered by their refusal. At the request of town officials, the Massachusetts Clean Energy Center recently agreed to examine the issue.
http://swissinnovation.org/newsUS/web/2013/06-130405-16.html

Prediction of above-average hurricane year

(The Boston Globe, April 10, 2013)

Colorado State University researchers estimate that an above-average number of storms will emerge from the Atlantic this hurricane season, with the odds of the United States being hit by a major system are greater than predicted last year. The Colorado State team estimated chances of a major hurricane strike on the country this year at 72 percent, compared with 42 percent last year. Atlantic hurricanes are watched closely because of their threat to major US population centers and to the Gulf of Mexico. The Gulf is home to 7 percent of US natural gas output, 23 percent of oil production, and 44 percent of refining capacity, according to the Energy Department.
http://swissinnovation.org/newsUS/web/2013/06-130410-b8.html

Starch from indigestible waste plant material

(ArsTechnica, April 17, 2013)

Researchers have managed to turn indigestible cellulose into starch, a process that could render billions of tons of agricultural waste into food and fuel. Plants grow more than 160 billion tons of cellulose—the material that makes up the walls of plant cells—every year, but only a tiny fraction of that is useful to humans in the crops we grow. This is frustrating, as cellulose is made up of glucose chains that are almost, but not quite, the same as those that make up the starch that constitutes 20 to 40 percent of most peoples' daily calorie intake. Biological systems engineers from Virginia Polytechnic Institute and State University investigated ways of breaking cellulose down into more basic glucose blocks, and how to combine them back together into more complex starches.
http://swissinnovation.org/newsUS/web/2013/06-130417-8d.html

Energy storing wind farm

(MIT, April 25, 2013)

Offshore wind can provide abundant electricity, but as with solar energy, this power supply can be intermittent and unpredictable. But a new approach from researchers at MIT could mitigate that problem, allowing the electricity generated by floating wind farms to be stored and then used, on demand, whenever it’s needed. The key to this concept is the placement of huge concrete spheres on the seafloor under the wind turbines. These structures, weighing thousands of tons apiece, could serve both as anchors to moor the floating turbines and as a means of storing the energy they produce. Whenever the wind turbines produce more power than is needed, that power would be diverted to drive a pump attached to the underwater structure. Later, when power is needed, water would be allowed to flow back into the sphere through a turbine attached to a generator, and the resulting electricity sent back to shore.
http://swissinnovation.org/newsUS/web/2013/06-130425-ac.html

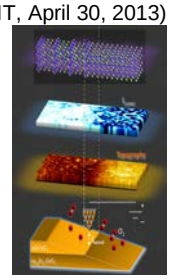
Most efficient EV car on public sale

(The Boston Globe, April 25, 2013)

General Motors said that the battery-powered version of its Chevrolet Spark mini-car can travel up to 82 miles on a single charge, which is an equivalent of 119 miles per gallon as tested by the Environmental Protection Agency. The result puts it among the leaders in mass-market electric vehicles sold in the United States, and makes it the most efficient car available for sale to the public. The figure is for combined city and highway driving.
http://swissinnovation.org/newsUS/web/2013/06-130425-42.html

Dramatically better efficiency in fuel cells

(MIT, April 30, 2013)



New research at MIT could dramatically improve the efficiency of fuel cells, which are considered a promising alternative to batteries for powering everything from electronic devices to cars and homes. Researchers have unraveled the properties of a promising alternative material structure for a key component of these devices, which would be a “superlattice” of two compounds interleaved at a tiny scale. The researchers hope that with this new knowledge, it will be possible to make rapid progress in the search for better electrode materials, helping make fuel cells practical for a wide range of energy applications, from powering homes to powering mobile devices.
http://swissinnovation.org/newsUS/web/2013/06-130430-a7.html

7. Engineering / Robotics / Space

New MIT Institute for Medical Engineering and Science

(MIT, April 02, 2013)

With the recent launch of MIT’s Institute for Medical Engineering and Science, MIT News examines research with the potential to reshape medicine and health care through new scientific knowledge, novel treatments and products, better management of medical data, and improvements in health-care delivery. To address this issue a new course was introduced at MIT: “Neurotechnology Ventures,” which has been taught every year since 2007. The class, co-taught by MIT Media Lab associate professor Ed Boyden and lecturer Joost Bonsen, encourages students to develop businesses based on concepts derived from the study of the brain, psychology, artificial intelligence, neurobiology or related fields.
http://swissinnovation.org/newsUS/web/2013/07-130402-3b.html

Ionic thrusters as jet propulsion

(MIT, April 03, 2013)

Thrusters powered by ionic wind may be an efficient alternative to conventional atmospheric propulsion technologies. Since the 1960s when it was first identified, ionic wind has largely been limited to science-fair projects and basement experiments, yet despite this wealth of hobbyist information, there have been few studies of ionic wind as a viable propulsion system. Some researchers have theorized that ionic thrusters, if used as jet propulsion, would be extremely inefficient, requiring massive amounts of electricity to produce enough thrust to propel a vehicle. However, researchers at MIT have run their own experiments and found that ionic thrusters may be a far more efficient source of propulsion than conventional jet engines. In their experiments, they found that ionic wind produces 110 newtons of thrust per kilowatt, compared with a jet engine’s 2 newtons per kilowatt. There are still unanswered questions, such as thrust density and the voltage required, but it’s definitely worth investigating further.
http://swissinnovation.org/newsUS/web/2013/07-130403-a9.html

Evidence of dark matter shown by MIT led CERN experiment

(The Boston Globe, April 03, 2013)

A space-based experiment nearly two decades in the making — led by Nobel laureate and MIT physicist Samuel C.C. Ting — has detected tantalizing, though preliminary, evidence of a signal that might be caused by dark matter, the long-sought, mysterious substance that makes up about a quarter of the universe. For years, scientists have known that dark matter is abundant in the universe. The Alpha Magnetic Spectrometer provided one possible way to detect dark matter, based on a theory that predicts that when particles of dark matter smash into and annihilate one another, the collision generates particles called positrons. The theory predicts the collision

leaves a trail. The observations reported by Ting and collaborators fulfilled part of those requirements, he reported at a scientific seminar at CERN in Switzerland and at a NASA press conference.
http://swissinnovation.org/newsUS/web/2013/07-130403-2e.html

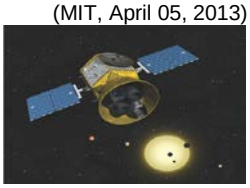
Self-assembly and "4D printing"

(TED, April 04, 2013)

A part on the outside of a spaceship that morphs, rather than requiring an astronaut to perform a risky maneuver. Plumbing pipes able to bend and flex based on the needs of the water flowing through them. Furniture that assembles itself, no screwdriver required. Buildings with the ability to repair themselves when something goes awry. These are just some potential applications of research being done at TED Fellow Skylar Tibbits' Self Assembly Lab at MIT. What Tibbits calls "4D printing", stems from a collaboration between the Self-Assembly Lab and 3D printing giant Stratasys. 4D printing allows for the printing of objects that — when they have an energy force (say, touch or submersion in water) applied — transform themselves.
http://swissinnovation.org/newsUS/web/2013/07-130404-99.html

Transiting Exoplanet Survey Satellite

(MIT, April 05, 2013)



Following a three-year competition, NASA has selected the Transiting Exoplanet Survey Satellite (TESS) project at MIT for a planned launch in 2017. The space agency announced a $200 million grant to the MIT-led team. TESS team partners include the MIT Kavli Institute for Astrophysics and Space Research (MKI) and MIT Lincoln Laboratory; NASA's Goddard Spaceflight Center; Orbital Sciences Corporation; NASA's Ames Research Center; the Harvard-Smithsonian Center for Astrophysics; The Aerospace Corporation; and the Space Telescope Science Institute. The project, led by principal investigator George Ricker, a senior research scientist at MKI, will use an array of wide-field cameras to perform an all-sky survey to discover transiting exoplanets, ranging from Earth-sized planets to gas giants, in orbit around the brightest stars in the sun's neighborhood.
http://swissinnovation.org/newsUS/web/2013/07-130405-0f.html

Lobbying for peaceful drones

(The Boston Globe, April 07, 2013)

The Danvers-based drone manufacturer CyPhy Works doesn't build flying robots that rain Hellfire missiles on people or record license plate numbers from 40,000 feet. Its drones are designed for peaceful missions — aerial inspections of buildings and bridges, or observing crime scenes. But CyPhy and other manufacturers are battling the negative images of better-known military drones as they struggle to win public and political acceptance for commercially marketed drones for domestic airspace. Though defense giants that produce military drones have been lobbying Congress for years, smaller start-ups and inventors began seeking to influence lawmakers' opinions only in 2007. The Congressional Unmanned Systems Caucus has grown to nearly 60 members. It aims to "educate" lawmakers on an industry that will "improve our lives as public acceptance progresses," according to its website.
http://swissinnovation.org/newsUS/web/2013/07-130407-ab.html

Space freighter test delayed

(20min.ch, April 18, 2013)

Technical issues have forced the company Orbital to delay the first test of their "Antares"-rocket. In the future, the company intends to use the rocket to transport the space freighter "Cygnus" to the ISS space station. Orbital Sciences Corporation is the second company to enter the business of transporting material to the space station, after the Californian company "SpaceX", whose "Dragon" successfully docked to the ISS in May 2013. The delay was caused by a data cable between the rocket and the launching pad, which was released prematurely.
http://swissinnovation.org/newsUS/web/2013/07-130418-2f.html

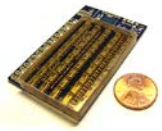
Two Earth-sized exoplanets in habitable zone found

(MIT, April 19, 2013)

An international team of scientists has discovered a planetary system 1,200 light-years away that hosts two super-Earth-sized planets in its "habitable zone" — a region in which conditions are favorable for a planet's surface to hold liquid water, and potentially life. The discovery was made after meticulous analyses of data from the Kepler telescope, a space observatory that trains its gaze on a wide swath of the sky to identify Earth-sized exoplanets. The newly discovered system is home to at least five planets, all with sizes comparable to the Earth.
http://swissinnovation.org/newsUS/web/2013/07-130419-ed.html

Inexpensive tactile sensor for robots

(Harvard, April 24, 2013)



Designed by researchers in the Harvard Biorobotics Laboratory at the School of Engineering and Applied Sciences, the TakkTile sensor is intended to put what would normally be a high-end technology within the grasp of commercial inventors, teachers, and robotics enthusiasts. TakkTile takes an existing device — a tiny barometer, which senses air pressure — and adds a layer of vacuum-sealed rubber to it, protecting it from as much as 25 pounds of direct pressure. The result, when added to a mechanical hand, is a robot that knows what it's touching. It can pick up a balloon without popping it. It can pick up a key and use it to unlock a door.
http://swissinnovation.org/newsUS/web/2013/07-130424-40.html

Touching robot arm

(The Boston Globe, April 28, 2013)

A group of roboticists in the Department of Biomedical Engineering at the Georgia Institute of Technology in Atlanta has developed a robot arm that moves and finds objects by touch. In a paper the Georgia Tech group described a robot arm that was able to reach into a cluttered environment and use ''touch,'' along with computer vision, to complete exacting tasks. This ability is vital if robots are to leave the world of factory automation and begin to undertake tasks in human environments, such as patient and elder care or rescue missions during emergencies. The researchers have made their software open source, as well, and shared instructions to make and adapt robot skin.
http://swissinnovation.org/newsUS/web/2013/07-130428-95.html

8. Physics / Chemistry / Math

Model on small-scale plasma turbulence in fusion reactor

(MIT, April 29, 2013)

One simple phenomenon explains why practical, self-sustaining fusion reactions have proved difficult to achieve. Turbulence in the superhot, electrically charged gas, called plasma, that circulates inside a fusion reactor can cause the plasma to lose much of its heat. This prevents the plasma from reaching the temperatures needed to overcome the electrical repulsion between atomic nuclei — which, in turn, prevents those nuclei from fusing together. But in order to tame that turbulence, scientists first must understand it. Researchers at MIT's Plasma Science and Fusion Center (PSFC) have now taken a significant step in that direction by quantifying a previously unknown type of small-scale turbulence that can have big effects on cooling the plasma in a reactor.
http://swissinnovation.org/newsUS/web/2013/08-130429-b4.html

9. Architecture / Design

Street Seats design challenge exhibition

(Design Museum Boston, April 25, 2013)

On September 20, 2012 Design Museum Boston invited individuals and teams from around the world to design an iconic bench or 'street seat' for the Fort Point Channel in South Boston's up and coming Innovation District. The goal of the challenge is to improve the livability of this burgeoning urban area, using design, while being socially and environmentally conscious. The 20 Semi-Finalists, selected from over 170 entries from all over the world, were selected an February 28, and can now be seen in full-scale outside along the Fort Point Channel.

http://swissinnovation.org/newsUS/web/2013/09-130425-b2.html

MIT's plans for Kendall Square

(The Boston Globe, April 30, 2013)

The MIT's plans for remaking Kendall Square in Cambridge are stuffed full of huge numbers and huge ambition. The 10-year, $1 billion plan covers 26 acres, and would allow the school to construct nearly 130'000 square meters of commercial, retail, and residential space. MIT's approvals for 90'000 square meters of new commercial space come with a commitment to set aside roughly 9'000 square meters in affordable office space for small-scale innovation companies. This set-aside acknowledges the dynamics that drew giants like Google, Microsoft, and Novartis to town in the first place. Kendall Square is a neighborhood of large companies hunting for small companies to buy.
http://swissinnovation.org/newsUS/web/2013/09-130430-ec.html

10. Economy, Social Sciences & Humanities

Businessmen still more likely to work full-time

(The Boston Globe, April 04, 2013)

It turns out that even among graduates from elite institutions like Harvard Business School, a woman's role is still more often in the home than those of her male classmates. Robin J. Ely, a professor of business administration at Harvard Business School, presented her study on Crimson alumnae at a two-day 50th anniversary celebration of women's inclusion at Harvard Business School. The study surveyed some 6,500 graduates, both male and female, to better understand their views, professional experiences, and choices. The survey results indicate that Harvard women are less likely to be full-time workers than men and more likely to be stay-at-home parents.
http://swissinnovation.org/newsUS/web/2013/10-130404-21.html

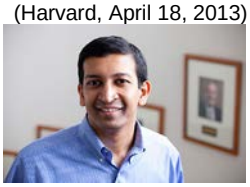
Dreams as language of enigmatic parable

(Harvard, April 12, 2013)

After Trisha Coburn's doctor told her she was in good health, Coburn said she had a dream in which a disembodied voice told her to "look deeper." Fearful, the 46-year-old Coburn returned to her doctor and asked him to look into the deepest part of her body: her colon. She said the skeptical doctor's examination detected colon cancer, treatable only because it had been detected early. Kimberley C. Patton, professor of the comparative and historical study of religion at Harvard Divinity School, relayed that story to make a larger point. Patton describes dreams as "a language of enigmatic parable" that Western culture generally prefers to dismiss. "There's a devaluation of dreams in the West," said Patton, something the ancients would have found incomprehensible.
http://swissinnovation.org/newsUS/web/2013/10-130412-59.html

Design of more effective government policies

(Harvard, April 18, 2013)



Harvard Professor of Economics Raj Chetty has been awarded the 2013 John Bates Clark Medal in recognition of his work, which combines empirical evidence and theory to inform the design of more effective government policies on everything from taxation to unemployment to education. Considered by many to be second only to the Nobel Prize in prestige, the medal is awarded annually by the American Economic Association (AEA) to an American economist under the age of 40 who is judged to have made the most significant contribution to economic thought and knowledge. At 33 years old, Chetty is the second-youngest ever to receive the award; Paul Samuelson was 32 when he received the first Clark Medal in 1947.
http://swissinnovation.org/newsUS/web/2013/10-130418-a5.html

11. Start-ups / Technology Transfer / IPR / Patents

Lab Cambridge – supercollider for artists, scientists, and entrepreneurs

(The Boston Globe, April 01, 2013)

It won't open until early 2014, but there's a fascinating new project percolating in Kendall Square: The Lab Cambridge, a gallery and workspace intended to be a supercollider for artists, scientists, students, and entrepreneurs. It's a project of Harvard professor and entrepreneur David Edwards, with financial backing from two local venture capitalists, that's located at 650 East Kendall St., near the skating rink and Genzyme tower. The Lab Cambridge will include work space, an exhibition space, a small auditorium, a store, and a café, Edwards says. It's the American incarnation of Le Laboratoire in Paris, which Edwards opened in 2007. Students come from around the world to work on transforming ideas into prototype products, and Edwards regularly invites artists, performers, and scientists to collaborate on exhibitions. Flagship Ventures' Noubar Afeyan, another supporter of The Lab, says Edwards is interested in "creating a social face for an innovation lab that is making things intended for consumers."
http://swissinnovation.org/newsUS/web/2013/11-130401-05.html

Fab Labs could bloom under bill in Congress

(The Boston Globe, April 01, 2013)

Fab Lab and mobile facility are part of a patchwork of some 40 labs around the United States and 80 worldwide. Their fortunes range from well-endowed to hand-to-mouth; the South End one, for example, was short of money and closed to the public for the better part of 2011. But their financial standing — not to mention availability — could take a huge turn if a US representative from Illinois persuades Congress to create a nationally chartered network for the US labs, to improve their fund-raising abilities, particularly for government money. The measure, which Democrat Bill Foster introduced in March, also calls for placing a Fab Lab in every congressional district. His goal is, in essence, is to bring the tools of innovation to Main Street.
http://swissinnovation.org/newsUS/web/2013/11-130401-c0.html

New shared wet-lab space for 60 life sciences startups

(CIC, April 04, 2013)

In April 2013, the CIC helped celebrate the groundbreaking for Lab|Central, CIC's new affiliated not-for-profit shared wet-lab space for life sciences and biotech entrepreneurs. Massachusetts Governor Deval Patrick followed the ceremony by swinging a chrome-plated sledgehammer to begin the demo work in preparation for the new lab build. US Senator Mary Landrieu, Chair of the Senate Small Business and Entrepreneurship Committee joined us from Washington for the event, as well as hundreds of supporters commemorating the first step in creating the new space. Lab|Central will be a fully outfitted wet-lab complete with all standard lab equipment, environmental health and safety systems, lab permits, and supervision, allowing startup life sciences entrepreneurs to rent as little as a single lab bench. It will house approximately 60 life sciences startups.
http://swissinnovation.org/newsUS/web/2013/11-130404-bf.html

Same day delivery: threat to vibrant community life

(The Boston Globe, April 07, 2013)

All major retailers in the US are testing new ways of online shopping and thus cope with the question of delivery. For instance, Walmart is investigating on a strategy that invite customers to be volunteer couriers. The giant is also testing a sameday service called Walmart To Go last year in several metropolitan areas, for a $10 fee. EBay is building its own network of "shopping valets" for its eBay Now mobile app, launched in August. They fetch merchandise from chain stores like Nordstrom and Best Buy, and deliver it for $5. Consumers can follow their progress on a map, and get an estimate of arrival time. In the same way that ecommerce and the digital delivery of books, videos, and music led to the demise of lots of companie, this feels to retailers like a new threat.
http://swissinnovation.org/newsUS/web/2013/11-130407-0f.html

Massachusetts venture firms strongest in fund-raising

(The Boston Globe, April 08, 2013)

Three local investment firms that back young technology and life sciences start-ups lead the ranks of venture capital fund-raising so far this year, beating similar firms in the Silicon Valley and New York City. Battery Ventures of Waltham, Third Rock Ventures of Boston, and Spark Capital of Boston were the top three in raising new funds from investors during the first quarter of 2013, in which overall investments to venture firms nationwide was $4.1 billion. Massachusetts venture firms raised $1.88 billion collectively during the period, or almost half of all the money generated nationwide since the beginning of the year, according to figures of Thomson Reuters and the National Venture Capital Association.
http://swissinnovation.org/newsUS/web/2013/11-130408-a1.html

Science-to-market leads to $500 million payday

(MIT, April 08, 2013)

During his PhD in the early 2000s, in MIT's Nanostructured Materials Research Laboratory, Zion began chemically modifying insulin for diabetics. The modified insulin would automatically adjust to fluctuating levels of blood glucose, requiring just a single injection per day. In 2003, he licensed this drug as SmartInsulin co-founded the company SmartCells to further develop the drug and turn it into a viable commercial product. It worked: Seven years later, Merck & Co. acquired SmartCells and the license for SmartInsulin for a substantial upfront sum and milestone payments (to be made if the drug succeeds at certain defined stages in its development) that could exceed $500 million — an unprecedented amount for what was then a preclinical drug.
http://swissinnovation.org/newsUS/web/2013/11-130408-d0.html

Developers to set aside lower-cost offices for startups

(The Boston Globe, April 10, 2013)

Cambridge, eager to preserve Kendall Square as a hothouse of innovation, is poised to become the first community in the country to require commercial developers to set aside lower-cost offices for start-up companies and budding entrepreneurs. The move is prompted by growing concerns that Kendall is fast becoming a victim of its own success. Increasingly the small, cutting-edge start-ups that give the neighborhood its vibe and cachet are being forced out by skyrocketing rents. The first step was when city officials approved a massive redevelopment plan by the Massachusetts Institute of Technology. MIT is required to set aside 5 percent of any new construction for so-called innovation office space, which will offer flexible lease terms, lower office rents, and amenities such as shared Wi-Fi service to qualifying start-ups.
http://swissinnovation.org/newsUS/web/2013/11-130410-91.html

Pfizer to concentrate R&D to Kendall Square

(The Boston Globe, April 11, 2013)

Drug giant Pfizer Inc. said it is planning to relocate the majority of its 530 employees at research facilities in Cambridge's Alewife neighborhood to Kendall Square sometime next year, joining roughly 400 Pfizer employees who are already working in Kendall Square, a hotbed of the life sciences industry. Pfizer said it plans to hire a broker to explore either selling or subleasing four buildings in Cambridge, including three on Cambridge Park Drive in Alewife. Pfizer said one reason for the move is that it is looking to make the most efficient use of its global real estate. Another reason: Pfizer wants to create a single, integrated research-and-development community that can easily access and collaborate with biomedical researchers and other partners.
http://swissinnovation.org/newsUS/web/2013/11-130411-13.html

$250 million expansion in Massachusetts drug manufacturing plant

(The Boston Globe, April 11, 2013)

Bristol-Myers Squibb Co., the global biopharmaceutical company, said that it will launch a $250 million expansion of its manufacturing complex in Devens and nearly double the size of its workforce there. The expansion will add space for developing biotechnology drugs, called biologics, and for manufacturing those products for clinical trials, a requirement of the drug approval process. The plant, which occupies 89 acres on a former Army installation in Central Massachusetts, employs about 400 people; the expansion will allow the company to add another 350 workers. Construction is expected to begin later this year and be completed in 2015.
http://swissinnovation.org/newsUS/web/2013/11-130411-ed.html

Research commercialization through "gap funding" programs

(The Boston Globe, April 15, 2013)

Boston University has several "gap funding" programs managed by OTD. These allow BU research to advance towards commercialization leveraging government sponsored basic research funding. BU has a history of being an innovator in research commercialization. The Community Technology Fund established in 1975 was the first university venture fund. The uninvested portion of CTF was placed into BU's endowment and provides about $750K annually for gap funding. The awardees are given $50'000 each. The 2013 High Tech Awardees were Assaf Kfoury, Douglas Densmore, Ramesh Jasti, and for developing commercial applications in Information Technology, Healthcare IT, and chemistry, respectively. The 2013 Life Science Awardees were Ulla Hansen, David Harris, Avrum Spira and Marc Lenburg, and Kenneth Walsh. All winners demonstrated potential for developing small and large molecule therapeutics in multiple therapeutic areas.
http://swissinnovation.org/newsUS/web/2013/11-130415-d6.html

543 US companies among 2000 most powerful

(20min.ch, April 18, 2013)

Out of 2,000 listed firms, 543 (+19) are from the US. Japan has 251 (-7) companies listed and China 136. Switzerland has 48 companies listed and 4 of them are in the top 100: Nestle on position 32, Novartis position 57, Zurich financial services rank 75, and Roche rank 93. The Industrial and Commerical Bank of China (ICBC) is first on the Forbes list of the most powerful company in the world. The China Construction Bank went from rank 13 to number 2. This is explained by the growth of over 10% of their turnover and profit. ExxonMobil, who used to be ranked first fell to rank 5, behind tow other US companies, JP Morgan Chase (rank 3) and General Electric (rank 4). The huge US computer company Apple is only on rank 15, a position shared with WalMart.
http://swissinnovation.org/newsUS/web/2013/11-130418-1d.html

Drop in start-up investment in first quarter

(The Boston Globe, April 19, 2013)

Venture capital funding to New England start-ups fell 10 percent in the first quarter of the year as investment firms put less money into fewer young companies. Companies in New England collectively received $677 million during the quarter, compared with $754 million in the same period last year; moreover the number of software, biotechnology, and other fledgling companies that received money fell 20 percent to 88, according to the quarterly MoneyTree report from PricewaterhouseCoopers and the National Venture Capital Association, based on data provided by Thomson Reuters. Nationally, funding by venture firms was down 6 percent to $5.8 billion, with some of the biggest deals going to computer and software companies instead of biotechnology and life science start-ups, which tend to require massive infusions of cash and have typically driven investments in Massachusetts.
http://swissinnovation.org/newsUS/web/2013/11-130419-82.html

$21 million investment for Cambridge gene synthesis company

(The Boston Globe, April 24, 2013)

Agilent Technologies Inc. has made a $21 million investment in Gen9 Inc., a Cambridge company specializing in gene synthesis. Customers can potentially use Gen9's technology to more efficiently make everything from fabrics and chemicals to drugs and renewable fuels. According to Gen9, methods using its technology are more cost-effective than traditional methods. Headquartered in California, Agilent is a $6.9 billion company focused on chemical analysis, life sciences, diagnostics, electronics, and communications. In a press release, Agilent said its partnership with Gen9 complements Agilent's existing investments in synthetic biology and gene synthesis. Agilent is taking an equity stake in Gen9.
http://swissinnovation.org/newsUS/web/2013/11-130424-1f.html

Highest number of startups funded by women

(The Boston Globe, April 25, 2013)

The number of women investing money into start-ups reached record levels last year as they become a much bigger force in the risky and male-dominated world of angel investing. Women made up 21.8 percent of active angel investors nationwide in 2012, compared with 12.2 percent the previous year, according to the Center for Venture Research at the University of New Hampshire, which released its annual report on such spending. That's the highest level of activity by female investors the center has recorded since it started tracking investments by gender in 2000.
http://swissinnovation.org/newsUS/web/2013/11-130425-e6.html

Schneider Electric opens R&D center in Massachusetts

(The Boston Globe, April 26, 2013)

Schneider Electric, a multinational energy management company, is investing tens of millions of dollars to build a global R&D center in Andover by the end of this year. About 730 people, relocated from existing Schneider facilities in Massachusetts, will work in the 20'000-square-meters R&D center when it opens in December. Schneider executives said they expect to steadily increase employment there in coming years. Schneider, based in Paris, generated about $30.8 billion in revenue last year and has some 140,000 employees in more than 100 countries. Its selection of Andover as one of five R&D centers is another example of how the state's culture of innovation, its standing as a technology center, and its highly educated workforce are attracting foreign investment.
http://swissinnovation.org/newsUS/web/2013/11-130426-0e.html

"Millennials" driven startup generation

(The Boston Globe, April 28, 2013)

Stace-Naughton, 24, is part of what seems to be a growing cadre of recent grads choosing to create their own jobs after picking up their diplomas. Leaping into entrepreneurship immediately after graduation, she says, is simply a way to keep her idea alive. After winning $25,000 last year in a start-up competition run by Dartmouth's business school, she is now trying to raise more money to nudge a new kind of device for endoscopic surgery toward the market. One survey by Payscale and Millennial Branding found that those in the current generation of students, often called "millennials," are more than twice as likely to start their own business upon graduation than any preceding generation.
http://swissinnovation.org/newsUS/web/2013/11-130428-92.html

Drug development partnership potentially worth $1 billion

(The Boston Globe, April 29, 2013)

Forma Therapeutics, a Watertown biotechnology company established in 2008 to deploy powerful new screening tools for developing drugs will collaborate with New Jersey-based Celgene Corp. on making drugs that regulate the level of proteins in cells. The treatments would be used to fight cancers and neurodegenerative disorders. If the companies succeed in getting those medicines on the market, the partnership could generate more than $1 billion in milestone payments to Forma. Such payments, tied to meeting regulatory and sales targets, have become an increasingly common part of life sciences deals between large drug companies and smaller biotechs.
http://swissinnovation.org/newsUS/web/2013/11-130429-6d.html

12. General Interest

Gray seals gathering off the coast of New England

(The Boston Globe, April 05, 2013)

Gray seals carpeted a beach at Monomoy National Wildlife Refuge, which has become the most popular area in the region for the mammals to haul themselves out of the ocean and take the sun. The most recent count showed more than 15,000 of the seals off New England.
http://swissinnovation.org/newsUS/web/2013/12-130405-ea.html

Immigration fuels population growth in Massachusetts

(The Boston Globe, April 07, 2013)

Driven by a boom in immigration, the Boston area grew by about 55,000 residents in a recent two-year period, according to new county population estimates by the US Census Bureau. The population growth in Cambridge's Middlesex County and Boston's Suffolk County together accounted for about half the state's overall growth of about 100,000 new residents between April 2010 and July 2012, the census figures show. The increase brought the state's total population to 6,646,144. Massachusetts' 1.5 percent growth during the period was less than the nation's 1.7 rate, but the state is doing well compared with the rest of the region.
http://swissinnovation.org/newsUS/web/2013/12-130407-ce.html

Racial economic equality still not achieved

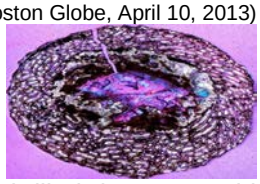
(The Boston Globe, April 10, 2013)

African-Americans have achieved tremendous gains in education over the past 50 years, but that has yet to translate into major progress toward economic equality, the National Urban League says in its latest State of Black America report. According to the report, 75 percent of black adults had not completed high school 50 years ago, compared

with 15 percent of black adults today. Overall, the standard of living for black Americans improved significantly, due mainly to better access to educational and employment opportunities, the report says. But there has been much less change between black people and white people on the economic ladder, with indicators such as employment, income, and home ownership. On average, black people remain twice as likely as white people to be unemployed and earn less than two-thirds the income of white people.
http://swissinnovation.org/newsUS/web/2013/12-130410-60.html

Fossil dinosaur embryos shed light on development

(The Boston Globe, April 10, 2013)



Recently discovered dinosaur embryos are giving scientists their best glimpse yet into how the ancient creatures developed. The 190-million-year-old fossils unearthed in China belonged to Lufengosaurus, a long-necked plant eater known for its gigantic size, with adults 30 feet long. A detailed look at more than 200 bones from 20 animals at various stages of development reveal they grew much more rapidly in the egg than other dinosaurs and flexed muscles in much the same way as birds and humans. While not a complete surprise, "we are thrilled that we could document this for the first time for an extinct animal," said University of Toronto paleontologist Robert Reisz, who led an international team.
http://swissinnovation.org/newsUS/web/2013/12-130410-d8.html

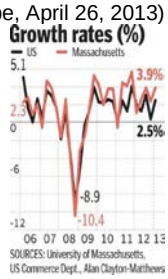
Massachusetts jobless rate at 6.4%

(The Boston Globe, April 18, 2013)

Following weak national employment growth last month, Massachusetts's economy slowed further in March as employers shed jobs and workers gave up job searches. Employers shed 5,500 jobs, the second consecutive month of losses for the state, the state Executive Office of Labor and Workforce Development reported. The unemployment rate slipped to 6.4 percent in March, but that was largely due to the more than 6,000 people who stopped looking for work in what is still a weak job market. Only those who actively seek jobs are counted as unemployed by labor officials.
http://swissinnovation.org/newsUS/web/2013/12-130418-e8.html

3.9% strong growth in Massachusetts economy

(The Boston Globe, April 26, 2013)



After a period of lackluster economic growth, the Massachusetts economy sprang to life in the first three months of this year as hiring increased, incomes rose, and consumer spending rebounded, according to a new report by the University of Massachusetts and the Federal Reserve Bank of Boston. The state's economy grew at a solid annual rate of 3.9 percent between January and March, accelerating from 2.4 percent at the end of last year and significantly outpacing national economic growth. The US economy grew at a disappointing 2.5 percent annual rate in the first three months of the year, after barely growing at all at the end of 2012, the US Commerce Department reported.
http://swissinnovation.org/newsUS/web/2013/12-130426-10.html

Widening racial wealth gap

(The Boston Globe, April 29, 2013)

Millions of Americans suffered a loss of wealth during the recession and the sluggish recovery that followed. But the last half-decade has proved far worse for black and Hispanic families than for white families, starkly widening the already large gulf in wealth between white Americans and most minorities, according to a study from the Urban Institute. The study found that the racial wealth gap yawned during the recession, even as the income gap remained stable. Before the recession, white families were about four times as wealthy as nonwhite families, according to the Urban Institute's analysis of Federal Reserve data. By 2010, whites were about six times as wealthy.
http://swissinnovation.org/newsUS/web/2013/12-130429-e5.html

13. Calls for Grants / Awards

Opportunity to participate in the 2013 Life Science Nation Investment Forum

(Life Science Nation, April 09, 2013)

Life Science Nation (LSN) is now accepting applications from innovators at emerging companies developing therapeutics, diagnostics, medical devices, and unique service platforms to participate in the 2013 LSN Early Stage Life Science Investment Forum. A select group of firms will be chosen to present their groundbreaking technologies to an exclusive investor audience. LSN sources, validates and maintains the largest global database of investor profiles and mandates in the life science arena. LSN has defined and actively tracks six categories of Life Science Investors.
http://swissinnovation.org/newsUS/web/2013/13-130409-16.html

> **SNSF Project Funding**
The Swiss National Science Foundation (SNSF) accepts applications for project funding on April 1 and October 1 each year. Applications must be submitted directly by researchers.
http://www.snf.ch/E/funding/projects/Pages/default.aspx

> **EU Seventh Framework Programme**
The seventh EU Framework Programme on Science Research and Innovation
http://cordis.europa.eu/fetch?CALLER=FP7_NEWS&ACTION=D&RCN=34831

Upcoming Science and Technology Related Events

Verge Boston - Renaissance Waterfront
May 13-14, 2013
http://www.greenbiz.com/events/verge/2013/05/boston
Energy / Environment / Innovation / Entrepreneurship
Next Stage Solutions, Inc., Waltham, MA

Planning Growth: The CEO Challenge III
May 14, 2013
http://nssceoworkshopmay2013.eventbrite.com/#
Innovation / Entrepreneurship
Next Stage Solutions, Inc., Waltham, MA

SOLUTIONS with/in/sight
May 23, 2013
http://www.regonline.com/register/checkin.aspx?eventid=1231326
Life Science
David H. Koch Institute for Integrative Cancer Research

Open Source Software- What's the Buzz All About?
May 23, 2013
http://technologydirections2013.eventbrite.com/
Innovation / Entrepreneurship / Information & Communications Technology
MassChallenge Headquarters

Nanotherapeutics & Diagnostics Wyss Institute symposium on medical nanotechnologies inspired by Nature
June 6, 2013
http://www.regonline.com/Register/Checkin.aspx?EventID=1215786
Life Science
Joseph B. Martin Conference Center, Amphitheater

Symposium on Translation of Regenerative Bioscience and Engineering
June 10, 2013
https://www.wpi.edu/academics/Research/BEI/Seminars/index.html
Life Science
The Bioengineering Institute at WPI

Red Hat Summit
June 11-14, 2013
http://www.redhat.com/summit/
Information & Communications Technology
Boston, MA

International Society for Stem Cell Research, 11. Annual Meeting
June 12-15, 2013
http://www.isscr.org/home/annual-meeting
Life Science
Boston, MA

PlanetSolar DeepWater in Boston!
June 27, 2013
http://www.swissnexboston.org/activities/events-in-house/planetsolar-deepwater-in-boston
Energy / Environment
swissnex Boston

JEC Composites - JEC Americas 2013
October 02-04, 2013
http://www.jeccomposites.com/events/jec-americas-2013
Material Science / Engineering

Boston, MA

Small Business Expo 2013 - Boston
October 17, 2013
http://smallbusinessexpoboston.eventbrite.com/
Innovation / Entrepreneurship
Boston, MA

2013 Molecular Targets and Cancer Therapeutics conference
October 19-23, 2013
http://www.aacr.org/home/scientists/meetings--workshops/molecular-targets-and-cancer-therapeutics.aspx
Life Science
Boston, MA

American Society of Human Genetics 2013 Annual Meeting
October 22-26, 2013
http://www.ashg.org/2013meeting/
Life Science
Boston, MA

2013 Advancing Ethical Research Conference
November 7-9, 2013
http://www.primr.org/aer13/
Life Science
Boston, MA

ArchitectureBoston Expo
November 19-21, 2013
http://abexpo.com/register/
Architecture
Boston, MA

Materials Research Society 2013 Fall Meeting & Exhibit
November 7-9, 2013
http://www.mrs.org/fall2013/
Material Science
Boston, MA

>> More events at swissnex Boston:
http://www.swissnexboston.org/activities/events-inhouse
