the expression of a cancer-promoting gene called *Met*.

Two chemotherapies that target pericytes — imatinib and sunitinib — produced similar effects in mice, but their effects on metastasis were suppressed when a *Met* inhibitor was given simultaneously. The authors suggest that pericyte loss makes tumour blood vessels leaky, which may set in motion events that promote metastasis.

Cancer Cell 21, **66–81 (2012)**

PHYSICS

One molecule, one photon

To harness quantum technology for applications such as computing and cryptography, researchers must develop materials that can emit single photons in response to electrical signals. However, existing approaches require an ultracold environment.

Maximilian Nothaft at the University of Stuttgart in Germany and his colleagues tested phosphorescent iridium-based organic molecules as the active layer in a light-emitting diode (LED) at room temperature. They showed that the molecules could emit photons in response to electrical and laser stimulation. The distribution of the emitted photons suggests that each was emitted by a single molecule.

The authors say that their method should allow for further study of photon-emission mechanisms in organic LEDs.

Nature Commun. **http://dx.doi.org/10.1038/ncomms1637 (2012)**

CELL BIOLOGY

Manganese fights deadly toxin

A toxin produced by certain deadly strains of pathogenic bacteria can be stopped in its tracks by the element manganese.

Shiga toxin — generated by *Shigella* bacteria and some strains of *Escherichia coli* — is shuttled through several organelles in the infected cell and eventually shuts down cellular protein production. Somshuvra Mukhopadhyay and Adam Linstedt at Carnegie Mellon University in Pittsburgh, Pennsylvania, fluorescently tagged the toxin and found that, in cells treated with manganese, the toxin was rerouted to the cell's degradative compartment and destroyed. Manganese targets a protein called GPP130 — which is normally required for the trafficking of the toxin — preventing the toxin from binding to it.

Mice injected with the toxin and treated with manganese stayed healthy throughout the six-day study, whereas untreated mice died within four days.

Science 335, **332–335 (2012)**

ECOLOGY

Ready for the toxic toads

Exposure to an exotic plant seems to have pre-adapted a native Australian lizard to the toxins of an invasive animal.

T. CHILD

The American cane toad (*Rhinella marina*), an exotic introduced to Australia within the past century, is generally toxic to native predators. But Richard Shine and his colleagues at the University of Sydney observed that bluetongue skinks (*Tiliqua scincoides*; **pictured**) in some areas can tolerate the toad's toxins. The toxins are similar to those produced by another exotic species, the Madagascan 'mother of millions' plant (*Bryophyllum* spp.).

The authors tested the resistance of skinks from various regions of Australia to either the toad or plant toxin. They found that skinks from areas where the plant is abundant were better able to tolerate both. Moreover, skinks readily eat both the plants and the toads. The findings suggest that the plants have selected for skinks that could tolerate the toad toxins.

Am. Nat. **http://dx.doi.org/10.1086/664184 (2012)**

NEURODEVELOPMENT

Mutation and infection to blame

A combination of genetic and environmental factors may act synergistically to boost the risk of certain neurodevelopmental disorders.

In humans, mutations in *NURR1* — a gene vital for the normal development of neurons that produce a neurotransmitter called dopamine — are thought to slightly raise the risk of neurodevelopmental disorders. The risk is similarly increased by infection in the mother during pregnancy. To test the combined effect of these two factors, Urs Meyer at the Swiss Federal Institute of Technology in Zurich and his colleagues activated the immune system of pregnant mice that had only one copy of the *Nurr1* gene.

They found that dopaminergic development in key parts of the brain was impaired in *Nurr1*-deficient pups born to immune-activated mothers. As adults, these mice were unable to sustain or shift attention normally, a characteristic of neurodevelopmental diseases such as schizophrenia and attention-deficit hyperactivity disorder.

J. Neurosci. 32, **436–451 (2012)**

COMMUNITY CHOICE

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CLIMATE CHANGE

Warming, but not as much

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The climate system may be less sensitive to greenhouse-gas warming than many models have predicted.

Nathan Gillett and his co-workers at Environment Canada in Victoria, British Columbia, analysed how well the latest Canadian Earth System Model tracked temperature changes attributable to volcanoes, man-made aerosols and rising greenhouse-gas emissions. They adjusted the model using temperature records from 1851 to 2010 — 60 years of data more than most previous analyses. The model predicted a short-term increase of 1.3–1.8 °C for a doubling of atmospheric carbon dioxide levels, which is low in the range of estimates from previous forecasts.

Under various scenarios, the authors' model forecasts warming of 1.2–4.3 °C by the end of the century compared with pre-industrial times.

Geophys. Res. Lett. **http://dx.doi.org/10.1029/2011GL050226 (2012)**

CORRECTION

In the Research Highlight 'Magnetic switch for memory' (*Nature* **481,** 241; 2012), the authors switched the magnetic states of antiferromagnetic iron atoms by applying a voltage, not a current, of more than 7 millivolts.

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