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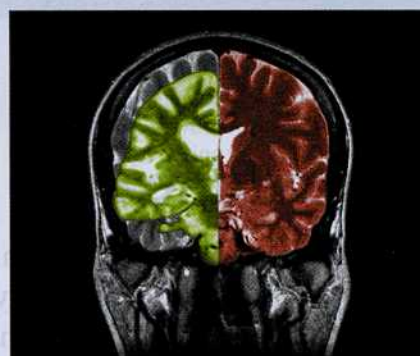
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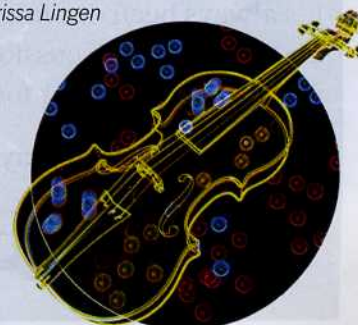
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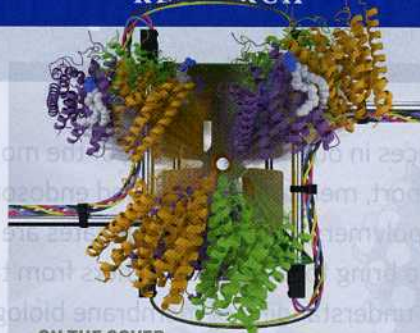
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RESEARCH



ON THE COVER

Lipid power

Ion mobility mass spectrometry (IM-MS) captures a native membrane protein complex emerging from an ion mobility cell. A new IM-MS method has been used to obtain high-resolution spectra of folded proteins bound to lipids, providing evidence for membrane protein conformational change due to lipid-protein interaction. **PAGE 172**

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- 126 ASTROPHYSICS** Dynamically important magnetic fields near accreting supermassive black holes

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- 129 CHEMISTRY** Palladium-catalysed C-H activation of aliphatic amines to give strained nitrogen heterocycles

A McNally, B Haffemayer, B S L Collins & M J Gaunt

- 134 CLIMATE SCIENCE** Millennial-scale variability in Antarctic ice-sheet discharge during the last deglaciation

*M E Weber et al. **SEE N&V P.39***

- 139 NUTRITION** Increasing CO₂ threatens human nutrition

S S Myers et al.

- 143 NEUROSCIENCE** Coordination of entorhinal-hippocampal ensemble activity during associative learning

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- 148 MICROBIOLOGY** Trace-gas metabolic versatility of the facultative methanotroph *Methylocella silvestris*

A T Crombie & J C Murrell

- 152 IMMUNOLOGY** Focused specificity of intestinal T_H17 cells towards commensal bacterial antigens

Y Yang et al.

- 157 IMMUNOLOGY** Nociceptive sensory neurons drive interleukin-23-mediated psoriasisform skin inflammation

L Riol-Blanco et al.

- 162 CELL BIOLOGY** Ubiquitin is phosphorylated by PINK1 to activate parkin

*F Koyano et al. **SEE N&V P.44***

- 167 CANCER** Oncogene-like induction of cellular invasion from centrosome amplification

S A Godinho et al.

- 172 STRUCTURAL BIOLOGY** Membrane proteins bind lipids selectively to modulate their structure and function

A Laganowsky et al.

- 176 CORRIGENDUM** Realizing the promise of cancer predisposition genes

N Rahman

- 176 ERRATUM** Recent advances in homogeneous nickel catalysis

S Z Tasker, E A Standley & T F Jamison

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- 37** Papers published this week at nature.com

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Excitation over jelly nerves

Ctenophore genomics suggests independent nervous-system evolution

*Andreas Hejnol **SEE ARTICLE P.109***

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How Antarctic ice retreats

Iceberg-rafted debris document past ice loss from Antarctica

*Trevor Williams **SEE LETTER P.134***

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Six microRNAs regulate cilium assembly in the lungs and reproductive tract

Irma Sánchez & Brian D Dynlacht

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*Asa Abeliovich **SEE LETTER P.162***

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N P King et al.

- 109 EVOLUTIONARY GENETICS** The ctenophore genome and the evolutionary origins of neural systems

*L L Moroz et al. **SEE N&V P.38***

- 115 CELL BIOLOGY** miR-34/449 miRNAs are required for motile ciliogenesis by repressing *cp110*

*R Song et al. **SEE N&V P.40***

- 121 BIOCHEMISTRY** Crystal structure of the human glucose transporter GLUT1

D Deng et al.

EVOLUTIONARY GENETICS

Parting shot

The sea gooseberry has gone its own way on neural evolution. **PAGE 109**

