

## Antibiotic Action

### Antibiotic Action – addressing 21st century medicine's greatest need

#### Professor Laura Piddock

"There is a lot in a name and none more so than Antibiotic Action: The Arms Race. This global, UK-led initiative will this week, through an event at the House of Commons and delivery of a Petition to 10 Downing Street, call for action in what is unquestionably one of the most important crises modern medicine has faced. This responsible campaign is led by the British Society for Antimicrobial Chemotherapy of which I am currently President. Antibiotic Action carries in its arsenal of evidence reports that document over 20 years deliberation within learned circles about the impending crisis of no new antibiotics. It is a clear call to "action" and it is a definite "race" that aims to arm modern medicine with antibiotic agents needed to address the resurgence and emergence of multi-drug resistant bacterial infections. The message is simple: the failure to develop new antibiotic agents will lead to a return to the pre-antibiotic era; whether this be within five, ten or 20 or more years is unknown – but we cannot afford to wait.

That antibiotic therapy is a mainstay of 21st century medicine is beyond question. That these agents are readily available, at low-cost for use across many therapy areas – particularly where patients require surgery or treatments that lead to suppression of their immune system -is expected. The availability of antibiotics is rarely questioned and major threats to their effectiveness, such as the relentless rise in numbers of antibiotic resistant infections – are being addressed through initiatives such as hand hygiene and prescribing stewardship programmes.

All efforts to contain resistance and preserve the current pool of antimicrobial agents must and should be supported. However, such initiatives are only part of the solution and there are unmet needs that must be addressed. These include the need to innovatively look at how we can stimulate interest in the discovery and development of new agents; adapt the regulatory framework to accelerate this process without compromising public health; identify how the economics of antibiotic development can be incentivised to give returns on investment that will bring industry back to the table and the need for governments worldwide to engage with each other and with stakeholders to work on regenerating the near-depleted antibiotic pipeline before it is too late. There is no other field in medicine where a success rate 75 per cent lower than that achieved for medicine in the 1980s would be accepted.

Through Antibiotic Action we have, in the four weeks since it was launched, received unprecedented support from likewise organisations across the globe. More than 3,700 signatories have been received for a Petition ([www.antibiotic-action.com](http://www.antibiotic-action.com)) calling for government to examine what can be done in this important area. We will work hard to translate this support into practical working relationships that will bring academics, economists, scientists, industry, venture capitalists, philanthropists, regulators and government together. We will examine what has gone before, open the natural product libraries and discover the treasures they hold and stimulate economic and regulatory innovations. We will strive to ensure that the field of antibacterial discovery and development is the place that the brightest, most able and most innovative scientists want to be, and the field in which those with social conscience and money to invest wish to work. Tall orders these may be, unapologetically ambitious definitely, but nothing less will achieve the results we need and that modern medicine deserves."