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Directorate-General

Ongoing and potential future EC activities on monitoring and control of MRSA

Food and Veterinary aspects

Dr. Kris De Smet

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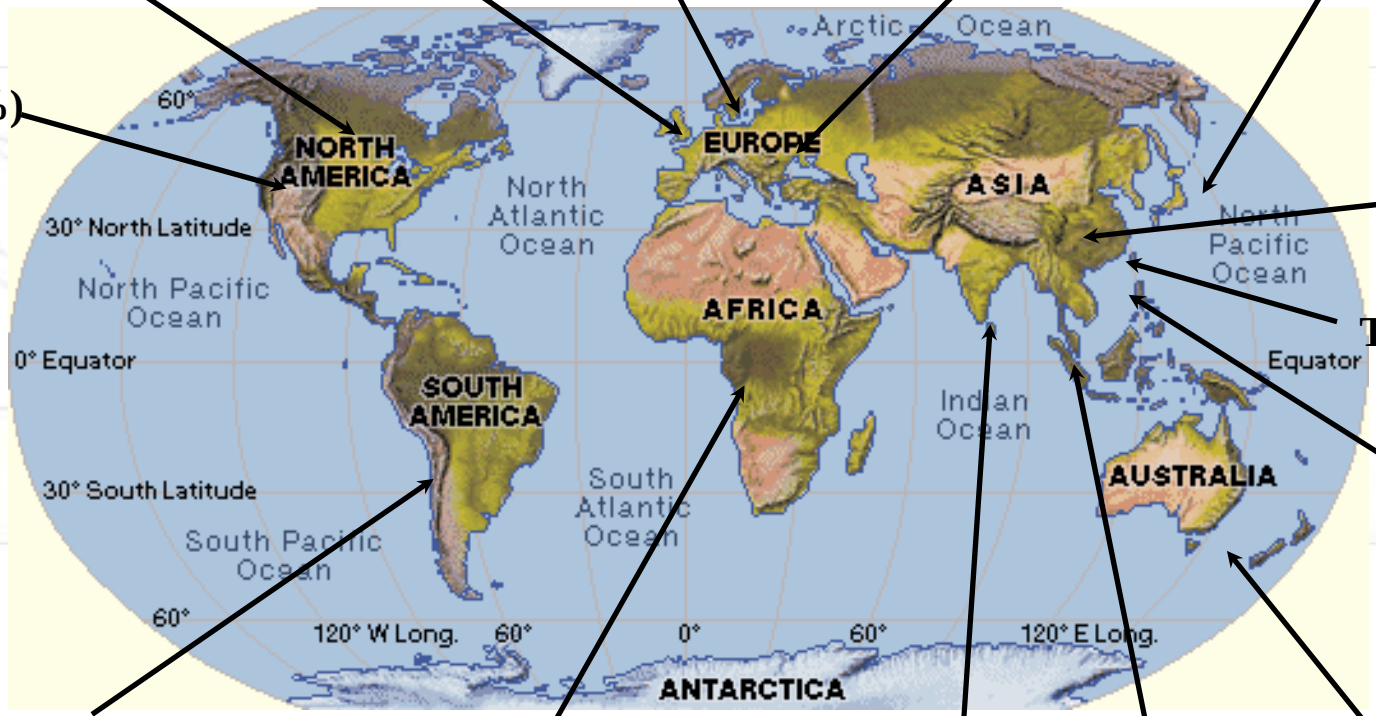
Human prevalence of MRSA (% of all *S. aureus*)



Canada (6%)

UK (42%)

Denmark/
Norway (<1%)

Europe (24%)
(range 1-60%)

Japan (74%)

USA (36%)

China
(39%)

Taiwan (61%)

Hong
Kong (80%)

Latin America (29%)

Africa
Nigeria (21%)
Zimbabwe (43%)
South Africa (49%)

India (34%)

Singapore (63%)

Australia (30%)

MRSA in animals

- See other presentations for detailed overview
- MRSA ST398
  - 2005: human cases associated with pig farming in the Netherlands
  - 2006: High prevalences in the NL in pigs, pig holders, their relatives and veterinarians
  - 2007: similar findings in Belgium
  - Also in horses, dogs, cattle and poultry

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Initiative of the European Commission

- 2008 baseline survey for *Salmonella* spp in breeding pig extended to MRSA
- Decision 2008/55/EC*
- Based on technical specifications provided by the EFSA Task Force on Zoonoses Data Collection

*OJ L 14, 17.1.2008, p. 10

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EU Baseline survey on MRSA

- 27 Member States + Norway & Switzerland
- January to December 2008
- 2 populations:
  - Nucleus and supplier/multiplier holdings
  - Production holdings
- Up to 171 holdings /country / population
- EC cofinancing: 1 950 000€ (including *Salmonella* analyses)

Some information collected

- Holding: size, type of production holding, replacement policy of gilts and boars.
- Sampled pens: indoor/outdoor, individual housing, floor, use of antibiotics
- Samples:
  - Mandatory: PCR confirmation, Spa typing
  - Optional: MLST typing, SCCmec typing, Antimicrobial susceptibility testing

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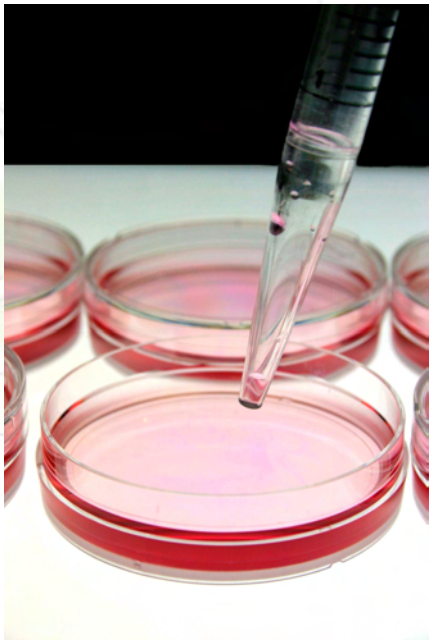
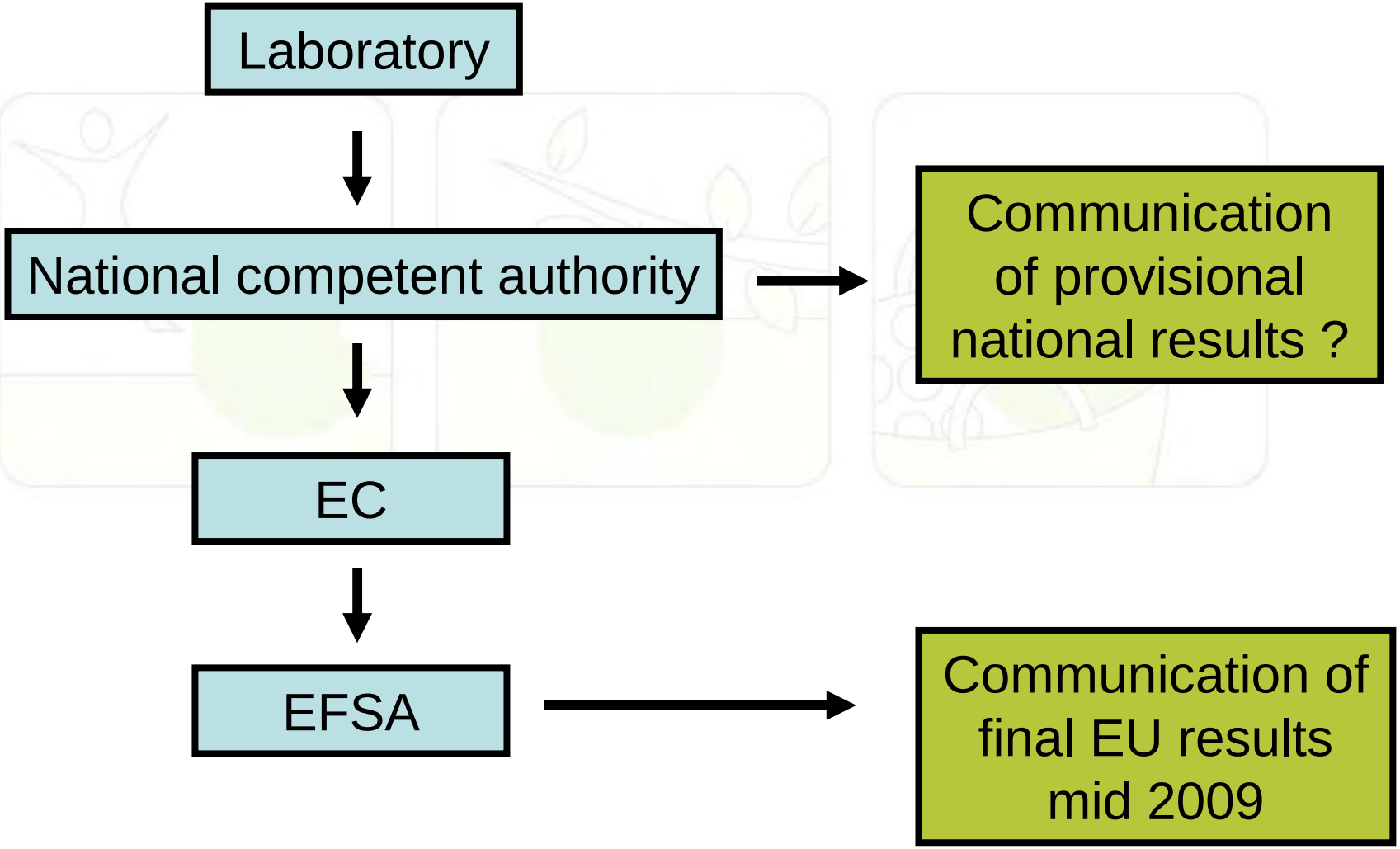
Sample collection and analysis

- 5 dust samples using dry sterile swabs in five pens of each holding
- Pooled sample analysed in laboratories with proven experience
- Selective enrichment followed by MRSA identification by PCR
- Subtyping for link to human isolates
- Antimicrobial susceptibility testing



Reporting and Communication of results



Objectives of the MRSA survey

- Comparable prevalence data on MRSA in breeding pigs in all Member States
- Link with human isolates
- Awareness of hospitals /medical sector

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Needs before measures are considered

- Results of the baseline study
- Assessment of risk for humans through contact or food
- Link with use of antibiotics
- (Other) risk factors
- Mitigation options
- Cost/benefit analysis

Possible future initiatives

- Mandatory monitoring in pigs and other animals
- Setting a target for reduction ?
- Trade restrictions between infected holdings and non-infected ?
- Restricting the use of (certain) antibiotics ?
- Criteria in food?

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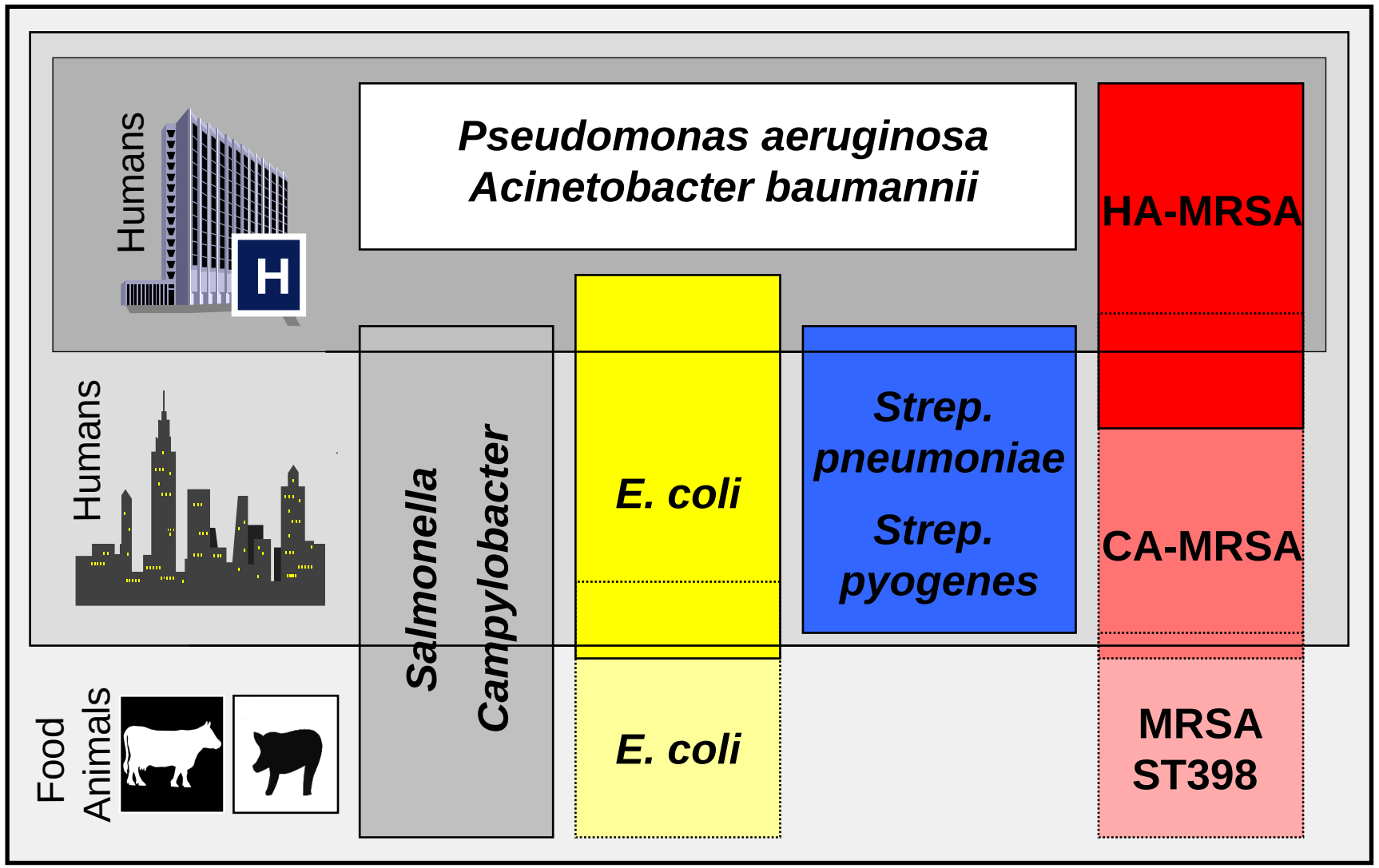
Antimicrobial resistance in animals and humans



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Monitoring of antimicrobial resistance (Dec 2007/407/EC) in *Salmonella* isolates*

	Layers	Broilers	Turkeys	Pigs
2007			X	X
2008	X			
2009	X	X		
2010	X	X	X	
2011	X	X	X	X
2012	X	X	X	X

*: In addition, antimicrobial resistance of *Campylobacter* isolates in broilers is monitored in all Member States.

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Conclusion

Both human and veterinary medicine should take their responsibility as regards control of MRSA and antimicrobial resistance