

Ricerca e innovazione si sono fermate perché?

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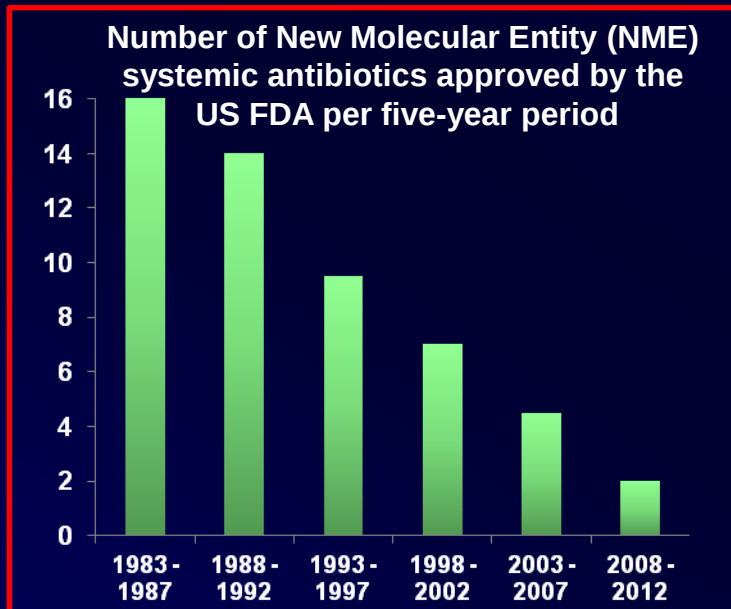
Prof. Ordinario Farmacologia Fuori Ruolo
Facoltà di Medicina



«Lotta alle infezioni correlate all'assistenza»
Auditorium La Nazione - 28 Ottobre 2019

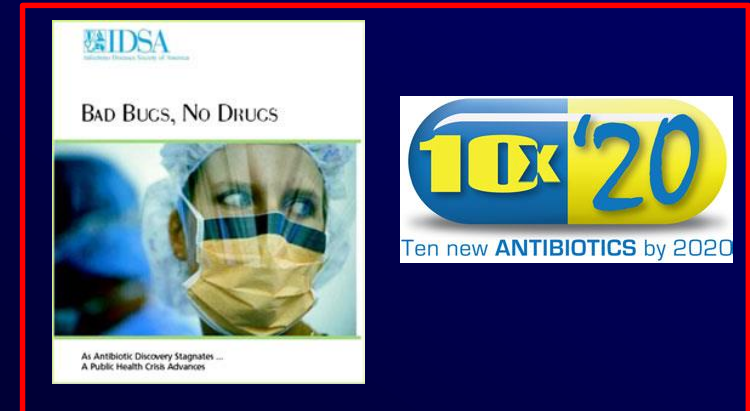
Combating Antimicrobial Resistance: Policy Recommendations to Save Lives

IDSA Policy paper



Enterococcus
Staphylococcus
Klebsiella
Acinetobacter
Pseudomonas
ESBL (Enterobacter and E. coli)

CID 2009;48: 1-12
ECDC/EMA 2009

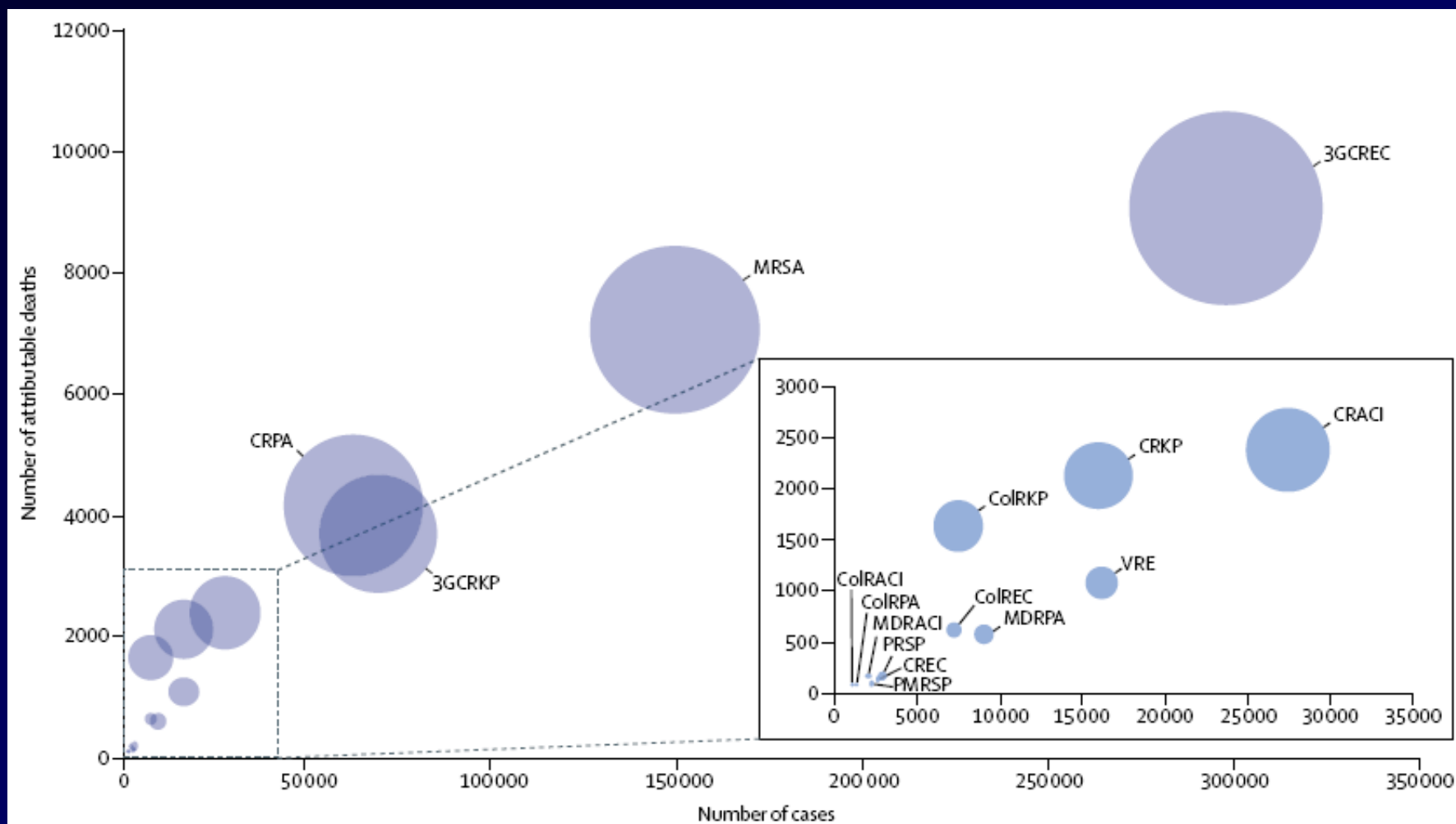


CID 2010;50: 1081-1083

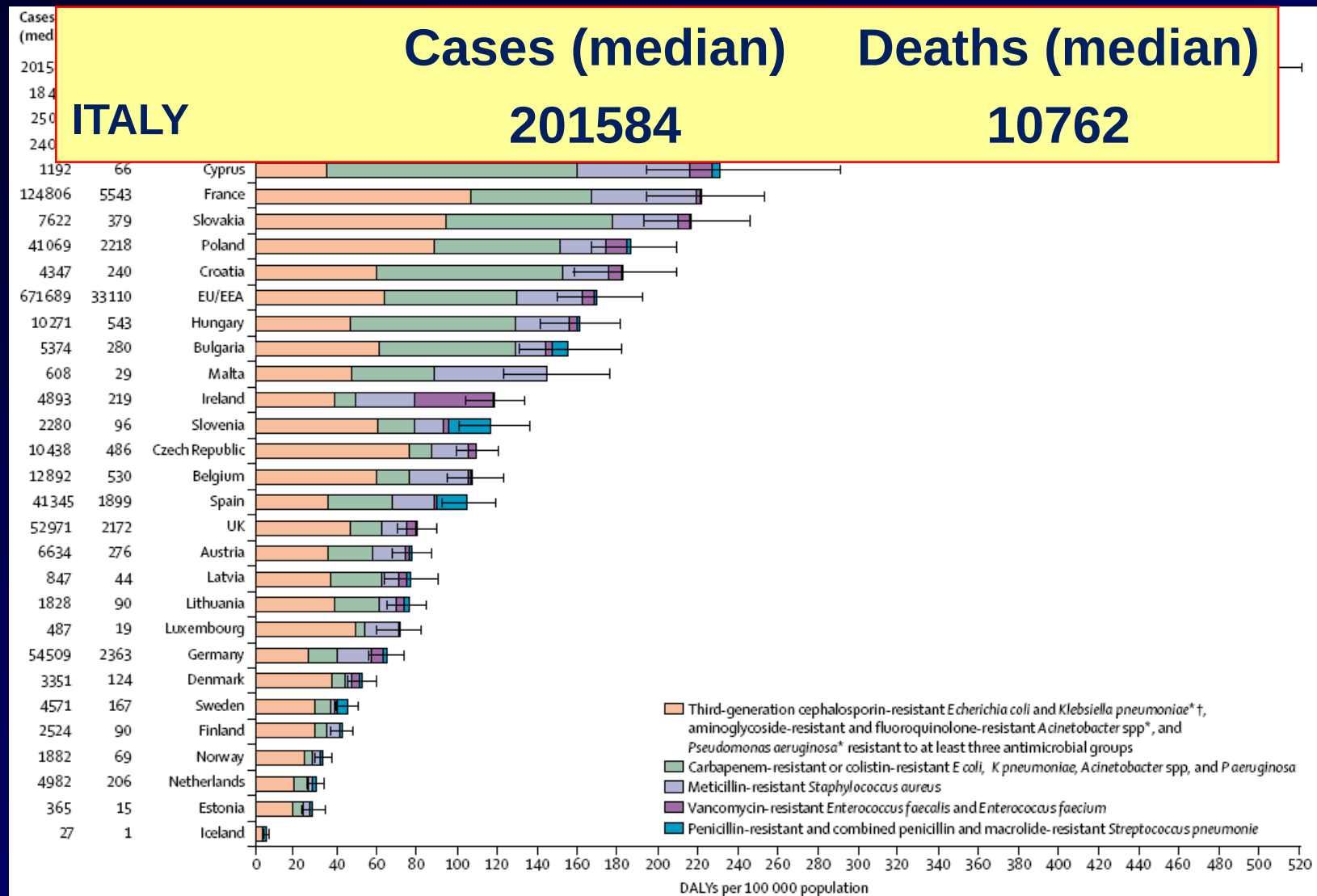
IDSA RECOMMENDS:

- Adoption of economic incentives and support for other collaborative mechanisms to address the market failure of antibiotics
- New regulatory approaches to facilitate antimicrobial development and approval
- Greater coordination of relevant federal agencies' efforts
- Enhancement of antimicrobial resistance surveillance systems
- Strengthening activities to prevent and control antimicrobial resistance
- Significant investments in antimicrobial-focused research
- Greater investment in rapid diagnostics R&D and integration into clinical practice
- Eliminating non-judicious antibiotic use in animals, plants, and marine environments

Infections with antibiotic-resistant bacteria, EU and European Economic Area, 2015



Burden of infections with antibiotic-resistant bacteria in DALYs, EU and European Economic Area, 2015

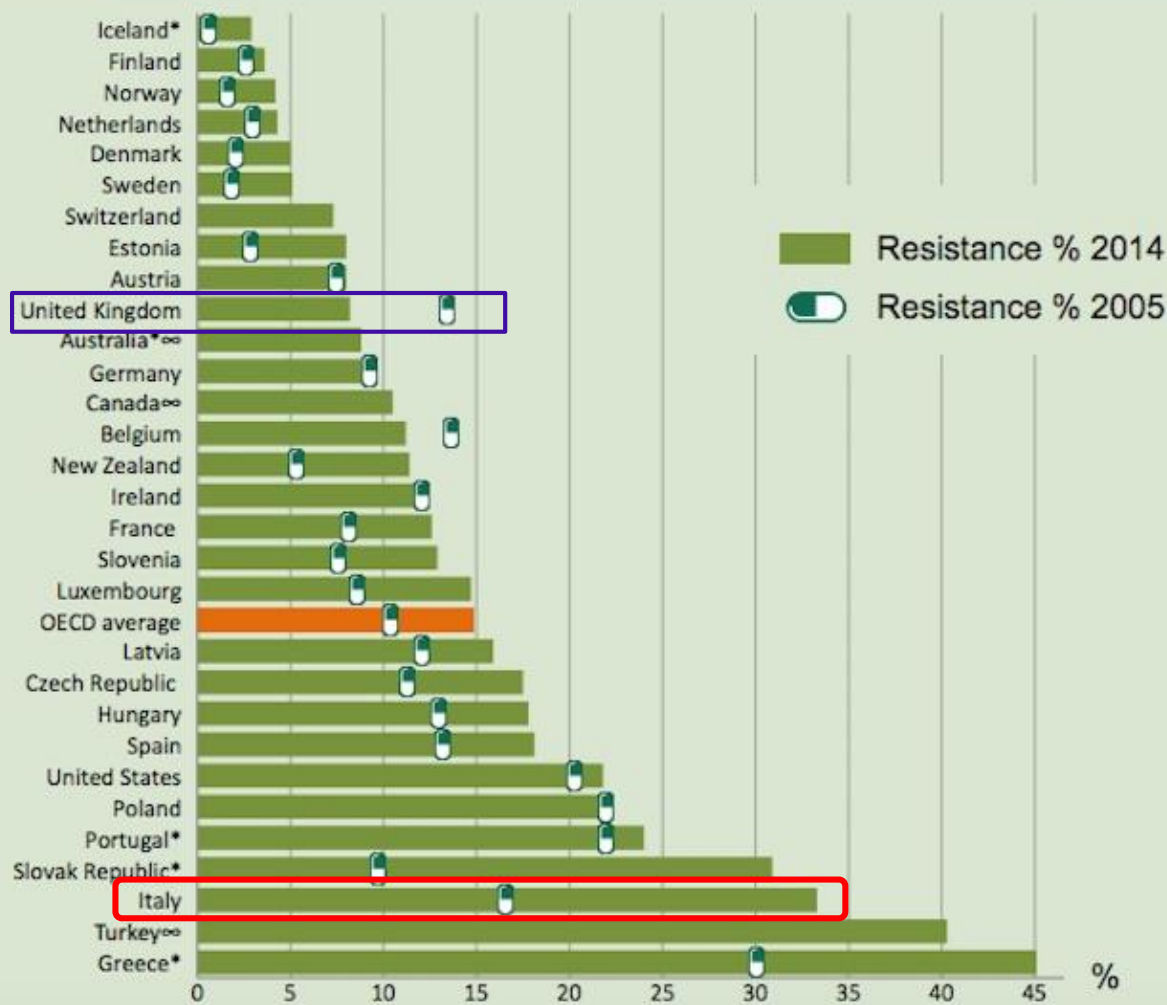


Human consumption of antibiotics



Trends across OECD countries

Antibiotic resistance is growing



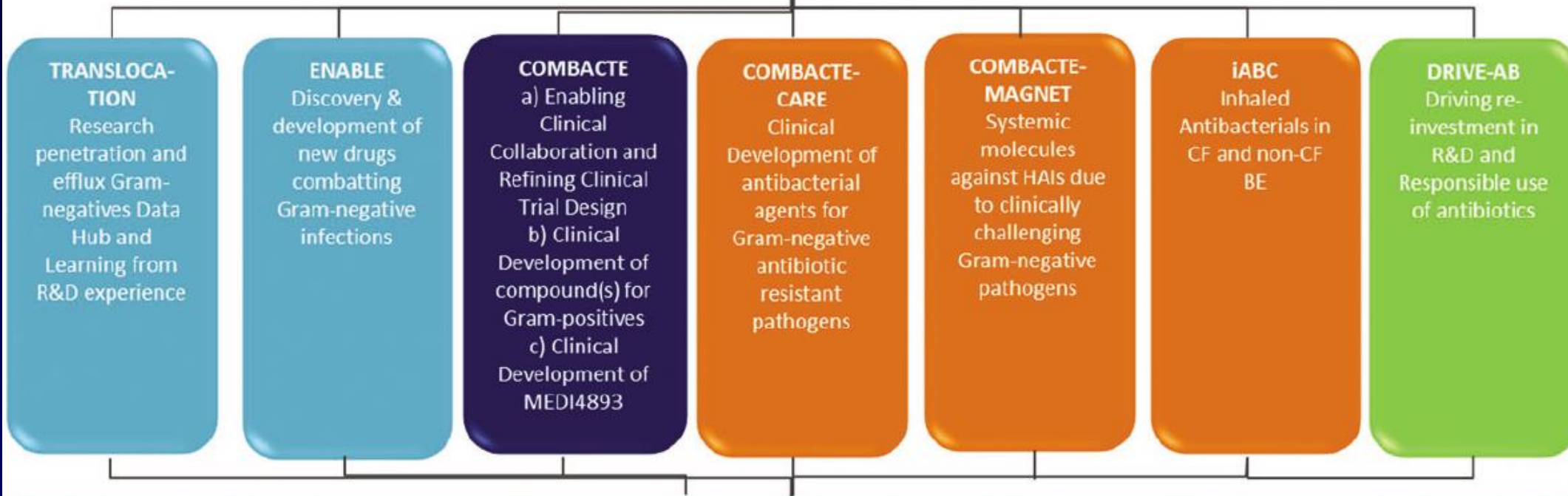
The innovative medicines initiative's new drugs for bad bugs programme: european public–private partnerships for the development of new strategies to tackle antibiotic resistance

Kostyanev T, Bonten MJM, O'Brien S, Steel H, Ross S, François B, Tacconelli E, Winterhalter M, Stavenger RA, Karlén A, Harbarth S, Hackett J, Jafri HS, Vuong C, MacGowan A, Witschi A, Angyalosi G, Elborn JS, deWinter R and Goossens H

J Antimicrob Chemother 2016; 71: 290–295

New drugs ND for Bad Bugs (ND4BB) initiative

ND4BB cross topic collaboration and dissemination



ND4BB Information Center

All data generated is submitted and is accessible to all consortium partners

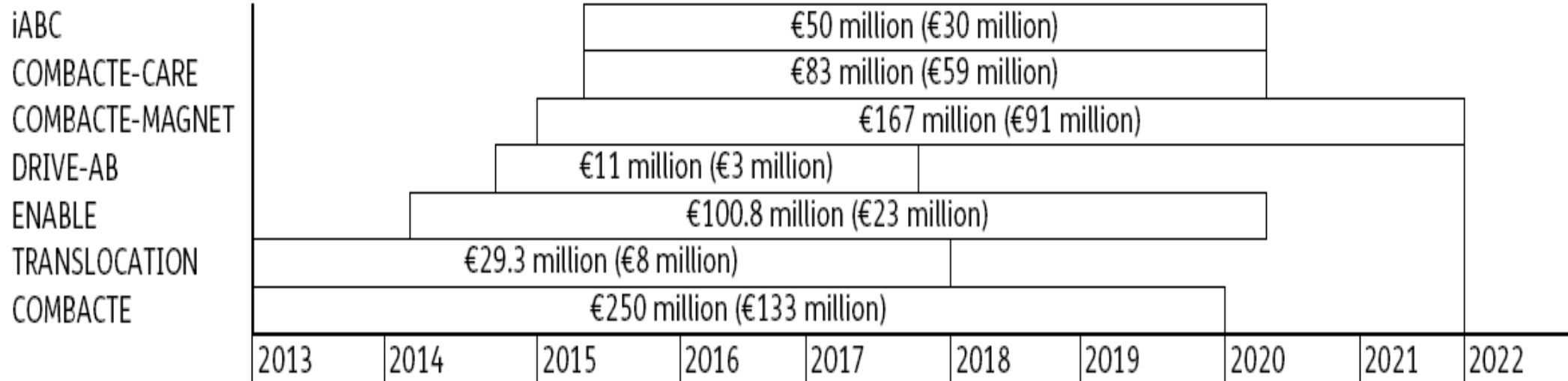
Drug discovery

Drug development Gram-positives

Drug development Gram-negatives

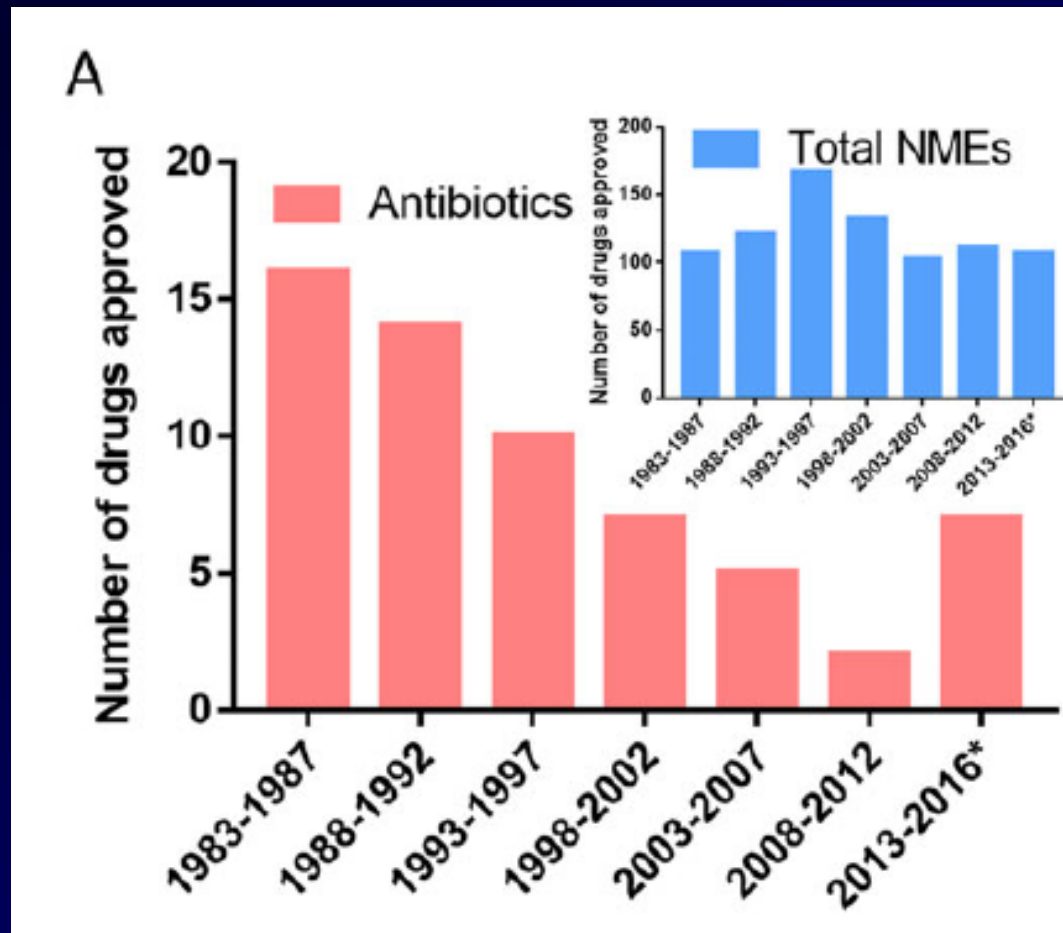
Economics and stewardship

Timeline and total budget estimation of the seven topics of the ND4BB programme



Kostyaney T et al., J Antimicrob Chemother, 2016

Number of US FDA-approved new antibiotics and total new molecular entities



Zheng W et al., Br J Pharmacol, 2018

Product launches: new antibiotics vs other brands

