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COVER Primary sensory areas of rat neocortex, revealed by computer-enhanced acetylcholinesterase histochemistry. Somatosensory cortex (center) is organized into discrete "barrels," functional units of thalamic axons and cortical neurons, arranged in a pattern isomorphic to specialized sensory hairs on the rat's skin. Visual cortex (lower right), which normally has a more uniform pattern, develops barrels when transplanted to somatosensory cortex, indicating that these diverse cortical areas have the potential to form similar structures. See page 1556. [Photograph by B. L. Schlaggar, D. D. M. O'Leary, and J. Plotkin]

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