



Review Article

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Human and Veterinary Medicine. Use of New and Free Online Technologies and Brilliant Ideas

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Abstract

The incorporation of new online technologies in the study of viral pathogens in Veterinary Medicine is a reality. Thus, molecular virology has occupied its space within those that attempt the detection and diagnosis of diseases that do not differ much from those described in Human Medicine. The fantastic idea of the biochemist Kary Mullis has made it possible to scrutinize and amplify part of the genome of anything that has DNA as its raw material and although some viruses have RNA as their genomic material, a previous reaction that synthesizes DNA allows this fantastic amplification. The existence of a database and other internet platforms finally make it possible to validate the existence of the suspected pathogen.

Introduction

In short, virology, which is a dynamic discipline, has served to incorporate both the fantastic idea of Kary Mullis and the existence of free internet platforms into university teaching to this day. These courses allow students to expand their knowledge of some viral genomes (RNA or DNA) in terms of their length, sequence, and other related characteristics. Currently, for everyone, the existence of the Genbank® [1] is a reality, a platform that has made it possible to know the sequence of several viral species and, together with others, to establish or design specific primers for the detection of pathogens of veterinary interest.

Material and Methods

Our faculty (FAVET) has an animal virology laboratory and therefore a cell culture room. Although viral isolation is the standard test for viral detection, the incorporation of the technique devised by Kary Mullis [2] along with others involving 2% agarose gel electrophoresis, nucleotide sequencing, and verification of the identity of the suspected pathogen using CLUSTAL Omega [3] and BLAST [4], they bring a lot.

According to the 1965 Nobel Prize winner André Lwoff: viruses are viruses, therefore their detection would not depend on whether they affect humans or another animal species. In other words, detecting SARS-CoV-2, VPH or CDV virus will only depend on the

genome that the virus has (RNA or DNA) and the funding involved, not on the technologies currently in use.

Discussion and Conclusion

Although since 2014 we have started the molecular study of pathogens of veterinary interest, these models used have been made known through the Internet regardless of the “nobility” of the journal considered [5-17].

The important thing has been that these attempts have been reflected in our country today having at least 35 new veterinarians, graduates from our University of Chile.

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