

Genomic Evolution of the Ascomycete Yeasts

Robert Riley¹, Sajeet Haridas¹, Asaf Salamov¹, Kyria Boundy-Mills², Markus Goker³, Chris Hittinger⁴, Hans-Peter Klenk⁵, Mariana Lopes⁴, Jan P. Meir-Kolthoff³, Antonis Rokas⁶, Carlos Rosa⁷, Carmen Scheuner³, Marco Soares⁴, Benjamin Stielow⁸, Jennifer H. Wisecaver⁶, Ken Wolfe⁹, Meredith Blackwell¹⁰, Cletus Kurtzman¹¹, Igor Grigoriev¹, Thomas Jeffries¹²

¹US Department of Energy Joint Genome Institute, Walnut Creek, CA

²Department of Food Sciences and Technology, University of California Davis, Davis, CA

³Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures, Braunschweig, Germany

⁴Laboratory of Genetics, Genetics/ Biotechnology Center, Madison, WI

⁵School of Biology, Newcastle University, Newcastle upon Tyne, UK

⁶Department of Biological Sciences, Vanderbilt University

⁷Instituto de Ciencias Biologicas, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil

⁸CBS-KNAW Fungal Biodiversity Centre, Utrecht, Netherlands

⁹UCD School of Medicine & Medical Science, Conway Institute, University College Dublin, Dublin, Ireland

¹⁰Department of Biological Sciences, Louisiana State University, Baton Rouge, LA

¹¹USDA ARS, MWA, NCAUR, BFPM, Peoria, IL

¹²Department of Bacteriology, University of Wisconsin-Madison, Madison, WI

March 2015

The work conducted by the U.S. Department of Energy Joint Genome Institute is supported by the Office of Science of the U.S. Department of Energy under Contract No. DE-AC02-05CH11231

LBNL-

DISCLAIMER

This document was prepared as an account of work sponsored by the United States Government. While this document is believed to contain correct information, neither the United States Government nor any agency thereof, nor The Regents of the University of California, nor any of their employees, makes any warranty, express or implied, or assumes any legal responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by its trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof, or The Regents of the University of California. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof or The Regents of the University of California.