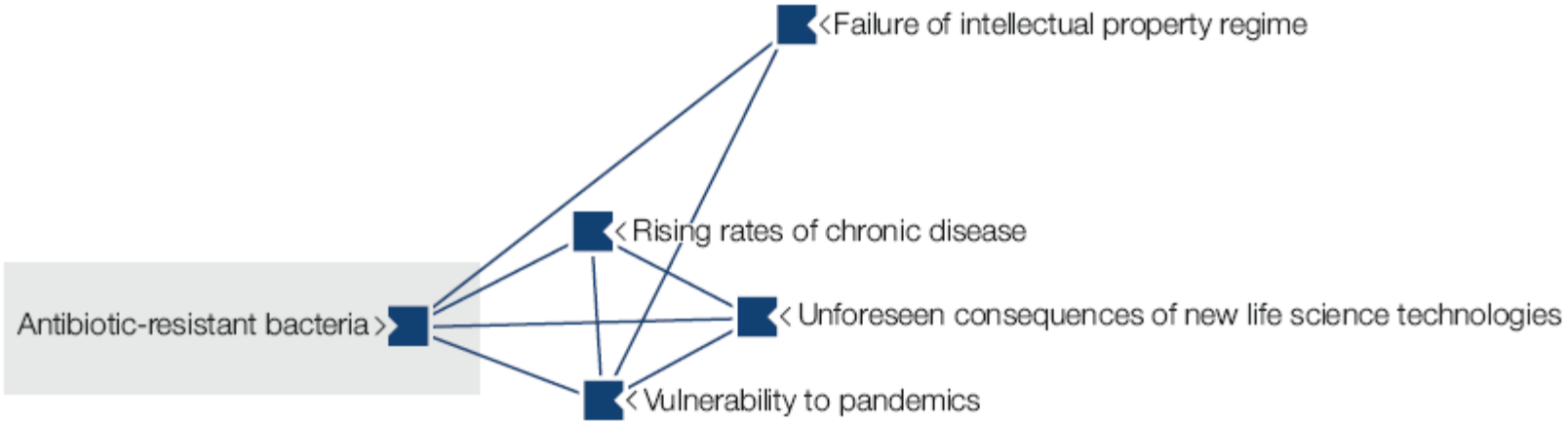
Global Risks 2013
Eighth Edition

WORLD ECONOMIC FORUM

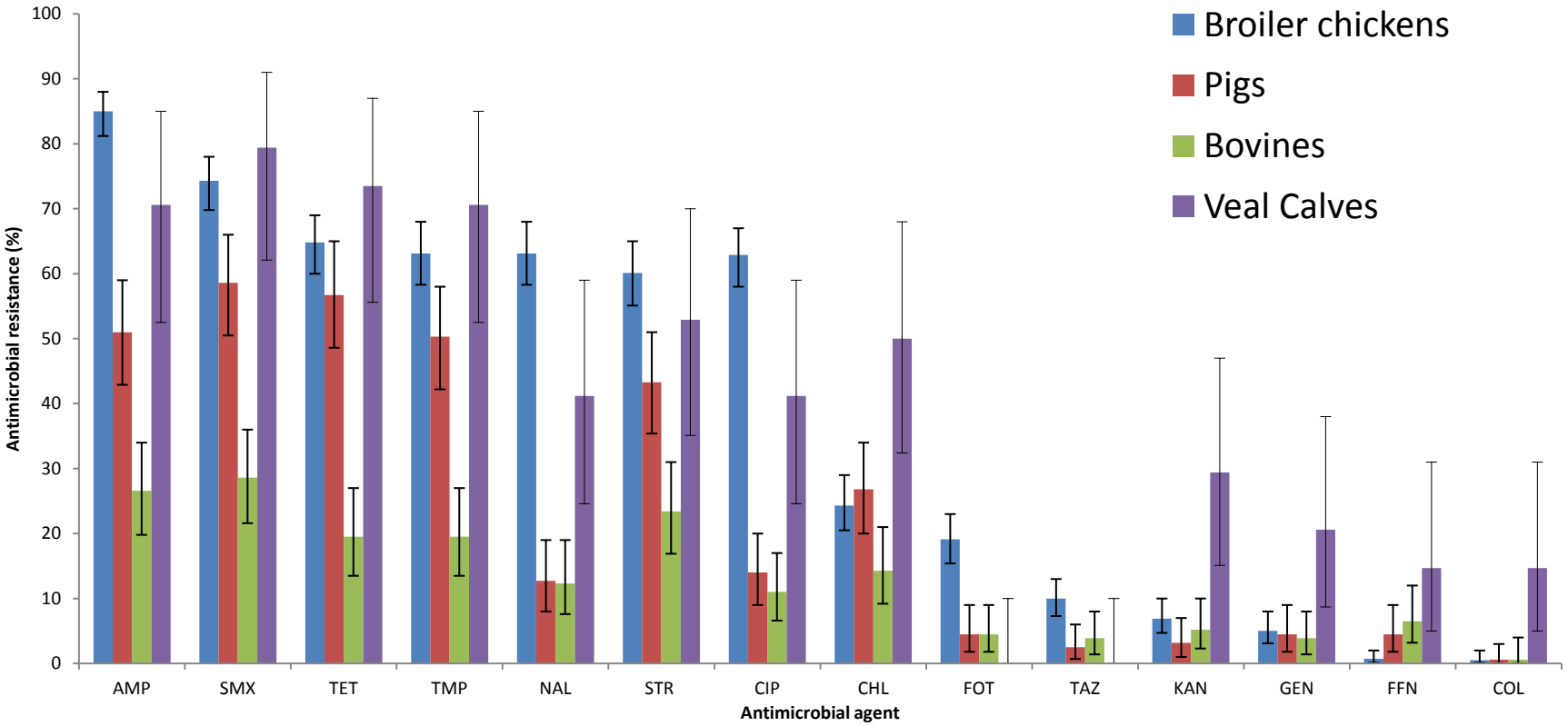
COMMITTED TO IMPROVING THE STATE OF THE WORLD

Figure 15: The Dangers of Hubris on Human Health Constellation



While viruses may capture more headlines, arguably the greatest risk of hubris to human health comes in the form of *antibiotic-resistant bacteria*. We live in a bacterial world where we will never be able to stay ahead of the mutation curve. A test of our resilience is how far behind the curve we allow ourselves to fall.

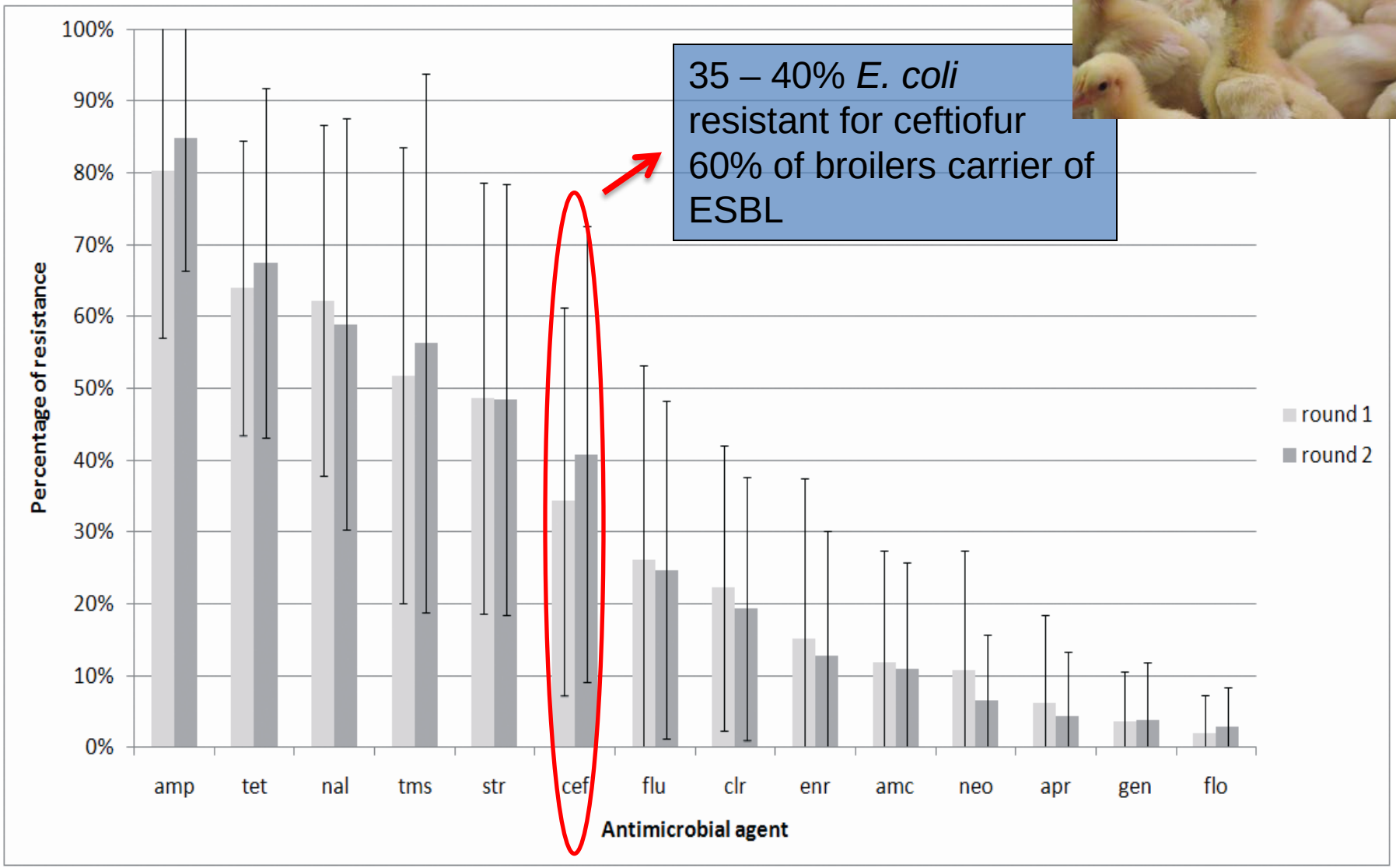
Belgian surveillance data 2011 (E. coli)



AMP: ampicillin, CHL: chloramphenicol, CIP: ciprofloxacin, COL: colistin, FFN: florfenicol, FOT: cefotaxime, GEN: gentamicin, KAN: kanamycin, NAL: nalidixic acid, SMX: sulfomethoxazole, STR: streptomycin, TAZ: ceftazidime, TET: tetracycline, TMP: trimethoprim

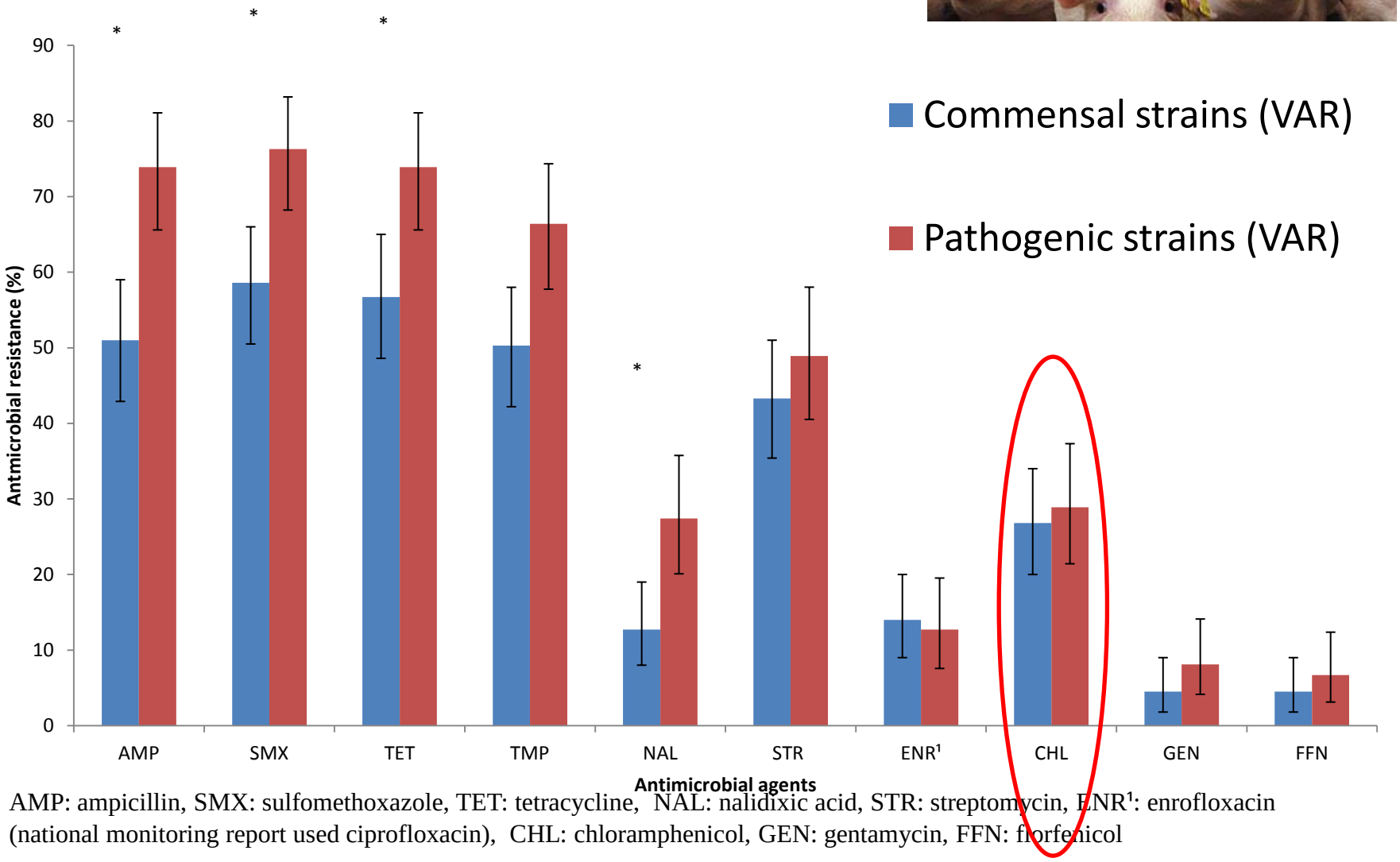
Chantziaris et al., 2013

Belgian broilers (E. coli):



Persoons et al., 2010

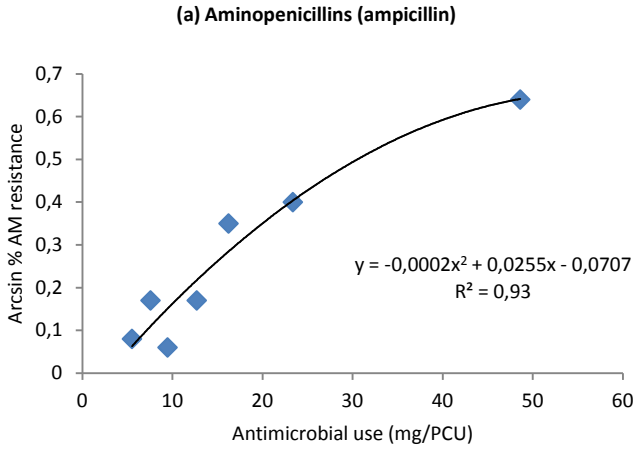
Vleesvarkens: *E. coli*

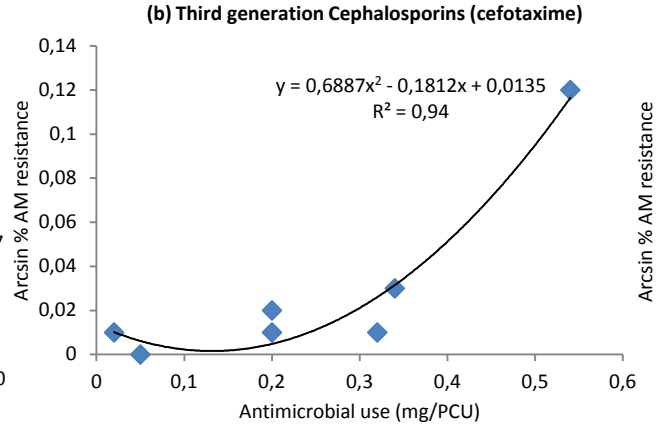


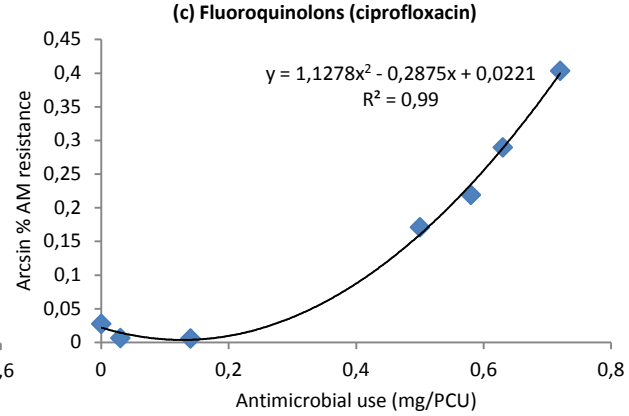
AMP: ampicillin, SMX: sulfomethoxazole, TET: tetracycline, NAL: nalidixic acid, STR: streptomycin, ENR¹: enrofloxacin (national monitoring report used ciprofloxacin), CHL: chloramphenicol, GEN: gentamycin, FFN: florfenicol

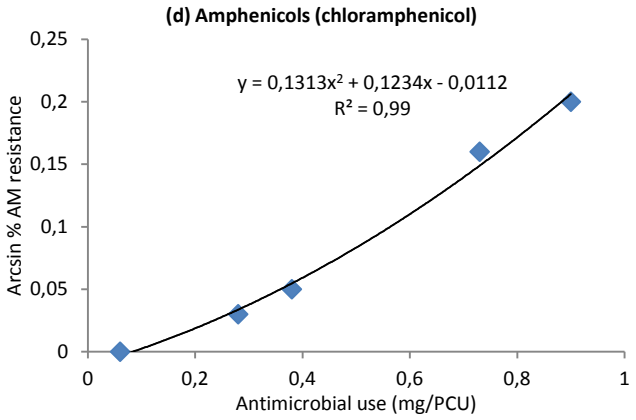
Chantziaras et al., 2014

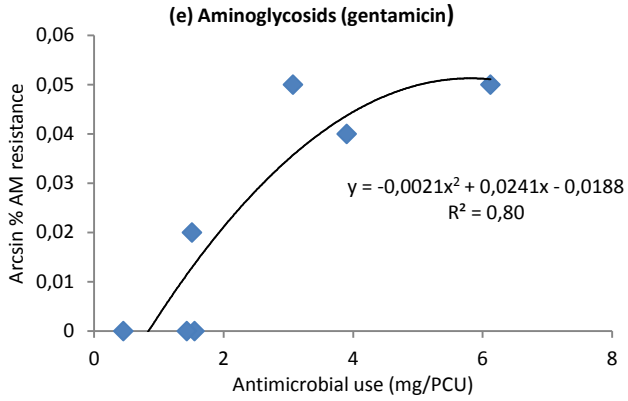
Linking antimicrobial use to antimicrobial resistance in 7 EU countries based on surveillance data

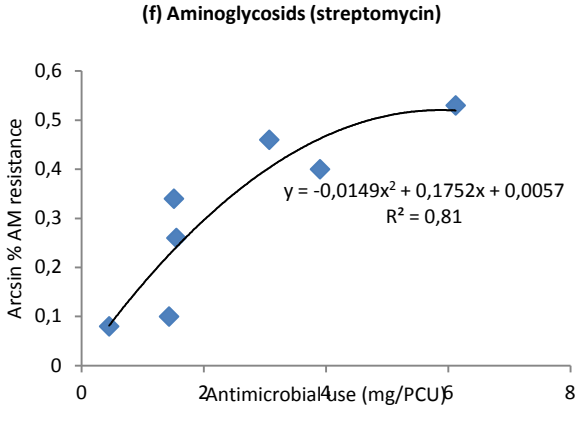






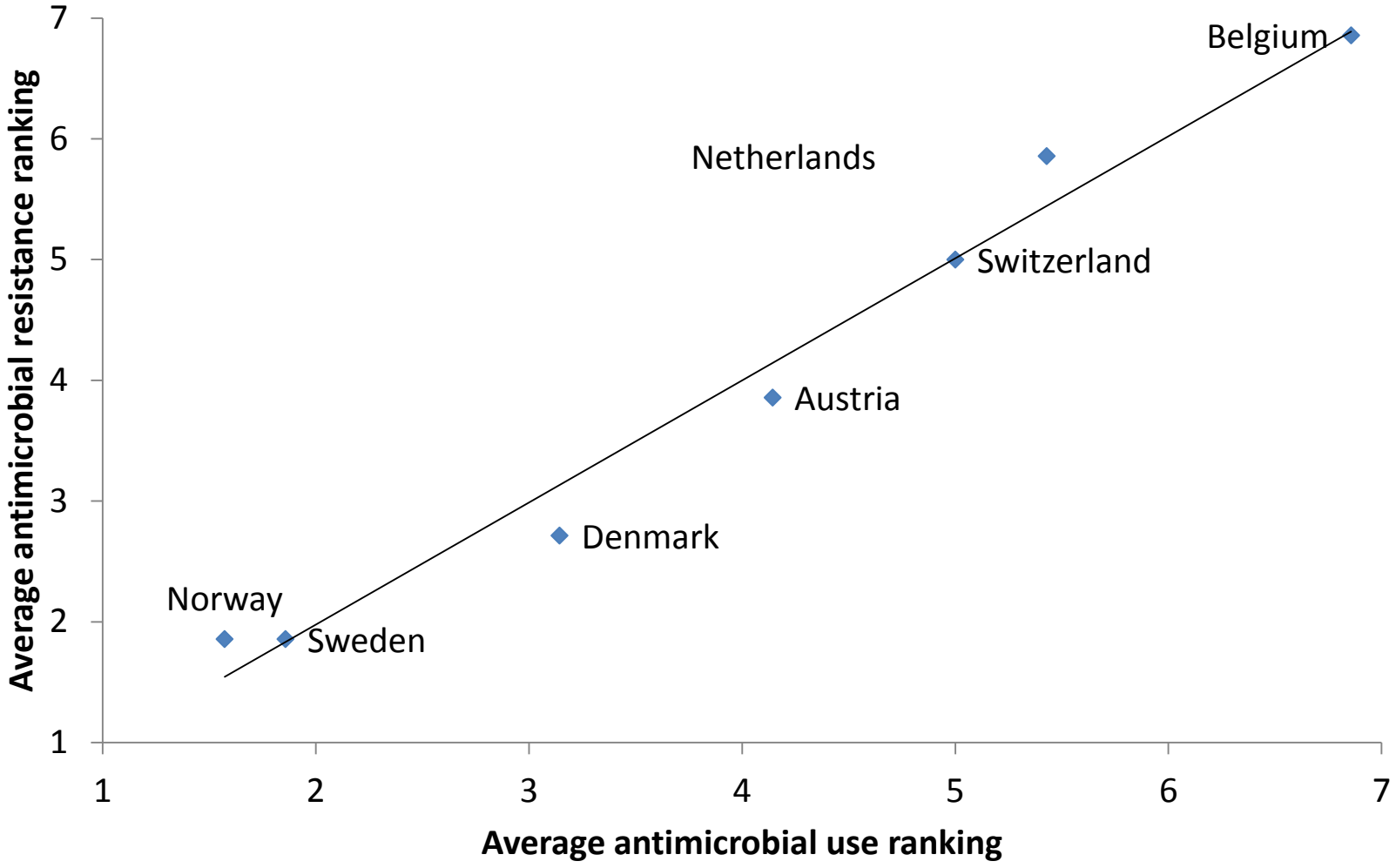






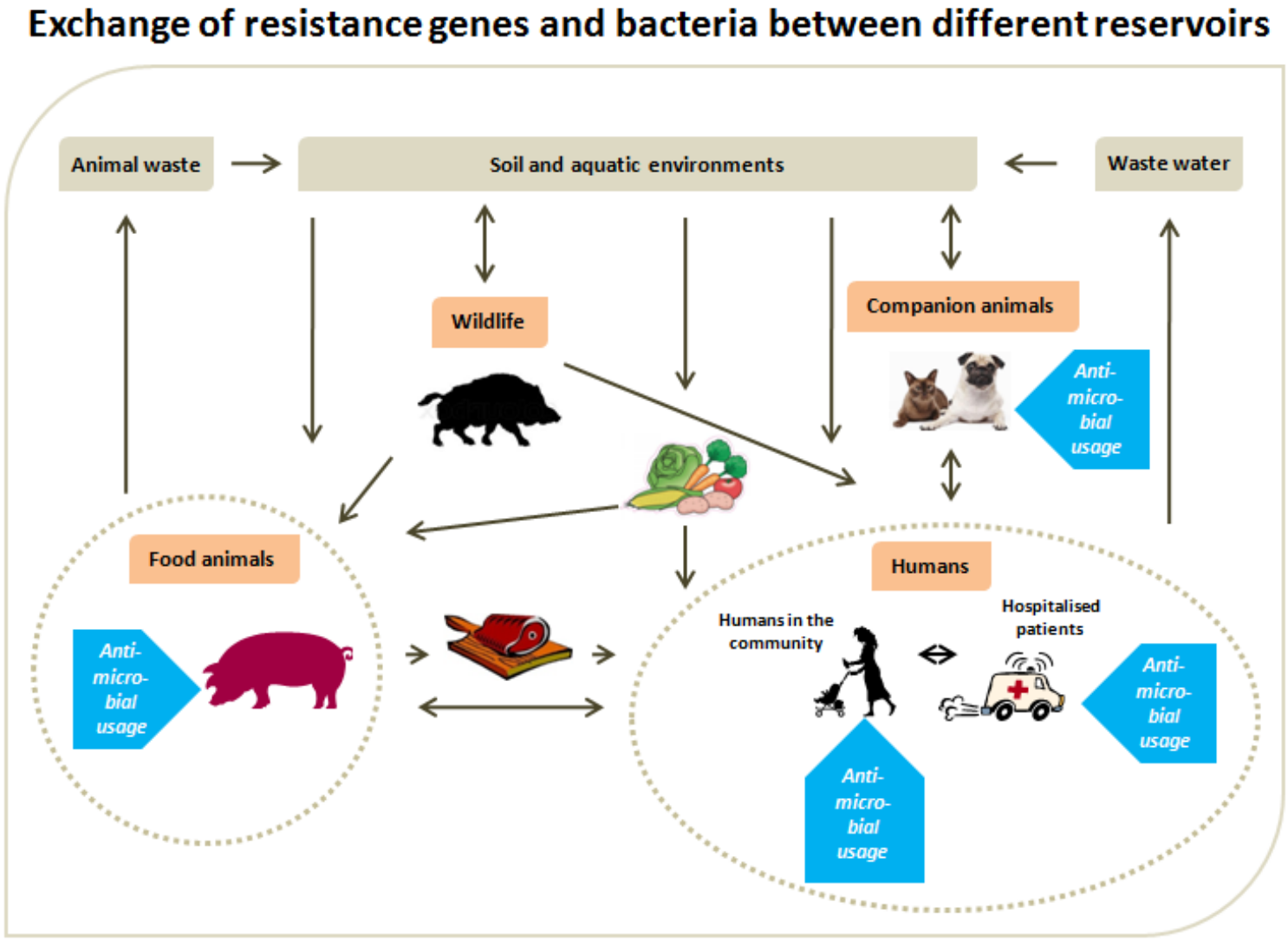
Chantziaras et al., 2013

Linking antimicrobial use to antimicrobial resistance in 7 EU countries based on surveillance data

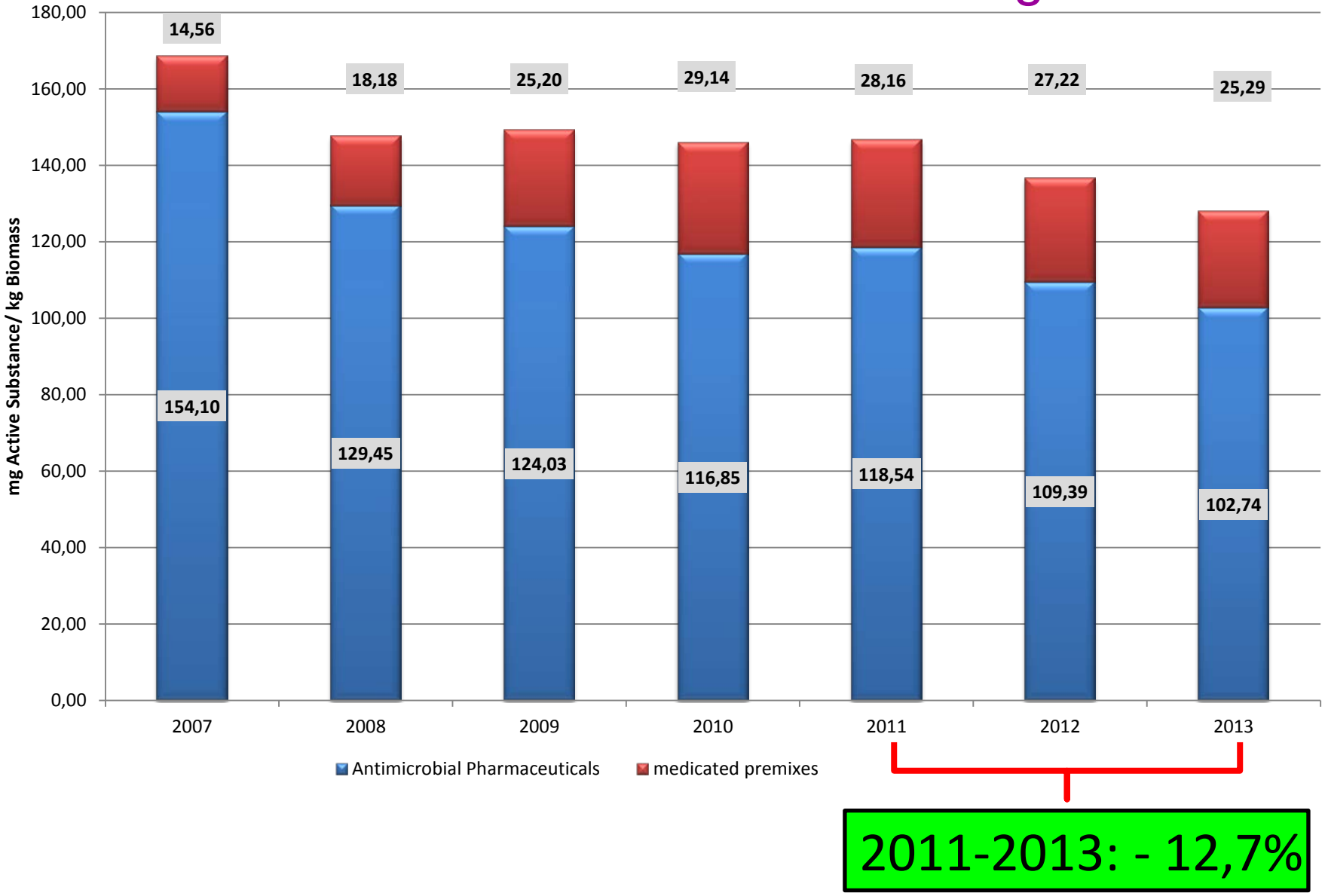


Chantziaras et al., 2013

Ecosystem


Exchange of resistance genes and bacteria between different reservoirs
Animal waste
Soil and aquatic environments
Waste water
Wildlife
Companion animals
Anti-micro-bial usage
Food animals
Humans
Humans in the community
Hospitalised patients
Anti-micro-bial usage
Anti-micro-bial usage
Anti-micro-bial usage

BelVet-Sac
Antimicrobial use in animals in Belgium



Antimicrobial use in Europe:
EMA / ESVAC