

Gene editing, novel baking ingredients could make bread safe for millions of consumers who can't eat carbs

Ah, bread....There are whole diets built around avoiding carbs and gluten in bread — sometimes by choice, sometimes by medical necessity.

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Researchers and food companies around the world are trying to develop bread without side effects or with health-enhancing components, using newly developed enzymes, novel ingredients and gene editing....

Up to 45 million Americans have irritable bowel syndrome (IBS)....Researchers believe that one of the culprits of IBS is food high in FODMAPs (which are poorly absorbed fermentable carbohydrates). Wheat is a well-known FODMAP. It contains carbs called fructans, which some people with IBS have trouble digesting.

Finnish company Fazer Mills recently introduced an enzyme called LOFO, which can help lower the fructan content in wheat bread.

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[G]luten is responsible for the elasticity that gives bread its unique texture. It's also the protein that triggers an immune response for the 3 million Americans with celiac disease...

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Researchers across the globe are hoping to develop wheat that's lower in gluten for those who are mildly intolerant, or to change the DNA of wheat so gluten is not a problem for people with celiac disease....So, how does it work? Using gene-editing technology called CRISPR/Cas9, researchers modify the celiac-causing gluten gene.

Read full, original article: [Advances could allow people who can't stomach wheat or gluten to enjoy bread](#)