COVER
An artist’s conception of the antibiotic penicillin and some of the bacteria that have developed resistance to various antibiotics. A special section beginning on page 355 explores the rise and spread of so-called bad bugs and possible interventions.
Illustration: Chris Bickel/Science

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10.1126/science.1156970

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Ferruginous Conditions Dominated Later Neoproterozoic Deep-Water Chemistry
D. E. Canfield et al.
Low sulfur input caused the deeper ocean to become anoxic and rich in ferrous iron 750 million years ago, a reversal from the more oxidizing conditions of the previous 1 billion years.

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A search for genetic modulators of sleep in Drosohila identified a gene encoding a brain protein that is likely secreted and is required for recovery from sleep deprivation.

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Y. Fang, N.-H. Seong, D. D. Dlott
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A. M. Intlekofer et al.
Two transcription factors cooperate to ensure the correct functioning of CD8+ T cells during the response to infection.

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N. Sudarsan et al.
The bacterial second messenger cyclic di–guanosine monophosphate controls a wide variety of cellular functions by acting on a riboswitch motif in numerous messenger RNAs.

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A. Schwegmann and F. Brombacher
A new drug discovery paradigm focuses on identifying and targeting cellular elements of the host that are exploited by pathogens.

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