Microbiologist discovers new super-preservative

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(PhysOrg.com) -- In one of those freak accidents that sometimes occur in science, where someone is looking at something for one purpose and finds another for it, Dan O'Sullivan has found a use for a byproduct of harmless bacteria commonly found in the human gut; called bisin, it appears to work as a sort of super-preservative for meat, dairy and eggs, allowing them to go unspoiled for perhaps years.

Dr. Dan O'Sullivan, a microbiologist working at the University of Minnesota claims to have found the bacteria killing properties of bisin, while doing basic research on bacteria that live in the intestine.

Chemically related to nisin, a preservative already used in cheese, bisin apparently kills E. coli, salmonella and listeria so effectively that foods (not fruits or vegetables though, since different biology is at work in their decomposition) that have been treated with it could, in theory, last almost indefinitely. And because it is so closely related to nisin, it won't have to undergo scrutiny before being put into foods. O'Sullivan, who already has a patent on it, has announced that he believes products with nisin in it should begin appearing on grocer's shelves within three years. Others are even more optimistic, suggesting that the time frame could actually be as short as just one year.

In either case, there are of course some questions still to be answered. The first might be, is it truly as safe as claimed, though that seems likely due to the fact that it already exists in the human body. Another question might be, does it affect taste? And finally, how is it to be integrated into

food? Surely just sprinkling or pouring it over a steak before packaging wouldn't do. To combat bacterium that has wound its way into the meat would seem to require something more pervasive.

There is also the matter of the impact of other elements on food that impact its ability to last; hydration levels, for example, contribute greatly to its general makeup and texture. It's hard to imagine simply adding a preservative to natural ingredients would allow cookies or cakes to remain palatable after just a couple of days.

Still, it is an exciting development. The idea of milk that doesn't spoil, cake batter that can be eaten without fear for the raw eggs in it, meat that never sours, or tuna fish or egg salad sandwiches that can be packed and eaten anywhere, anytime, seems almost unimaginable.