

HIV

Antibody–drug mix stops relapse

A combination of antibodies and multiple virus-activating drugs can keep HIV from resurging in infected mice, even after treatment ends.

During drug treatment, HIV enters a dormant state and stays hidden inside infected cells; afterwards, it bounces back. A team led by Michel Nussenzweig at the Rockefeller University in New York tested a combination of neutralizing antibodies and three drugs that activate dormant HIV so it is no longer hidden. After the treatment was given to HIV-infected mice, 57% were protected from virus resurgence, whereas no significant effects were seen in mice treated with antibodies plus only one inducer or with antibodies alone.

Such drug combinations could reduce the reservoir of HIV-infected immune cells, a key step towards curing the disease, the authors say.

Cell <http://doi.org/t7w> (2014)

MATERIALS

Soft machines made like Lego

Soft, stretchy, Lego-style bricks offer a way to make three-dimensional (3D) prototypes of elastic structures, according to researchers at Harvard University in Cambridge, Massachusetts.



‘Click-e-bricks’, which were developed by George Whitesides and his colleagues, can be used to build stretchy devices, such as hollow ones that expand when air is injected (**pictured**) or that have internal channels for liquid. The approach could be used to rapidly make prototypes of soft machines, such as soft robots, that move depending on changes in air pressure, current or light.

The team argues that click-e-bricks offer a faster alternative to 3D printing, which relies on hard acrylic

polymers that limit the composition and complexity of the final structure.

Adv. Mater. <http://doi.org/f2tdnq> (2014)

ASTRONOMY

Comets forge organic molecules

Astronomers have captured three-dimensional images of organic compounds streaming from two comets.

Comets contain some of the oldest materials in the Solar System. Using the

collected data on how many tagged animals were recaptured by fishermen. In some cases, immature fish were found near their release sites, but for adults, the recapture rate after 1–2 years was less than 0.1%.

Using this probability for recapturing escapees, the team estimates that as many as 1.5 million farmed salmon escape from farms in Norway each year — significantly more than the 413,000 escapees that are reported annually.

ICES J. Mar. Sci. <http://doi.org/t6t> (2014)



OCEAN SCIENCES

Farmed salmon swim to freedom

Vastly more salmon could be escaping from aquaculture farms (pictured) than is officially reported, say Ove Skilbrei and his colleagues at the Institute of Marine Research in Bergen, Norway.

Farmed salmon that escape could mate with wild populations and make them less fit for survival. The researchers tagged more than 90,000 farmed Atlantic salmon (*Salmo salar*) and released them along the Scandinavian coast in 2005. Over the next five years, the team