CONTENTS

SPECIAL SECTION
Repair and regeneration

INTRODUCTION
1020 Repair and regeneration

REVIEWS
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

SPECIAL SECTION
Repair and regeneration

996 CIRCULAR DNA THROWS BIOLOGISTS FOR A LOOP
Studies hint at health and disease roles of unusual DNAs
By E. Pennisi

997 DATA CHECK: CRITICS CHALLENGE NIH FINDING THAT BIGGER LABS AREN’T NECESSARILY BETTER
Agency-backed analysis led to policy move to cap grant support for big labs
By J. Kaiser

998 RETHINKING THE DREADED R-WORD
Two groups propose ways to make it easier to retract a paper—by not calling it a retraction
By M. Enserink

1001 SAVING THE ‘GOD OF UGLY THINGS’
Nearly wiped out by invasive mammals, New Zealand’s mouse-sized insects, called giant weta, are making a comeback
By E. Pennisi

NEWS

IN BRIEF
990 News at a glance

IN DEPTH
993 OLDEST MEMBERS OF OUR SPECIES DISCOVERED IN MOROCCO
New fossils and dates put a face on early Homo sapiens
By A. Gibbons

994 ROMANIAN RESEARCHERS DECRY SUDDEN POWER GRAB
Government appoints loyalists to four councils, limits foreign influence
By A. Nistoroiu

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

FEATURE
1001 SAVING THE ‘GOD OF UGLY THINGS’
Nearly wiped out by invasive mammals, New Zealand’s mouse-sized insects, called giant weta, are making a comeback
By E. Pennisi

INSIGHTS

BOOKS ET AL.
1004 SCIENCE READS FOR THE SUMMER OF ’17

PERSPECTIVES
1010 NANOMATERIALS FOR STIMULATING NERVE GROWTH
Flexible nanomaterials may recruit neurons or create artificial bridges to restore connectivity
By S. Marchesan et al.

1011 FROM SEQUENCE TO COLOR
Tyrosine-containing tripeptides form eumelanin-like pigments with tunable properties
By M. d’Ischia and P. B. Messersmith
▶ REPORT P. 1064

1013 POISONS, ANTIDOTES, AND SELFISH GENES
Genes masquerade as essential to development to ensure their transmission
By N. Phadnis
▶ RESEARCH ARTICLE P. 1051

1014 SPECIFIC REPAIR BY DISCERNING MACROPHAGES
Immune cells recognize organ-specific cues during repair processes
By T. Bouchery and N. L. Harris
▶ REPAIR AND REGENERATION SECTION P. 1020; REPORTS PP. 1072 & 1076

984 9 JUNE 2017 • VOL 356 ISSUE 6342

Published by AAAS
1043 TRANSMEMBRANE SIGNALING

By A. C. M. van Esbroeck

Mechanism of transmembrane signaling by sensor histidine kinases

RESEARCH ARTICLES

1044 IN BRIEF

1045 ORGANIC CHEMISTRY

Decarboxylative borylation C. Li et al.

RESEARCH ARTICLE SUMMARY: FOR FULL TEXT:
dx.doi.org/10.1126/science.aai7355

1046 GRAVITATIONAL LENSING

Relativistic deflection of background starlight measures the mass of a nearby white dwarf star K. C. Sahu et al.

RESEARCH ARTICLE SUMMARY: FOR FULL TEXT:
dx.doi.org/10.1126/science.aah6345

1047 TISSUE REPAIR

Lack NIH funding

By A. P. Galvani

Research on a razor’s edge

By David Michaels and Thomas Burke

The dishonest HONEST Act

By Eric Dexter

1048 DE-EXTINCTION, NOMENCLATURE, AND THE LAW

How we name resurrected species

By N. Wagner et al.

1049 ERRATA

1050 ORGANIC CHEMISTRY

Polymeric peptide pigments with sequence-encoded properties

A. Lampel et al.

PER SPECTIVE P. 1011

1051 GENETICS

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1013; PODCAST

1052 BIOCHEMISTRY

Activity-based protein profiling

M. Almeida et al.

1053 X INACTIVATION

Macrophage function in tissue repair and remodeling requires IL-4 or IL-13 with apoptotic cells

L. Bosurgi et al.

1054 BIOCHEMISTRY

Decarboxylative borylation C. Li et al.

RESEARCH ARTICLE SUMMARY: FOR FULL TEXT:
dx.doi.org/10.1126/science.aaj0309

1055 QUANTUM MAGNETISM

Neutron scattering in the proximate quantum spin liquid α-RuCl3

A. Banerjee et al.

1056 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1057 SERIES REPORTS

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1013; PODCAST

1058 SERIES REPORTS

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1059 ORGANIC CHEMISTRY

Palladium-catalyzed carbon-sulfur or carbon-phosphorus bond metathesis by reversible arylation Z. Lian et al.

1060 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1061 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1062 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1063 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1064 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1065 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1066 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1067 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1068 CHEMISTRY

A maternal-effect selfish genetic element in Caenorhabditis elegans

E. Ben-David et al.

PER SPECTIVE P. 1011

1069 COSMOCHEMISTRY

Xenon isotopes in 67P/Churyumov-Gerasimenko show that comets contributed to Earth’s atmosphere

B. Marty et al.

1070 TISSUE REPAIR

Macrophage function in tissue repair and remodeling requires IL-4 or IL-13 with apoptotic cells

L. Bosurgi et al.

1071 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1072 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1073 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1074 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1075 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1076 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1077 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1078 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1079 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1080 TISSUE REPAIR

Local amplifiers of IL-4Rα-mediated macrophage activation promote repair in lung and liver

C. M. Minutti et al.

PER SPECTIVE P. 1014; REPAIR AND REGENERATION SECTION P. 1020

1081 X INACTIVATION

PCGF3/5–PRC1 initiates Polycomb recruitment in X chromosome inactivation

M. Almeida et al.

1082 X INACTIVATION

PCGF3/5–PRC1 initiates Polycomb recruitment in X chromosome inactivation

M. Almeida et al.

1083 X INACTIVATION

PCGF3/5–PRC1 initiates Polycomb recruitment in X chromosome inactivation

M. Almeida et al.

1084 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1085 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1086 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1087 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1088 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1089 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1090 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1091 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1092 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1093 BIOCHEMISTRY

Activity-based protein profiling reveals off-target proteins of the FAAH inhibitor BIA 10-2474

A. C. M. van Esbroeck et al.

1094 WORKING LIFE

Research on a razor’s edge

By Eric Dexter

DEPARTMENTS

989 EDITORIAL

The dishonest HONEST Act

By David Michaels and Thomas Burke

1095 CAREERS

Science Staff .................................................. 988
New Products .................................................. 1088
Science Careers .................................................. 1091

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