The role of Vaccines in AMR – the European perspective

Pierre Meulien, Executive Director of the Innovative Medicines Initiative (IMI)
MAKING THE EU A BEST PRACTICE REGION ON AMR

Including better prevention and control

BOOSTING RESEARCH, DEVELOPMENT AND INNOVATION ON AMR

SHAPING THE GLOBAL AGENDA ON AMR

EU One Health Action Plan on AMR (June 2017)
IMI – Europe’s partnership for health

**IMI1: 2008-2013**
- €2 bn budget
- 59 projects

**IMI2: 2014-2020**
- €3.3 bn budget
- More ambitious
- Greater scope

- **Antimicrobial resistance**
- Osteoarthritis
- Cardiovascular diseases
- Diabetes
- Neurodegenerative diseases
- Psychiatric diseases
- Respiratory diseases
- Immune-mediated diseases
- Ageing-associated diseases
- Cancer
- Rare/Orphan Diseases
- Vaccines

Aligned with WHO priorities
New Drugs for Bad Bugs (ND4BB)

**Transition**
- Penetration barriers & efflux

**ENABLE**
- Drug discovery engine

**Clinical trial networks**
- **COMBACTE-NET**
  - Observational and epidemiology studies
  - MEDI4893 in *S. aureus* infections
  - Minocycline in *A. baumannii* infections

- **COMBACTE-CARE**
  - Clinical management & outcomes of patients with CRE
  - Microbiological analysis and biomarkers
  - ATM-AVI clinical development

- **COMBACTE-MAGNET**
  - Epidemiology network and support
  - MEDI3902 anti-*P. aeruginosa*
  - First-in-Human trial AIC499

- **iABC**
  - Inhaled antibiotics in bronchiectasis and cystic fibrosis
  - Bronchiectasis patient registry (EMBARC)

**DRIVE-AB**
- New economic models

**Total budget**
- > 650 million Euro

**IMI ND4BB**
- Innovative medicines Initiative
- JUNE 4-7, 2018 • BOSTON, MA

**Discovery biology**
- Discovery chemistry
- Preclinical
- Phase I
- Phase II
- Phase III
- Market authorisation
- Phase IV
Challenges and opportunities

- Pneumococcal conjugate vaccine - children and elderly
- Typhoid vaccine
- Influenza vaccines and prevention of secondary infection
- But how do we deal with nosocomial infections.
  - Who should get these vaccines?
  - Are the vaccines available for the right infectious agent?
  - Would there be a market for companies to invest in?
  - R&D costs would be very high due to complexity and heterogeneity
- Need validated biobanks of nosocomial agents
- Complex regulatory frameworks and reimbursement regimens
- Vaccines for animals - aquaculture proof of concept from Norway
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