

# Trends in Microbiology

April 2019, Volume 27, Number 4, pp. 285–380

*Special Issue: Antimicrobial Resistance and Novel Therapeutics*

## Editorial

- 285 **Responding to Antimicrobial Resistance with Novel Therapeutics** *Gail Teitzel*

## Science & Society

- 287 **Research, Innovation, and Policy: An Alliance Combating Antimicrobial Resistance** *Arjon J. van Hengel and Laura Marin*

## Spotlights

- 289 **The Scourge of Antibiotic-resistant Infections in Cystic Fibrosis** *Erin P. Price and Derek S. Sarovich*
- 291 **Efflux-Pump Upregulation: From Tolerance to High-level Antibiotic Resistance?** *Jakob Frimodt-Møller and Anders Løbner-Olesen*

## Opinion

- 294 **Not by (Good) Microbes Alone: Towards Immunocommenseal Therapies** *Chung-Yin Leung and Joshua S. Weitz*

## Reviews

- 303 **Fighting *Staphylococcus aureus* Biofilms with Monoclonal Antibodies** *Dina Raafat, Michael Otto, Kevin Reppschläger, Jawad Iqbal, and Silva Holtfreter*
- 323 **Alternatives to Conventional Antibiotics in the Era of Antimicrobial Resistance** *Chandradhish Ghosh, Paramita Sarkar, Rahaf Issa, and Jayanta Haldar*
- 339 **The Eagle Effect and Antibiotic-Induced Persistence: Two Sides of the Same Coin?** *Anggia Prasetyoputri, Angie M. Jarrad, Matthew A. Cooper, and Mark A. T. Blaskovich*

## Editor

Gail Teitzel

## Trends Publisher

Paige Shaklee

## Journal Manager

Jeanette Bakker

## Journal Administrator

Patrick Scheffmann

## Advisory Editorial Board

Adriano Aguzzi  
Norma Andrews  
Paul Bieniasz  
Barry Bloom  
Ulla Bonas  
Julian Davies  
W. Ford Doolittle  
Brett Finlay  
Vincent Fischetti  
William Goldman  
Bryan Grenfell  
Stefan Kaufmann  
Karla Kirkegaard  
Ulrich Koszinowski  
John Mekalanos  
Richard Moxon  
Ken Nealson  
Glen Nemerow  
Philippe Sansonetti  
Chihiro Sasakawa  
Quentin Sattentau  
Olaf Schneewind

(Contents continued)

- |     |  |  |
|-----|--|--|
| 355 | <b>Engineering Bacteriophages as Versatile Biologics</b> | <i>Samuel Kilcher and<br/>Martin J. Loessner</i>   |
| 368 | <b>Phage Therapy: Going Temperate?</b>                   | <i>Rodrigo Monteiro,<br/>Diana Priscila Pires, Ana Rita Costa,<br/>and Joana Azeredo</i> |
| 379 | <b>Hepatitis C Virus</b>                                 | <i>Thomas Pietschmann and<br/>Richard J.P. Brown</i>                                     |



**On The Cover:** In this themed issue of *Trends in Microbiology* we discuss issues in antimicrobial resistance and explore novel therapeutic approaches to treat infections. Cover image from iStock/Fahroni.

**Editorial Inquiries**  
*Trends in Microbiology*  
Cell Press  
50 Hampshire St. 5th Floor  
Cambridge, MA 02139, USA  
Tel: 617 397 2848  
E-mail: [tim@cell.com](mailto:tim@cell.com)

**CellPress**  
REVIEWS