

disintegration.

The findings could inform estimates of how much Antarctic melting will contribute to future sea level rise, the authors say.

*Science* 345, 1354–1358 (2014)

## IMMUNOLOGY

## The gut improves vaccine effects

Bacterial residents of the gut boost immune responses to vaccination in mice.

Humans vaccinated against the influenza virus ramp up expression of a protein called TLR5, which is involved in detecting certain types of bacterium. To see how this protein and gut bacteria might affect immune responses to vaccines, Bali Pulendran of Emory University in Atlanta, Georgia, and his colleagues studied mice that lack the gene encoding TLR5.

They found that the animals produced fewer antibodies in response to flu vaccination than normal mice. The team saw similar effects in mice reared in a germ-free environment and in those treated with powerful antibiotics. Antibody responses could be restored, however, by inoculating the mice with the kind of bacteria to which TLR5 is sensitive.

The results suggest that antibiotic treatment could hinder the effects of certain vaccines, the authors say. *Immunity* <http://doi.org/vm3> (2014)

## PARTICLE PHYSICS

## Better estimate of Higgs mass

Researchers have decreased the uncertainty of their estimate of the mass of the Higgs boson, the particle thought to bestow mass to matter.

The ATLAS collaboration, one of two teams that detected the Higgs at the Large Hadron Collider near Geneva, Switzerland, reanalysed data and improved detector calibration to come up with the revised mass of

125.36 gigaelectronvolts (GeV), with a systematic uncertainty of 0.18 GeV — an improvement by a factor of three.

The measurement will refine predictions of the Higgs' behaviour and help to identify potential phenomena not predicted by the standard model of physics, the team says. *Phys. Rev. D* 90, 052004 (2014)

## INFECTIOUS DISEASE

## Mosquitoes awaken malaria

Mosquitoes biting a malaria-carrying host coax the malaria parasite to come out of hiding, resulting in greater disease transmission.

Sylvain Gandon at the National Centre of Scientific Research in Montpellier, France, and his colleagues infected canaries (*Serinus canaria*) with a malaria parasite that is specific to birds (*Plasmodium relictum*), and then exposed them to mosquitoes that were not carrying the parasite.

After the birds were bitten by malaria-free insects, the level of parasites rose in the birds' blood. Mosquitoes that subsequently bit birds were more likely to pick up and transmit the parasite than insects attacking birds that had not been initially bitten.

The researchers conclude that mosquito bites trigger *Plasmodium* to emerge from its dormant stage. *PLoS Pathog.* 10, e1004308 (2014)

## MICROBIOLOGY

## Vaginal microbe makes drug

A bacterium that lives in the human vagina produces an antibiotic, suggesting how the microbiome could be mined for possible drug candidates.

Michael Fischbach at the University of California, San Francisco, and his colleagues trained a computer program to recognize genes that are known to make molecules that could be used as drugs, and then asked the program to hunt

## SOCIAL SELECTION

Popular articles on social media

## High retraction rates raise eyebrows

Amid a wave of recent retractions, researchers are taking to social media to discuss a perennial favourite: a three-year-old paper looking at the relationship between a journal's impact factor and its retraction frequency. The 2011 report proposed a "retraction index", a measure of the likelihood that a paper in a given journal will eventually be pulled from the literature. The authors looked at articles published from 2001 to 2010 in 17 journals and plotted the journals' retraction indexes against their impact factor. The result was clear: the higher the impact factor, the higher the retraction index. "You know 'high impact' journals? All that means is that work is more likely to be retracted," tweeted Jon Tennant, who studies palaeontology at Imperial College London, earlier this month. David Basanta, a cancer researcher at the Moffitt Cancer Center in Tampa, Florida, responded on Twitter: "A case could be made that more people try to replicate the results." *Infect. Immun.* 79, 3855–3859 (2011)



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for similar genes in the human microbiome.

This yielded thousands of genes, including some that make a class of antibiotics called thiopeptides. The team isolated a new thiopeptide from a vaginal microbe grown in the lab, and found that the compound could kill the same types of bacterium as other thiopeptides.

This could be the first drug discovered in and isolated from an organism living in humans, the authors say. *Cell* 158, 1402–1414 (2014)

## ECOLOGY

## Sneaky ants steal in plain sight

A recently discovered parasitic ant species steals food from colonies of another ant by disguising itself as the host.

Scott Powell at George Washington University in Washington DC and his co-workers discovered the parasitic ant, *Cephalotes specularis* (pictured right), in the Brazilian woodland



savannah. *C. specularis* lives only with its host, the highly aggressive *Crematogaster ampla* ant (pictured left).

The researchers found that, rather than introduce its brood into the host's nest like other parasitic ants, *C. specularis* mimics the body posture of the host worker ants to move freely around the host's territory. The deceptive ant follows the host's pheromone trails to locate food, and manages to sneak undetected into 89% of potential host territories.

*Am. Nat.* <http://dx.doi.org/10.1086/677927> (2014)

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