CABBI
CENTER FOR ADVANCED BIOENERGY AND BIOPRODUCTS INNOVATION

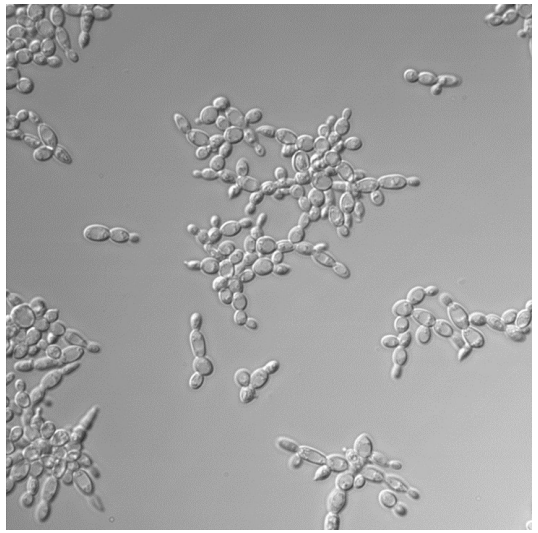
Near-Complete Genome Sequence of Zygosaccharomyces rouxii NRRL Y-64007, a Yeast Capable of Growing on Lignocellulosic Hydrolysates

Background/Objective

- *Z. rouxii* NRRL Y-64007 has several traits that would be advantageous for producing biofuels and bioproducts: halotolerant, osmotolerant, acidophilic, and fructophilic.
- *Z. rouxii* NRRL Y-64007 is already used to produce volatile compounds, organic acids, lipids, and sugar alcohols, and can grow on lignocellulosic hydrolysates.

Approach

We sequenced the genome and transcriptome of *Z. rouxii* NRRL Y-64007 to facilitate further investigation of its physiology, metabolism, and metabolic engineering to produce biofuels and bioproducts.



***Zygosachharomyces rouxii* NRRL Y-64007 cells in differential interference contrast microscopy.**

Results

The 9.95-Mb genome assembly contained eight contigs (N_{50}, 1.53 Mb), a GC content of 39.12%, and 5,001 protein coding genes.

Significance/Impacts

The genome sequence of *Z. rouxii* will aid future genetic and genomic studies to understand its robustness and potential to produce biofuels and bioproducts.

Jagtap, S.S., Liu, J.J., Walukiewicz, H.E., Pangilinan, J., Lipzen, A., Ahrendt, S., Koriabine, M., Cobaugh, K., Salamov, A., Yoshinaga, Y., Ng, V., Daum, C., Grigoriev, I.V., Slininger, P.J., Dien, B.S., Jin, Y.S., Rao, C.V. April 20, 2022. "Near-Complete Genome Sequence of *Zygosaccharomyces rouxii* NRRL Y-64007, a Yeast Capable of Growing on Lignocellulosic Hydrolysates." *Microbiology Resource Announcements*. DOI: 10.1128/mra.00050-22.