

## SPECIAL SECTION

# Repair and regeneration

### INTRODUCTION

**1020** Repair and regeneration

### REVIEWS

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**1026** Inflammation and metabolism in tissue repair and regeneration *S. A. Eming et al.*

**1031** Regenerating optic pathways from the eye to the brain *B. Laha et al.*

**1035** Cardiac regeneration strategies: Staying young at heart *E. Tzahor and K. D. Poss*

SEE ALSO ▶ PERSPECTIVE P. 1014 ▶ REPORTS PP. 1072 & 1076 ▶ VIDEO

### ON THE COVER



A regenerating zebrafish heart, 7 days after injury to the apex of the ventricle (bottom). Red stain, epicardial cell layer; green stain, transgenic *ctgfa* 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

## 999 INDIA RESURRECTS FORGOTTEN LEPROSY VACCINE

Large-scale use of vaccine aims to break stalemate against the disease by protecting people most at risk  
*By S. Kumar*

## 1000 CAN U.S. STATES AND CITIES OVERCOME PARIS EXIT?

Emissions will keep declining, but likely not enough for the United States to meet 2025 goal  
*By W. Cornwall*

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Nearly wiped out by invasive mammals, New Zealand's mouse-sized insects, called giant weta, are making a comeback *By E. Pennisi*

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Genes masquerade as essential to development to ensure their transmission *By N. Phadnis*  
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*By T. Bouchery and N. L. Harris*  
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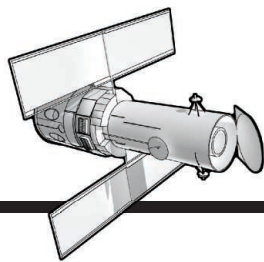
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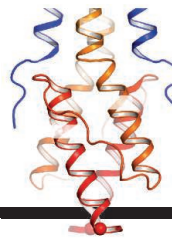
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