

GM Food Newsletter

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Piggy's Choice : To Eat or Not to Eat ?

After a hard day at school, Piggy was craving for something cold and sweet when she was on her way home.

“Ding-a-ling, ding-ding-ding...”

There was an ice cream van parked by the roadside. Piggy just could not resist and dashed to buy a cone. At the moment when she was about to make an order, a little angel with a halo above the head appeared on Piggy's shoulder.

“Piggy...look at you...you are already overweight. Don't get it!”
The little angel cried.

Piggy was shocked and just could not respond.

Suddenly, a red-horned, long-tailed devil popped out on Piggy's other shoulder.

“No, no, no ...Piggy. It's delicious. A scoop of it won't make you put on too much weight,” the devil tried to persuade Piggy.

“Don't listen to him, Piggy,” said the angel, “you can choose ice cream with less sugar and fat. There are...”

“I know, I know,” the devil interrupted, “humans make ice cream with less fat and sugar. They even add artificial sweeteners to it. Let me tell you though, fat and sugar is vital to the taste and creamy texture of ice cream. The so-called 'healthier' ice cream does not taste and feel as good as what you are going to eat...um...YUMMY...”

“You are not telling Piggy the whole picture,” the angel exclaimed, “some manufacturers make low-calorie ice cream with the help of genetic modification.”

“What? Genetic modification? Haha...ha...don't make me laugh. How can you imagine genetic modification is linked to ice cream? Ice cream has genes in it?” the devil poured scorn on what the angel said.

“I am not kidding. To make this low-calorie ice cream, people insert the gene of an anti-freeze protein (AFP) from cold water fish into the genome of a food-grade baker's yeast. They let the genetically modified (GM) yeast to grow in a fermenter and get the AFPs...” the angel explained.



“But the AFPs have nothing to do with ice cream?” the devil criticised.

“Could you let me finish?” the angel was in annoyance. She cleared her throat and continued, “when added into ice cream, the AFPs can help with the formation of ice crystals with reduced sizes. These very small ice crystals provide a smooth consistency to the ice cream, thus allowing the manufacturers to add less fat to achieve the same texture and taste. That is the way how the ice cream with lower calories can be made.”

“Don’t cheat on me. I know AFPs. They protect organisms living in cold climates by lowering the temperature at which ice crystals grow and modifying the size and shape of the crystals so that ice formed is less damaging to tissues and cells. Let me tell you, AFPs present in many different organisms. Fish, plants, insects...there are plenty of it. People can just get AFPs from these organisms. There is no way to make AFPs from any GM yeasts,” the devil argued.

“Yes, you are right. Many organisms produce AFPs. However, sourcing AFPs from nature for making ice cream seems not sustainable or economically feasible. That is why people employ genetic modification,” the angel explained further.

“Piggy, see this evil angel. She wants you to eat the ice cream with GM ingredients. It’s no good to your health,” the devil denounced.

“No, I am not!” the angel said. “In fact, the AFPs are purified before adding into ice cream. It is free of any GM materials. Moreover, the AFPs have been approved for food use as a processing aid or food additive in the United States, Australia, New Zealand and the European Union.”

“Okay, okay. I don’t bother whether the ice cream is safe or not. People can have it if they want but...where is it now? Can’t you see Piggy is sweating heavily!” The devil turned to Piggy and continued, “forget about the low calorie thing. Go and get a cone. Just a little cone.”

Piggy could not resist the temptation. She picked out her wallet. Unexpectedly, it was empty! Piggy looked at the angel and the devil and asked, “Could you please...”

All of a sudden, the two little creatures disappeared.

