BY THE NUMBERS

13% Reduction in sensitivity of the planned European Extremely Large Telescope (E-ELT), slated to be built in Chile. The telescope's mirror will be shrunk from 42 meters in diameter to 39.2 meters to save costs.

94.1% Percentage of Italian voters in a national referendum who chose to shelve the government's plans to resurrect nuclear energy.

Clues to Autism Emerge In Protein Network

Autism is a puzzle for scientists, with dozens of "suspect genes" scattered among various types of the disorder and showing up in the DNA of only a handful of patients. But now researchers have identified a densely connected network of proteins that may help reveal how autism develops.

Proteins working together inside cells sometimes physically touch each other; often, many of them will also link to a few central proteins that play a key role in a particular biological process, forming what researchers call an "interactome." Using a screening process to find interactomes relevant to autism, Huda Zoghbi, a neurobiologist at Baylor College of Medicine in Houston, Texas, and colleagues caught 500 proteins that connected with 26 proteins produced by different autism genes and also interacted with each other.

The proteins play key roles in a complex process, one that likely causes a problem at the synapses of people with autism, Zoghbi says. Her team reported its findings online 8 June in *Science Translational Medicine*. Pathways shared by different types of autism are promising targets for drug development, she adds. **http://scim.ag/autism-proteins**

Can Brain Scans Predict Music Sales?

A new study suggests that brain scans can reveal information about consumer preferences that couldn't be gained from old-fashioned marketing research methods like surveys and focus groups.

In 2007, neuroeconomist Gregory Berns of Emory University in Atlanta used functional magnetic resonance imaging to monitor brain activity in 27 teenagers as they listened to dozens of songs from the MySpace pages of unsigned artists. When one of the songs ("Apologize" by OneRepublic) became a huge hit, Berns reexamined his data to see if anything could have predicted it. One hot spot was the nucleus accumbens, a component of the brain's reward circuitry, he reports in a paper in press at the *Journal of Consumer Psychology*. The average activity elicited by a song in this region correlated with the song's sales over the next 3 years. Intriguingly, the brain scans predicted commercial success better than whether the subjects reported liking a song.

"This is a really cool result," says Brian Knutson, a cognitive neuroscientist at Stanford University in Palo Alto, California. He suggests that activity in the nucleus accumbens may provide a pure indication of how much people want something, unencumbered by economic and social considerations. **http://scim.ag/brain-music**

Random Sample

Matchmaker, Matchmaker

Pikas in the Pacific Northwest, kiss your privacy goodbye. This spring, Gregg Treinish, wildlife biologist, founder, and director of Adventurers and Scientists for Conservation (ASC), recruited 22 hikers on the Pacific Crest Trail from Campo, California, to Manning Park, British Columbia, to spy on the small, furry mammals. The hikers are recording pika sightings, straw nests, and even urine stains as part of a pilot project to track the impacts of climate change on the creatures.

Recruiting passersby for research is a time-honored tradition: Psychologists designing an experiment often grab stray students for a quick, cheap pilot study before shooting for the big bucks. Treinish wants to apply the same principle to ecological studies: the nonprofit ACS, founded in November 2010, seeks to connect scientists with far-ranging adventurers for "model expeditions that could be repeated on a widespread scale," he says. Researchers are already using his matchmaking to recruit intrepid explorers to catalog the presence of ice worms in glaciers or record grizzly movements near Yellowstone National Park. "There's no project too big or too small," Treinish says.

Elisabeth Holland, a biogeochemist and lead author of the Intergovernmental Panel on Climate Change reports, is on the ASC advisory board. Treinish has also recruited professional adventurers ranging from ocean rower Roz Savage to high-altitude mountaineer Conrad Anker as ASC advisers. Interested adventurers and scientists can register on his Web site: http://adventureandscience.org.

New Particle a No-Show In Second Act

It *would* have been the feel-good science story of the year. Two months ago, the 500 physicists working with the massive CDF particle detector at Fermi National Accelerator Laboratory (Fermilab) in Batavia, Illinois, reported hints of a bizarre new particle (*Science*, 15 April, p. 296). That unexpected find would have marked a triumph for the 25-year-old Tevatron atom smasher, which feeds CDF and will shut down this year, having been surpassed by a more-powerful atom smasher in Europe. Alas, physicists working with CDF's sibling at the Tevatron, the D0 detector, see no sign of the particle, which appeared to weigh about 160 times as much as a proton. That suggests the first team was misled by some unaccounted "systematic" effect in their analysis and that the particle doesn't exist.

Still, it's far from clear why the experiments disagree, says Robert Roser, a Fermilab physicist and co-spokesperson for the CDF team. "The fact that they don't see [the peak] means that the situation is muddy and that you have to get down in the mud and wrestle around and figure it out," he says. Mud wrestling over systematic errors may be less exciting than it sounds. **http://scim.ag/Fermilab**

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