

6th Call for Proposals 2012

“Combating Antibiotic Resistance”

NEWDRUGS4BADBUGS (ND4BB)



The crisis of no new antibiotics—what is the way forward?



Laura J V Piddock

Antibiotic use not only underpins modern medicine, but has brought huge changes to the world, especially in expectations of survival of children into adulthood. The theme of World Health Day, 2011, was “antimicrobial resistance: no action today and no cure tomorrow”. The demise of antibacterial drug discovery brings the spectre of untreatable infections. To prevent this crisis immediate action is needed and a new initiative, Antibiotic Action, has been launched. By bringing together communities who need these drugs with academia, health-care professionals, and pharmaceutical companies, this initiative aims to strengthen and enhance academic-industrial partnerships, bring about revision of costly and laborious processes of licensing and regulation of new antibiotics, and address the economics of antimicrobial drugs (cost of use vs profit). A global alliance for antibiotic drug discovery and development would provide a platform for these initiatives.

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The looming crisis

Many articles in medical and scientific journals and the press have documented the problems of rising numbers of antibiotic-resistant bacteria.^{1,2} Recently, some articles have revealed the impending catastrophe linked to the failure to develop new antibiotics and its implications for the practice of modern medicine.³⁻⁷ The discovery, development and widespread use of antibiotics are

and others still cause serious global health concerns (eg, *Mycobacterium tuberculosis* and *Neisseria gonorrhoeae*¹⁶).

Human beings do not live in a sterile world. Food and water can be contaminated and many different events occur that affect sharing of microorganisms between ecosystems and antibiotic-resistance genes between pathogenic and commensal bacteria. Floods, earthquakes and tsunamis have affected public health

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The broad picture of the IMI Anti-Microbial Resistance programme



- As a **public-private partnership** aiming at **removing bottlenecks in drug development**, **IMI** is the ideal instrument to solve the **scientific challenges**, to provide the necessary **incentive** for industry and to revisit the **regulatory environment** in order to reinvigorate R&D on antibiotics
- The 6th Call is the first Call of **a series of IMI Calls** which will address additional major challenges
- **First clinical trials** were selected according to **products ready to be tested** in view of a **rapid introduction in clinical care**

