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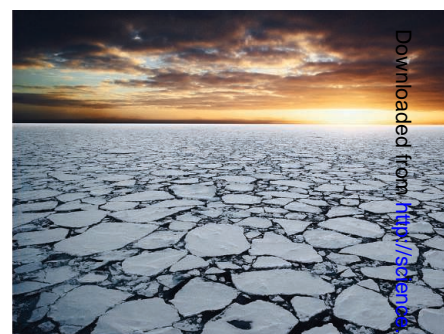
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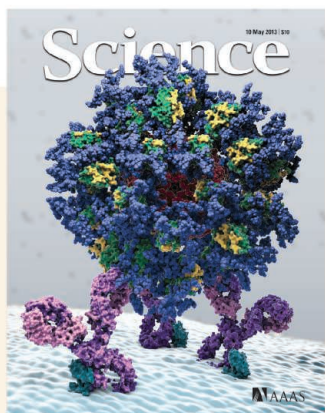


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ON THE WEB THIS WEEK

>> **Science Express**
Read articles on the formation of cirrus clouds, the evolution of Arctic polar climate, and the common origin of water on Earth and the Moon.

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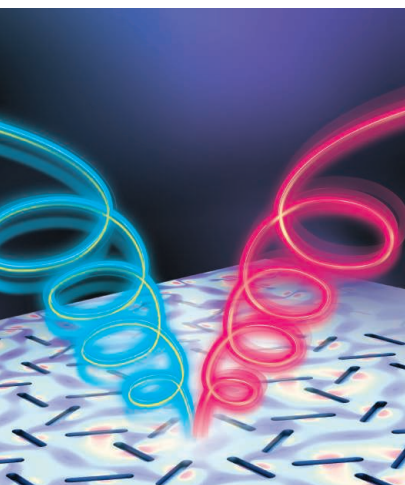
COVER

Model of a candidate HIV vaccine prime immunogen (center) engaging germline B cell receptors (bottom) to initiate an antibody immune response. The immunogen is a virus-like nanoparticle, ~30 nanometers in diameter, displaying 60 copies of an HIV gp120 outer domain protein engineered to bind germline precursors of specific broadly neutralizing antibodies. This work has promising implications for HIV vaccine research. See page 711.

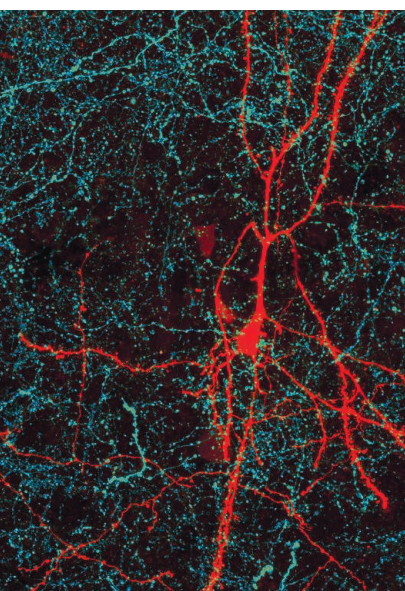
Image: Christina Corbaci, Adam Gardner, Joe Jardine, Sergey Menis, and William Schief, The Scripps Research Institute

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A. Falk and N. Szech
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>> *Science Podcast*
- 711 **Rational HIV Immunogen Design to Target Specific Germline B Cell Receptors**
J. Jardine et al.
Structural knowledge of broadly neutralizing antibodies against HIV-1 guides the design of an immunogen to elicit them.

REPORTS

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C. Ott et al.
An analytical framework bolstered by attosecond spectroscopy conveys a clear understanding of asymmetric spectral line shapes.
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- 720 **Multiscale Modeling of Membrane Rearrangement, Drainage, and Rupture in Evolving Foams**
R. I. Saye and J. A. Sethian
A model is developed to describe the complex dynamics of dry foams across a range of time and length scales.
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- 724 **Spin-Optical Metamaterial Route to Spin-Controlled Photonics**
N. Shitrit et al.
Designed arrays of metallic nanoantennas provide a route for the polarization-dependent propagation of light.
- 727 **Enhanced Role of Transition Metal Ion Catalysis During In-Cloud Oxidation of SO₂**
E. Harris et al.
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- 730 **Networks of bZIP Protein-Protein Interactions Diversified Over a Billion Years of Evolution**
A. W. Reinke et al.
A comparative study of a dimeric transcription factor family looks at the evolution of protein interactions.

- 734 **Observing Atomic Collapse Resonances in Artificial Nuclei on Graphene**
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C. Q. Chiu et al.
Inhibitory synapses can control individual dendritic spines independently from their neighbors.

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