

effects. One pregnant mother lacked a functional *PRDM9* gene, which is required for fertility in mice, but the non-functioning gene had no impact on her health.

Non-functioning genes in adults may not be as clinically important as previously thought, the authors say.

*Science* <http://doi.org/bc3x> (2016)

## CLIMATE CHANGE

## Climate shift for African farming

Many farmers in Africa may have to change the crops they are growing by the end of this century because of climate change, but for most plants only small areas will be impacted.

Julian Ramirez-Villegas at the University of Leeds, UK, and his colleagues modelled the suitability of sub-Saharan Africa for growing 9 major crops under climate scenarios that would see relatively large increases, exceeding 2 °C, in global temperatures by 2100. For maize (corn) and banana, around 30% of the region will become unsuitable, and for beans, 60% of the land will be unavailable. But for the other six crops — including cassava and yam — the affected area is limited to small pockets that total less than 15%.

The authors suggest that some farmers will initially adapt to climate change through improvements to farming techniques, but will then need to transition to substitute crops or relocate. *Nature Clim. Change* <http://dx.doi.org/10.1038/nclimate2947> (2016)

## VIROLOGY

## Zika virus infects brain cells

Laboratory-grown human cells that are similar to those in the brains of developing fetuses are rapidly infected and killed by Zika virus.

With the disease now spreading across Latin

America and the Caribbean, researchers are racing to understand Zika virus and its potential link to microcephaly in fetuses. Hongjun Song and Guo-li Ming at Johns Hopkins University in Baltimore, Maryland, along with Hengli Tang at Florida State University in Tallahassee and their team, caused reprogrammed human stem cells to develop into neural progenitor cells, then infected them with Zika virus, which replicated rapidly. After three days, the virus had killed one-third of the cells. Immature neurons were also susceptible to Zika, but to a lesser extent.

Neural progenitor cells could be used to study the virus in the lab and identify treatments, the researchers say.

*Cell Stem Cell* <http://doi.org/bc3w> (2016)

## GENETICS

## Genetic link for a monobrow

Researchers have identified ten genetic variants linked to hair traits, including the rate at which hair goes grey and whether a person will have a 'monobrow'.

Previous studies looking at European and East Asian populations have identified genes associated with male-pattern baldness, hair colour and curliness. Kaustubh Adhikari at University College London and his colleagues studied the genomes of more than 6,000 people living in Brazil, Colombia, Chile, Mexico and Peru, categorizing volunteers according to the colour, shape and pattern of hair on their scalp and faces.

They found, for example, that the variant associated with the rate of hair-greying is in a gene called *IRF4*, which regulates the production and storage of melanin — the pigment that determines hair, skin and eye colour. A variant of *FOXL2* is linked to eyebrow thickness,

## SOCIAL SELECTION

Popular topics on social media

## 'Creator' paper sparks concern

A paper that attributed the architecture of the human hand to "the proper design by the Creator" has triggered a debate over the quality of editing and peer review at high-volume journals.

The paper by Cai-Hua Xiong at the Huazhong University of Science and Technology in Wuhan, China, and his co-authors appeared in *PLoS ONE* on 5 January. But it came to prominence last week after its apparently creationist slant was flagged on Twitter, spawning the hashtags #Creatorgate and #HandofGod. James McInerney, who works on computational molecular evolution at the University of Manchester, UK, started the ball rolling with a tweet, saying the paper reveals *PLoS ONE* to be an "absolute joke of a journal". When contacted by *Nature*, Xiong said he was sorry, adding, "We are not native speakers of English, and entirely lost the connotations of some words such as 'Creator'". The journal later posted an online statement saying that it had decided to retract the paper. "Our internal review and the advice we have

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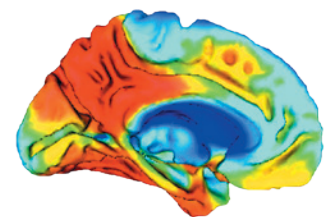
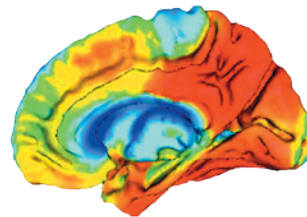
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received have confirmed the concerns about the article and revealed that the peer review process did not adequately evaluate several aspects of the work."

*PLoS ONE* <http://doi.org/bc4c> (2016)



and a *PAX3* variant is associated with the growth of a monobrow.

*Nature Commun.* 7, 10815 (2016)

## NEURODEGENERATION

## Ageing protein imaged in brain

A protein that accumulates in the brain with normal ageing as well as with Alzheimer's disease can be tracked using human brain imaging for the first time.

Scientists could previously map the insoluble form of the protein tau in human brain tissue only after death. To follow changes in tau levels and distribution over time, William Jagust at the University of California, Berkeley, and his colleagues used a previously developed molecule that labels tau for positron emission tomography (PET) imaging

(pictured) in living people. Compared with young people, healthy older people had increased tau in the medial temporal lobe, an area involved in memory. Higher levels of the protein predicted a poorer performance on certain memory tasks. Older adults with suspected Alzheimer's disease had the highest levels of tau. Across all older participants, the spread of tau to other brain areas correlated with higher levels of amyloid- $\beta$  protein, which is also associated with Alzheimer's disease.

The technique could be used to monitor brain health and test drug candidates, the authors suggest.

*Neuron* 89, 971–982 (2016)

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