

# THE YEAR IN SCIENCE

# DISCOVER

Science, Technology, and The Future

## TOP 100 SCIENCE STORIES OF 2006

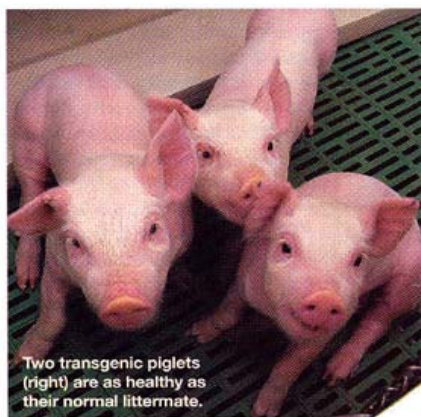
# #38

### GENETICS

#### Lab Cooks Up A Healthier Pig

**Bacon and sausages that are good for you?** Possibly. In April scientists announced they had engineered transgenic pigs that produce omega-3 fatty acids, the same compounds that make fish such a healthy meal.

Most animals lack the gene to convert omega-6 fatty acids—which, when eaten in large amounts, contribute to heart disease, cancer, diabetes, and arthritis in humans—into healthier omega-3s. The



Two transgenic piglets (right) are as healthy as their normal littermate.

only way to enrich meat with omega-3s has been to feed animals flaxseed, fish oil, or fish meal.

Scientists from Harvard University, the University of Pittsburgh, and the University of Missouri at Columbia devised another solution: inserting into pig cells a gene that codes for an enzyme that converts omega-6s to omega-3s. The modified cell nuclei were then inserted into unfertilized eggs to create engineered pig embryos, which were implanted in a normal sow. The result: eight omega-3-generating pigs, whose ratio of omega-6s to omega-3s was fivefold lower than in ordinary piglets.

Whether this pig goes to market remains to be seen. The FDA has yet to permit any genetically modified animal to enter the human food chain.

Nicholas Bakalar

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## SCIENCE & SPACE

### Scientists chase healthier hog

Monday, March 27, 2006; Posted: 10:37 a.m. EST (15:37 GMT)

**SAN FRANCISCO, California (AP) -**  
**- A microscopic worm may be the key to heart-friendly bacon.**

Geneticists have mixed DNA from the roundworm *C. elegans* and pigs to produce swine with significant amounts of omega-3 fatty acids -- the kind believed to stave off heart disease.

Researchers hope they can improve the technique in pork and do the same in chickens and cows. In the process, they also want to better understand human disease.

(AP PHOTO)

**Researcher Jing Kang modified pig genes to make them produce omega-3 fatty acids.**

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