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COVER
Illustration of the black hole in Cygnus X-1, a binary star system 6000 light-years away. A disk of stellar material feeds this black hole, which is 15 times as massive as the Sun but less than 60 kilometers across. As it falls toward the black hole, some of the material gets expelled in two opposite jets. A section highlighting recent research on black holes begins on page 535. For the story behind the cover, go to http://scim.ag/cov6094.

Image: NASA/Chandra X-ray Center/M. Weiss

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Two synaptic adhesion molecules that have been implicated in psychiatric diseases affect the kinetics of synaptic events.
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FOCUS: Anti-CD25 Immunotherapy—Regulating the Regulators
J. W. Rose
Daclizumab inhibition of inflammation in human autoimmunity is associated with blockade of lymphoid tissue inducer cell development.

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E. Wayman
James Wade, a U.S. Olympic Kayak Team alternate and a Ph.D. student in bioengineering, navigates a tricky course between his research and his sport.
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R. C. Reis et al.
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RESEARCH ARTICLE: The Scaffolding Protein Synapse-Associated Protein 97 Is Required for Enhanced Signaling Through Isotype-Switched IgG Memory B Cell Receptors
W. Liu et al.

PODCAST
S. K. Pierce and A. M. VanHook
A scaffolding protein clusters B cell receptors to promote antibody secretion by memory B cells.

RESEARCH ARTICLE: Differential RET Signaling Pathways Drive Development of the Enteric Lymphoid and Nervous Systems
A. Patel et al.
Cis and trans signaling mechanisms direct different developmental responses to ligands for the receptor tyrosine kinase RET.

PERSPECTIVE: T Cell Signaling Targets for Enhancing Regulatory or Effector Function
F. Pan et al.
The PD-1 receptor in effector T cells and the transcription factor Foxp3 in Tregs are promising targets for therapies.

PERSPECTIVE: Tyrosine Kinases Enabling Adaptor Molecules for Chemokine-Induced Rap1 Activation in T Cells
L. P. Malherbe and D. Wang
T cell migration requires phosphorylation of an adaptor protein by Abl family kinases to activate guanosine triphosphatase Rap1.

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Anacardic acid attenuates mutant TDP-43–associated abnormalities in motor neurons derived from ALS patient–specific induced pluripotent stem cells.

RESEARCH ARTICLE: Reversal of Paralysis and Reduced Inflammation from Peripheral Administration of β-Amyloid in T<sub>1</sub> and T<sub>17</sub> Versions of Experimental Autoimmune Encephalomyelitis
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β-Amyloid reduces inflammation and improves symptoms in a mouse model of multiple sclerosis.

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