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A regenerating zebrafish heart, 7 days after injury to the apex of the ventricle (bottom). Red stain, epicardial cell layer; green stain, transgenic ctgfr reporter expression; blue stain, cell nuclei. Unlike in humans, lost cardiac muscle regenerates in zebrafish in 30 to 60 days, with minimal scarring. From single cells to mammalian organ systems, the ravages of disease and injury are often, but not always, countered by repair and regeneration mechanisms. See the special section beginning on page 1020.

Image: Amy L. Dickson and Kenneth D. Poss, Duke University

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