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Mutants in complementary chromatic adaptation isolated from the filamentous cyanobacterium *Fremyella disphosphon*. Each of the four mutants shown has a lesion in a separate step of the signal transduction pathway controlling complementary chromatic adaptation and shows a different color during growth. The red cells (center, red mutants) are response regulator mutants, and the grayish colonies (upper left, black mutants) are defective in a sensor with similarity to plant phytochromes. See page 1409. [Image: Gregory O. Lam-Niemeyer]

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