FDA approves genetically engineered pigs

The Food and Drug Administration has approved genetically engineered pigs for use in food and medical products. The pigs, developed by medical company Revivicor, could be used in the production of drugs, to provide organs and tissues for transplants, and to produce meat that’s safe to eat for people with meat allergies.

“Today’s first-ever approval of an animal biotechnology product for both food and as a potential source for biomedical use represents a tremendous milestone for scientific innovation,” said FDA Commissioner Stephen M. Hahn in a press release.

The pigs are called GalSafe pigs because they lack a molecule called alpha-gal sugar, which can trigger allergic reactions. Alpha-gal sugar is found in many mammals, but not usually in humans. Alpha-gal syndrome (AGS), which causes a serious meat allergy, can happen after a bite from a lone star or deer tick. Though it hasn’t been tested specifically for people with AGS yet, the FDA has determined GalSafe pork products are safe for the general population to eat.

In addition to their potential for safer consumption, there are several potential medical uses for GalSafe pigs. They could be used to make drugs like heparin, a common blood-thinner derived from animal tissue, safer for people with AGS. GalSafe pigs could also be useful in organ transplants, as alpha-gal sugar can be a cause of organ rejection. The pigs haven’t been tested for transplantation potential yet, so further research is required.

This isn’t the first time the FDA has approved genetically modified animals. In 2009, the FDA approved genetically altered goats that produce a drug in their milk for preventing blood clots. Chickens that can make a drug in their eggs were approved in 2015, the same year salmon became the first genetically modified animal to be approved for eating. But the GalSafe pigs mark the first time the FDA has granted approval of a genetically altered animal for both human consumption and medical use.

These pigs are not superpigs à la *Okja* or Atwood’s pigoons. The only difference between them and their unaltered peers is a lack of a specific sugar molecule. Any developers that want to use GalSafe pigs will have to seek further FDA approval before using new drugs, transplants, or implants in humans.

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