Hypoxia-induced apoptosis in HEK293 cells. Apoptosis can be initiated by many extracellular and intracellular signal molecules and physiological and pathological inducers, including hypoxia that occurs during acute and chronic vascular disease, pulmonary disease, and cancer. E2F6, a potential transcriptional repressor of the E2F family, plays an important role in hypoxia-induced apoptosis. Condensed chromatin and apoptotic bodies stained with Hoechst33342 were detected in apoptotic cells induced by hypoxia in a dose-dependent manner (middle column), whereas E2F6-overexpressing cells showed less condensed chromatin and fewer apoptotic bodies under the same hypoxia condition (right column: bottom row) than the cells transfected with (right column: middle row) or without (right column: top row) the control vector. Cells without hypoxia treatment showed normal nuclear morphology (left column: control, top row; vector, middle row; and overexpression of E2F6, bottom row). Such regulation of E2F6 is mediated via control of E2F1 expression and transactivation. See the article by Yang et al. on p. 3691 of this issue of MBC. (Image: Huang-Tian Yang, Institute of Health Sciences, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, and Shanghai Jiao Tong University School of Medicine, Shanghai, China)