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Ribbon drawing of the 20S proteasome from the archaebacterium *Thermoplasma acidophilum* as revealed by x-ray structure at 3.4 Å. The cross section of the protease complex (consisting of 28 subunits) shows a penetrating channel with three large cavities. Access to the inner cavity, which contains the 14 active sites, is controlled by narrow constrictions that allow only unfolded proteins to be cleaved. See page 533, related Perspectives beginning on page 522, and the Report on page 579. [Graphic and photo: J. Löwe, D. Stock, and R. Huber at Max-Planck-Institut für Biochemie]

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