

# DRIVE-AB

## RE-INVESTMENT IN R&D AND RESPONSIBLE ANTIBIOTIC USE

### Driving new reward models to stimulate antibiotic innovation compatible with sustainable use and global access

#### The Problem

Bacterial resistance is a global human and economic burden that is increasing annually. Antibiotic research and development (R&D) pipelines are inadequate, and no new antibiotic that is effective against the most resistant Gram-negative bacteria is expected to be available in the near future. There is an urgent need for new economic models that stimulate antibiotic R&D while considering sustainable use and access for all patients in need.

#### The Project

DRIVE-AB is a multinational consortium composed of 16 public and 7 private partners from 12 countries funded by the EU Innovative Medicines Initiative (IMI), a joint undertaking between the European Union and the pharmaceutical industry association EFPIA.

The project is established to **identify models that incentivise the discovery and development of novel antibiotics** while supporting efforts to make antibiotic use more sustainable and to ensure access for all patients in need.

DRIVE-AB will research the questions that other initiatives in the field of antibiotic resistance are raising, provide evidence-based information, model economic data and recommend implementable solutions addressing innovation, conservation, and access that are based on scientific data.

#### Creation and testing of new economic models

To date, DRIVE-AB has:

- validated the principle **bottlenecks** to antibiotic innovation,
- performed an **analysis of incentives from other industries** that may be applicable for antibiotics
- Designed a computer simulator as basis for large-scale **economic simulations**
- short-listed the **most promising economic incentives**.
- Engaged with all involved **stakeholder** groups and major initiatives

DRIVE-AB will publish its detailed results in peer-reviewed journals and will deliver its final recommendations to governments and policy-makers in the second half of 2017.

#### DRIVE-AB Conference

The consortium will be holding a high-level conference on **“Stimulating innovation, sustainable use and global access to antibiotics”**. The conference will be held in Amsterdam on **2 June 2016** and will present DRIVE-AB’s preliminary research results and seek feedback from stakeholders regarding feasibility and implementation of R&D incentive policies. The conference also seeks to demonstrate how DRIVE-AB aligns or deviates from other ongoing European and international initiatives in the field of antibiotic resistance and to identify opportunities for interaction and synergy.

#### Responsible use of antibiotics, new and old

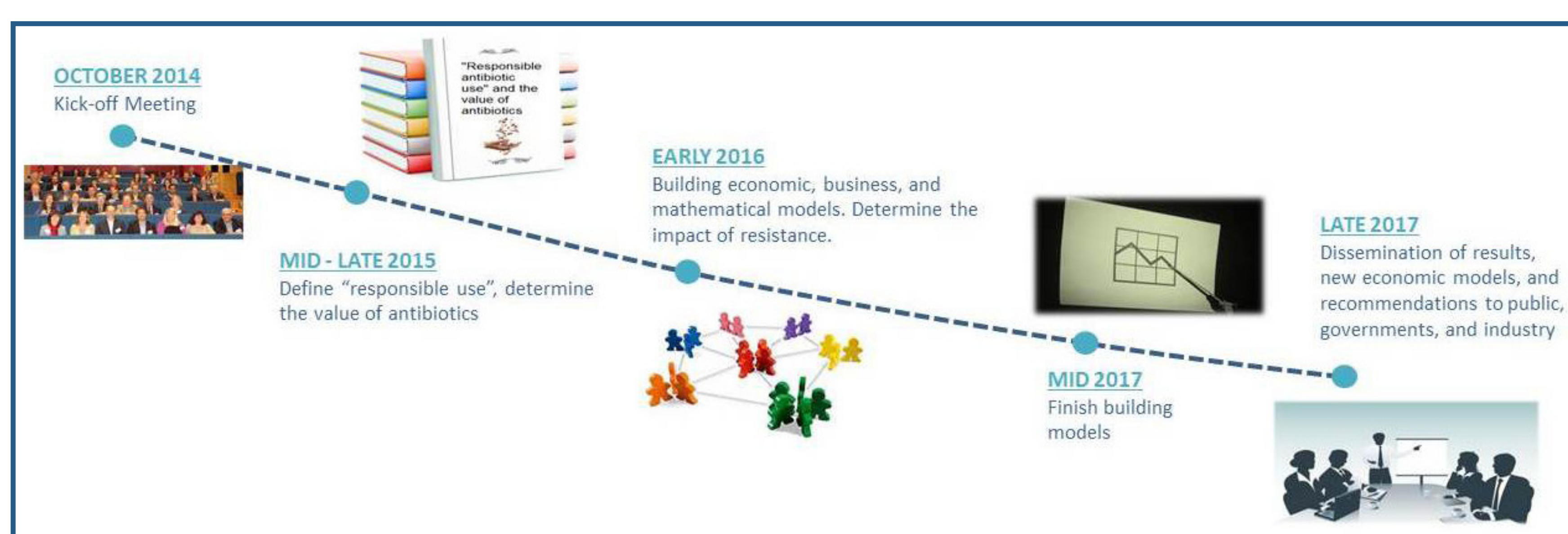
DRIVE-AB is developing **standardized definitions and metrics for responsible antibiotic use as well as identifying the barriers and facilitators to this** through the use of literature reviews, consensus procedures and focus groups/interviews with a wide range of stakeholders. The team is currently completing the literature reviews and consensus procedures, preparing the interviews and holding a training event for high-level experts across the EU on how to use the metrics.

#### Setting, communicating and revising public health priorities

The ultimate output of this work stream will **assist pharmaceutical companies and policy-makers to predict the future magnitude and clinical impact of resistance and the need for new antibiotics** as well as the **effects of various interventions** to curtail resistance. To date, data mining of antibiotic surveillance systems has informed models that have been developed to predict the spread of antibiotic-resistant pathogens, resulting infections and their impact at the hospital, regional and global levels. Temporal and geographic patterns in the spread of resistance have been identified.

#### Antibiotic Valuation

This work stream is focused on the economic valuation of antibiotics. The team is **creating a new framework for valuing antibiotics** and identifying how current health technology assessment processes fall short for antibiotics. We will demonstrate the framework through a series of case studies.



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