## SPECIAL SECTION ____________

### Spatial Cell Biology

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|                                               |              |                                          | 1193 Educating Scientists About Dual Use |
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### Cover

Liver cells possess a well-defined morphology and interact in time and space with their neighbors, with the extracellular matrix, and with the bloodstream. A special section starting on page 1205 describes some of the basic tenets of spatial cell biology.

*Image: Frank Geisler/Alamy (liver cells); iStockphoto.com (compass rose)*
BREVIA
1230 Induced Chromosomal Proximity and Gene Fusions in Prostate Cancer
R.-S. Mani et al.
Androgen signaling facilitates the formation of an oncogenic fusion gene in prostate cancer cells.

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1231 Haploid Genetic Screens in Human Cells Identify Host Factors Used by Pathogens
J. E. Carette et al.
A method identifies human factors required for successful microbial pathogenesis.
1235 Proteome Organization in a Genome-Reduced Bacterium
S. Kühner et al.
The simplified proteome of a bacterium provides insight into the organization of proteins into molecular machines.
>> Perspective p. 1200; Reports pp. 1263 and 1268

REPORTS
1241 Directed Transport of Atoms in a Hamiltonian Quantum Ratchet
T. Salger et al.
A quantum ratchet, which operates without dissipation, is created with a Bose-Einstein condensate and optical potentials.
1244 Visualizing the 3D Internal Structure of Calcite Single Crystals Grown in Agarose Hydrogels
H. Li et al.
Electron tomography shows that physical interactions may be sufficient to incorporate macromolecules into a calcite crystal.
>> Perspective p. 1194
1247 Formation of Compositonally Abrupt Axial Heterojunctions in Silicon-Germanium Nanowires
C.-Y. Wen et al.
A solid alloy catalyst is used to synthesize atomically sharp interfaces in silicon-germanium nanowires.
1250 Selective Phenol Hydrogenation to Cyclohexanone Over a Dual Supported Pd–Lewis Acid Catalyst
H. Liu et al.
The cooperation of two common catalysts unexpectedly facilitates selective synthesis of a commodity chemical compound.
1253 Climate-Driven Basin-Scale Decadal Oscillations of Oceanic Phytoplankton
E. Martinez et al.
Satellite data show that upper ocean chlorophyll and sea surface temperatures are connected on a multidecadal time scale.
1256 Global Signatures and Dynamical Origins of the Little Ice Age and Medieval Climate Anomaly
M. E. Mann et al.
The global pattern of warming that characterized the Medieval Climate Anomaly was a dynamical response to solar forcing.
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G. S. van Doorn et al.
Modeling demonstrates how speciation occurs due to sexual selection.
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Hematopoietic Stem Cells
Rapamycin reverses aging-related declines in hematopoietic stem cell function.

Clustering proteins into groups on the basis of their domain compositions provides insight into protein evolution.

Bioinformatics analysis reveals how protein domain composition correlates with evolutionary change.

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Science 326 (5957), 1159-1287.

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