US researchers moving abroad to avoid FDA's CRISPR-edited animal regulations



Alison Van Eenennaam

One day soon, farmers may be able to raise food animals <u>immune to deadly diseases</u> and spare them painful but necessary procedures like <u>horn removal</u>. These innovations, made possible by <u>CRISPR</u> and other gene-editing techniques, could cut the cost of food production, <u>reduce antibiotic</u> use in agriculture and dramatically improve animal welfare. But federal regulation may very well stifle these developments in the US.

In 2017, the Food and Drug Administration (FDA) proposed a plan to regulate gene-edited animals as veterinary drugs under the 1938 Food, Drug and Cosmetic Act, because their DNA is "intentionally altered." The proposal has drawn harsh criticism from animal scientists, some of whom are packing up their labs and leaving the US to avoid the FDA's rules. Food animals, these experts say, should be regulated based on the risk they pose to human health, not the breeding method that produced them.

Alison Van Eenennaam, an extension specialist in animal biotechnology at the University of California in Davis, has been a vocal critic of the FDA's proposal, <u>urging the agency</u> to reconsider its recommended gene-edited animal regulations:

Myself and fellow academic researchers reject the idea that intentional genomic DNA alterations should be regulated as a veterinary drug in food animals, and consider that the proposed approach will thwart the development of genetic approaches by public sector researchers and small companies to use gene editing to solve zoonotic disease and animal welfare problems in the United States.

tbioephotod or type unknown Biotech Facts and Fallacies host Cameron English

On this episode of the Biotech Facts and Fallacies podcast, Van Eenennaam joins the GLP's Cameron English to examine the FDA's plan and outline <u>her petition</u> to harmonize US gene-edited food regulations, arguing that the USDA's approach to gene-edited plants offers a better way forward. While the future of

animal gene editing in the US remains uncertain, Van Eenennaam says she's encouraged by countries like Brazil and Argentina, whose regulators <u>have signaled</u> their willingness to embrace the technology.

Alison Van Eenennaam is an extension specialist in animal biotechnology and genomics, Department of Animal Science, University of California, Davis. Follow her on Twitter @biobeef

Cameron J. English is the GLP's senior agricultural genetics and special projects editor. He is a science writer and podcast host. BIO. Follow him on Twitter @camjenglish