

The drug, called trametinib, inhibits MEK, a protein that amplifies cancer-promoting signals. Keith Flaherty at the Massachusetts General Hospital in Boston and his team tested trametinib in melanoma patients with a mutated version of a RAS-pathway protein BRAF, which is mutated in 50% of advanced melanoma patients. A total of 322 patients were randomly assigned to receive either trametinib or standard chemotherapy.

Twenty-two percent of patients responded to trametinib, which delayed disease progression by 3 months longer than chemotherapy alone. *N. Engl. J. Med.* <http://dx.doi.org/10.1056/nejmoa1203421> (2012)

ARCHAEOLOGY

Cultural wellspring

Certain forms of art and music might have emerged among ancient humans living in southern Germany and then spread through Europe along the Danube River.

The Aurignacian culture, which is characterized by innovations such as figurative art and musical instruments (**mammoth-ivory flute pictured**), originated in Europe more than 40,000 years ago. However, imprecision in carbon dating has made it difficult to determine precisely where the culture arose. Thomas Higham at the University of Oxford, UK, Nicholas Conard at the University of Tübingen, Germany, and their team used improved sample preparation techniques for carbon dating to study Aurignacian remains from Geißenklösterle cave in southern Germany's Swabian Jura region.

The analysis revealed that the artefacts at Geißenklösterle are about 42,500 years old. This pre-dates other recently

dated Aurignacian sites in Europe.

J. Hum. Evol. <http://dx.doi.org/10.1016/j.jhevol.2012.03.003> (2012)

EXTRASOLAR PLANETS

A new world is born

Astronomers have identified a planet in the making.

The variable brightness of GM Cephei — a 4-million-year-old star 870 parsecs away — has been noted for decades. But whether that variability is caused by bursts of light from the star or by an object in the disk of dust that surrounds it has been a matter of debate.

Wen-Ping Chen at the National Central University in Jhongli, Taiwan, and his team argue for the latter. Using telescopes positioned around the world, the researchers monitored GM Cephei from 2009 to 2011 and found that the brightness of the star dipped each year for about a month. The researchers interpret this variability as evidence of a young planet: a clump of dust, roughly the mass of an asteroid, which is orbiting GM Cephei. *Astrophys. J.* 751: 118 (2012)

METABOLISM

A pathway for feeding control

The activation of a group of neurons in a region of the brain called the hypothalamus boosts food intake, but what controls this activation has been unclear. Researchers have now identified a receptor in these neurons that is targeted by a protein called FoxO1 to promote feeding.

The FoxO1 protein is involved in regulating the signalling of key hormones that suppress appetite. Domenico Accili at Columbia University in New York and his team deleted FoxO1 from mouse hypothalamic neurons

COMMUNITY CHOICE

The most viewed papers in science

EVOLUTION

Domesticated apes

HIGHLY READ
on journals.elsevier.com/animal-behaviour
March–May

Selection against aggression seems to have occurred naturally in some animals and to have led to traits similar to those seen in domesticated animals.

The bonobo (*Pan paniscus*) is less aggressive and more sociable than its sister species, the chimpanzee (*Pan troglodytes*). Brian Hare at Duke University in Durham, North Carolina, and his team propose that these differences, along with a suite of physical variations — bonobos have smaller childlike heads, plus paler lips and tails, than chimps — are a linked set of traits that parallel those seen in domesticated animals such as dogs and guinea pigs. Bonobos are, the authors argue, a self-domesticated ape.

Selection pressures that might have favoured bonobo self-domestication include the acquisition of bigger territories, reducing competition for food and the emergence of coalitions of females that enforced the peace.

Domestication, far from being a human invention, may also occur spontaneously in nature, they say.

Anim. Behav. 83, 573–585 (2012)

and found that the animals were leaner, ate less and had improved glucose and fat metabolism compared with normal mice. The researchers pinpointed the receptor Gpr17 as mediating the effects of FoxO1.

Targeting this pathway could be a strategy for anti-obesity drugs, the authors say. *Cell* 149, 1314–1326 (2012)

GEOPHYSICS

Ship GPS could flag tsunamis

Commercial ships on Earth's oceans could provide a cheap and easy way to track propagating tsunamis.

Current warning systems rely on sparse, expensive buoys and underwater sensors that track a wave once it has been triggered by an earthquake. James Foster at the University of Hawaii at Manoa in Honolulu and his team examined Global Positioning System (GPS) data from a research vessel (**pictured**) that was heading from Hawaii to Guam in February 2010 when



SOEST/UNIVERSITY OF HAWAII

an underwater earthquake occurred off the coast of Chile. Filtering the data on the basis of tsunami models allowed the researchers to differentiate between choppy seas and changes in ocean surface height due to a tsunami. The team detected a roughly 10-centimetre rise as the tsunami passed, and estimated wave speed and arrival time.

Although data from a single ship could be prone to false positives, recruiting thousands of ships could overcome this problem, the authors suggest. *Geophys. Res. Lett.* <http://dx.doi.org/10.1029/2012GL051367> (2012)

NATURE.COM

For the latest research published by Nature visit:

www.nature.com/latestresearch

