

Abstract Submitted
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Isotopic effects of metabolism of ^{13}C -fructose in yeast¹ JAMES MULHERN, KHOA NGUYEN, LLOYD LUMATA, University of Texas at Dallas — *Saccharomyces cerevisiae* (SC) is a useful organism for studying metabolic pathways because of its hardiness and simplicity in culturing. Using proton (^1H) and carbon-13 (^{13}C) nuclear magnetic resonance (NMR), we can study SC metabolism in vivo using ^{13}C -enriched sugar such as fructose. The fruit sugar fructose, structurally similar with glucose, has slightly different metabolic route to ethanol production compared to glucose and therefore is an interesting subject of study. A reduction of fructose metabolism was seen when the ^1H spins in the media were replaced with ^2H spins. These results will be discussed in light of the isotopic effects in fructose metabolism in yeast. This study is supported by the Welch Foundation grant AT-1877, DOD grants W81XWH-21-1-0176 and W81XWH-19-1-0741, CPRIT grant RP180716, and the UTD CoBRA and SPIRE grants.

¹Isotopic effects of metabolism of ^{13}C -fructose in yeast

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