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Bright-field light microscopy image of peritoneal cells, including a macrophage undergoing cell division (center cell, ~20 micrometers across), taken from mice treated with the cytokine interleukin-4. On page 1284, Jenkins et al. describe a mechanism of inflammation in response to parasitic nematode infection whereby macrophages expand in number through cell division rather than by recruitment from the blood.

Photo: Stephen Jenkins, University of Edinburgh, UK

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The breast cancer drug lapatinib increases the sensitivity of colon cancer cells to apoptosis through n-2 and Erk-independent mechanisms.

RESEARCH ARTICLE: Host Alloreactive Memory T Cells Influence Tolerance to Kidney Allografts in Nonhuman Primates
O. Nadazdin et al.

PERSPECTIVE: Transplantation Tolerance—Memories That Haunt Us
M. L. Ford and C. P. Larsen
Screening for preformed donor-reactive memory T cells may advance the goal of organ transplant acceptance without immunosuppression.

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Mind Matters: Resilience
I. Levine
A growing body of research and experience suggests that individuals possessing personal resilience are more likely to overcome career roadblocks.
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PERSPECTIVE: Beyond the Balance of Activator and Repressor
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Leakiness in the microvasculature might be key determinants of the pathogenesis of sepsis.

RESEARCH ARTICLE: TWIK-1 Two-Pore Domain Potassium Channels Change Ion Selectivity and Conduct Inward Leak Sodium Currents in Hypokalemia
L. Mo et al.
Very low extracellular K+ concentrations, which can trigger cardiac arrhythmias, cause TWIK-1 potassium channels to become permeable to Na+.

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School-Based Early Childhood Education and Age-28 Well-Being: Effects by Timing, Dosage, and Subgroups
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A little bit of preschool goes a long way.

Long Unfolded Linkers Facilitate Membrane Protein Import Through the Nuclear Pore Complex
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Climate-Forced Variability of Ocean Hypoxia
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Proteins evolve to avoid misfolding in toxic, hypoxic environments
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Efficient T cell activation depends on the rate with which T cell receptors and antigens bind and unbind, rather than simply their equilibrium affinity.

GLOSSARY
Find out what BL, DUB, and FX mean in the world of cell signaling.

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PERSPECTIVE: Breaking Barriers—A New Take on Sepsis Pathogenesis
N. M. Goldenberg et al.
Loss of the endothelial barrier and subsequent leakiness in the microvasculature might be key determinants of the pathogenesis of sepsis.

Research Article: Protein Interactome Reveals Converging Molecular Pathways Among Autism Disorders
Y. Sakai et al.
An autism protein interaction network provides a framework for studying autism pathogenesis.

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Editor's Summary

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