Académie Vétérinaire de France
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The Veterinary Academy of France position paper on Genome Editing in domestic animals, unanimously voted for it at its General Assembly in Paris, 20 June 2019.

Press release
This position paper on this topic is the first ever published by any veterinarian scientific group in Europe.

The Veterinary Academy of France:

- **Considering** that the genome engineering technologies now available make it possible to accurately and efficiently perform a real editing of certain DNA segments and the production of targeted mutations in the genome of domestic animals, in particular that of farm animals.
- **Considering** that many sequence modifications induced by these same genome editing technologies are structurally comparable to the various mutations already identified in several species and described as "spontaneous" or "natural".
- **Considering** that modern technologies for genome editing represent a major breakthrough in the history of veterinary medicine because they offer the possibility of producing, in very few generations, animals with inherited characteristics of resistance to potentially pathogenic agents important for animal health and public health (zoonoses).
- **Considering** that genome editing technologies may allow, according to the progress of our knowledge on the genetic control of infections, to modify the susceptibility of animals to infectious and parasitic diseases and thus to reduce the use of certain antibiotic or antiparasitic drugs by veterinary Medicine.
- **Considering** that some traditional, but indispensable, means of sanitary prophylaxis, such as the mass destruction of animals with highly contagious diseases (the case of foot-and-mouth disease) are less and less accepted by the civil society.
- **Considering** that the biotechnologies of reproduction (artificial insemination, embryo transfer, fertilization and in vitro embryo culture, cryo-preservation of gametes and embryos, etc.) are now mastered for many species of domestic animals and in many laboratories.
- **Considering** that the technologies used to produce targeted changes in the genome of domestic animals, because they are simple to implement and relatively inexpensive, are likely to have widespread use in several areas, including research, agronomy and in veterinary medicine, as shown by the considerable investment made by some countries.

- **Considering** that if animals whose genomes have been modified using one of the genomic engineering techniques currently available, they must actually be qualified as genetically modified organisms (GMOs) in application, on the one hand, of the Directive 2001/18 and on the other hand of the judgment of the Court of Justice of the European Union of 25 July 2018, those whose genomes do not contain exogenous DNA are not transgenic animals, literally of the term.
- **Considering** that in European countries the rise of finalized research projects involving the editing of the genome is significantly slowed down, if not prevented, by very restrictive legislation.
- **Considering** finally that in several domestic species (cattle, sheep, equine, for example) it is possible to set up the traceability of a modified allele over several generations, thus offering the possibility of interrupting at any moment, if necessary, the spread of a particular genotype.

The Veterinary Academy of France:

- **recommends** that research projects making use of modern genome engineering technologies be encouraged at all levels and adequately funded, otherwise it will lead to detrimental delay.

- **recommends** that Community legislation adapted to the case of genetically modified domestic animals should rapidly be introduced in order to establish a regulatory framework which is a function of the type of genetic modification and takes account of the rapid evolution of the technology in this field, so as to foster innovation. This legislation should take into account that most research aimed at producing animals whose genomes have undergone targeted modifications is of interest only to the extent that they actually confer appreciable economic, health, animal welfare or environmental benefits.

- **recommends** that projects relating to the production or importation of domestic animals whose genomes have been modified by editing certain segments of DNA should be examined on a case-by-case basis by the competent authorities and subject to a scientifically sound basis, also taking into account an analysis of the degree of acceptability by society.

Position paper approved unanimously by the members present, with one abstention, by the General Assembly of the French Veterinary Academy on June 20, 2019.

Also see the French version on the Académie Vétérinaire de France web site : *https://www.academie-veterinaire-defrance.org/*