

Study finds tumors in rats fed on Monsanto's GM corn

By Ben Hirschler and Kate Kelland updated 9/19/2012 9:41:02 AM ET

LONDON (Reuters) - In a study that prompted criticism from other experts, French scientists said on Wednesday that rats fed on Monsanto's genetically modified (GM) corn or exposed to its top-selling weedkiller suffered tumors and multiple organ damage.

Gilles-Eric Seralini of the University of Caen and colleagues said rats fed on a diet containing NK603 - a seed variety made tolerant to dousings of Monsanto's Roundup weedkiller - or given water with Roundup at levels permitted in the United States, died earlier than those on a standard diet.

Experts not involved in the study were highly skeptical about its methods and findings, with some accusing the French scientists of going on a "statistical fishing trip".

The animals on the GM diet suffered mammary tumors, as well as severe liver and kidney damage. The study was published in the peer-reviewed journal Food and Chemical Toxicology and presented at a news conference in London.

The researchers said 50 percent of males and 70 percent of females died prematurely, compared with only 30 percent and 20 percent in the control group.

Monsanto was not immediately available for comment but the group has in the past repeatedly said its products are safe and there is no credible evidence of any health risk to humans or animals from consuming GM crops.

EXPERTS HIGHLY SCEPTICAL

GMOs are deeply unpopular in Europe and many other countries, but dominate key crops in the United States after Monsanto in 1996 introduced a soybean genetically altered to tolerate Monsanto's Roundup weed killer

Experts asked by reporters to review the scientific paper advised extreme caution in drawing conclusions from it.

Tom Sanders, head of the nutritional sciences research division at King's College London noted that Seralini's team had not provided any data on how much the rats were given to eat, or what their growth rates were.

"This strain of rat is very prone to mammary tumors particularly when food intake is not restricted," he said in an emailed comment.

"The statistical methods are unconventional and probabilities are not adjusted for multiple comparisons. There is no clearly defined data analysis plan and it would appear the authors have gone on a statistical fishing trip."

Mark Tester, a research professor at the Australian Centre for Plant Functional Genomics at the University of Adelaide, said the study's findings raised the question of why no previous studies have flagged up similar concerns.

"If the effects are as big as purported, and if the work really is relevant to humans, why aren't the North Americans dropping like flies? GM has been in the food chain for over a decade over there - and longevity continues to increase inexorably," he said in an emailed comment.

LONG-TERM EFFECTS?

While supporters of GM crops say previous studies have overwhelmingly pointed to their safety, critics argue there is still limited information about the long-term effects since the crops have only been around for just over 15 years.

Seralini was part of a team that has voiced previous safety concerns based on a shorter rat study in a scientific paper published in 2009. This new study takes things a step further by tracking the animals throughout their two-year lifespan.

Monsanto said at the time of the earlier research that the French researchers had reached "unsubstantiated conclusions."

Seralini believes his latest lifetime rat tests give a more realistic and authoritative view of risks than the 90-day feeding trials that form the basis of GM crop approvals, since three months is only the equivalent of early adulthood in rats.

France's Jose Bove, vice-chairman of the European Parliament's commission for agriculture and known as an opponent of GM, called for an immediate suspension of all EU cultivation and import authorizations of GM crops.

"This study finally shows we are right and that it is urgent to quickly review all GMO evaluation processes," he said in a statement. "National and European food security agencies must carry out new studies financed by public funding to guarantee healthy food for European consumers."

The study is also likely to create friction in the United States, where opponents of genetically engineered foods in California are fighting to have all GMOs removed from the food supply.

The California protesters are hoping to drum up support for a California ballot measure that would require food sellers to label a broad range of products, including soup, soy milk, breakfast cereals and chips, that contain GMOs.

(Additional reporting by Sybille de La Hamaide in Paris, editing by Anna Willard and Janet McBride)

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