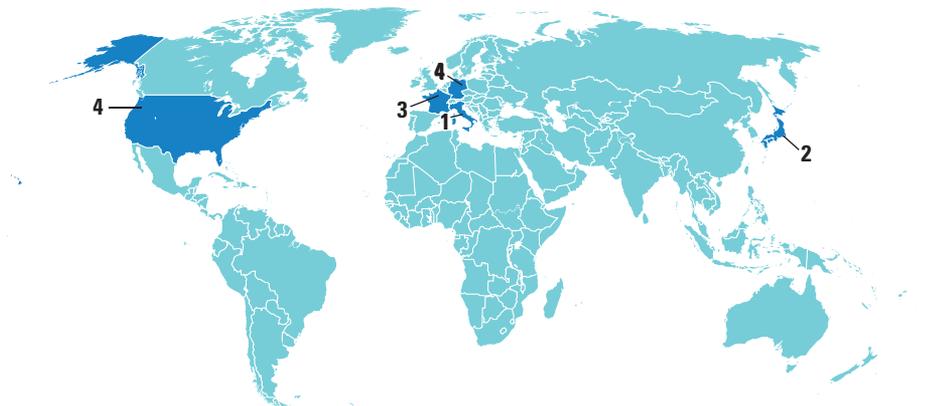


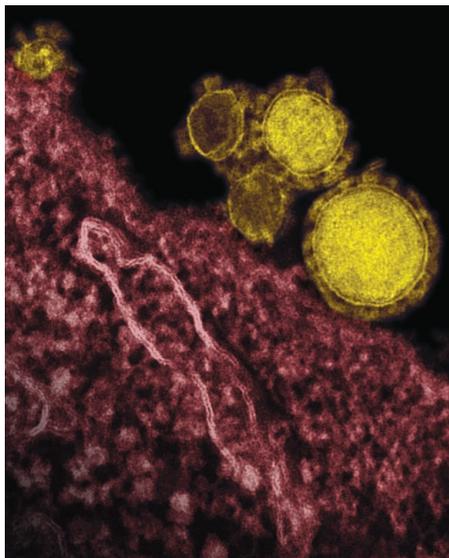
AROUND THE WORLD



Florence, Italy

Three MERS Cases in Italy

A deadly new virus that originated in the Middle East has made another jump to Europe. Italian health authorities have reported three cases of Middle East respiratory syndrome (MERS), the first of whom was a 45-year-old man who fell ill



after a 40-day trip to Jordan, where he is assumed to have picked up the virus. A 2-year-old girl and a 42-year-old woman who were in close contact with the man became infected in Italy.

The cluster is another clear sign that the virus can spread between people, although not very efficiently so far. That's worrisome to scientists and public health experts, who fear that MERS may start spreading more rapidly and trigger a pandemic. Caused by a distant cousin of the SARS virus, MERS is known to have occurred in Jordan, Saudi

Arabia, Qatar, and the United Arab Emirates; people infected in those countries had previously brought the virus to the United Kingdom, Germany, France, and Tunisia. So far, there have been 53 recorded cases, including 30 deaths.

Tokyo 2

Joining the Fight Against Neglected Diseases

Japan is joining global efforts to contain malaria, tuberculosis, and a variety of tropical diseases in a big way. On 1 June, a recently formed public-private partnership announced agreements to screen tens of thousands of drug candidates from Japanese private and public sector compound libraries for treatments for illnesses that primarily afflict the poor in developing countries.

The 11 initial agreements are the first fruits of a recently formed public-private Global Health Innovative Technology Fund (GHIT Fund), which brings together Japan's foreign affairs and health and welfare ministries, five pharmaceutical companies, and the Bill & Melinda Gates Foundation. The Japanese government is putting up a bit over one-half of the \$100 million committed to GHIT over the next 5 years; the drugmakers and the Gates Foundation are contributing the rest.

Even though Japan is a major producer of new pharmaceuticals, the country has been a bit behind other nations in contributing to the global health R&D effort, says BT Slingsby, the fund's CEO and executive director. GHIT is working with established nonprofits—the Global Alliance for TB Drug Development, the Medicines for Malaria Venture, and the Drugs for Neglected Diseases initiative—to help develop candidate drugs.

<http://scim.ag/GHITJapan>

Paris 3

Can Science Help France's Economy?

On 28 May, France's National Assembly approved a law that aims to simplify the national landscape for research and higher education, making it more efficient and more competitive at the European level. The bill, which comes hand in hand with a new strategic plan called France Europe 2020, also gives the government a greater role in coordinating research. The bill and the strategic plan have been sharply criticized by various groups of researchers and university professors.

The new national priorities include health, food security, climate change, sustainable energy, urban systems, digital technologies, and space; they will be periodically revised by a newly created strategic research council. The strategic plan is partly designed to reinvigorate industry through pathbreaking areas such as nanotechnologies and by promoting industry-academia partnerships.

But trade unions say that the government can't make science responsible for rescuing the economy and worry that the new plan will erode basic research. "There is a big concern because [the government] wants research to solve an economic problem and an industry problem," says Patrick Monfort, a marine ecologist with CNRS in Montpellier and the general secretary of SNCS-FSU, the national trade union for scientific researchers.

<http://scim.ag/Franceecon>

Oregon and Berlin 4

Furor Over U.S. GM Wheat

News that genetically modified wheat plants—last deliberately planted years ago—were found growing on an Oregon farm touched off an international uproar last week. Japan postponed wheat imports from Oregon, while South Korea and the European Union called for stepped up testing to ensure that GM wheat hasn't entered the food supply. Oregon's wheat crop, valued at up to \$500 million a year, now stands in jeopardy.

Science LIVE

Join us on Thursday, 13 June, at 3 p.m. EDT for a live chat with experts on **bioelectronics**.
<http://scim.ag/science-live>



Frown for the Camera

For decades, psychologists have used “Pictures of Facial Affect” (conceived by psychologist Paul Ekman) to examine human responses to “universal” facial expressions and emotions: anger, fear, sadness, happiness, surprise, and disgust. But these photos have a drawback: They’re primarily of Caucasian adults, and reactions to the expressions can depend on both race and age, says psychologist Vanessa LoBue of Rutgers University, Newark, in New Jersey.

So over the last 5 to 6 years, LoBue, with the help of photographer and former research assistant Cat Thrasher, has created her own set of more than 1200 photos, featuring 190 children of multiple demographics and ages (including the 4- to 6-year-olds shown here). Last month, LoBue received a National Science Foundation grant to conduct validation experiments of her new photo set, in which adults and children of different age groups will try to identify the expressions in each photo, and each photo will then get a “validity score” that researchers can use to design their own experiments. “Ultimately, the goal is to release the set for anyone to use for free,” LoBue says. “We spent so many years working on it, we feel like anyone should be able to use it.”

The latest GM row touched off in April after a farmer noticed wheat plants growing on his farm, although it had been sprayed with enough of the herbicide glyphosate to kill normal wheat. He contacted researchers at Oregon State University, Corvallis, who tested plant samples and discovered that they contain an introduced gene for glyphosate resistance, a GM technology field-tested by Monsanto in Oregon and 15 other states from 1998 to 2005. Monsanto dropped the project when it became clear there was little market for GM wheat.

Monsanto has come to a similar conclusion in Europe: It will not apply for new E.U. product licenses for GM varieties or conduct new field trials, a spokesperson told German newspaper *Die Tageszeitung* last week.

NEWSMAKERS

Storm Chasers Killed in Tornado

Tim Samaras, 55, an engineer and tornado researcher and “storm chaser,” was one of 13 people killed by a cluster of tornadoes that swept through central Oklahoma on 31 May. Two other storm chasers—Samaras’s

son **Paul**, 24, and researcher **Carl Young**, 45, were also killed, in the first known fatalities of storm interceptors during a tornado.

Samaras designed and built weather probes that he deployed in the path of tornadoes in order to gain scientific insight into their inner workings. He founded the Tactical Weather Instrumented Sampling in/near Tor-



Young and Tim Samaras

nadoes Experiment, consisting of a caravan of vehicles equipped with thermodynamic and video probes that deployed each spring during tornado season.

“We are terribly saddened by this news,” said a spokesperson for the National Oceanic and Atmospheric Administration in a statement on 3 June. “Samaras was a respected

tornado researcher and friend of NOAA who brought to the field a unique portfolio of expertise in engineering, science, writing and videography.”

First Fresenius Award To Immunologist

Yale University immunologist **Ruslan Medzhitov** has been awarded the first Else Kröner Fresenius Immunology Award. The scientist will receive \$650,000 for past achievements, plus an additional \$4.5 million for his ongoing research. The Fresenius Foundation plans to award the prize, which commemorates the 25th anniversary of the death of German pharmaceutical entre-



Medzhitov

preneur Else Kröner, every 4 years; each award will single out promising research in a different field.

“We wanted to single out the most innovative work in immunology done in the past that promises

to have the highest impact on future clinical immunology,” said immunologist Stefan Kaufmann, head of the selection committee, in a statement.

Medzhitov, who was born in Tashkent, Uzbekistan, worked with Yale immunologist Charles Janeway to elucidate how the human body fights infectious agents. Together, they showed that molecules called toll-like receptors recognize pathogens in the human body and activate the immune system. Medzhitov was controversially left out when the Nobel Committee recognized work in this field in 2011.

New Award to Target Young Scientists

Ukrainian billionaire **Leonard Blavatnik** and the New York Academy of Sciences (NYAS) this week announced the creation of a new national award specifically geared to help young scientists still working to establish their careers. Three unrestricted cash prizes of \$250,000 in three categories (physical sciences and engineering, chemistry, and life sciences) will be awarded annually by NYAS and the Blavatnik Family Foundation.

The award grew from a regional awards program that, beginning in 2007, recognized young scientists in New York, New Jersey, and Connecticut. The scientific advisory

council for the national award includes a number of heavy-hitters, including Ellis Rubinstein, the chair and CEO of the NYAS, and Tim Appenzeller, incoming news editor of *Science*. Institutions can choose nominees for the 2014 program from October to December 2013.

“The long-term goal of the Awards is to create a pipeline of scientific support, in which established scientists choose the most outstanding young faculty-rank scientists, who then go on to mentor the next generation of would-be scientists and award winners,” Rubinstein said in a statement.

FINDINGS

OK, Cupid: Online Dating Can Lead to Love

Once considered “creepy” by many, online dating has become mainstream with the rise of dating websites such as Match and OkCupid. Now, a new survey of nearly 20,000 Americans suggests that spouses who met online have marriages that are at least as stable and satisfying as those who met in the real world—possibly more so.

Curious about the impact of online dating, John Cacioppo, a psychologist at the University of Chicago in Illinois and a scientific adviser to eHarmony, convinced the company to pay for the survey. (Two statisti-

cians with no connection to the company, Elizabeth Ogburn and Tyler VanderWeele of the Harvard School of Public Health in Boston, analyzed the answers). In 2012, 19,131 people out of 200,000 who responded to an e-mail survey request were chosen; of those, more than a third reported meeting their spouse online. Still-married participants answered questions such as, “Please indicate the degree of happiness, all things considered, of your marriage.”

Online marriages, it turns out, were durable. In fact, people who met online were slightly less likely to divorce and scored slightly higher on marital satisfaction, the team reports online this week in the *Proceedings of the National Academy of Science*. <http://scim.ag/Onlinelove>

‘Crucial Link’ in Primate Evolution

A tiny fossil skeleton excavated from an ancient lakebed in central China is among the earliest known primates, a team reports this week in *Nature*. Dubbed *Archicebus achilles*, the creature lived 55 million years ago and probably weighed less than an ounce. Its discovery supports a once-controversial hypothesis: Primates first evolved in Asia and only later migrated to Africa.

A. achilles is likely a very early ancestor of modern tarsiers, a group of small,



big-eyed nocturnal primates with long heel bones that help them take powerful leaps. The fossil “sits at that critical part of the [evolutionary] tree right where the tarsier branch is splitting away from the anthropoid branch,” which includes monkeys, apes, and humans, says K. Christopher Beard, a paleontologist at the Carnegie Museum of Natural History in Pittsburgh, Pennsylvania, and a co-author of the study. Indeed, *A. achilles* has several anthropoid-like features, including relatively small eyes and a short heel bone.

“You don’t get these kind of complete fossils very often,” says John Fleagle, a paleontologist at Stony Brook University in New York who was not involved in the research. “It documents an aspect of primate evolution that we didn’t have much documentation for.” <http://scim.ag/Archicebus>

Random Sample

Red Meets White Atop Mont Blanc

By the time this issue of *Science* appears, 25 Dutch scientists and volunteers should be climbing Europe’s highest mountain, Mont Blanc in the French Alps, seeking to better understand the effects of hypoxia and low blood oxygen levels on blood coagulation. The mission, called “the red meets white study,” was scheduled to begin on 5 June in the French village of Chamonix near the base of the mountain (expedition logo, inset). Led by Dutch mountain guide Edward Bekker, the climbers plan to attain the summit, 5000 meters above sea level, by 14 June. Every thousand meters, each climber will offer up a drop of blood.

Previous alpine expeditions have sought a direct link—if one exists—between lowered blood oxygen levels and an increased risk of thrombosis, the formation of blood clots within blood vessels. But those efforts were unsuccessful, due to the failure of regular blood coagulation tests at high altitudes: At lower atmospheric pressures, not enough blood enters the catalyst-filled test tubes to get conclusive results.

But, expedition leader biochemist Bas de Laat of Maastricht University has a secret weapon—a new coagulation test specially adapted for the expedition that requires just a single drop of blood. De Laat divided his team into two groups—one hiking and one taking a cable car—to track how physical activity affects coagulation. Then, each team’s medical staff, consisting of cardiologists, a hematologist, and anesthesiologists, will use the new test, adapted from a standard test by Synapse BV (a Maastricht University spinoff company of which de Laat is the current CEO) that measures thrombin, a key blood clotting component that forms within 10 minutes after coagulation begins.

