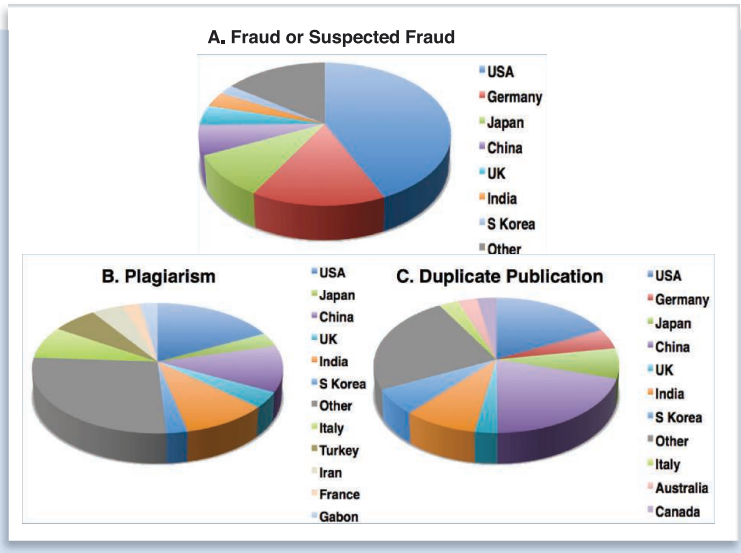
Most Papers Retracted for Misconduct

Geography helps tell the story of why biomedical papers are retracted—or so suggests a new study published online on 1 October in the *Proceedings of the National Academies of Sciences* (*PNAS*). Microbiologists Ferric Fang and Arturo Casadevall, along with medical writer R. Grant Steen, examined the reasons for retractions from multiple angles, and they found that the explanations partly track with the country where the research was done. Most papers retracted for fraud or suspected fraud involved work conducted in the United States. But when plagiarism and duplicate publications are the reason for retractions, locales such as China take a bigger slice of the pie.

More broadly, the *PNAS* study finds that misconduct (which includes fraud, plagiarism, and duplicate publication) accounts for about two-thirds of all retractions, to the authors' surprise. "I thought it was going to be error" that explained why most papers were pulled, says Casadevall of Albert Einstein College of Medicine in the Bronx, New York.



Science has the dubious distinction of coming first in a long list of journals with the most retracted articles in the past 40 years, with 70 retractions, edging out *PNAS* by one. http://scim.ag/retractstudy

Christoph Düllmann of the GSI nuclear research lab in Darmstadt, Germany. Will the adjudicators agree? Stay tuned. **http://scim.ag/element113**

NEWSMAKERS

Early Leader of Environmental Movement Dies


Commoner

Barry Commoner, a cell biologist who became an influential proponent of the 1963 Nuclear Test Ban Treaty, a leader of the burgeoning environmental movement, and a candidate for president, died on 30 September in New York at the age of 95. Known as an often provocative scholar, Commoner prompted a flurry of letters to *Science* in 1961 with an essay, "In Defense of Biology," that decried environmental threats and bemoaned "a widening gap between the more traditional areas of biology and those which are closely related to modern chemistry and physics" (*Science*, 2 June 1961, p. 1745). In 1970, *Time* magazine put Commoner on its cover, hailing him as a luminary in the "emerging science of survival." But when asked in 1976 what he would do if appointed White House science adviser, Commoner told *Science* he'd resign: "I don't believe in science advice. … Pressure from an informed public is far better than an advisory system" (*Science*, 6 August 1976, p. 464).

Polar Bear Biologist Cleared Of Misconduct Charges

Charles Monnett, a prominent U.S. government polar bear researcher who had been suspended amid allegations of research misconduct (*Science*, 5 August 2011, p. 681), has returned to work after being cleared of the most serious charges. But he is being reprimanded by his employer, the U.S. Bureau of Ocean Energy Management, Regulation and Enforcement, for e-mailing internal agency documents to several political officials and academics in Alaska. The decision ends a controversy that began in March 2010 when an anonymous government employee complained that Monnett had released information and manipulated data on polar bear mortality to thwart plans by the Shell energy company to drill exploratory wells in the Arctic. Monnett's allies cheered the decision. "We are pleased this misguided witch hunt is finally stumbling to a conclusion," said Jeff Ruch, executive director of Public Employees for Environmental Responsibility in Washington, D.C., which helped defend Monnett against the charges.

Gran Sasso Gets New Director

Physicist **Stefano Ragazzi**, of the University of Milano-Bicocca in Italy, has been appointed the next director of the Gran Sasso National Laboratory in L'Aquila, Italy, run by the Italian National Institute of Nuclear Physics. He replaces physicist Lucia Votano, who has held the post since 2009, on 15 October. Ragazzi, 57, began his scientific career studying neutrinos and later moved into high-energy physics. Starting in 1992, he coordinated several high-energy research groups at CERN, the European particle physics lab in Geneva, Switzerland. He also helped design calorimeters—devices that measure the energy of particles—that CERN's CMS experiment used in the hunt for the Higgs boson. "As a new director, the major challenge will be keeping the level of research as high as it has been so far, especially in the field of dark matter and the study of neutrinos' properties," Ragazzi says.


Ragazzi

FINDINGS

Obesity Hormone in Fruit Flies

When it comes to mealtime, fruit flies are more like people than we thought. The insects, researchers have found, churn >>

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Random Sample

Alfred Russel Wallace Goes Online

The eminent 19th century British naturalist Alfred Russel Wallace now has his own Web site. Wallace Online (http://wallace-online.org/) provides free searchable access to all 28,000 pages of his writings and other historical documents and to 22,000 images. Wallace and Charles Darwin were contemporaries who independently formulated the theory of evolution by natural selection. Aside from Darwin, "Wallace is the only other person in history who independently figured out the secret of life," says John van Wyhe, a science historian at the National University of Singapore who put the treasure trove of information together. Van Wyhe also created the popular Darwin Online Web site (http://darwin-online.org.uk/). The new site, timed to mark the hundredth anniversary of the naturalist's death in 1913, includes the full text of Wallace's magnum opus, *Darwinism*, which van Wyhe calls "next to *The Origin of Species*, the single greatest book ever written on evolution."

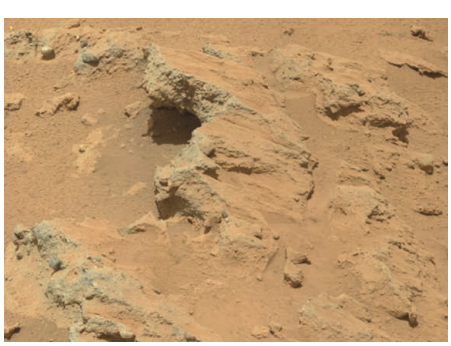
>>FINDINGS

out the hormone leptin—the same hormone that helps control appetite and metabolism in humans. Leptin has long fascinated scientists, who study it to sort out the molecular underpinnings of obesity. But until now, they thought that only vertebrates produced it. This new find could make it easier to uncover leptin's secrets.

Akhila Rajan, a postdoctoral fellow at Harvard Medical School in Boston, and her adviser, Norbert Perrimon, made the discovery after engineering flies that lacked a nutrient-sensing protein called Upd2. Flies without Upd2 look metabolically as if they're famished. But when Rajan inserted the human leptin gene into her flies, they didn't have that problem. The researchers concluded in a study published last week in *Cell* that Upd2 is the "functional homolog" of leptin, meaning the protein in flies acts very much as leptin does in people. Because flies are relatively easy to study in the lab, the researchers hope their discovery will make it easier to study leptin's biology. **http://scim.ag/obesefly**

Concrete Evidence for Water On Ancient Mars

Billions of years ago, enough water flowed into Gale crater fast enough to carry gravel to the middle of the crater floor—where the Curiosity rover has found and imaged it, the NASA mission's team reported in a press conference on 27 September. The broken face of a 15-centimeter-thick layer of rock sports bits of stone worn into pebbly roundness as they tumbled down from the nearby crater rim in a torrent of water. Previous Spirit and Opportunity rover investigations and orbital imaging have found evidence of salty ground water, evanescent puddles of brine, and flowing rivers on ancient Mars. But properties of the newly discovered rock, such as the size range of the gravel, will let researchers infer a great deal more about ancient water on Mars. Unfortunately, gravel laid down in torrential flows is about the worst sort of deposit to search for traces of ancient life. As demonstrated on Earth, the organic remains of long-ago life are far better preserved in the muddy deposits of quiescent lake bottoms. **http://scim.ag/Marswater**



Oocytes Created in a Dish Produce Normal Mice

A Kyoto University team led by stem cell biologist Mitinori Saitou has produced normal mouse pups using oocytes, or immature egg cells, created in vitro from embryonic stem cells and induced pluripotent stem cells (ES cells and iPS cells). The achievement is a first for mammals.

The researchers cultured mouse ES and iPS cells in protein cocktails to produce primordial germ cell-like cells. To get oocytes, they mixed these cells with fetal ovarian cells, forming reconstituted ovaries that they grafted onto natural ovaries in female mice. Four weeks later, the primordial germ cell-like cells had developed into oocytes. After in vitro fertilization, the researchers implanted the resulting embryos into surrogate mothers, producing normal mouse pups, the team reported online on 4 October in *Science*.

"It is remarkable that one can produce oocytes capable of sustaining complete development starting with embryonic stem cells," says developmental biologist Davor Solter of Singapore's Institute of Medical Biology who was not involved with the research. Saitou says that with more work, the team may be able to eliminate the grafting step, generating viable oocytes completely in vitro. In addition to shedding light on early developmental processes, the technique could lead to new human fertility treatments if technical challenges and ethical issues can be resolved, he says. **http://scim.ag/oocytes**

BY THE NUMBERS

$1.2 trillion Estimated annual worldwide cost of climate change, equivalent to about 1.6% of global GDP, according to a report released on 26 September by DARA and the Climate Vulnerable Forum.

50% Average decline in coral cover on the Great Barrier Reef from 1985 to 2012, according to a study published on 1 October in the *Proceedings of the National Academy of Sciences*.

Science LIVE

Join us on Thursday, 11 October, at 3 p.m. EDT for a live chat on a **hot topic in science**. **http://scim.ag/science-live**

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