

**EAVPT  
2015**

**13<sup>th</sup> International Congress** of the **European Association**  
for **Veterinary Pharmacology** and **Toxicology**

**19-22 July 2015** - Cité Nantes Events Center, Nantes, France



## Sunday 19 July

**16:30-17:00**    **Opening Ceremony**    *Auditorium 450*

*Johanna Fink-Gremmels - EAVPT President*

*André Sobczak - Nantes Métropoles*

*Jean-Claude Desfontis - Chairman Local Organizing  
Committee EAVPT*

**17:00-18:00**    **Inaugural Plenary Lecture**

*Chairs: J. Fink-Gremmels and J.-Y. Madec*

*Antimicrobial Resistance in Animals - Which Significance  
for Human Health? - Jean-Yves Madec - Lyon (FR)*

**18:00** - Mezzanine - R2 Foyer Haut

# Welcome cocktail



PARALLEL SESSIONS

08:30-10:15 **Antimicrobials 1 & Antibiotic resistance**

*Chairs: T. Simon and M. Everett*

Room 200

**Antibiotics and antibiotic resistance in Veterinary Medicine - future challenges**

*Tony Simon - Zaventem (BE)*

**Development of antivirulence compounds as replacements or adjuncts to antibiotics in animal health**

*Martin Everett - Labège (FR)*

*Short oral communications*

**Characterization and prevention of fluoroquinolone resistance in Escherichia coli isolated from animals - M. Cengiz - Bursa (TU)**

**Evaluation of the influence of treatment time and antibiotic dosage regimen on bacterial burden and clinical outcomes in experimentally infected calves with *Mannheimia haemolytica* - G. Lhermie - Paris (FR)**

**Pharmacokinetics, pharmacodynamics and local tolerance at injection site of marbofloxacin administered via regional intravenous limb perfusion in standing horses - E. Lallemand - Toulouse (FR)**

**Pharmacodynamic/pharmacokinetic analysis of cephalexin activity on *Staphylococcus aureus* in a new *in vitro* model with and without macrophages - E. Lallemand - Toulouse (FR)**

08:30-10:15 **Pharmacokinetics 1**

*Chairs: J. Gabrielsson and A. Anadón*

Auditorium 450

**Dose-response-time data analysis: A poorly explored topic in pharmacokinetic and pharmacodynamic practice**

*Johan Gabrielsson - Uppsala (SE)*

*Short oral communications*

**Pharmacokinetics of metoclopramide: intravenous, intramuscular, subcutaneous and per rectum administrations in rabbits - V. de Vito - Sassari (IT)**

**Flupirtine: pharmacokinetics and disposition in the horse - M. Giorgi - Pisa (IT)**

**Relation between age-dependent change in hemodynamics and metronidazole body clearance in turkeys - M. Switala - Wrocław (PL)**

**Pharmacokinetics of repeated sodium salicylate administration to laying hens: evidence for time dependent increase in drug elimination from plasma and eggs - B. Poźniak - Wrocław (PL)**

08:30-10:15 **Toxicology 1 - Clinical/farm animals & Regulatory**

*Chairs: M. Perez-Lopez and C. Nebbia*

Rooms G-H

**Ruminant toxicology diagnosis: How to proceed?**

*Marcos Perez-Lopez - Caceres (ES)*

*Short oral communications*

**Monitoring of milk, chicken meat eggs and feed for GMO's using PCR based microarray**

*G. Sarathchandra - Tamilnadu (IN)*

**ABCG2-pesticide interactions in the bovine mammary gland and pesticide-mediated induction of ABCG2 efflux activity by the arylhydrocarbon receptor - S. Halwachs - Leipzig (GE)**

**Comparison of the antithrombotic activity of ferulenol and ferprenin, two prenylated coumarins contained in *Ferula communis* - V. Lattard - Marcy-l'Etoile (FR)**

**Comparing User Risk Assessment - Veterinary Medicinal Products versus Biocides**

*D. Pfeifer - Munich (GE)*

## PARALLEL SESSIONS

### 10:45-12:30 Antimicrobials 2 & Antibiotic resistance

*Chairs: J.-Y. Madec and P.-L. Toutain*

Room 200

**Methicillin-resistant *Staphylococcus pseudintermedius* - a problematic issue for companion animals**  
*Jean-Yves Madec - Lyon (FR)*

*Short oral communications*

**Fluoroquinolones *in vitro* dynamic model to minimize emergence of resistant *Salmonella enterica* serovar Typhimurium** - *S.-J. Lee - Dae-gu (KS)*

**Comparative pharmacodynamics of ciprofloxacin, enrofloxacin and norfloxacin for *Escherichia coli* of diarrheic calves** - *P. Sidhu - Punjab (IN)*

**Demonstration of applicability of PK/PD concepts to determine a dosage regimen for tulathromycin in the calf** - *P.-L. Toutain - Toulouse (FR)*

**Protocols for the assessment of biofilm formation and sensitivity: Model experiments with *Staphylococcus epidermidis*** - *J. Fink-Gremmels - Utrecht (NL)*

### 10:45-12:30 Pharmacodynamics 1 - General

*Chairs: J. Elliott and Q. Mc Kellar*

Auditorium 450

**From isolated blood vessel to *in vivo* cardiovascular drug action** - *Jonathan Elliott - London (UK)*

**Specificity of pharmacokinetics and pharmacodynamics in old animals** - *Petra Cagnardi - Milan (IT)*

*Short oral communications*

**Developmental-related alteration of the cardiac  $\beta$ -adrenergic system in turkey poults**  
*S. Hoffmann - Leipzig (GE)*

**Effect of nitric oxide synthase inhibition on blood pressure and nitric oxide concentrations in control and previously laminitic ponies** - *J. Elliott - London (UK)*

**First-in-class angiotensin receptor-neprilysin inhibitor LCZ696 markedly influences the dynamics of circulating cGMP and biomarkers of the renin-angiotensin aldosterone system in dogs**  
*J. Mochel - Basel (SZ)*

**Effects of dexamethasone treatment on B-adrenergic receptors in target organs of veal calves**  
*C. Vercelli - Grugliasco (IT)*

**Differential Expression of Skeletal Muscle Genes Following Administration of Clenbuterol to Exercised Horses** - *H. Knych - Davis (US)*

**Immunomodulatory effects of hyaluronan oligosaccharides in equine peripheral blood mononuclear cells** - *J. Vendrig - Utrecht (NL)*

### 10:45-12:30 Drug residues

*Chairs: T. Whitem and L. Letendre*

Rooms G-H

**New approach for modeling drug concentrations in milk and for calculation of withdrawal times**  
*Ted Whitem - Melbourne (AU)*

**International Methods for Consumer Risk Assessment of Injectable Veterinary Medicines Lack of Harmonization Can Impact International Trade** - *Laura Letendre - Duluth (US)*

*Short oral communications*

**Understanding intra-mammary beta-lactam pharmacokinetics using a physiologically-based model** - *A. Woodward - Werribee (AU)*

**Monitoring of chloramphenicol residues in milk, chicken meat and eggs**  
*G. Sarathchandra - Tamilnadu (IN)*

**Transcriptomic analysis of skeletal muscle from beef cattle exposed to illicit schedules containing dexamethasone: identification of new candidates and their comparison with proteomics data and samples from field monitoring** - *R. Elgendy - Legnaro (IT)*

**Pharmacokinetics and Tissue Residue of Toltrazuril in Broiler Chickens** - *A. Soliman - Giza (EG)*

# Monday 20 July - Afternoon

---

## PARALLEL SESSIONS

### 14:00-15:45 Bayer Roundtable - Animal Farming & the Need for Innovation in the Mitigation of Infectious Diseases

*Chairs:* P.-L. Toutain and J.-C. Desfontis - *Moderator:* D. Veerman

Room 200

#### Perspectives from the Food Industry

*Ignacio Blanco-Traba - Madrid (SP)*

#### Immunomodulation as an approach for reduction of antibiotics - Stimulation of the innate immune response for an enhanced resistance against infections

*Armin Saalmüller - Vienna (AU)*

#### Mitigating infectious diseases in farm animals

*Johanna Fink-Gremmels - Utrecht (NL)*

### 14:00-15:45 PK/PD Modeling

*Chairs:* J. Mochel and P. Lees

Auditorium 450

#### Chronopharmacology of the renin-angiotensin aldosterone system in dogs: the value of pharmacokinetic/pharmacodynamic modeling

*Jonathan Mochel - Basel (SZ)*

#### Short oral communications

#### PK/PD evaluation of the novel atypical opioid tapentadol in yellow-bellied slider turtles (*Trachemys scripta scripta*) - M. Giorgi - Pisa (IT)

#### A PK/PD study in trachemis turtles after single intracoelomic injection of Marbofloxacin at different doses - C. Vercelli - Grugliasco (IT)

#### Efficacy of florfenicol and gamithromycin in an *Ornithobacterium rhinotracheale* infection model in turkeys: A pharmacokinetic-pharmacodynamic approach - A. Watteyn - Merelbeke (BE)

#### Pharmacokinetics and clinical efficacy of meloxicam in Italian Mediterranean Buffalo calf (*Bubalus bubalis*) - P. Cagnardi - Milano (IT)

#### Pharmacodynamic and pharmacokinetic (PK/PD) pooled modelling of the antihypertensive response to amlodipine in hypertensive cats - L. Pelligand - Hatfield (UK)

### 14:00-15:45 Endocrine Disruptors

*Chairs:* C. Viguié and B. Le Bizec

Rooms G-H

#### Endocrine disruptors toxicology: what can domestic species bring to the table?

*Catherine Viguié - Toulouse (FR)*

#### Short oral communications

#### *In vitro* toxicity of some pesticides on goat and dog spermatozoa - B. Yurdakok Dikmen - Ankara (TU)

#### Bisphenol A-glucuronide hydrolysis in the ovine fetal compartment prolongs the fetal exposure to Bisphenol A - G. Gauderat - Toulouse (FR)

#### Evaluation of Antropogenic Ecotoxicity in Ankara River Using RTG2 Cell line

*B. Yurdakok Dikmen - Ankara (TU)*

#### Bisphenol A: comparison of the pharmacokinetics profiles obtained after 3 routes of administration - D. Guignard - Toulouse (FR)

---

### 15:45-16:15 Tea break - Poster session

[Mezzanine - R2 Foyer Haut](#)

# Monday 20 July - Afternoon

---

## PARALLEL SESSIONS

16:15-18:00

### Workshop - Pharmacovigilance

*Chairs: P. Sanders and E. Motschwiller*

Auditorium 450

**Perspectives for applied pharmacology in veterinary pharmacovigilance**

*Cédric Colmar - Fougères (FR)*

**Pharmacovigilance surveillance over the life cycle of the Product**

*Edelgard Motschwiller et Corinne Tzanavaris - Paris (FR)*

**Point of view of pharmacologist about pharmacovigilance surveillance**

*Michel Laurentie et Pascal Sanders - Fougères (FR)*

*Short oral communications*

**Interactions of clay-based feed additives with orally administered veterinary drugs**

*T. De Mil - Merelbeke (BE)*

**Trilostane drug safety surveillance: a retrospective study of 103 cases - D. Rochel - Nantes (FR)**

16:15-18:00

### Applied biostatistics

*Chairs: L. Pelligand and R. Servien*

Room 200

**Monte Carlo simulations and their application in veterinary medicine**

*Ludovic Pelligand - Hatfield (UK)*

**Multivariate analysis of clinical scores: A population PK/PD approach**

*Remi Servien - Toulouse (FR)*

*Short oral communications*

**Effect of furosemide on diuresis and renin-angiotensin aldosterone activation in dogs: a model-based dose-response approach - J. Mochel - Basel (SZ)**

**Impact of early antimicrobial prevention on broiler flocks performances - a propensity score analysis - C. Chauvin - Ploufragan (FR)**

**A kinetic of effects study: an attempt to model intracellular mechanisms generated by drug-receptor interaction - C. Thorin - Nantes (FR)**

16:15-18:00

### Contaminants

*Chairs: P. De Backer and B. Le Bizec*

Rooms G-H

**Mycotoxins - True natural toxins**

*Johanna Fink-Gremmels - Utrecht (NL)*

*Short oral communications*

**Effects of Deoxynivalenol on intestinal barrier functions: a comparative *in vitro/in vivo* assessment - S. Braber - Utrecht (NL)**

**Comparative toxicokinetics, absolute oral bioavailability and biotransformation of zearalenone in different poultry species - M. Devreese - Merelbeke (BE)**

**Fates and tissue dispositions of deoxynivalenol and zearalenone in broilers**

*A. Poapolathep - Bangkok (TH)*

**Stachybotryotoxicosis in cattle - About a case - M. Kammerer - Nantes (FR)**

18:00-19:00

### General Assembly ECVPT

[Room 200](#)

# Tuesday 21 July - Morning

## PARALLEL SESSIONS

### 08:30-10:15 Antiparasitics internal & external

*Chairs: C. Lanusse and D. Larsen*

Rooms G-H

**Pharmacology-based strategies to optimize drug activity against resistant helminth parasites in ruminants**

*Carlos Lanusse - Tandil (AR)*

**An overview of the Pharmacokinetics of an Isoxazoline: a New Class of Parasiticide for Dogs**

*Diane Larsen - North Brunswick (US)*

*Short oral communications*

**Evaluation of the tolerance of a permethrin-dinotefuran-pyriproxyfen combination (Vectra®3D) after topically repeated overdosed administration in young puppies**

*E. Coussanes - Libourne (FR)*

**ABCG2-mediated transport of anthelmintic drugs in the mammary gland of dairy cows**

*S. Halwachs - Leipzig (GE)*

**On the mode of action of emodepside and diethylcarbamazine - R. J. Martin - Ames (US)**

**Not just GluCl<sub>s</sub> (Glutamate-gated Chloride channels): Abamectin has potent effects on nicotinic acetylcholine receptors of nematode parasites - R. J. Martin - Ames (US)**

### 08:30-10:15 Pharmacokinetics 2

*Chairs: M. Martinez and J. Mochel*

Auditorium 450

**Use of in silico models to support drug and drug product understanding**

*Marilyn Martinez - Rockville (US)*

*Short oral communications*

**Pharmacokinetics of the angiotensin receptor-neprilysin inhibitor LCZ696 in furosemide-treated dogs - J. Mochel - Basel (SZ)**

**Simultaneous intravenous and subcutaneous population modelling of robenacoxib disposition kinetics in cats - L. Pelligand - Hatfield (UK)**

**Preliminary results of potential lateral distribution of permethrin over horse skin**  
*A. Werners - St. George (GD)*

### 08:30-10:15 Drug transporters & biotransformation 1

*Chairs: M. Dacasto and K. Mealey*

Room 200

**Pharmacogenetics Of Cytochromes P450 In Veterinary Species: An Update**

*Mauro Dacasto - Legnaro (IT)*

*Short oral communications*

**Comparative study on the expression and activity of hepatic enzymes responsible for dioxin-like compound biotransformation in sheep and cows - F. Girolami - Grugliasco (IT)**

**Interaction of the bovine mammary ABCG2 efflux transporter with AFB1 and the modulation of its activity by PCB126 - L. Manzini - Grugliasco (IT)**

**The ontogeny of hepatic CYP3A, CYP2C and CYP2E enzyme activity in conventional pigs**  
*J. Millecam - Merelbeke (BE)*

**Correlation between Dextromethorphan and Debrisoquine metabolism and CYP2D50 genotype in Thoroughbred horses - H. Knych - Davis (US)**

### 10:15-10:45 Coffee break - Poster session

[Mezzanine - R2 Foyer Haut](#)

# Tuesday 21 July - Morning

## PARALLEL SESSIONS

### 10:45-12:30 Antimicrobials 3 & Antibiograms

*Chairs: D. Mevius and A. Bousquet-Melou*

Rooms G-H

**The consequences of generic marketing on antibiotic consumption and the spread of antimicrobial resistance: the need for new antibiotics**

*Alain Bousquet-Melou - Toulouse (FR)*

**Veterinary Committee on Antimicrobial Susceptibility Testing (VetCAST)**

*Dik Mevius - Lelystad (NL)*

*Short oral communications*

**The revised draft of the EMA/CVMP 'Guideline for the demonstration of efficacy for VMPs containing antimicrobial substances': Requirements to field studies - K. Hellmann - Munich (GE)**

**Regulation and guidelines of veterinary antimicrobial therapy and animal welfare in the Netherlands - from a small animal perspective - L. Schipper - Utrecht (NL)**

**Zoonotic disease control: collaboration to control infectious diseases affecting multiple species - L. Reeve-Johnson - Brisbane (AS)**

### 10:45-12:30 Drug transporters & biotransformation 2

*Chairs: M. Dacasto and K. Mealey*

Room 200

**Clinical relevance of ABC transporter polymorphisms in the dog and cat**

*Katrina Mealey - Pullman (US)*

*Short oral communications*

**Use of liver slices to assess metabolic drug-drug interactions in cattle - G. Virkel - Tandil (AR)**

**Transcriptomic characterization of Marby Darby Bovine Kidney (MDBK) cell line and its comparison with cattle primary hepatocytes and liver tissue - R. Elgendy - Legnaro (IT)**

**Regulation Of Bovine CYP3A28 Promoter By Pregnane X Receptor (PXR) And Constitutive Androstane Receptor (CAR) - M. Giantin - Legnaro (IT)**

**Bovine liver slices as a model to evaluate metabolic interactions between flukicidal (triclabendazole) and nematocidal (oxfendazole, fenbendazole) molecules - P. Viviani - Tandil (AR)**

**Exonic Polymorphisms Of Cytochrome P450 3As (CYP3As) In Piedmontese Cattle Breed**

*M. Giantin - Legnaro (IT)*

### 10:45-12:30 Pharmacodynamics 2 - Pain/Inflammation

*Chairs: B. Ranheim and J.-C. Desfontis*

Auditorium 450

**Quantification of pain and nociception in inflammation models**

*Olivier Levionnois - Bern (SZ)*

**Pain models in domestic animals**

*Birgit Ranheim - Oslo (NO)*

*Short oral communications*

**Synergistic interaction between tapentadol and flupirtine in the rat orofacial formalin test**

*H.-K. Lee - Daejeon (KS)*

**Topically Administered Janus-Kinase Inhibitors Tofacitinib and Oclacitinib Display Anti-Pruritic and Anti-Inflammatory Responses in a Mouse Model of Allergic Dermatitis**

*T. Fukuyama - Raleigh (US)*

**Hepatic microsomal stability of human CYP2C9 substrates between marsupials and the rat: a preliminary study - M. Govendir - Sydney (AS)**

**Evaluation of the anti-inflammatory properties of ketoprofen in bovine and porcine *in vivo* models using a HPLC-MS/MS multi-method - P. De Backer - Merelbeke (BE)**

**Local tolerance assessment of two Ketoprofen based solutions for injection at 15 and 10% administered by intramuscular route in swine - M. Salichs - Barcelona (ES)**

12:30-14:00 Lunch

[Restaurant - R2](#)

# Tuesday 21 July - Afternoon

---

## PARALLEL SESSIONS

### 14:00-15:30 Evidence-based veterinary medicine & Innovative learning

*Chairs: L. Schipper and V. Fajt*

Room 200

#### How best to integrate EBVM into veterinary curricula

*Virginia Fajt - College Station (US)*

#### Veterinary pharmacologists' responsibilities in supporting the practice of evidence-based veterinary medicine

*Virginia Fajt - College Station (US)*

#### Developing a virtual learning environment for veterinary pharmacology and toxicology

*Jérôme Del Castillo - Saint-Hyacinthe (CA)*

### 14:00-15:30 Toxicology 2 - Clinical/small animals

*Chairs: J. N. Edwards and H. Pouliquen*

Rooms G-H

#### New trends in poisoning treatment - lipidotherapy

*John Nick Edwards - London (UK)*

#### Short oral communications

#### Acute hepatotoxicity of nano- and micro-sized iron particles in adult albino rats

*G. Hasabo - Cairo (EG)*

#### Presumptive mycotoxicosis in dog after eating mouldy walnuts

*M. Kammerer - Nantes (FR)*

#### Non-convulsive status epilepticus - translational research cases: humans and dogs

*L. Reeve-Johnson - Brisbane (AS)*

---

### 15:30-16:00 Tea break - Poster session

*Mezzanine - R2 Foyer Haut*

---

### 16:00-17:00 Plenary Lecture

*Auditorium 450*

#### Translational Pharmacokinetics/Pharmacodynamics (PKPD) and Systems

#### Pharmacology in Drug Discovery and Development

*Piet van der Graaf - Leiden (NL)*

---

### 17:00-18:00 General Assembly EAVPT

*Room 200*

---

### Congress Dinner

19:00 Bus departure from the congress center

19:15 Boarding for the evening cruise and aperitif

20:15 Arrival by boat at the Château de la Poterie

# Wednesday 22 July - Morning

---

## PARALLEL SESSIONS

### 08:30-10:15 Pharmacodynamics 3 & Recent and innovative advances

*Chairs: G. Abraham and M. Y. Mallem*

Auditorium 450

#### **Oncology: new pharmacological targets**

*Catherine Ibisch - Nantes (FR)*

*Short oral communications*

#### **The Use of Synovial Fluid Biomarkers to Study Corticosteroid Pharmacodynamics in Exercised Thoroughbred Horses**

*H. Knych - Davis (US)*

#### **Prevention of new bacterial infections of the mammary glands in dairy cows during the dry period using topical administration of chlorhexidine sustained release formulation**

*E. Lavy - Jerusalem (IL)*

#### **Intramammary propolis formulation for prevention and treatment of mastitis in dairy ruminants**

*L. Radin - Zagreb (HR)*

### 08:30-10:15 Workshop Analgesics

*Chairs: P. Flecknell and M. Gogny*

Rooms G-H

#### **New developments in cage-side assessment of pain in laboratory species**

*Paul Flecknell - Newcastle (UK)*

*Short oral communications*

#### **Covariate identification of propofol pharmacokinetics in maturing guide dogs**

*J. Del Castillo - Saint-Hyacinthe (CA)*

#### **Ultrasound monitoring protocol of intestinal motility in healthy horses after systemic morphine administration**

*C. Tessier - Nantes (FR)*

#### **Cranial spread of 3 volumes of procaine 2% for caudal epidural analgesia in adult dairy cows**

*O. Topie-Nikolayenkova - Nantes (FR)*

#### **Comparison of xylazine and detomidine for caudal epidural analgesia in cattle**

*G. Touzot-Jourde - Nantes (FR)*

#### **Comparison of methadone and morphine sedation and analgesia in the NZW rabbit**

*G. Touzot-Jourde - Nantes (FR)*

---

### 10:15-10:45 Coffee break - Poster session

[\*Mezzanine - R2 Foyer Haut\*](#)

# Wednesday 22 July - Morning / Afternoon

---

## PARALLEL SESSIONS

10:45-12:30

### Ecotoxicology

*Chairs: P. Berny and C. Nebbia*

**Auditorium 450**

**Monitoring unintentional effects of plant protection products and other environmental contaminants on non-target species: how can we manage?**

*Philippe Berny - Marcy-l'Etoile (FR)*

**Biomarkers of the exposure to dioxin-like compounds in mammalian species**

*Carlo Nebbia - Grugliasco (IT)*

**Potential of essential oils in medical and veterinary pest management: Efficacy and modes of action**

*Olivier Sparagano - Coventry (UK)*

*Short oral communications*

**The transdermal permeation of oil at seabirds - a research to estimate the prognosis of rehabilitation to establish a triage after an oil catastrophe**

*A. Willmes - Niedersachsen (GE)*

**Resistance to antivitamin K rodenticides: from wild rodents to humans**

*E. Benoit - Marcy-l'Etoile (FR)*

10:45-12:30

### Experimental design and Translational Medicine

*Chairs: M. Kietzmann and J.-C. Desfontis*

**Rooms G-H**

**Experimental design and the three Rs**

*Manfred Kietzmann - Hannover (GE)*

**3R(evolution)s in Toxicological Research**

*Francesca Caloni - Milan (IT)*

**Translational medical research: The imperative for One Health Collaborations in pharmacology and toxicology**

*Lloyd Reeve-Johnson - Brisbane (AS)*

12:30-13:15

### Plenary Lecture

[Auditorium 450](#)

**From cure to care - the changing landscape of veterinary medicine**

*Johanna Fink-Gremmels - Utrecht (NL)*

13:15-14:00

### Lunch

[Restaurant - R2](#)

14:00-14:30

### Awards and best posters

[Auditorium 450](#)

14:30-15:30

### Closing ceremony and invitation to Wroclaw, Poland

[Auditorium 450](#)

15:30-17:00

### Tour to the Veterinary College Oniris with registration on meeting place