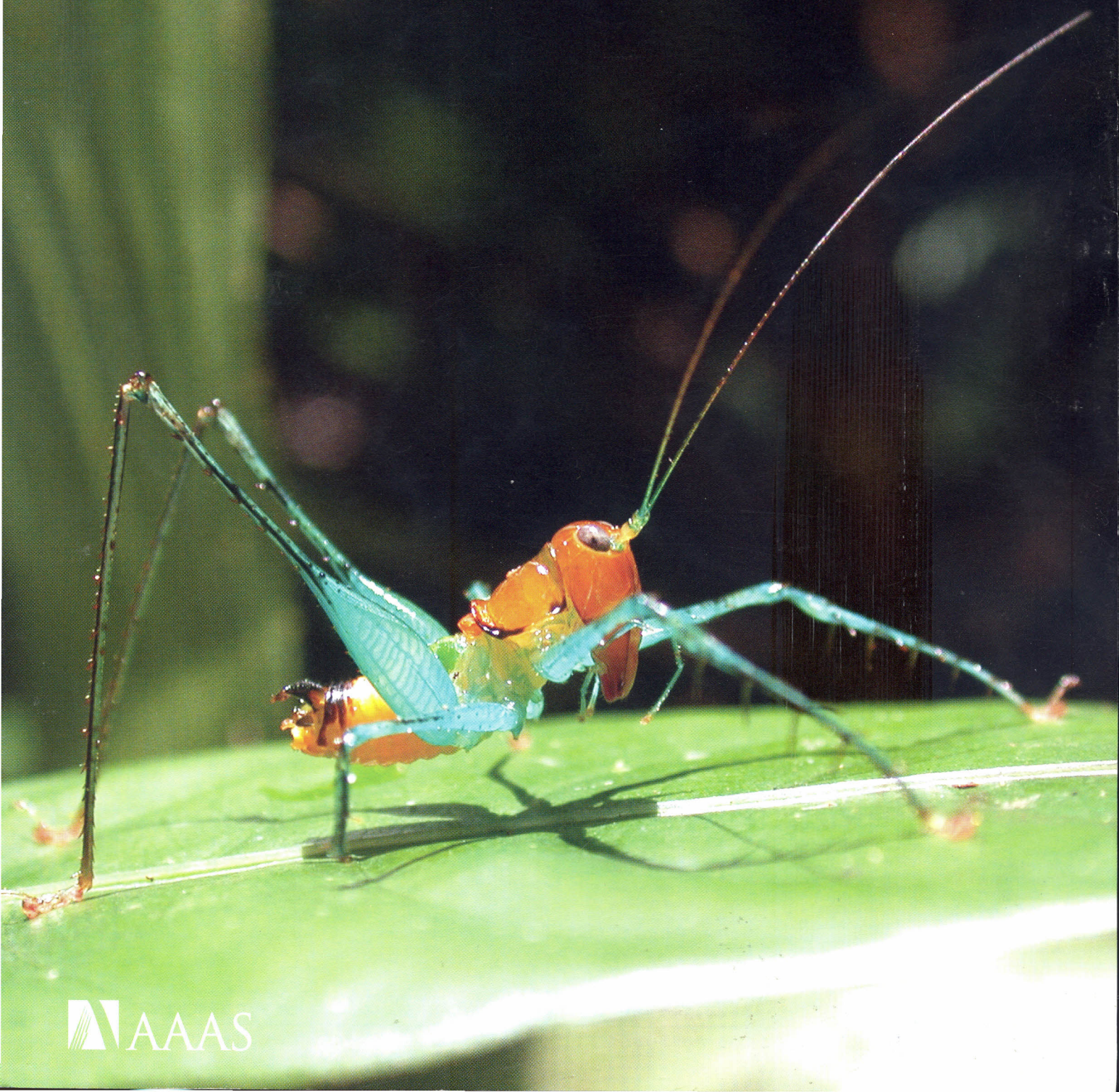


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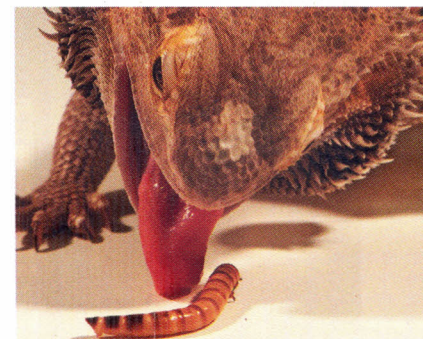
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COVER

Arachnoscelis magnifica, a predaceous katydid (Orthoptera: Tettigoniidae), on a leaf in the San Lorenzo forest of Panama. This attractive insect is but one of the ~25,000 arthropod species likely to live in this 6000-hectare forest, confirming the formidable diversity of arthropods, which appears to be 300 times that of mammals in tropical rainforests. See page 1481.

Photo: Maurice Laponce, Royal Belgian Institute of Natural Sciences

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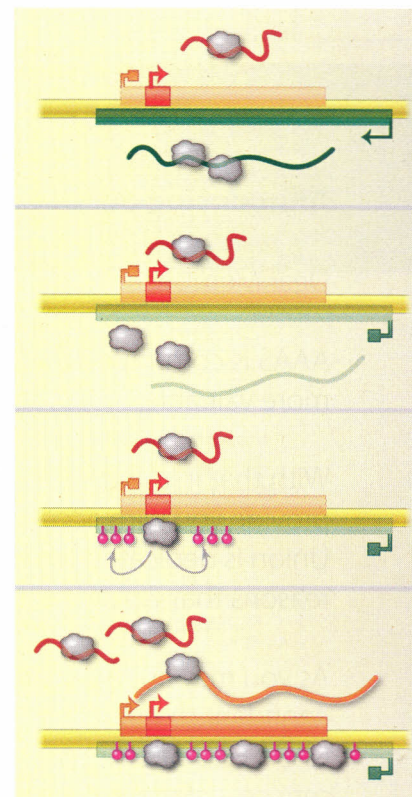
RESEARCH ARTICLE

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Insertional mutagenesis and depletion dissects the interplay between intracellular *Legionella pneumophila* and its host.

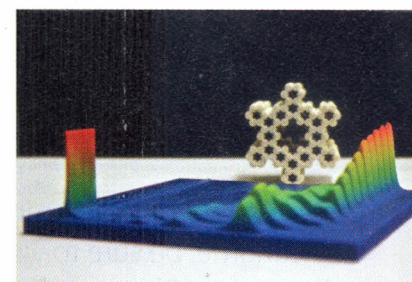
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R. S. Nemmen et al.
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- 1448** Texture of Nanocrystalline Nickel: Probing the Lower Size Limit of Dislocation Activity
B. Chen et al.
A metal subjected to high pressures retains the activity of dislocations, even for very small grain sizes.
- 1452** Small Gold Clusters Formed in Solution Give Reaction Turnover Numbers of 10^7 at Room Temperature
J. Oliver-Meseguer et al.
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- 1458** Rapid Folding of DNA into Nanoscale Shapes at Constant Temperature
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- 1462** Pheromonal Induction of Spatial Learning in Mice
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A male sex pheromone rapidly stimulates learning of place preference that is remembered for about 2 weeks.
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An epigenetic regulator positively regulates gene expression in cell-based models of hormone-resistant prostate cancer.
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- 1472** A Steroid Receptor-MicroRNA Switch Regulates Life Span in Response to Signals from the Gonad
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The mechanism by which removal of signals from the reproductive organs promotes longevity in nematodes is elucidated.
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SCIENCEEXPRESS

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Publication Ahead of Print

Variable Clonal Repopulation Dynamics Influence Chemotherapy Response in Colorectal Cancer

A. Kreso et al.
10.1126/science.1227670

Actin, Spectrin, and Associated Proteins Form a Periodic Cytoskeletal Structure in Axons

K. Xu et al.
10.1126/science.1232251

EF-P Is Essential for Rapid Synthesis of Proteins Containing Consecutive Proline Residues

L. K. Doerfel et al.
10.1126/science.1229017

Translation Elongation Factor EF-P Alleviates Ribosome Stalling at Polyproline Stretches

S. Ude et al.
10.1126/science.1228985

A Stringent Limit on a Drifting Proton-to-Electron Mass Ratio from Alcohol in the Early Universe

J. Bagdonaitė et al.
10.1126/science.1224898

SCIENCE NOW

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Diuretic Drug Offers Latest Hope for Autism Treatment

In a small trial, bumetanide improves social interactions in some children with this disorder.
<http://scim.ag/Autism-Treatment>

Tree Rings for Lobsters

Newly discovered growth bands reveal crustacean ages for the first time.
http://scim.ag/Crustacean_Ages

Turning Pull Into Push?

One physicist puts a curious twist on the interactions of charge and surface.
http://scim.ag/Charge_Surface

SCIENCE SIGNALING

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The Signal Transduction Knowledge Environment
11 December issue: <http://scim.ag/ss121112>

RESEARCH ARTICLE: TIM Family Proteins Promote the Lysosomal Degradation of the Nuclear Receptor NUR77

S. Balasubramanian et al.
The TIM family of receptors attenuates cell death in kidney cells after injury.

RESEARCH ARTICLE: Mechanism of Stretch-Induced Activation of the Mechanotransducer Zyxin in Vascular Cells

S. S. Babu et al.
Multiple steps drive the stretch-induced nuclear translocation of the mechanotransducer zyxin.

MEETING REPORT: Celebrating 30 Years of Wnt Signaling

F. Verkaar et al.
Researchers gathered to share the latest findings on Wnt signaling in development and disease.

LETTER: Comment on "Epidermal Growth Factor Receptor Is Essential for Toll-Like Receptor 3 Signaling"

B. Burness et al.
Targeted inhibitors used in cancer treatments may have adverse effects on immune responses.

SCIENCE TRANSLATIONAL MEDICINE

www.sciencetranslationalmedicine.org
Integrating Medicine and Science
12 December issue: <http://scim.ag/stm121212>

FOCUS: T_{reg} Cells in Cancer—A Case of Multiple Personality Disorder

P. D. Bos and A. Y. Rudensky

RESEARCH ARTICLE: Expression of ROR γ t Marks a Pathogenic Regulatory T Cell Subset in Human Colon Cancer

N. R. Blatner et al.
T_{reg}s that expand in human colon cancer have proinflammatory properties and contribute to tumor progression.

PERSPECTIVE: Pluripotent Stem Cells—Immune to the Immune System?

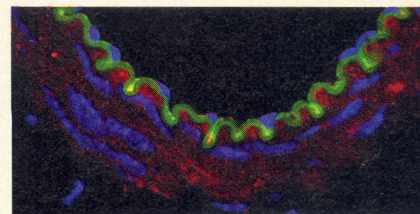
J. I. Pearl et al.
The immunogenicity of pluripotent stem cells will dictate the type of immunosuppression needed for cell therapy.

RESEARCH ARTICLE: Dantrolene Enhances Antisense-Mediated Exon Skipping in Human and Mouse Models of Duchenne Muscular Dystrophy

G. C. Kendall et al.
A ryanodine receptor antagonist facilitates exon skipping for treatment of Duchenne muscular dystrophy.

RESEARCH ARTICLE: Ser¹²⁹² Autophosphorylation Is an Indicator of LRRK2 Kinase Activity and Contributes to the Cellular Effects of PD Mutations

Z. Sheng et al.
LRRK2 Ser¹²⁹² autophosphorylation may be useful for screening candidate LRRK2 inhibitors.



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Signaling arterial stretch.

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Big Hopes, Small Changes for Biomedical Workforce Training

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In implementing the recommendations of its workforce working group, NIH decides to play it safe.

Experimental Error: The Myth of the Well-Rounded Scientist

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Despite what grad school admissions committees seem to believe, outside interests are good.

Administrative Hurdles Delay Ph.D. Scholarships in Spain

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Many Spanish students have been forced to start their doctorates without financial help.

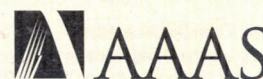
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