

## Science-USA (Boston+), January 2013

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swissnex Boston welcomes you to the 4<sup>th</sup> 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.

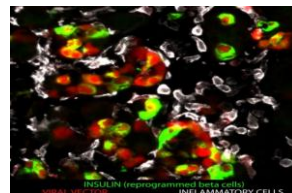
### Swiss Spotlight

#### Scientist: Keeping cellular identity: don't lose your fate!

(Adrian Zumsteg, Harvard, January 14, 2013)

The direct conversion of one differentiated cell type into another is an emerging topic in the field of cellular reprogramming. Such reprogramming requires suppression of mechanisms maintaining the original cellular identity. Adrian Zumsteg is interested in the mechanisms of how cellular identity is maintained and - eventually - lost. As a model system to study loss of cellular identity, he uses the in vivo pancreatic acinar to beta cell reprogramming system, pioneered in our lab by Prof. Qiao Zhou. Critical components of acinar cell identity are rapidly lost after vector delivery, paralleled by significant inflammation. Adrian Zumsteg, funded by the Swiss National Science Foundation (SNSF) and Swiss Foundation for Grants in Biology and Medicine (SFGBM) is currently dissecting the interplay of reprogramming factors (transcription factors), the viral vectors and the associated inflammation. Understanding the molecular events underlying direct cellular conversion is expected to yield important insights into early events in carcinogenesis.

<http://swissinnovation.org/newsUS/web/2013/00-130114-3e.html>



#### Startup: coresuite cloud makes us pioneers in mobile

(Arti Sahgal General Manager Coresystems USA Inc, January 01, 2013)

coresystems develops mobile, flexible and user-friendly apps to support business processes and create essential added value. With our intelligent cloud and mobile solutions, businesses can access local information from their company's ERP environment from anywhere at any time and use, bundle or forward it as needed. coresystems was originally founded in Switzerland in 2006 and based on the extensively growing demand of the coresuite solutions in the U.S., in 2010 the company's first subsidiary was established in New York City. The East Coast was chosen as strategic location as it is a thriving technology hub for service companies. As of today 75,000 users benefit from the coresuite products, with around 15,000 of those users based in North America. Due to the rapid growth of the U.S. business, a support and service center has already been established in Miami and Los Angeles.

<http://swissinnovation.org/newsUS/web/2013/00-130101-01.html>



## swissnex Boston Events

### Big day for the Friends of Basel Network

In January 2012 was the first meeting of University of Basel Alumni in Boston and the beginning of Friends of Basel. One year later, the Friends of Basel Network in New England has grown a lot. On January 22, a group of close Friends of Basel came together to discuss the progress of Friends of Basel and exchange ideas. Finally, the Friend of Basel Network elected their board. We are happy to present the six members of the board, Alumni of University of Basel and/or Friends of the city, as shown in the picture to the right.

(swissnex Boston, January 30, 2013)



<http://swissinnovation.org/newsUS/web/2013/00-130130-04.html>

### Cool the planet with aerosol particles?

swissnex Boston was delighted to host another interesting ETH Alumni New England Chapter gathering in collaboration with ETH professor Thomas Peter, who is presently on Sabbatical at NOAA ESRL CSD in Boulder. Thomas Peter faced the challenging task of introducing a diverse audience formed by climate scientist and amateurs, to the mystery of tiny aerosol particles. The presentation started with general climate considerations, followed by discussions about laboratory experiments and field measurements on aerosol particles and led finally to considerations about the so-called "geoengineering" – the possibility to use aerosols to purposefully cool the planet.

(swissnex Boston, January 17, 2013)



<http://swissinnovation.org/newsUS/web/2013/00-130117-95.html>

### swissnex Boston visit: World renowned Woods Hole Oceanographic Institute

In the quaint village of Woods Hole, a fishers village 90 minutes south of Boston, visitors will find not only fishing boats and the ferry to Martha's Vineyard, but also one of the most world renowned research institutions in Oceanography, the "Woods Hole Oceanographic Institute (WHOI)". As we have learned from President Susan Avery, WHOI counts nearly 1100 researchers and has a yearly budget of \$220 million USD, mainly funded by the National Science Foundation and the Navy. WHOI covers a wide range of research topics, from Ocean Chemistry, over Ocean circulation systems to pollution and polar research.

(swissnex Boston, January 28, 2013)



<http://swissinnovation.org/newsUS/web/2013/00-130128-5b.html>

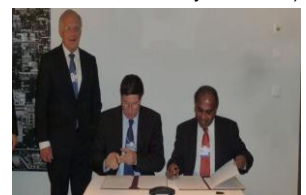
### >> More past events at swissnex Boston:

<http://www.yourswissnexboston.org/>

### Switzerland strengthens cooperation with the United States

State Secretary Mauro Dell'Ambrogio and Dr. Subra Suresh, Director of the American National Science Foundation NSF, signed a Letter of Intent in which Switzerland expressed its desire to become involved in the NSF Graduate Research Opportunities Worldwide programme. Federal Council Johann N. Schneider-Ammann was present at the signing in Davos. Launched in December 2012 by the NSF, the Graduate Research Opportunities Worldwide (GROW) program aims to promote international collaboration in the field of academic research. At the invitation of the NSF, Switzerland will become the ninth member of this network of academic excellence. The aim is to enable the NSF's best doctoral students to do a research internship of six months to a year at a Swiss university.

(swissnex Boston, January 28, 2013)



<http://swissinnovation.org/newsUS/web/2013/00-130128-94.html>



## 1. Policy

### Mayor Menino's vision of Boston

(The Boston Globe, January 30, 2013)

In a speech, Mayor Thomas M. Menino offered a buoyant vision of Boston, celebrating accomplishments and outlining initiatives for the future. Among new initiatives, the mayor proposed using 1 million square feet of city-owned property to develop affordable housing. He announced a partnership with Harvard University and the Massachusetts Institute of Technology to bring cutting-edge online learning to Boston's community centers. He pledged \$30 million in new money for schools to support a longer school day and upgraded facilities. To remedy gender inequities, Menino said he would launch a forum for women-owned businesses. He pledged \$1 million for low-interest loans for new child-care facilities and promised to make Boston the first city to help young women negotiate fair pay. <http://swissinnovation.org/newsUS/web/2013/01-130130-1f.html>

### Growth in Massachusetts outperforms US economy

(The Boston Globe, January 31, 2013)

No one is calling it a return to boom times, but the state's economy grew modestly in the final three months of 2012, even as the US economy unexpectedly contracted slightly. The contrast offered further evidence the state is rebounding from the recession at a more robust pace than the nation as a whole, largely on the strength of its technology industries. The state's economy grew at a 1 percent annual rate in the fourth quarter, while the Commerce Department said the US economy shrunk at an annual rate of one-tenth of a percent, largely because of a pullback in government spending.

<http://swissinnovation.org/newsUS/web/2013/01-130131-12.html>

### Medicaid expansion in Arizona

(The Boston Globe, January 21, 2013)

The Arizona governor Jan Brewer surprised almost everyone when she announced that she not only plans to push for an expansion of the state's Medicaid program under the federal health care law — she plans to fund it by raising taxes. A conservative Republican, Brewer is believed to be the first governor to publicly come up with a way to fund the controversial Medicaid expansion. The Medicaid expansion is intended to cover about half of the 30 million uninsured people expected to eventually gain coverage under President Obama's health care overhaul. The law expanded Medicaid to cover low-income people making up to 138 percent of the federal poverty level, or about \$15,400 a year for a single person.

<http://swissinnovation.org/newsUS/web/2013/01-130121-74.html>



## 2. Education

### Higher quality with more 'turnaround' schools

(The Boston Globe, January 02, 2013)

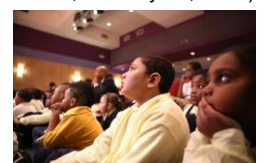
State law grants widespread powers to school districts to sidestep existing teacher contracts at so-called "turnaround schools," a euphemism for the roughly 40 lowest-performing schools in the state. But the difference between the turnaround schools and the next-lowest performance level based on standardized test scores is often marginal. There are 48 of these "Level 3" schools, which have weak MCAS scores, in Boston. And Menino assumes that many of them would benefit significantly from the imposition of a longer school day, staff shake-ups, alterations to the curriculum, merit pay for teaching staffs, and other measures allowed under state law for turnaround schools. Menino, in calling for a dramatic increase in the number of schools with flexible staffing rules, is showing a strong commitment to raise the quality of schools across the district.

<http://swissinnovation.org/newsUS/web/2013/02-130102-e9.html>

### \$2.5 billion plan for Massachusetts public education

(The Boston Globe, January 16, 2013)

Governor Deval Patrick proposed to increase spending on public education by more than \$2.5 billion over the next four years, an investment he said was critical to the state's social and economic future. The money would benefit tens of thousands of the state's youngest residents, from infants to college students, and would target specific aspects of Patrick's long-standing education agenda that aims to build a more skilled workforce needed to drive the state's economy. At a press conference at the Orchard Gardens K-8 School in Roxbury,





Patrick said the additional revenue will probably require an increase in taxes and fees. He said he thinks the economy is strong enough to ask taxpayers to fund his proposal.

<http://swissinnovation.org/newsUS/web/2013/02-130116-a5.html>

### High school graduation rate at new peak

(The Boston Globe, January 22, 2013)

The percentage of students at public high schools who graduate on time has reached its highest level in nearly 40 years. The National Center for Education Statistics estimated that 78% of students earned a diploma within four years of starting high school. In Massachusetts, the percentage is even higher, at 84.7%. High school graduation rates have a significant effect on the economy, according to a study last year by America's Promise Alliance, a foundation created by Colin Powell. On average, high school graduates earn \$130,000 more over their lifetimes than peers who drop out of school, the study said.

<http://swissinnovation.org/newsUS/web/2013/02-130122-d3.html>

### Education consultant defrauded international clients

(The Boston Globe, January 26, 2013)

An educational consultant was indicted in federal court on charges of defrauding international clients after he had pledged to help get their children into renowned colleges, universities, and boarding schools, the US attorney's office in Boston said. Mark J. Zimny of Los Angeles and formerly of Cambridge, is accused of numerous counts of wire fraud and money laundering, US Attorney Carmen M. Ortiz's office said. Zimny falsely claimed to still be teaching at Harvard University when he allegedly defrauded the clients, Ortiz's office said. He also allegedly used his educational consulting firm, IvyAdmit Consulting Associates, to collect more than hundreds of thousands of dollars from clients after claiming to use the funds as contributions to targeted schools, Ortiz said.

<http://swissinnovation.org/newsUS/web/2013/02-130126-32.html>

### MOOC initiative with Boston, Harvard, and MIT

(The Boston Globe, January 29, 2013)

The City of Boston plans to launch a partnership with Harvard University and the Massachusetts Institute of Technology through the experimental online initiative edX, which offers free courses to anyone with Internet access. In his State of the City address, Mayor Thomas M. Menino announced an effort to bring edX to Boston's community centers. Founded by Harvard and MIT, edX provides online courses and other learning opportunities to roughly 600,000 people globally. Instructors have determined that students learn better in small groups, so the goal in Boston will be to nurture clusters of people taking the courses together. The new initiative, dubbed BostonX, remains nascent, but officials on both sides of the Charles River have high hopes.

<http://swissinnovation.org/newsUS/web/2013/02-130129-f7.html>



## 3. Life Science

### Boston remains top life sciences cluster globally

(The Boston Globe, January 31, 2013)

Boston's local life sciences industry is once again taking top honors, in a new report from the commercial real estate firm Jones Lang LaSalle. The report ranks the Boston area life sciences scene as the premier R&D cluster in the world, with more than 74,000 life sciences employees; five of the top eight NIH-funded hospitals in the country; and numerous major research universities, including Harvard, MIT and Tufts. Behind Boston in the rankings are San Diego and the San Francisco Bay Area. This is the second year that Jones Lang has issued its report on life sciences clusters, and the second year that Boston has topped the list.

<http://swissinnovation.org/newsUS/web/2013/03-130131-6c.html>



### Life Science industry boom in Kendall Square

(The New York Times, January 01, 2013)

Kendall Square is at the center of a real estate boom. Most of that growth is connected to the biotechnology and pharmaceutical industries, including new buildings for Pfizer and Novartis. Amazon just revealed plans to rent 100,000 square feet here; Google is expanding its footprint by 40,000 square feet; and Microsoft, IBM and Nokia are nearby. Pharmaceutical companies traditionally preferred suburban enclaves where they could protect their intellec-







tual property in more secluded settings and meet their employees' needs. But in recent years, as the costs of drug development have soared and R&D pipelines slowed, pharmaceutical companies have looked elsewhere for innovation. Much of that novelty is now coming from biotechnology firms and major research universities like MIT and Harvard, just two subway stops away.

<http://swissinnovation.org/newsUS/web/2013/03-130101-35.html>

### Placebo stimulates real physiological response

(Harvard, January 01, 2013)

Kaptchuk, an associate professor of medicine, has spent his career studying these mysterious human reactions, he doesn't argue that you can simply "think yourself better." In his recent clinical drug trial his team had given patients pills that were made of cornstarch or "acupuncture" treatment with needles that were retractable shams that never pierced the skin. The study wasn't aimed at comparing two treatments. It was designed to compare two fakes. "The side effects were simply amazing," Kaptchuk explains. Researchers have found that placebo treatments — interventions with no active drug ingredients — can stimulate real physiological responses. Kaptchuk and colleagues from several Harvard-affiliated hospitals created the Program in Placebo Studies and the Therapeutic Encounter (PiPS), headquartered at Beth Israel Deaconess Medical Center — the only multidisciplinary institute dedicated solely to placebo study.



<http://swissinnovation.org/newsUS/web/2013/03-130101-84.html>

### Repair blood vessel by novel artery stretching

(The Boston Globe, January 02, 2013)

Ameigh is the third person to undergo a surgical procedure being pioneered at Boston Children's Hospital in which a child's blood vessels are stretched, providing new material to make repairs elsewhere in the body. The newly grown arteries can replace sections that are damaged or missing, resulting in fixes that may grow with the child and last a lifetime. The artery-stretching technique was described in a letter published in the New England Journal of Medicine. Surgeons implant a device that, when filled with fluid, expands like a balloon behind a healthy artery.

<http://swissinnovation.org/newsUS/web/2013/03-130102-ed.html>

### New device to identify cancerous breast tissue

(The Boston Globe, January 02, 2013)

Federal regulators have approved a new instrument made by Dune Medical Devices Inc. that enables breast cancer surgeons to determine immediately whether they have removed all of the cancer tissue during lumpectomy procedures. The device which is already in use in Switzerland, Israel and Germany gives surgeons information intra-operatively — at the time of surgery — to determine whether more tissue needs to be taken. Dune Medical, based in Israel, plans to move its US office from Framingham to Boston's Innovation District as it builds a sales force to market the device, called the MarginProbe system, to breast cancer surgeons across the nation.



<http://swissinnovation.org/newsUS/web/2013/03-130102-aa.html>

### New Infectious-Disease Research Lab

(The Boston Globe, January 02, 2013)

A decade-long push to open a controversial infectious-disease research lab in Boston's South End neighborhood is one giant step closer to fruition, with federal regulators signing off on the project. The National Institutes of Health said that after "careful consideration" it has concluded that Boston University's National Emerging Infectious Diseases Laboratories, which will work with some of the world's deadliest germs, "poses minimal risk to the community surrounding the facility." The decision clears the way for final state environmental review, which has been in limbo pending the federal decision. Federal and state lawsuits challenging the project by neighborhood residents and environmentalists also must be resolved.

<http://swissinnovation.org/newsUS/web/2013/03-130102-a1.html>

### New biotechnology corporate in Kendal Square

(The Boston Globe, January 07, 2013)

Ariad Pharmaceuticals Inc. will build a new corporate headquarters and laboratory complex in Kendall Square, adding to a biotech building boom that is rapidly filling that part of Cambridge with jobs and modern buildings. The new offices will allow Ariad to consolidate its operations and usher in an era of expansion following the launch of Iclusig, which won Food and Drug Administration approval last month as a treatment for chronic myeloid leukemia.





Ariad's workforce has more than doubled to about 300 employees since the start of 2012, and the company expects to add at least 100 jobs in Cambridge over the next two years.

<http://swissinnovation.org/newsUS/web/2013/03-130107-ce.html>

### First-of-its-kind Alzheimer's drug trial

(The Boston Globe, January 15, 2013)

Long-awaited federal funding has been approved for a first-of-its-kind, Boston-led study to test whether drugs can hold off Alzheimer's disease in people who have no symptoms of the illness, but who have an abnormal protein in their brains believed to be a marker of the disease. Other drug trials aimed at clearing the amyloid proteins in the brains of Alzheimer's patients have produced disappointing or very modest results, with little or no apparent easing of symptoms, and researchers think that is because the drugs were used too late. Scientists believe that more than half of certain critical brain cells are lost by the time a patient displays even mild cognitive impairment. There is no known cure for Alzheimer's disease.

<http://swissinnovation.org/newsUS/web/2013/03-130115-ad.html>

### Fecal transplantation against relapsing gastrointestinal infection

(The Boston Globe, January 16, 2013)

The half-century old medical procedure has long been a measure of last resort: When a patient suffers from a gastrointestinal infection that keeps coming back, try transplanting someone else's feces into the gut to restore a normal balance of healthy bacteria. The scatological treatment may seem more medieval than modern, but over the past decade, doctors have increasingly stopped snickering and started to try it --with promising results. There is now a flurry of new trials at cutting-edge medical centers in Boston and elsewhere, a rigorous randomized trial published by Dutch researchers found that most patients with serious, recurrent infections caused by the bacteria C. difficile got better when donor feces were infused into their intestines.

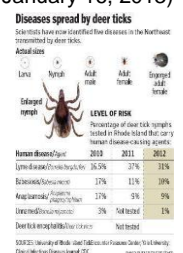
<http://swissinnovation.org/newsUS/web/2013/03-130116-04.html>

### New illness linked to ticks with Lyme disease

(The Boston Globe, January 16, 2013)

Researchers have discovered a new human disease in the Northeast transmitted by the same common deer tick that can infect people with Lyme disease. The bacterial illness causes flu-like symptoms, researchers from Tufts, Yale, and other institutions reported, but they also described the case of an 80-year-old woman who became confused and withdrawn, lost weight, and developed hearing difficulty and a wobbly gait. Researchers estimate that 1 percent of the population in areas where Lyme is widespread, such as western Massachusetts and Cape Cod and the Islands, may be infected by the new bacteria, which can be transmitted by the tick when it is as small as a poppy seed.

<http://swissinnovation.org/newsUS/web/2013/03-130116-5a.html>



### Connection between genes and behavior

(The Boston Globe, January 17, 2013)

For years, scientists have been trying to untangle the complicated connections between genes and behavior, knowing that just as DNA gives rise to physical traits, it must also influence how people and animals act. A team of Harvard University biologists has untangled a connection between genes and the simple behavior in mice to dig complex burrows. The oldfield mice, they found, repeatedly dug the same basic burrows, and the behavior appeared to be innate -- not a skill they learned. The complex home-making tendencies even appeared to be a genetically dominant behavior. It could be that genes involved in such a fundamental behavior in mice also contribute to important behaviors in people.

<http://swissinnovation.org/newsUS/web/2013/03-130117-9a.html>



### Privacy risks on health data

(The Boston Globe, January 18, 2013)

Scientists at the Whitehead Institute for Biomedical Research showed how easily sensitive health information could be revealed and possibly fall into the wrong hands. Identifying the supposedly anonymous research participants did not require fancy tools or expensive equipment: It took a single researcher with an Internet connection about three to seven hours per person. The feat, reported in the journal Science, has already triggered action at the National Institutes of Health, which has removed the ages of the participants from a searchable repository of genetic material and put the information under tighter control.

<http://swissinnovation.org/newsUS/web/2013/03-130118-e4.html>



## Hidden genetic code

(Harvard, January 18, 2013)

To manufacture proteins, cells rely on RNA, which like DNA is made up of nucleotides that have one of four bases. Cells “read” those bases in groups of three to translate RNA into amino acids, which are used to build proteins. While there are 64 possible ways to combine four bases into groups of three, called codons, the translation process uses only 20 amino acids. To account for the difference, multiple codons translate to the same amino acid. Scientists, however, have long speculated whether those seemingly synonymous codons truly produced the same amino acids, or whether they represented a second, hidden genetic code. Researchers found, certain sequences manufacture proteins efficiently, while others — which are ostensibly identical — produce almost none.

<http://swissinnovation.org/newsUS/web/2013/03-130118-df.html>

## Etiquette for DNA hacker

(The Boston Globe, January 21, 2013)

Expert group aims to keep biology safe for amateurs. As equipment has gotten cheaper and techniques have become more accessible, biology has been embraced by a growing number of amateurs. Bringing biology, and specifically the ability to analyze and manipulate DNA, out of the specialized and intimidating confines of the laboratory could drive science education forward. The flipside is that amateurs could — accidentally or purposefully — do science that could harm others. Now, in an effort to make sure the DNA hackers know what they're doing, Boston-based DIYbio.org (short for Do-it-Yourself Biology) and the Synthetic Biology project at the Woodrow Wilson International Center for Scholars, a nonpartisan research organization, have created a new resource: “Ask a Biosafety Expert.”

<http://swissinnovation.org/newsUS/web/2013/03-130121-00.html>

## Reprogramming of neuron identity within the brain

(Harvard, January 21, 2013)

A new finding by Harvard stem cell biologists turns one of the basics of neurobiology on its head by demonstrating that it is possible to turn one type of already differentiated neuron into another within the brain. The discovery by Paola Arlotta an associate professor in Harvard's Department of Stem Cell and Regenerative Biology (SCRB) “tells you that maybe the brain is not as immutable as we always thought, because at least during an early window of time one can reprogram the identity of one neuronal class into another”. Their experiments targeted callosal projection neurons, which connect the two hemispheres of the brain, and turned them into neurons similar to corticospinal motor neurons, one of two populations of neurons destroyed in Amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease.

<http://swissinnovation.org/newsUS/web/2013/03-130121-69.html>

## Resurrecting the Neanderthal

(20min.ch, January 22, 2013)

The renowned Harvard Professor George Church has the goal of resurrecting the Neanderthal. The Neanderthal, a distant relative of the modern human, went extinct 33'000 years ago. The professor of the Harvard Medical School is convinced that he can resurrect the Neanderthal with the help of fossil DNA. He has already largely reconstructed the genetic code, and is now in search for an appropriate surrogate mother. The scientist also pushes for human genetic modification. In that scenario, every human would be able to live for 120 years and be resistant to viruses like HIV.



<http://swissinnovation.org/newsUS/web/2013/03-130122-15.html>

## Better vaccine coming soon

(The Boston Globe, January 23, 2013)

With a flu season that arrived earlier and more harshly than usual, government health officials have been loudly sounding the call for everyone to be immunized, while more quietly encouraging efforts to develop a better vaccine that would protect against many more strains of the virus. Next year, two firms will for the first time produce a quadrivalent vaccine, which contains four strains rather than the three in current vaccines. And the Food and Drug Administration approved the first gene-based flu vaccine, which uses DNA technologies to produce mass quantities of the virus in insect cells instead of chicken eggs.

<http://swissinnovation.org/newsUS/web/2013/03-130123-fd.html>



## Squeezing cells opens tiny temporary holes

(MIT, January 23, 2013)

Living cells are surrounded by a membrane that tightly regulates what gets in and out of the cell. This barrier is necessary for cells to control their internal environment, but it makes it more difficult for scientists to deliver large molecules such as nanoparticles for imaging, or proteins that can reprogram them into pluripotent stem cells. Researchers from MIT have now found a safe and efficient way to get large molecules through the cell membrane, by squeezing the cells through a narrow constriction that opens up tiny, temporary holes in the membrane. Any large molecules floating outside the cell – such as RNA, proteins or nanoparticles – can slide through the membrane during this disruption.

<http://swissinnovation.org/newsUS/web/2013/03-130123-cc.html>

## Longer-lasting injectable multiple sclerosis drug

(The Boston Globe, January 24, 2013)

Peginterferon beta-1a is a version of Biogen's best-selling drug, Avonex, which is a injectable multiple sclerosis drug. Peginterferon is longer-lasting and reduced patients' risk of flare-ups by 28 percent when dosed every four weeks compared with placebo, the firm said in a statement. Based on the results, Biogen said it plans to apply this year for regulatory approval in Europe and the United States. The trial of more than 1,500 patients was part of the third and final stage of studies generally required for US approval. The drug was safe and tolerable across different dosing frequencies, Biogen said. The most common side effects were redness at the injection site and flu-like symptoms.

<http://swissinnovation.org/newsUS/web/2013/03-130124-22.html>

## New clues on deadly skin cancer

(The Boston Globe, January 25, 2013)

Two teams of scientists working independently to understand the biology of a deadly skin cancer have made a surprising discovery. A set of genetic mutations found in most melanomas, sitting in a region of the genome that has largely been overlooked. Finding these mutations in the vast majority of tumors studied suggests that the researchers in Boston and Germany may have stumbled upon a fundamental mechanism that may be involved in a hallmark trait of cancer cells: Their ability to live forever. Both teams were surprised by their convergent results, which also suggest that an area of the genome that has been neglected, largely because of the cost and difficulty of studying it, should be scoured to look for the genetic underpinnings of other cancers.

<http://swissinnovation.org/newsUS/web/2013/03-130125-24.html>

## New cancer related mutations in non-protein-coding DNA

(Harvard, January 25, 2013)

Two mutations that collectively occur in 71 percent of malignant melanoma tumors have been discovered in what scientists call the "dark matter" of the cancer genome, where cancer-related mutations haven't been previously found. The researchers said these cancer-associated mutations are the first to be discovered in the vast regions of DNA in cancer cells that do not contain genetic instructions for making proteins. The mutations are located in non-protein-coding DNA that regulates the activity of genes. The mutations affect a promoter region – a stretch of DNA code that regulates the expression of a gene – adjacent to the TERT gene. TERT contains the recipe for making telomerase reverse transcriptase, an enzyme that can make cells virtually immortal, and is often found overexpressed in cancer cells.

<http://swissinnovation.org/newsUS/web/2013/03-130125-9b.html>



## Harvard to lead study of NFL players

(The Boston Globe, January 29, 2013)

Cross-campus research on 1,000 retired players aims to treat, prevent wide health problems. The National Football League players union, alarmed that its members die nearly 20 years earlier on average than other American men, has selected Harvard University to oversee a \$100 million accelerated research initiative aimed at treating and ultimately preventing the broad-ranging health problems plaguing the athletes. Harvard specialists from across its many schools and affiliated hospitals will team up with the NFL Players Association in an unprecedented study of 1,000 retired players. The researchers will look at everything from their repetitive brain traumas, torn knee ligaments, and arthritic joints to the gnawing effects of long-term exposure to acute pain and chronic use of painkillers.

<http://swissinnovation.org/newsUS/web/2013/03-130129-ef.html>





## Brain plaque PET scan covered by Medicare

(The Boston Globe, January 29, 2013)

Advanced imaging that detects plaque in the brain should be covered by Medicare and private insurers for select people with dementia to help diagnose or rule out Alzheimer's disease. The recommendations are the first to help govern the burgeoning field of brain imaging and may increase the use of the practice to improve care for the 5 million Americans affected with Alzheimer's disease. The Alzheimer's Association and the Society of Nuclear Medicine and Molecular Imaging crafted the proposal to address which patients might benefit from the PET scan technology that detects plaque. While amyloid plaque is a hallmark of Alzheimer's disease, not everyone with it has the mind-robbing condition.

<http://swissinnovation.org/newsUS/web/2013/03-130129-e2.html>

## Kendall Square a hub for multiple sclerosis research

(The Boston Globe, January 29, 2013)

Genzyme's moves a step closer to building a multidrug multiple sclerosis (MS) franchise based in Kendall Square — blocks away from the research campus of the world's leading maker of MS treatments, Biogen Idec Inc. Multiple sclerosis, a potentially debilitating autoimmune disease, affects the brain and central nervous system of an estimated 400,000 people in the United States and 2.5 million globally. Genzyme's push into the lucrative market, which analysts estimate at \$13 billion annually, is a departure for the biotech pioneer known for developing drugs to treat rare genetic disorders such as Gaucher and Fabry diseases, which affect smaller numbers of patients.



<http://swissinnovation.org/newsUS/web/2013/03-130129-e4.html>

## MIT students create new medical devices

(MIT, January 30, 2013)

Precision machine design class links doctors with students to find ways of meeting pressing medical needs for new technology. When clinicians in a Boston-area hospital wish there was a device that could meet some specific need, they have a chance to do something about it: They can add it to a wish list to be presented each fall to a class of mechanical engineering students at MIT. These budding engineers then spend a semester coming up with ideas, and eventually prototypes, to solve selected problems. Sometimes these projects end up becoming real products.

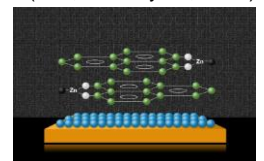
<http://swissinnovation.org/newsUS/web/2013/03-130130-69.html>

# 4. Nano / Micro Technology / Material Science

## Molecular memory

(MIT, January 23, 2013)

An experimental technology called molecular memory, which would store data in individual molecules, promises a 1,000-fold increase in storage density. But previous schemes for molecular memory have relied on physical systems cooled to near absolute zero. An international team of researchers led by Jagadeesh Moodera, a senior research scientist in the MIT Department of Physics and at MIT's Francis Bitter Magnet Laboratory, describes a new molecular-memory scheme that works at around the freezing point of water — which in physics parlance counts as "room temperature." Moreover, where previous schemes required sandwiching the storage molecules between two ferromagnetic electrodes, the new scheme would require only one ferromagnetic electrode.



<http://swissinnovation.org/newsUS/web/2013/05-130123-85.html>

# 5. Information & Communications Technology

## Self-monitoring for safe e-health records

(The Boston Globe, January 07, 2013)

The federal office in charge of a massive rollout of electronic health records has a plan to make those systems safer by encouraging providers to report problems to patient safety organizations. The Office of the National Coordinator for Health Information Technology delegated various monitoring and data-collection duties to existing federal offices, including the Agency for Healthcare Research and Quality. The office has asked patient safety organizations, which work with doctors and hospitals to monitor and analyze medical errors, to add health IT to their agendas. Data from the organizations would be aggregated by the agency, but reporting by doctors would be voluntary.

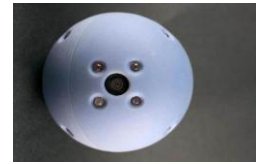
<http://swissinnovation.org/newsUS/web/2013/05-130107-d5.html>



## Camera-ball for emergency responders

(The Boston Globe, January 07, 2013)

Bounce, one of Boston's most promising hardware start-ups, is developing a tossable, baseball-size orb embedded with cameras and other sensors. Pitch it into a dangerous situation and it sends back panoramic pictures and data about what's happening — without putting people at risk. Bounce won \$50,000 in last year's MassChallenge competition, and Time Magazine named it one of the best inventions of 2012. The company is building test units and plans to start working with New England law enforcement agencies to see how the orb can be helpful and how it might be improved. The target price is about \$500.



<http://swissinnovation.org/newsUS/web/2013/05-130107-96.html>

## "We make babies" App

(The Boston Globe, January 14, 2013)

The Cambridge start-up Ovuline is pretty clear about its mission: "We make babies," founder Paris Wallace likes to say. In 2013 Ovuline is pitching an app and a website to help the process along. And the company has just raised \$1.4 million from a group of investors including Lightbank, Cambridge-based Launch Capital, LionBird, and TechStars chief executive David Cohen. Ovuline sells a mobile app and access to a website to help women monitor fertility and get advice about "what to do every day to maximize it," Wallace said. "We are finding our early users are getting pregnant two times faster than the national average."

<http://swissinnovation.org/newsUS/web/2013/05-130114-78.html>

## Restaurants resisting tech start-ups

(The Boston Globe, January 20, 2013)

The Toast app makes it simple to split the bill when you're out with a group. But for now, you can only try it at one restaurant. The Toast app is one of many apps trying to make visits to a restaurant more palatable. Part of the appeal is that the industry is massive: Americans will spend about \$660 billion dining out this year, according to the National Restaurant Association's forecast. And part of it is that, aside from the cash register, technology hasn't yet had a wide impact on the business. But many of the food-focused entrepreneurs have already discovered just how difficult it can be to introduce new technologies in the industry, and several have given up after chewing through hundreds of thousands of dollars.



<http://swissinnovation.org/newsUS/web/2013/05-130120-af.html>

## MIT university website hacked in memorial of Aron Swartz

(The Boston Globe, January 22, 2013)

In a tribute to Aaron Swartz, the 26-year-old cyber activist who committed suicide earlier this month, computer hackers took down the website of the MIT for an hour. Outside viewers who visited the university's web domain saw a black page with white text reading, "R.I.P. Aaron Swartz, Hacked by grand wizard of Lulzsec, Sabu." The student newspaper, The Tech, reported the outage -- at least the second time in the last month that MIT has been hacked. People who visited the website were redirected from the usual servers to a web page hosted by a security company called CloudFlare. CloudFlare was not hacked, a person who "obtained unauthorized control" over the mit.edu domain used CloudFlare's Domain Name Servers to host the domain.

<http://swissinnovation.org/newsUS/web/2013/05-130122-36.html>

## Big medical data

(MIT, January 25, 2013)

At the intersection of medicine and computer science, researchers look for clinically useful correlations amid mountains of information. Peter Szolovits, a professor in the Department of Electrical Engineering and Computer Science (EECS) and the Harvard-MIT Division of Health Sciences and Technology (HST), directs the Clinical Decision Making group at CSAIL (Computer Science and Artificial Intelligence Laboratory), which is researching a whole host of methods for bringing artificial intelligence to bear on medical care. The group participates in a large initiative, sponsored by the National Institutes of Health, to create a database system that would link genomic data and clinical data so that physicians could more easily test hypotheses about connections between genetic variations and particular diseases.

<http://swissinnovation.org/newsUS/web/2013/05-130125-d2.html>



## One of the hottest Big Data startups

(The Boston Globe, January 30, 2013)

DataGravity, a start-up based in Nashua making data crunching technology for smaller businesses, has raised \$30 million from a team of venture capitalists that include Netscape cofounder Marc Andreessen. The size of the funding, as well as the cachet of backing from a pioneer of the Internet Age, has made DataGravity one of the hottest start-ups in the Boston area. DataGravity is part of a fast-growing technology sector that broadly has become known as big data, in which companies use highly sophisticated analytic tools to extract customer leads, business insights, and other useful information from the massive amounts of data they and others collect.

<http://swissinnovation.org/newsUS/web/2013/05-130130-5e.html>

## Cybersecurity hub in Massachusetts

(The Boston Globe, January 30, 2013)

The growing cadre of Massachusetts cybersecurity companies ranges from the giant defense contractor Raytheon Co. to small start-ups such as Co3 Systems Inc. in Cambridge. Many of them, such as Arbor Networks Inc. of Burlington and Courion Corp. of Westborough, are on hiring sprees to keep up with the demand for their services. Their growth is helping to fuel a cybersecurity sector in Massachusetts that many say is second only to Silicon Valley's in terms of its concentration of security professionals and academics who focus on a potent and costly problem. The state is home to more than two dozen cybersecurity companies and organizations that, combined, employ hundreds of professionals.



<http://swissinnovation.org/newsUS/web/2013/05-130130-46.html>

## 6. Energy / Environment

### Record: warmest year in Boston in 2012

(The Boston Globe, January 02, 2013)

2012 was the warmest year ever recorded in Boston, according to the National Weather Service. Most people will remember the balmy winter which, at an average of 2.9 degrees Celsius, turned out to be the second warmest on record and the fourth least snowy. The average annual temperature was 12.3 degrees Celsius about 1.5 degrees higher than normal. Across New England, other cities also reported record or near-record warming last year such as Hartford, Providence, and Burlington, Vt.

<http://swissinnovation.org/newsUS/web/2013/06-130102-b5.html>

### Catastrophic risk-modeling for insurances

(The Boston Globe, January 06, 2013)

AIR Worldwide, a Boston company that uses computer models to help insurers determine the risk of losses from disasters and set rates accordingly calculate the amount of damage the storm could cause, even before it made landfall. The final estimate: as much as \$22 billion in insured losses, making it the one of the costliest US storms on record. AIR Worldwide is one of the nation's three major catastrophic risk-modeling firms, tracking damage from tornadoes, earthquakes, tsunamis, and — of course — hurricanes around the globe. The models have become controversial, however, as insurers use them to justify rate increases, particularly near the coast.



<http://swissinnovation.org/newsUS/web/2013/06-130106-f8.html>

### Newest deep sea submarine

(The Boston Globe, January 14, 2013)

A makeover of the storied Woods Hole-based sub Alvin will let scientists descend four miles below sea level to explore the earth's final frontier. Launched during the Space Age and overshadowed by missions to the moon, the deep-diving submersible known as Alvin has nonetheless racked up an impressive list of explorations over more than 40 years of plying the world's oceans. And now, after a year-long retrofit, Alvin is ready to tackle what many scientists consider the last frontier on earth — the deepest parts of the ocean floor — and transmit its findings back in broadcast-quality pictures and video.



<http://swissinnovation.org/newsUS/web/2013/06-130114-83.html>



## Massachusetts solar power installations doubled in 2012

(The Boston Globe, January 19, 2013)

Massachusetts recorded its largest number of new solar power installations in 2012, as hundreds of homeowners and large institutions and businesses, such as schools and big box stores, took advantage of government-backed incentives for renewable resources. The surge in installations more than doubled the amount of solar power in Massachusetts to 194 megawatts — enough to power around 30,000 homes, according to the state Department of Energy Resources. Moreover, with a number of projects already scheduled for installation this year, Massachusetts is likely to achieve its goal of having 250 megawatts of solar generating capacity well before a 2017 deadline.



<http://swissinnovation.org/newsUS/web/2013/06-130119-1a.html>

## Torpedo robots to locate whales

(The Boston Globe, January 20, 2013)

The torpedo-shaped underwater robots, called gliders, can read calls from four types of endangered whales and relay their locations in real time. And they can do it in weather too harsh for the plane and boat surveys now used to find whales. On a three-week trip between the gliders developed by the Woods Hole Oceanographic Institution located nine right whales. The robots also led the Endeavor into an area where researchers were able to observe the whales firsthand, once the waters calmed. The gliders are primarily about protecting whales, since knowing where the whales are can help regulators devise rules that prevent fatal human contact, such as ship strikes.

<http://swissinnovation.org/newsUS/web/2013/06-130120-37.html>

## Young ocean scientist students explore Nantucket

(The Boston Globe, January 21, 2013)

The Nantucket Field Station sits on one of the most spectacular natural resources New England has to offer. The setting will be a new year-round home for ocean science students from the University of Massachusetts Boston, who are more accustomed to the urbanized environs of Boston Harbor. In their studies here, the students will address specific issues, such as the water-quality concerns of the island's scallop fishermen, as well as the much broader issue of climate change preparation in a coastal community. Although the field station facilities are modest, the 107-acre site attracts world-class researchers to study the environment, biology, and weather of Nantucket.



<http://swissinnovation.org/newsUS/web/2013/06-130121-10.html>

## FDA approved hospital iRobot device

(The Boston Globe, January 24, 2013)

iRobot Corp., best known for its Roomba vacuum cleaners, has won Food and Drug Administration clearance for a new line of robots designed to let doctors interact with hospital patients remotely. Hospitals often use telemedicine to allow specialists to diagnose patients from long distances. The sleek, 5-foot-6-inch robot called the RP-VITA is designed to navigate around hospitals on its own and has a 15-inch LCD screen as a face. It represents the early stages of a big push by iRobot into the health care market as the defense side of its business continues to contract. IRobot began a partnership with InTouch Health about a year ago when it invested \$6 million to buy a minority stake in the company.

<http://swissinnovation.org/newsUS/web/2013/06-130124-1b.html>

## Easy price-comparison for home energy upgrades

(The Boston Globe, January 30, 2013)

Chris Buchanan and Robert Lawless want to make buying a heating system, windows, or solar panels almost as easy as buying a plane ticket online. They have formed a start-up, -Enmojo, to act as a price-comparison website for home energy products. Homeowners key in the relevant information, and Enmojo returns a handful of price quotes from providers qualified to do the work. Enmojo's founders used to work for Next Step Living, a Boston firm that provides energy audits and related services, and so bring a deep background in helping homeowners with the complex and sometimes daunting task of making homes energy-efficient.



<http://swissinnovation.org/newsUS/web/2013/06-130130-54.html>





## Carmakers collaborate on hydrogen cars

(The Boston Globe, January 29, 2013)

Ford is joining with Daimler and Renault-Nissan to speed development of cars that run on hydrogen, with hopes of bringing a vehicle to market in as little as four years. Hydrogen fuel cell vehicles generate electricity after a chemical reaction between hydrogen and oxygen. Hydrogen is stored in special high-pressure tanks, and the only emissions are water vapor and heat. Under the alliance, each company will invest equally in the technology. They plan to develop a common fuel cell system that the companies will use to power their own vehicles.

<http://swissinnovation.org/newsUS/web/2013/06-130129-59.html>

## Ambitious solar manufacturing and research plant

(The Boston Globe, January 30, 2013)

1366 opened a \$6 million pilot plant in Bedford, financed completely by private investors. The one-story, 42,000-square-foot manufacturing and research complex with green-tinted windows is the first step for the company, before accepting federal money. 1366 Technologies' main challenge, said Lux analyst Fatima Toor, will be remaining cost-competitive in a still emerging US industry that has been left reeling as low-cost foreign rivals drive down solar panel prices. 1366 Technologies said its manufacturing process can make wafers for 10 cents to 12 cents per watt, compared to roughly 20 cents for standard wafer manufacturing processes.

<http://swissinnovation.org/newsUS/web/2013/06-130130-8a.html>



## 7. Engineering / Robotics / Space

### New pool cleaning robot

(The Boston Globe, January 04, 2013)

iRobot Corp. is diving into the deep end, with a new machine that automatically cleans swimming pools. Among the products being introduced by the robot-maker is a submersible named the Mirra 530 that automatically calculates the size and shape of a pool, then scours its floor and sides to remove algae and bacteria. The Mirra also filters 70 gallons of water per minute, reducing the need to run the pool's own filtration system. The company also announced a major upgrade to its Looj, a robot designed to clean leaves and other debris from a building's rain gutters. It features a new design that will enable it to fit inside smaller, narrower gutters.

<http://swissinnovation.org/newsUS/web/2013/07-130104-3f.html>



### Moons offering asylum to Life

(The Boston Globe, January 21, 2013)

The search for life beyond our solar system tends to focus on finding familiar ground — a rocky, Earth-like world that sits in its star's habitable sweet spot, where water is liquid and life could thrive. But scientists have found moons that could host life in areas previously considered uninhabitable. For example, planets that are too cold and far from their suns to support life may have moons that are perfectly suited. Case in point: Io, Jupiter's volcanic moon. Jupiter is far from the sun's warmth, but Io has what's called tidal heating, due to the gravitational pull the moon is heated to more than 2000 degrees. In this case, it is too hot, but one can imagine a bit cooler moon, outside of the traditional 'habitable zone'.

<http://swissinnovation.org/newsUS/web/2013/07-130121-c2.html>



### Boeing 787 battery problem remains unsolved

(The Boston Globe, January 28, 2013)

Although a fire destroyed one of two big batteries on a Boeing 787 parked at Logan International Airport in Boston on Jan. 7, a quick examination of the second battery found "no obvious anomalies," according to the National Transportation Safety Board. The second battery was of identical design but used for a different purpose than the first, the agency said. Its report added scattered details to what is known about the incident, one of two battery problems that led to the grounding of all 50 of the 787s in airline service. The board said its laboratory was continuing to study the destroyed battery, whose function was to start the auxiliary power unit, a small engine used mostly on the ground.

<http://swissinnovation.org/newsUS/web/2013/07-130128-2c.html>





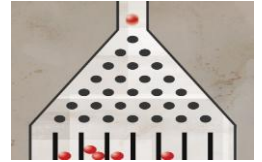
## 8. Physics / Chemistry / Math

### Steps towards quantum computing

In early 2011, a pair of theoretical computer scientists at MIT proposed an optical experiment that would harness the weird laws of quantum mechanics to perform a computation impossible on conventional computers. Commenting at the time, a quantum-computing researcher at Imperial College London said that the experiment “has the potential to take us past what I would like to call the ‘quantum singularity,’ where we do the first thing quantumly that we can’t do on a classical computer.” In December, four different groups of experimental physicists, centered at the University of Queensland, the University of Vienna, the University of Oxford and Polytechnic University of Milan, reported the completion of rudimentary versions of the quantum experiment.

<http://swissinnovation.org/newsUS/web/2013/05-130118-ec.html>

(MIT, January 18, 2013)



## 9. Architecture / Design

### Yale University Art Gallery reopened

The Yale University Art Gallery, reopened after a series of renovations. Here are some of the virtues that make the Yale Art Gallery an architectural winner. Credit goes to director Reynolds and a New York firm of architects known as Ennead. There’s no entry fee, no ID check, no fuss. The message is that this place is about art. It’s made of more than one building. One is a modernist classic of 1953 by a famous architect, Louis Kahn. One is a bulky work of 1928 that looks like a medieval castle. It’s full of memorable interiors.

<http://swissinnovation.org/newsUS/web/2013/09-130126-6f.html>

(The Boston Globe, January 26, 2013)



## 10. Economy, Social Sciences & Humanities

### Steep decline in foreclosures

In another sign of brightening, fewer Massachusetts homeowners went into foreclosure and lost their properties to lenders in November. There were 295 completed foreclosures in November, a decline of almost 60 percent from November 2011, according to the Warren Group, a Boston company that tracks local real estate. Between January and November, the number of completed foreclosures fell to 7,158, a drop of nearly 8 percent compared to the first 11 months of 2011, according to the Warren Group. Last year is also likely to have the smallest number of completed foreclosures in the state since 2006, when the housing crisis began.

<http://swissinnovation.org/newsUS/web/2013/10-130102-ab.html>

(The Boston Globe, January 02, 2013)

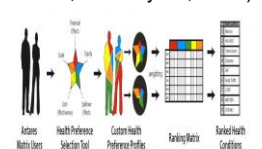


### Relation of poverty and poor health

Poverty and poor health perpetuate each other. Antares, a collaboration between the Harvard Business School and the Harvard School of Public Health, was created to address both. Antares is based on the premise that if high-impact health interventions can be delivered using commercial systems, they can extend coverage significantly. To ensure a focus on the most pressing health issues, Antares developed a health priorities matrix, which takes into account traditional measures such as mortality and cost-effectiveness and factors such as household income, impact on women, and social externalities. A web tool has been created to implement the Matrix. Populated with health data from a country or a region within a country, the Matrix can show the health priorities that correspond to specific choices based on individual preferences.

<http://swissinnovation.org/newsUS/web/2013/10-130109-9c.html>

(Professor Michael Chu and Professor David Bloom, January 09, 2013)



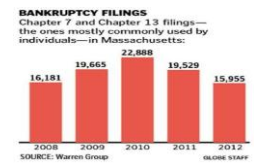


## Less bankruptcy in the US in 2012

(The Boston Globe, January 22, 2013)

Bankruptcy filings plunged last year in Massachusetts and nationwide as consumers continued to shun credit card debt and beefed up their savings. Personal bankruptcies fell 18 percent in Massachusetts last year, according to Warren Group, the Boston company that publishes Banker & Tradesman. Including businesses, there were about 16,100 filings for bankruptcy protection in the state in 2012, down from more than 19,700 in 2011. The Massachusetts figures reflect a national trend. Nationwide, bankruptcy filings fell by 14 percent last year to the lowest tally since 2008 financial crisis, according to data collected by the Epiq Systems Inc. for the American Bankruptcy Institute, a research group in Alexandria, Va.

<http://swissinnovation.org/newsUS/web/2013/10-130122-bf.html>



## Collaborative symphony of Toronto

(The Boston Globe, January 27, 2013)

Tod Machover, the Boston-based composer and technologist, was recently commissioned by the Toronto Symphony Orchestra to write a piece about the city. He wrote a symphony not for the city of Toronto but with the city of Toronto, a piece of music that would ultimately be about Toronto in a way that was granular, participatory, and reflective of an urban landscape in all of its component parts. He involved collecting recorded urban sounds and actual musical ideas from Torontonians of all stripes, and forged those into a hopefully coherent whole. The premiere of "A Toronto Symphony" will be held on March 6.

<http://swissinnovation.org/newsUS/web/2013/10-130127-e8.html>



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

### Cambridge born car sharing giant sold for half a billion

(The Boston Globe, January 02, 2013)

Avis is buying Zipcar for \$491.2 million, expanding its offerings from traditional car rentals to car sharing services. Car sharing has become a popular alternative to traditional rentals in metropolitan areas and on college campuses, allowing members to get a vehicle quickly for short trips. Zipcar, which was founded in 2000, has more than 760,000 members. It went public in 2011 and posted net income of \$850,000 in the first nine months of this year. The car sharing companies also pay for fuel, a cost not included in standard car rentals. Bringing the Avis fleet into play will help Zipcar meet high demand on weekends.

<http://swissinnovation.org/newsUS/web/2013/11-130102-7b.html>



### New businesses drawn to Boston Financial District

(The Boston Globe, January 07, 2013)

The new or incoming tenants include the Internet payment giant PayPal, the engineering business Technip, and Brightcove Inc., a digital media company that moved into 80,000 square feet at the base of the Atlantic Wharf tower. In 2012, those and other companies made commitments to fill nearly 700,000 square feet in the Financial District, helping it to recover rapidly from the recession. The companies moving in are creating a more diverse business environment, with many more smaller companies in the mix, as opposed to a few financial behemoths taking up nearly all the space. "It's setting a completely different tone," said Bill Barrack, a managing director of Jones Lang LaSalle, a real estate services company with offices in the heart of the district.

<http://swissinnovation.org/newsUS/web/2013/11-130107-27.html>



### Apple R&D outpost in Kendall Square

(The Boston Globe, January 14, 2013)

Apple seems to have set up a new office in Kendall Square, just a few floors from Amazon.com in the Cambridge Innovation Center. Building residents say an Apple sign appeared above an office door just before the holidays. The single door has frosted glass; the office looks like it could hold four or five people. Apple always has had sales and support staffers in the Boston area to serve corporate and academic customers. But what would be big news is if this is a new engineering or R&D outpost. Historically, those are activities Apple has done only at its Cupertino, Calif., headquarters.

<http://swissinnovation.org/newsUS/web/2013/11-130114-20.html>



## Venture capitalists avoiding risks

(The Boston Globe, January 18, 2013)

Venture capital funding for start-ups dropped nationwide and in Massachusetts last year as investors shied away from backing biotechnology companies, traditionally a bright spot for investment in New England. Overall spending for New England fell to \$3.2 billion, a 3.3 percent decline compared with 2011, and declined 10 percent nationwide, to \$26.5 billion, according to the quarterly Money Tree Report by PricewaterhouseCoopers and the National Venture Capital Association, based on data from Thompson Reuters. The decline in investments follows a few years of growth in the venture capital market.

<http://swissinnovation.org/newsUS/web/2013/11-130118-69.html>

## Patent law hindering innovation

(The Boston Globe, January 20, 2013)

Patents have become a costly and controversial part of the business world: In every sector of the economy, companies spend an increasing amount of time defending, prosecuting, and worrying about the billion-dollar lawsuits that could be on the horizon. Seemingly overnight, we have seen the rise of an entire class of companies—monetizers, or so-called patent trolls—that do nothing but buy up existing patents and then sue manufacturers for violating them. As many critics have begun to point out, what we are seeing is a system of profound importance in American life that has careened out of control. Patents, meant to encourage innovation, today are increasingly threatening to strangle it.

<http://swissinnovation.org/newsUS/web/2013/11-130120-d7.html>



## Amazon's secret business at Kendall square

(The Boston Globe, January 27, 2013)

Amazon found temporary office space early last year at the Cambridge Innovation Center in Kendall Square. Most of Amazon's employees work behind frosted glass walls; the doors open only for employees with an access card. "They are building some sort of new device that will have speech as an interface," said Michael Phillips, a speech recognition entrepreneur who founded Vlingo in Cambridge in 2006. Whatever is cooking in Cambridge, one thing is certain: As the company comes close to tapping out the Seattle labor pool, it needs to set up bases in other parts of the country to bring on more technology talent. Amazon plans to move to new offices at 101 Main St. this spring that will be large enough for several hundred employees.

<http://swissinnovation.org/newsUS/web/2013/11-130127-73.html>



## New "Crowd-Funding" site

(The Boston Globe, January 28, 2013)

A Lexington firm that has helped several Kickstarter projects go from concept to finished product is getting ready to launch a rival "crowd-funding" site. Scott Miller, the former iRobot Corp. executive who runs Dragon Innovation, is planning to unveil Dragon Launcher next month, with a carefully chosen set of five to 10 hardware products. Like Kickstarter, Miller says, Dragon Launcher will take a fee of about 10 percent of the money raised. But unlike at Kickstarter, Dragon Innovation's consulting services will be priced into each project.

<http://swissinnovation.org/newsUS/web/2013/11-130128-82.html>

## Job placing for seniors

(The Boston Globe, January 31, 2013)

Since high-tech entrepreneur Alan Greenfield retired, he has filled his days with trips, dance classes, and volunteer work. Yet the engineer with a degree from MIT is most excited about his new \$10-an-hour job helping low-income families file their tax returns and maximize their refunds. Greenfield is among the first in Boston to find work through ReServe Inc., a non-profit that puts adults age 55 and up to work in schools, government offices, and community agencies. ReServe, matches people – often recent retirees or unemployed older workers – with part-time jobs, paying them \$10 an hour for their help. Foundations and private donors have funded the concept in seven cities – including Miami, Milwaukee, and now Boston.

<http://swissinnovation.org/newsUS/web/2013/11-130131-12.html>







## 12. General Interest

### What will 2013 bring?

(The Boston Globe, January 06, 2013)

As we begin 2013, things may not seem all that different from 2012. It's change, yes, but the kind of change we expect. But one thing is not predictable: science and technology. It is those — the unique products of the human mind — that are not only unforeseeable, but whose impact can radically remake our lives. Improvements in carbon sequestration could solve the problem of global climate change. Developments in battery technology might do the same, dramatically reducing the need for internal combustion engines. Continued progress in our ability to manipulate DNA could wipe out a major disease or eliminate birth defects.



<http://swissinnovation.org/newsUS/web/2013/12-130106-1d.html>

### Falling unemployment rate

(The Boston Globe, January 18, 2013)

The number of Americans seeking unemployment aid plummeted to a five-year low last week, a hopeful sign the job market may be improving. But much of the decline reflects seasonal volatility in the data. Weekly unemployment benefit applications fell 37,000 to a seasonally adjusted 335,000. That's the lowest level since January 2008, just after the recession began. Applications are a proxy for layoffs. Overall, applications remain at a level that suggests employers are hiring at a slow but steady pace. Applications fluctuated between 360,000 and 390,000 for most of last year. At the same time, employers added an average of 153,000 jobs a month. That's just been enough to slowly push down the unemployment rate, which fell 0.7 percentage points last year to 7.8 percent.



<http://swissinnovation.org/newsUS/web/2013/12-130118-d9.html>

## 13. Calls for Grants / Awards

### > Win a 10-Day Startup Development Program in Boston

Every year 20 excellent entrepreneurs have the unique chance of travelling with other top start-ups to Boston as part of the official Swiss national startup team. You will have the opportunity of following an intensive ten-day business development course, and meet successful North American startups and venture capitalists. Included is a four-day entrepreneurship course offered by the famous Babson College. Apply by March 1st, 2013: <http://www.venturelab.ch/ventureleaders>.

<http://swissinnovation.org/newsUS/web/2013/13-130131-f4.html>

### > H-1B visa cap looming

The H-1B visa is the most common type of visa petition for US employers. To qualify, an employer must demonstrate to the government that a foreign national (non-US Citizen/green card holder) possesses at least a bachelor's degree or a foreign equivalent and that he or she is going to work for a US employer in a job that requires at least a bachelor's degree or a foreign equivalent in a particular field. Every year, the government begins accepting H-1B visa petitions for processing on April 1st. This date is important because the government numerically limits the number of H-1B visas that it issues annually. Last year, the H-1B visa cap was reached on June 12, 2012 and we expect that the cap will be reached even sooner this year.

<http://swissinnovation.org/newsUS/web/2013/13-130130-60.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](http://cordis.europa.eu/fetch?CALLER=FP7_NEWS&ACTION=D&RCN=34831)



> **New England Venture Summit**

Call for Top Innovators. The New England Venture Summit is an ideal venue to connect emerging growth companies with active Venture Capitalists, Angel Investors, Corporate VCs and Investment Firms. It provides an unparalleled opportunity for startups to meet, network and showcase their innovative investment opportunities to a leading group of investors.

<http://www.youngstartup.com/newengland2012/overview.php>

## **Upcoming Science and Technology Related Events**

>> More events at swissnex Boston:

<http://www.swissnexboston.org/activities/events-inhouse>

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