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Multiphoton laser scanning images showing cortical (top) and medullary (bottom) portions of a mouse inguinal lymph node. Green spheres represent dendritic cell precursors 5 hours after transfer from bone marrow; B cell follicles are shown in blue; blood vessels and T cells are in red. During development, these precursors migrate through the blood to lymphoid tissues where they divide and disperse into the dendritic cell network. See page 392.

Image: Gabriel Victora and Tanja Schwickert, the Nussenzweig Laboratory, Rockefeller University

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A. Nishikimi et al.
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403 Mirror Neurons Differentially Encode the Peripersonal and Extrapersonal Space of Monkeys
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The ciliate Oxytricha expresses transposase genes to influence thousands of DNA rearrangements required for proper development.
10.1126/science.1170023

The Nuclear DNA Base 5-Hydroxymethylcytosine Is Present in Purkinje Neurons and the Brain
S. Kriaucionis and N. Heintz
The genome of mammals contains appreciable amounts of a previously undescribed modified DNA base.
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Conversion of 5-Methylcytosine to 5-Hydroxymethylcytosine in Mammalian DNA by MLL Partner TET1
M. Tahiliani et al.
Methylated C bases, an important epigenetic mark in genomic DNA, can be enzymatically converted to 5-hydroxymethylcytosine.
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full text at www.sciencemag.org/cgi/content/full/324/5925/336b
Response to Comment on "Atmospheric Hydroxyl Radical Production from Electronically Excited NO2 and H2O" S. Li et al.
full text at www.sciencemag.org/cgi/content/full/324/5925/336c

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What You See Is What You Feel
Sense of touch shapes our visual perception, a new study shows.

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EDITORIAL GUIDE: The Protein Dynamics of Cell Signaling
W. Wong and N. R. Gough
Changes in the conformation, binding partners, or localization of signaling proteins affect the flow of information through signaling cascades.

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P.-A. Pouille et al.
Mesoderm invagination during gastrulation is controlled by mechanical cues that promote Fog signaling and redistribution of a motor protein.
PERSPECTIVE: Arrestin Times for Developing Antipsychotics and β-Blockers
M. D. Houssay
Conformation determines G protein–independent signaling through β-arrestins.
PERSPECTIVE: HIV Infection of T Cells—Actin-In and Actin-Out
Y. Liu et al.
The coordinated activities of various actin-binding proteins facilitate entry of HIV into T cells.

MEETING REPORT: Visualizing Immune System Complexity
M. L. Dustin
From individual molecules to cells in animals, imaging has brought incredible insight to immunology.

PRESENTATION: Molecular Origin and Functional Consequences of Digital Signaling and Hysteresis During Ras Activation in Lymphocytes
A. K. Chakraborty et al.
Simulations, theory, and experiments reveal a potential molecular mechanism for digital signaling and short-term molecular memory in lymphocytes.

SCIENCE CAREERS
www.sciencemag.org/career_magazine
Free Career Resources for Scientists
Tooling Up: The Business Development Career Track
D. Jensen
Ph.D. scientists working in business development scout for new technologies and plan new initiatives.

In the Trenches: Science for Humanitarian Aid
R. Mejia
Humanitarian relief organizations need scientists to work in regions experiencing wars or natural disasters.

From the Archives: The Academic Scientists’ Toolkit
J. Austin
Today’s faculty must know research but must also have all the skills of a manager.