

## **Understanding of antibiotic resistance and use of the antibiotics by veterinary students at the Faculty of Veterinary Medicine, University of Liege.**

Moula N.<sup>1,2</sup>, Djebala S<sup>3</sup>

<sup>1</sup> GIGA—Animal Facilities, Liege University, 4000 Liege, Belgium

<sup>2</sup> Veterinary Management of Animal Resources Department, Veterinary Medicine Faculty, Liege University, Belgium

<sup>3</sup> Clinical Department of Production Animals, Veterinary Medicine Faculty, University of Liège, Belgium

*Corresponding author:* [Nassim.Moula@uliege.be](mailto:Nassim.Moula@uliege.be)

Antibiotic resistance renders one or more antibiotics ineffective against a bacterial infection. This can make it difficult or impossible to treat certain infections. At present, antibiotic resistance is one of the most serious threats to global health, food security and development. One of the main reasons for the increase in antibiotic resistance is the excessive and inappropriate use of antibiotics by physicians and veterinarians. Proper training of veterinary students on the use of antibiotics in animal husbandry can reduce antibiotic resistance. For this purpose, a survey was conducted among the 2nd cycle veterinary students of the University of Liege. In a survey, a total of 94 structured questionnaires were completed by 4th (11), 5th (56) and 6th (27) year students. The questionnaires focused on: (1) sociodemographic characteristics, (2) the impact of veterinary curriculum on the attitude towards antibiotic use and the phenomenon of antibiotic resistance, (3) practical knowledge of antibiotics, and (4) assessment of the influence of certain factors on the emergence of antibiotic resistance.

The majority of students surveyed were female (67/94). Career interests in the context of future work as a veterinarian was very diverse, with 33/94 of respondents considering mixed practice in veterinary medicine (large animals and companion animals). 85/94 of students surveyed owned pets. Regarding motivation for being veterinarian, 76/94 of the respondents answered that they love animals and/or find the veterinary profession very interesting. For the impact of the veterinary curriculum on the knowledge of antibiotic resistance, 51/94 of the students reported a real and positive impact. Students responses to the questions on practical knowledge of antibiotics demonstrated good basic knowledge. Students responded that antibiotics are not effective against viruses (84/94) and that they should be used against bacteria (87/94). The main factors favoring the emergence of antibiotic resistance cited by the students were the overuse of antibiotics by health professionals (83/94) and the misuse of antibiotics in veterinary medicine (60/94).

In conclusion, this preliminary study suggests the need to increase the level of knowledge of antibiotics among veterinary students, especially regarding their practical use in their future work as practitioners.