

## Curriculum Vitae

Personal information Alexis Viel

Work experience

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- **Since October 2020 : Research project manager** (permanent contract)- **ANSES, Laboratoire de Fougères, "Experiment, Modeling and Data Analysis" (EMAD) Unit.** Research projects in veterinary antimicrobial pharmacology and transversality with human health (One Health), using PK/PD and PB/PK modelling approaches
- **October 2019-October 2020 : Research project manager. University of Poitiers and Anses Fougères, EMAD Unit.** Antibiotraces project: Use of PBPK modelling to explore and predict the pharmacokinetics of 4 antibiotics at the blood/milk barrier in 3 dairy production species. Co-supervision of a PhD student
- **March 2018-October 2019 : Post-doctoral fellow. Anses Fougères, EMAD Unit.** Involved in the RaDAR (Risk and Disease burden of Antimicrobial Resistance) work package in the One Health EJP. Development of PKPD models to assess the risk between animal exposure and impact on antibiotic resistance.
- **December 2017-February 2018 : Post-doctoral fellow. INSERM U1070, Poitiers.** PBPK modeling approaches for inhaled medicines through the European SimInhale Cost action

Education and training

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- **Since December 2018 : Resident at the European College of Veterinary Pharmacology and Toxicology (ECVPT). Anses Fougères, EMAD Unit**
- **October 2014- December 2017 : PhD in pharmacology. University of Poitiers, INSERM U1070 and Anses**

**Fougères, EMAD Unit.** Title : "*Uses of colistin in human and veterinary medicine: pharmacokinetic exploration and antibiotic resistance issues*".

- **October 2013- September 2014 : Master 2 Man-Imal** « Man-Animal-Food Health: transdisciplinary management of global health and nutritional safety ». **Oniris, Nantes.**

- **September 2008-October 2013 : Doctor of Veterinary Medicine.** **Oniris, Nantes.**

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#### Additional information

##### Publications

**Viel, A.**, Nouichi, A., ..., & Henri, J (**2023**). A PBPK model to predict marbofloxacin distribution in edible tissues and intestinal exposure in pigs. *Journal of Agricultural and Food Chemistry* 71(10), 4358-4370.

Bello, A., Henri, J., **Viel, A.**, Mochel, J. P., & Poźniak, B. (**2022**). Ionophore coccidiostats-disposition kinetics in laying hens and residues transfer to eggs. *Poultry Science*, 102280.

Dréano, E., Valentin, C., Taillandier, ..., **Viel, A** & Mompelat, S. (**2022**). Presence and Depletion of Sulfadiazine, Trimethoprim, and Oxytetracycline into Feathers of Treated Broiler Chickens and Impact on Antibiotic-Resistant Bacteria. *Journal of Agricultural and Food Chemistry*.

Santos-Santórum Suárez, C., Sanders, P., Perrin-Guyomard, A., Hurtaud-Pessel, D., Laurentie, M., **Viel, A.**, ..., & Gaugain, M. (**2022**). Validation of a LC-MS/MS method for the quantitative analysis of four antibiotics in pig tissues and plasma to assess the risk of transfer of residues to edible matrices after exposure to cross-contaminated feed. *Food Additives & Contaminants: Part A*, 39(11), 1818-1827.

Tardiveau, J., LeRoux-Pullen, L., Gehring, R., ..., **Viel, A.**,\* & Grégoire, N\*. (**2022**). A physiologically based pharmacokinetic (PBPK) model exploring the blood-milk barrier in lactating species-A case study with oxytetracycline administered to dairy cows and goats. *Food and Chemical Toxicology*, 161, 112848.\* contributed equally as last co-authors

Tardiveau, J., ..., **Viel, A.**, & Laurentie, M. (**2021**). A liquid chromatography coupled to tandem mass spectrometry method for the quantification of spiramycin and its active metabolite neospiramycin in milk of major and minor species: Validation using the accuracy profile. *Journal of Chromatography B*, 1187, 123013.

**Viel, A.**, Rostang, A., Morvan, M. L., Fournel, C., Daniel, P., Thorin, C.,... & Calvez, S (**2021**). Population pharmacokinetics/pharmacodynamics modelling of enrofloxacin for the three major trout pathogens *Aeromonas salmonicida*, *Flavobacterium psychrophilum* and *Yersinia ruckeri*. *Aquaculture*,

2021, vol. 545, p. 737119.

McCarthy, C, **Viel, A.**, ... & Simons, R (**2021**). Estimating the likelihood of ESBL-producing E. coli carriage in slaughter-aged pigs following bacterial introduction onto a farm: a multiscale risk assessment. *Microbial Risk Analysis*, 20, 100185

Dubreil, E., ..., **Viel, A.**, Sanders, P & Verdon, E. (**2021**). Tissue distribution, metabolism, and elimination of Victoria Pure Blue BO in rainbow trout: Main metabolite as an appropriate residue marker. *Chemosphere*, 262, 127636

**Viel, A.**, ... & Sanders, P (**2020**). Assessment of the selective effect of colistin on mcr-1-positive Escherichia coli through in vitro co-culture time-kill experiments. *Poster presented at the virtual 10th International Conference on Antimicrobial Agents in Veterinary Medicine*.

**Viel, A.**, Henri, J., ... & Grégoire, N. (**2019**). Use of PBPK modelling to explore the pharmacokinetics and renal disposition of CMS/colistin in piglets as a model for the paediatric population. *Poster presented at the ECVPT/ESVNU Symposium: Pharmacology and the kidney, London, UK*.

Simons, R., **Viel, A.**, .... & Sanders, P. (**2019**). Building a Combined Model for Transmission of Antimicrobial Resistance Along the Pork Production Chain. *Poster presented at the One Health EJP Annual Scientific Meeting, Dublin, Ireland*.

**Viel, A.**, Henri, J., ... & Sanders, P. (**2018**). Lack of experimental evidence to support mcr-1-positive Escherichia coli strain selection during oral administration of colistin by gavage in weaned piglets. *Poster selected for Oral communication at the 14th EAVPT Congress in Wrocław, Poland*.

**Viel, A.**, Henri, J., Bouchène, S., ... & Grégoire, N. (**2018**). A Population WB-PBPK Model of Colistin and its Prodrug CMS in Pigs: Focus on the Renal Distribution and Excretion. *Pharmaceutical research*, 35(5), 92.

**Viel, A.**, Henri, J., Perrin-Guyomard, ... & Laurentie, M. (**2017**). Lack of experimental evidence to support mcr-1-positive Escherichia coli strain selection during oral administration of colistin at recommended and higher dose given by gavage in weaned piglets. *International journal of antimicrobial agents*, 51(1), 128-131.

Salama, A., Fichou, N., Allard, M., Dubreil, L., De Beaurepaire, L., **Viel, A.**, ... & Bach, J. M. (2014). MicroRNA-29b modulates innate and antigen-specific immune responses in mouse models of autoimmunity. *PloS one*, 9(9), e106153.

#### Projects

**2023-2026** : Partner in the Sultan Project funded by JPIAMR – « *Optimized dosing regimens for the combinations of sulfonamides and trimethoprim in veterinary medicine* ». Total sum awarded: 1.5 M€ <https://www.jpiaamr.eu/projects/sultan/>

**2022-2025** : Partner in the consortium of the EFSA call TKplate2.0 (OC/EFSA/SCER/2021/07) : « *an open source platform integrating physiologically-based kinetic and*

*physiologically-based kinetic-dynamic models and machine learning models for risk assessment of single and multiple chemicals and biological stressors in animal species* ». Budget : 800 k€

**2021-2023** : Partner in the Medic'eau project : « *Optimisation of antibiotic dosage and vaccine administration conditions for improved efficacy in the control strategy of furunculosis in sustainable fish farming* ». ». Budget : 375 k€

#### Memberships

##### Scientific conferences:

**Viel, A.** & Sanders, P.(2023). Pharmacocinétique des antibiotiques dans la mamelle: les concentrations efficaces sont-elles atteintes dans les différents compartiments ? Oral communication at the *Journées Nationales des GTV 2023, Poitiers*.

**Viel, A.**, ... & Sanders, P (2020). Population PKPD modelling of enrofloxacin for the three major trout pathogens *A. salmonicida*, *F. psychrophilum* and *Y. ruckeri* according to fish ploidy. Oral communication at the *virtual 10th International Conference on Antimicrobial Agents in Veterinary Medicine*.

**Viel, A.**, Henri, J., ... & Sanders, P. (2018). Lack of experimental evidence to support mcr-1-positive *Escherichia coli* strain selection during oral administration of colistin by gavage in weaned piglets. Poster selected for Oral communication at the *14th EAVPT Congress in Wrocław, Poland*.

**Viel, A.**, (2018). A Population WB-PBPK Model of Colistin and its Prodrug CMS in Pigs and extrapolation to humans, Oral communication at the *PBPK SYMPOSIUM 2018 in Paris, France*.

#### Other Relevant Information