Potential Consequences of the current Discussions and Papers on the Development of new Classes of Antimicrobials

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at HMA/CVMP/Interested Parties Meeting

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Introduction

- Various Papers published related to Antimicrobials
  - Fluoroquinolones (EMEA, EFSA)
  - Cephalosporines (EMEA, EFSA, ECDC)
  - Macrolides
  - Which class next?
- Strict Regulations for Antimicrobials and Antibiotics
  - Regulation 1831/2003
  - Directive 2004/28
- Lisboa Agenda: most competitive and innovative Market
- Need for Innovation to meet increased food demand
- Antimicrobials 2nd largest Market in EU Animal Health
- Antimicrobials lowest Innovation

Recent Developments

New MA for Antimicrobials since 00

- 95 % Generics
- New Claims
- New active Ingredients
- New Formulations
- New Classes: ?

Recent Developments

- Generics
  - Valuable development to harmonise EU markets
  - Problems regarding harmonisation of claims
  - Is this true innovation?

Recent Developments

- **New Claims**
  - Frequent, as foreseeable cost and benefit:
    - DC study
    - Field study
    - MIC data
- **Many examples, e.g.**
  - Haemophilus parasuis (Glässer Disease)
  - Mycoplasma hyopneumoniae, M. bovis (enzootic Pneu.)
  - Prevention/Metaphylaxis of SRD/BRD
  - Lawsonia intracellularis
  - Necrotic enteritis
  - Footrot

Recent Developments

- **New Active Ingredients**
  - 3rd Generation Cephalosporin in pets
    - Cefovecin
  - Fluoroquinolones in pets
    - Pradofloxacin ↓
    - Orbifloxacin (combination)
  - Macrolides in Food Producing Animals
    - Tylvalosin
    - Tulathromycin
    - Gamithromycin

Recent Developments

- **New Formulations/Application Forms**
  - One-Shot (e.g. Convenia, Naxcel, Zactran, Draxxin, Baytril Max)
  - Injection at the base of the ear (Naxcel)
  - Combinations (Posatex)

Recent Developments

- **New Classes**
  - NONE in Animal Health

Antimicrobial Classes in Human Health

- **Pleuromutilins 2007**
- **Glycylcyclines 2005**
- **Cyclic Lipopeptides 05**
- **Ketolites 2001**
- **Oxazolidinone 2000**
- **Macrolides 1987**
- **Carbapenemes 1985**
- **Fluoroquinolones 1983**
- **Streptogramins 1962**
- **Glycopeptides 1958**
- **Cephalosporins 1953**
- **Erythromycin A 1952**
- **Amphenicoles 1949**
- **Tetracyclines 1948**
- **Polymixins 1947**
- **Aminglycosides 1944**
- **Penicillins 1943**
- **Sulfonamides 1936**
- **Salvarasan 1910**

New Antimicrobial Classes in AH

- Recently identified classes have not been authorised as Animal Health Products
- However, off-Label use in pets, especially in hospital kind settings
- While we do not authorise them in EU, they are imported via the food chain to the European consumer

Why little interest of AH-Industry in new Classes of Antimicrobials?

- Cost of Investment

versus

- Predictability of Success

Where to direct investment?

- Profitable: justify investment
- Innovative: better than currently available products
- Low Risk: not used in Human Medicine
- **Positive Benefit/Risk from both: applicant and regulators**

Potential Influence of Guidelines?

- Create further Hurdles to get MA
  - E.g. only „serious“ disease
  - More rigorous evaluation compared to other products
- Do they Provide Clarity to Applicants?
  - In which respect?

Costs of Development

- MRL: 5 Mill €
- MA of Antimicrobial Class livestock: ~40-80 Mill €
- ROI only, if MA granted for beef/dairy and swine

- Generic Antimicrobial: 1 - 3 Mill €
- New Class of Antiparasitics in Pets: 10 - 15 Mill €
- New NSAID: ~ 20 - 30 Mill €
- Livestock Vaccine: ~ 8 - 12 Mill €

Risks

- Failing to get MA
- Delay in getting MA
- SPC Restrictions that limit ROI
- Competition

Associated with:

- **Changing guidance**
- **Changing Assessment**
- **Changing the Risk/Benefit profile**
- **Referrals and other obstacles**

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New Actives?

- No independent basic Research for Antimicrobials in Animal Health: Remainings from human R&D
- Also applies for currently used Classes: FQ, Ceph, Macrolides, Tetracyclines
- Risk-Benefit Assessment should also address the potential Consequences regarding future Innovation in such Area: Success will trigger Investment! Non-Approval will discourage all!

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We believe:

- Need for new, highly efficacious Antimicrobials for Animal Health, both pets and food producing species
- Risk/Benefit assessment of industry currently not very positive: ↓ investment
- Unlikely to invest in new Classes
- Unlikely to invest in Classes, where such Guidance has created further Hurdles for MA
- The Guidance produced may not be, what encourages Investors

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We propose:

- Broad political support to improve husbandry
- Avoid misuse of AM (see last AVC presentation)
- Invest in training farmers/vets for responsible use of AM
- Support the development of new Classes by
  - Reducing hurdles to obtain MA
  - Providing clarity to avoid spoiling money
- Society needs new Classes to treat new (resistant) organisms, support secure and safe food

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Association of Veterinary Consultants

THANK YOU for inviting AVC

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