Up-to-date education in veterinary medicine

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Abstract

Education should be in the hands of those who exercise a certain discipline and not in those who have only read about it. The experience is not transmitted by osmosis, but it must serve to walk the professional destiny of the students in this particular case of future veterinary doctors in our country, regardless of which university it is. The future of a country arose from the new representatives in our society, who are currently students.

Keywords: education, instruction, respect, multidisciplinary, science

Introduction

I have been working in a Faculty of the University of Chile for twenty-six years, different from my faculty of origin, and I have seen a lot of water run under this bridge. I joined as an assistant and today I am an Associate Professor according to favet. I have used virology in the training of around 60 medical veterinarians for our country from my area of work, occupying some molecular biology and other related techniques. These disciplines have been little praised in this Faculty, preferring the typical ones of Veterinary Medicine oriented to the management of animals and their recovery after treatment. There are also those who have dedicated themselves to the economy and intra-faculty business development and others to the development of vaccines that still do not have a certain destination.

Here, education does not have the counterpart of medical practice, even less in times of COVID-19, deteriorating the training of new veterinarians dedicated to animal clinics, small or large. The above endorsed by opinions of our students.

By having another academic background, the diagnosis of viral and bacterial diseases can be approached from another point of view, showing students a vision that is very different from the usual reality, for example: since 1993 it has been known that the canine distemper virus (CDV) it affects the lions, however in our Faculty, those who do not take an elective course under my coordination, can graduate without knowing about it. In this cited example, the brilliant idea of Kary Mullis [1], together with other techniques, has made it possible to show how the CDV genome has changed over time. This constitutes relevant information for new medical veterinarians in Chile, where at least we have described the existence of two of the fourteen genotypes described [2, 3].

Material and methods

There are several techniques that allow screening for the detection of disease-causing pathogens in humans and other animals. It is our duty to show what is indicated to our students in the courses we offer them and it will not depend on the university where we teach. Specifically, while I was teaching at another university, the idea was the same, to show real evidence of how to detect pathogens of veterinary interest.

The fabulous technique developed by Kary Mullis called Polymerase Chain Reaction (PCR) in conjunction with other molecular techniques and bio tools today allow us to learn about the existence of various viral strains of SARS-CoV-2, possible strains of monkeypox and other bacterial pathogens of interest [4]. Veterinary Medicine cannot afford not to teach or rather not give it the importance that these methods currently have because they were not developed or implemented by veterinarians. The disease is important to teach, its treatments too, but the pathogen that causes it should not be overlooked.

A Veterinary Medicine student cannot be unaware of the existence of Genbank (R) or even free online programs such as Clustal Omega, BLAST and, for example, Oligo Perfect Primers Design® for the design of primers for PCR [4, 5, 6, 7].

Discussion

The teaching of Veterinary Medicine as a whole must be multidisciplinary, that is, consider other professionals for the development of their students. The skewed vision can be a real blinder like the one used on draft horses, to keep them from spooking.

Veterinary Medicine is too important not to take this consideration into account and every day we are faced with unknown pathogens that probably existed before us.

Conclusion

Viral and bacterial pathogens exist, cause disease, and we are required to devise methods for effective detection of them. We are in days of One Health.

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