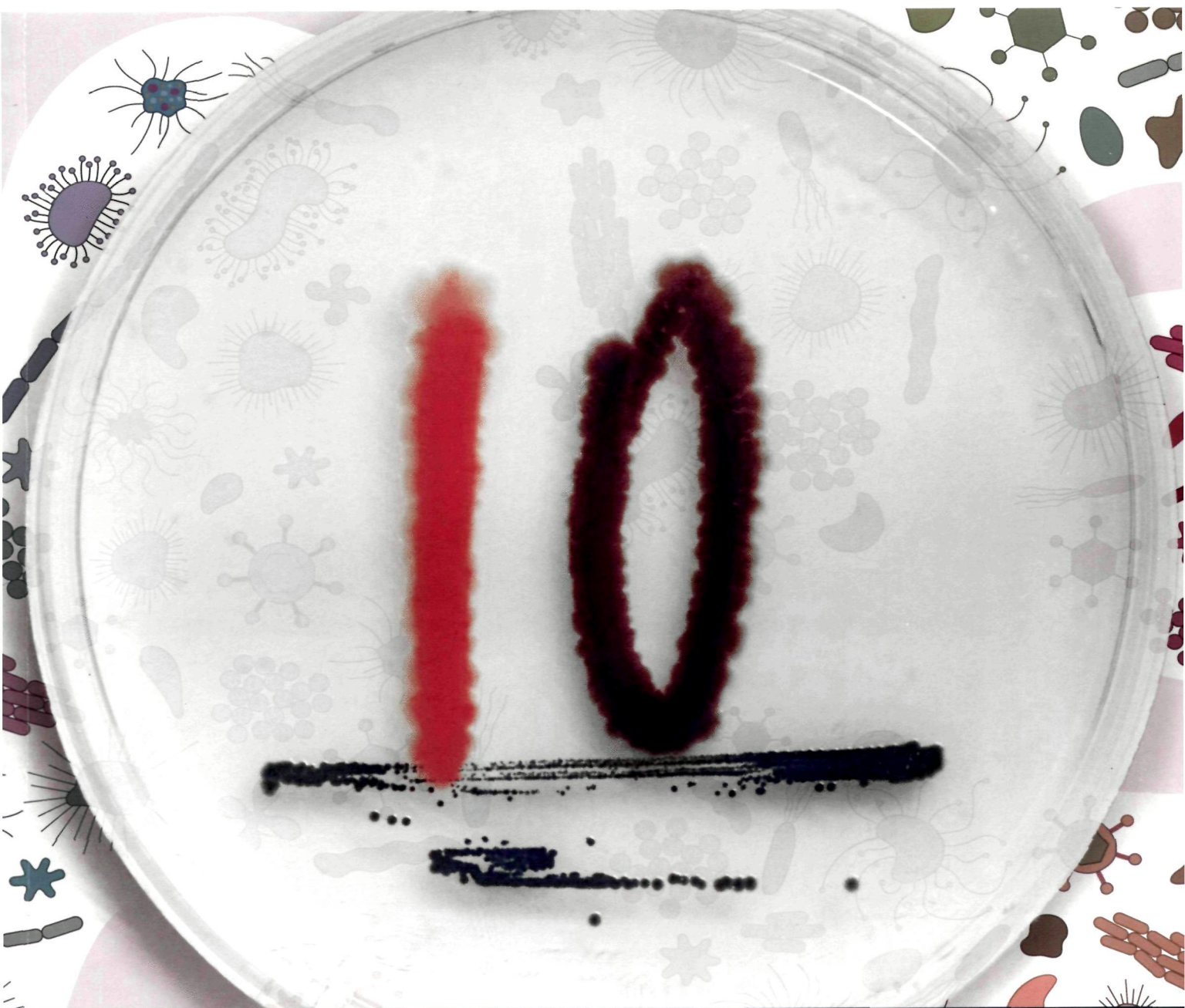


nature REVIEWS

october 2013 volume 11 no. 10
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10th anniversary issue

MICROBIOLOGY

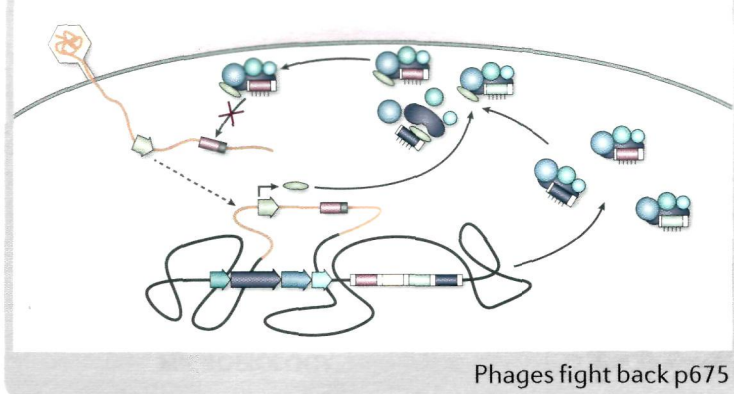


THE FIRST DECADE

Nature Reviews Microbiology turns 10!

Seeking revenge

How phages counter bacterial resistance mechanisms



Phages fight back p675

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2013

REVIEWS

Revenge of the phages: defeating bacterial defences

Julie E. Samson, Alfonso H. Magadán, Mourad Sabri and Sylvain Moineau

Bacteriophages have a remarkable capacity to defend against the antiviral systems of their bacterial hosts. Here, Moineau and colleagues discuss the diverse mechanisms that phages use to evade adsorption inhibition, restriction-modification systems, CRISPR-Cas systems and abortive infection.

The ins and outs of hepatitis C virus entry and assembly

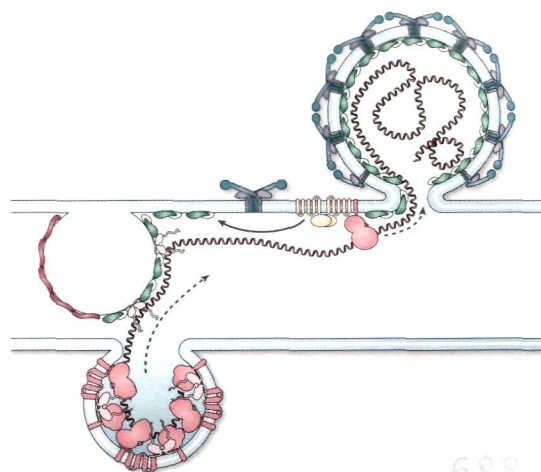
Brett D. Lindenbach and Charles M. Rice

Hepatitis C virus (HCV) is a positive-strand RNA virus that causes significant pathology in humans. Here, Lindenbach and Rice discuss recent insights into the unique properties of HCV particles and then review HCV entry and assembly, with a focus on the viral and host factors involved.

Looking under the skin: the first steps in malarial infection and immunity

Robert Ménard, Joana Tavares, Ian Cockburn, Miles Markus, Fidel Zavala and Rogerio Amino

Robert Ménard and colleagues review how our understanding of the pre-erythrocytic phase of malarial infection has changed over the past decade and how this in turn has informed our understanding of the host immune response.



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PROGRESS

Phenol-soluble modulins and staphylococcal infection

Andreas Peschel and Michael Otto

Phenol-soluble modulins (PSMs) are staphylococcal toxins with multiple roles in staphylococcal infection. Here, Peschel and Otto discuss recent progress made in our understanding of the biochemical and genetic properties of PSMs and their role in *Staphylococcus aureus* pathogenesis.

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Forthcoming articles:

Next month's Focus on Plant-Microbe Interactions includes:

Going back to the roots: the microbial ecology of the rhizosphere
Laurent Philippot, Jos M. Raaijmakers, Philippe Lemanceau and Wim H. van der Putten

On the frontline: structural insights into plant-pathogen interactions
Lennart Wirthmueller, Abbas Maqbool and Mark J. Banfield

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Key points

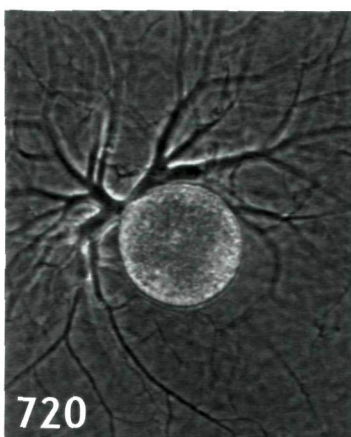
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► **COVER:** 'A microbial decade'. The image shows *Escherichia coli* expressing three different chromoproteins. *E. coli* strains and image courtesy of iGEM Uppsala 2012 and Hervé Nicoloff, Uppsala University, Sweden.



EDITORIAL

A microbial decade

RESEARCH HIGHLIGHTS

Selections from the recent scientific literature

NEWS & ANALYSIS

Genome watch What has high-throughput sequencing ever done for us?

PERSPECTIVES

ESSAY

The legacy of Carl Woese and Wolfram Zillig: from phylogeny to landmark discoveries

Sonja-Verena Albers, Patrick Forterre, David Prangishvili and Christa Schleper

In this Essay, Albers *et al.* discuss the remarkable achievements of two leaders of the archaeal research field: the late Carl Woese and the late Wolfram Zillig. They highlight how the discoveries of these two researchers have inspired the current and upcoming generations of microbiologists.

OPINION

Horizontal gene transfer in osmotrophs: playing with public goods

Thomas A. Richards and Nicholas J. Talbot

Richards and Talbot propose that in osmotrophic eukaryotic microorganisms, horizontal gene transfer has had a major role in reconfiguring osmotrophic functions, which involve the production and acquisition of public goods.

OPINION

MLST revisited: the gene-by-gene approach to bacterial genomics

Martin C. J. Maiden, Melissa J. Jansen van Rensburg, James E. Bray, Sarah G. Earle, Suzanne A. Ford, Keith A. Jolley and Noel D. McCarthy

Maiden and colleagues propose a gene-by-gene approach of analysing whole-genome data; this approach is based on their experience with multilocus sequence typing (MLST) and reflects the functional and evolutionary relationships among bacteria.

Propelling vaccinia virus to the neighbours (erratum)

Rachel David

EDITORIAL & PRODUCTION OFFICE

The Macmillan Building, 4 Crinan Street, London N1 9XW, UK
Tel: +44 (0)20 7843 3620; Email: NatureReviews@nature.com
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EDITORS



SHEILAGH MOLLOY



CHRISTINA TOBIN KÄHRSTRÖM



RACHEL DAVID



URSULA HOFER