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Cover photograph (Copyright © 2013, American Society for Microbiology. All Rights Reserved.): Shape recovery trajectories of *Escherichia coli* spheroplasts that can or cannot induce the Rcs envelope stress response. A rod-shaped cell (bottom) was converted into a spheroplast (spherical cell above the rod). Over the next 3 h, wild-type *E. coli* recovers a normal rod-shaped morphology after progressing through a series of aberrant shapes (left series), whereas a mutant unable to mount the Rcs response grows into a giant cell and lyses (right series). This image was generated from phase-contrast micrographs; the composite image was then modified in Photoshop using the emboss filter and colorized. (See related article on page 2452.)