

EU Research on Antimicrobial drug resistance



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EU research funding for AMR

- Research projects addressing AMR have received EU funding since 1999
- Mostly human medicine and far less the veterinary/food sector
- More than 200 million € over 10 years (restrictive counting!)
- Very broad scope so far!
- Mobilization of EU scientists in the field

AMR & Research needs

- ▶ Developing strategies for prudent/rational use of currently available antibiotics
 - ◆ slows down the rise in the development of resistance
 - ◆ reduces the spread of resistant microbes
- ▶ Infection control
- ▶ Understanding host-pathogen interaction
- ▶ Developing novel antimicrobial therapies
 - ◆ new use of existing antibiotics
 - ◆ new drugs
 - ◆ new treatment strategies
- ▶ Developing new rapid cost-effective diagnostic tests
 - ◆ to determine **whether** antibiotics should be prescribed
 - ◆ to determine **which** antibiotics should be prescribed
 - ◆ to determine whether antibiotics remain effective
- ▶ Validation of diagnostic tests
 - ◆ to determine performance, robustness, sensitivity, reliability

FP7 funded research on AMR so far

- ▶ Novel targets for drugs against Gram negative bacteria
- ▶ Host-pathogen interactions in infections by *Streptococcus pneumoniae*
- ▶ Molecular epidemiology to control nosocomial and community spreading of highly virulent multi-drug resistant strains of bacterial pathogens
- ▶ Clinical evaluation of point-of-care diagnostic tests for microbial detection and identification, antibiotic susceptibility determination and biomarkers
- ▶ Impact of specific antibiotic therapies on the prevalence of resistant bacteria in the human host

- ◆ 15 projects funded
- ◆ 65 million €

Topics for the current call

Investigator-driven clinical trials of off-patent antibiotics. **CT**

Funding scheme: collab. project, max €6m, 2-stage, one or more proposals.

Multi-disciplinary research on the evolution and transfer of antibiotic resistance.

Funding scheme: collab. project, max €12m, single-stage, max one proposal.

Management of Gram negative multi-drug resistant infections.

Funding scheme: collab. project, max €12m, single-stage, max one proposal.

Topics for the current call

Development of multi-analyte diagnostic tests. **SME $\geq 30\%$**

Funding scheme: collab. project, max €3m, 2-stage, one or more proposals.

Development of tools to control microbial biofilms with relevance to clinical drug resistance. **SME $\geq 30\%$**

Funding scheme: collab. project, max €3m, 2-stage, one or more proposals.

Development of an evidence-based behavioural and communication package to respond to major epidemic outbreaks.

Funding scheme: collab. Project, max € 2m, 2-stage, one or more proposals.

- **All topics are open for international cooperation**

- ▶ An opportunity to involve partners from anywhere in the world



Innovative Medicines Initiative (IMI)

- **Point of Care Diagnostic Test for Clinical trials of antibiotics**
 - ▶ Partnership with Big Pharma
 - ▶ Support to pipeline
 - ▶ Pre-competitive research

Future calls (call 6 and 7)

- **In call 6 AMR is closed**
- **Focus areas for AMR in call 7**
 - ▶
 - ▶
- **IMI again?**

Upcoming new initiatives

- **Trans-Atlantic Task Force on Antimicrobial Resistance (TATFAR)**
 - ▶ EU-US Summit November 2009
 - ▶ ECDC, EMA, EFSA, DG SANCO, DG Research
 - ▶ CDC, FDA, NIH
 - ▶ Report on priority areas for TA collaboration March 2011
 - ▶ AB use in medical and veterinary fields, IC, pipeline of new ABs
- **EU Integrated Action Plan**
- **Joint Programming for Research**
 - ▶ Coordination (but not pooling!) of national research programmes
 - ▶ “5% + 95%”
 - ▶ Bottom-up at the request of Member States

Tuberculosis



FP7 TB Research

“1/3 of the world’s population is infected with
Mycobacterium tuberculosis”

First four calls (2007-2010): 65 million €
Total: 13 projects + 4 projects TB-related

Highly innovative approaches for research into host-pathogen interaction in tuberculosis:
5 small CP, 14,3 million €, **HOMITB, TB-EUROGEN, NOVSEC-TB, TB-VIR, StopLATENT-TB**

- Development of fast tests for the diagnosis of multi-drug-resistant strains of TB and of
- latent TB infection: 2 small CP, 5,7 million €, **TM-REST, FAST-XDR-DETECT**
- Highly innovative research in TB between Indian and European partners: SICA 1 small CP, 3 million € **NATT**
- Coordination of European research activities with global initiatives, including PPPs: 1 SA, **ESI-TBVI**
- Next generation of researches for TB: 1 CA, **TBsusgent**

FP7 TB Research

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TREATMENT : 17 million €

PREVENTION: 12 million

MULTI-DRUG RESISTANCE: 11 million

DIAGNOSTICS: 5,7 million

OTHERS: 19,3 million

- **Drug Discovery and Preclinical Development – 1 large + 1 medium size CP, 17 million €**

ORCHID, MM4TB (Under negotiation)

- **Identification and pre-clinical testing of TB vaccines: 1 large CP, 12 million €,**

NEWTBVAC

