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NEWS RELEASE

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UMSL scientists find way to add magnesium to cells

We often hear about the health benefits of zinc and iron in our diets, but less attention has been paid to magnesium. The metal helps maintain normal muscle and nerve function, keeps heart rhythm steady, supports a healthy immune system and keeps bones strong.

Scientists at the University of Missouri-St. Louis have discovered a biological method to alter the magnesium content in yeast by manipulation of a magnesium transporter gene. This technology could potentially be applied to other fungi or plant species and provide a new way to increase the nutritional value of some foods.

"Right now biotechnology is being used to enhance the content of micronutrients such as zinc and iron in various crops," explained Colin MacDiarmid, assistant professor of biology at UMSL, who heads up the project. "At UMSL, we have found a way to overcome a natural limitation of plant and yeast cells in order to increase their magnesium content. Processing of foods reduces the content of many nutrients, including magnesium. This method could be a way to replace them."

The research also could be used to improve the flavor or nutrient content of some beers and wines, increase magnesium in yeast destined for food products or nutrient supplements, or alter the amount of magnesium and nutritive value of crop plants.

