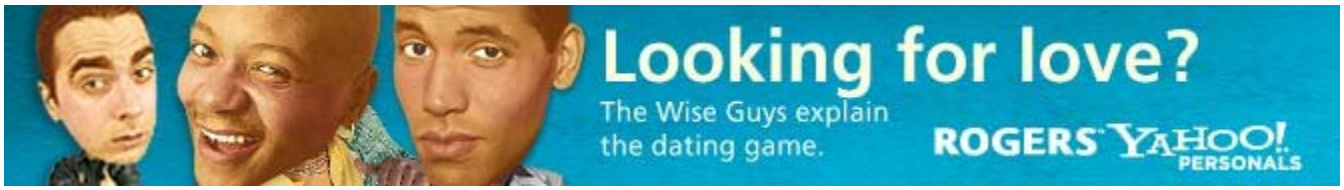

Pearl of a swine: Genetically modified pigs could yield pork high in omega-3

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(CP) - Bringing home the bacon could take on a whole new meaning if some forv scientists have their way.

Researchers from three U.S. universities have collaborated to create cloned pigs that produce higher than normal levels of omega-3 fatty acids, a nutrient whose benefits include improved cardiovascular, reproductive and immune-system function.

Their hope is that some day these transgenic pigs could be bred in large enough numbers to be turned into ham, chops and other cuts of pork as a way of giving consumers a readily available source of omega-3. Normal pork contains little of the essential nutrient.

"We were able to make pigs that are making their own omega-3 fatty acids, wher pigs and humans, to get omega-3s into your system, you have to consume it," sa Randall Prather, a professor of reproductive biotechnology at the University of M Columbia, who cloned the pigs from genetically altered cells.

Prather said he currently has five male pigs that can be naturally bred to produce that contain higher levels of omega-3 in their muscles and other tissues.

Dr. Jing Kang, a researcher at the Harvard School of Medicine, provided DNA cc gene that causes omega-6 to convert to omega-3. That DNA was inserted into p

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lab run by Dr. Yifan Dai at the University of Pittsburgh, who shipped them to Prat produce cloned piglets in surrogate sows.

For Kang, the ultimate goal of the project is to provide food that will increase wor consumption of omega-3 fatty acid, a nutrient many health-promotion organizatic people to ingest because of its beneficial effects.

But the major dietary sources of omega-3 are fish - which often contain metals su mercury - and flaxseed oil, two food products that don't exactly top most meat-pc North Americans' shopping lists.

"While fish, especially salmon and tuna, is one of the best food sources of omeg acids, we have been warned to limit consumption because of high mercury level professor of surgery at the University of Pittsburgh School of Medicine, said in a

There are eggs fortified with omega-3, but they get that way through hens fed die flaxseed and fish - and possibly metal contaminants.

Kang said that throughout history, humans had food that provided a balanced rat 3 and omega-6 fatty acids. But in the last 50 to 100 years, agricultural and food-p practices have caused that ratio to favour omega-6, another essential fatty acid f seeds, nuts and vegetable oils.

"The omega-6 has dramatically increased and the omega-3 has decreased," Kar suggesting that humans' deficiency in omega-3 may be in part responsible for th chronic diseases, such as cardiovascular disease, arthritis and diabetes.

But Kang conceded it could take a long time for government regulatory agencies the modified pork for human consumption and for consumers to swallow the idea tech meat. (He's also working on creating omega-3-producing cattle and chicken

And there are sure to be those who will object to genetically modified pork on gro shelves and people's plates - another item on the growing list of so-called Franke because of fears it could accidentally contaminate and alter existing animal spec

Kang and Prather believe those concerns are groundless.

"This compound naturally occurs in food, but normally it's low," Kang said from B we just increase the content of this nutrient in the food. So it doesn't add any oth or chemical to the meat."

Prather said genetic modification is of more concern when applied to crops and c

"Here in Missouri, we don't have a wild population of pigs that this gene could ge not like there's going to be semen blow across the fence and impregnate a sow l with pollen.

"So it's a totally different scenario."

Up to now, Prather added, most genetic modification has been done to aid farme could make production more efficient.

"This is an example of something that the consumer would benefit from - and it's

something that's more likely to be accepted by the consumer."

While Prather's interest lies primarily in having an animal model that approximate human physiology so researchers can determine omega-3's role in preventing di also defends the notion of trying to improve on Nature when it comes to the food

"I think we have these possibilities before us and I think we have a moral obligati them," he said. "Because the implications of creating animals like this (means) w opportunity to study human health and maybe improve human health.

"We have an opportunity to feed an ever-growing world population."

A report on the omega-3 pig appears in Monday's issue of the journal Nature Bio

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