

Thomas William Jeffries, Ph.D.

Professional Preparation:

BS, 1969 California State University, Long Beach (Medical Microbiology)
MS, 1972 California State University, Long Beach (Environmental Microbiology)
PhD, 1975 Rutgers, The State Univ. of New Jersey (Microbiology and Biochemistry)
1977-1979: Postdoctoral Associate, Department of Chemical Engineering, Columbia University

Appointments:

2013-Present President, Xylome Corporation, Madison, Wisconsin
2012-Present Professor Emeritus, Dept. of Bact., Univ. Wisconsin-Madison
2008-2012 Microbiologist, ST, USDA, FS, Forest Products Laboratory, Madison
2004-2008 Microbiologist, GS15 USDA, FS, Forest Products Laboratory, Madison
1998 to 2012 USDA Professor, Dept. Bact., Univ. of Wisconsin-Madison
1998 to 2004 Director, Institute for Microbial and Biochemical Laboratory, USDA, Forest Service, Forest Products Laboratory, Madison, WI
1994 to Feb. 2008 Supervisory Microbiologist GS-15, USDA, FS, FPL, Madison, WI
1990 to Jan. 1998 USDA Assoc. Professor, Dept. of Bacteriology Univ. of Wisconsin – Madison
1986 to Jan. 1994 Supervisory Microbiologist GM-14, USDA, FS, FPL, Madison, WI
1984 to June 1986 Research Microbiologist GS-14, USDA, Forest Service, FPL, Madison, WI
1980 to July 1984 Microbiologist GS-13, USDA, Forest Service, FPL, Madison, WI
1979 to Nov. 1980 Microbiologist GS-12, USDA, Forest Service, FPL, Madison, WI
1977 to June 1979 Research Associate, Dept. Chem. Eng. Columbia University, New York, N.Y.
1975 to Aug. 1977 Staff Scientist, Lawrence Livermore National Laboratory, Livermore, Calif.
1973 to Aug. 1975 Research Intern, Rutgers, The State Univ. of New Jersey, New Brunswick, NJ
1973 to Aug. 1973 Visiting Scientist, U.S. Army Natick Laboratories, Natick, MA

Products:

1. Jeffries TW, Jin YS. 2004. Metabolic engineering for improved fermentation of pentoses by yeasts. *Applied Microbiology and Biotechnology* 63:495-509.
2. Jeffries TW. 2006. Engineering yeasts for xylose metabolism. *Current Opinion in Biotech.* 17:320-326.
3. Jeffries TW, Grigoriev IV, Grimwood J, Laplaza JM, Aerts A, Salamov A, Schmutz J, Lindquist E, Dehal P, Shapiro H, Jin YS, Passoth V, Richardson PM. 2007. Genome sequence of the lignocellulose-bioconverting and xylose-fermenting yeast *Pichia stipitis*. *Nature Biotechnology* 25:319-326.
4. Smith DR, Quinlan AR, Peckham HE, Makowsky K, Tao W, Woolf B, Shen L, Donahue WF, Tusneem N, Stromberg MP, Stewart DA, Zhang L, Ranade SS, Warner JB, Lee CC, Coleman BE, Zhang Z, McLaughlin SF, Malek JA, Sorenson JM, Blanchard AP, Chapman J, Hillman D, Chen F, Rokhsar DS, McKernan KJ, Jeffries TW, Marth GT, Richardson PM. 2008. Rapid whole-genome mutational profiling using next-generation sequencing technologies. *Genome Research* 18:1638-1642.
5. Van Vleet JH, Jeffries TW. 2009. Yeast metabolic engineering for hemicellulosic ethanol production. *Current Opinion in Biotechnology* 20:300-306.
6. Jeffries, Thomas W., Ni, Haiying, Laplaza, Jose Miguel (2006) Xylose-fermenting recombinant yeast strains United States US Pat #7285403
7. Laplaza, Jose M., Jeffries, Thomas W. (2009) Yeast transformation system. United States. The United States of America as represented by the Secretary of Agriculture (Washington, DC) US Pat #7501275
8. Jeffries, Thomas W., Nelson, Shawn S., Mahan, Sarah D. (2011) Metabolically engineered yeasts for the production of ethanol and other products from xylose and cellobiose. United States The United States of America as represented by the Secretary of Agriculture (Washington, DC) US Pat App. #2011/0262983
9. Jeffries, Thomas W., Bae, Juyun, Lin, Bernice Chin-yun, Van Vleet, Jennifer Rebecca Headman (2012) Sugar transport sequences, yeast strains having improved sugar uptake, and methods of use. United States Wisconsin Alumni Research Foundation (Madison, WI, US), The United States of America as represented by the Secretary of Agriculture (Washington, DC, US). US Pat #8105811
10. Jeffries, Thomas W., Willis, Laura B., Long, Tanya M., Su, Yi-kai (2013) Co-fermentation of glucose, xylose and/or cellobiose by yeast. United States. Wisconsin Alumni Research Foundation (Madison, WI, US), U.S. Department of Agriculture (Washington, DC, US) US Pat #8530211

Synergistic Activities:

- Advisory Committees: Society for Industrial Microbiology Committee on Awards and Honors (1/1/1999-present); Committee on integration of SIM and Fuels and Chemicals meeting (2006-2007); 2011: Crop Science Society of America (CSSA) Science Policy Committee to draft recommendations for biofuel crop research.
- Editorial Boards: *Applied and Environmental Microbiology* (1984 to 1996; 2003-present), *Applied Microbiology and Biotechnology* (1996 to present), *Current Genetics* (1999 to present), *Enzyme and Microbial Technology* (1994 to present), *Metabolic Engineering* (1998 to present); *World Journal of Microbiology and Biotechnology* (Associate Editor, North America); (1992 to 2000). *FEMS Yeast* (2011-present); *J. Society for Industrial Microbiol. Biotechnol. Sr. ed.* 2010-pres
- Reviewer: *Academic Press, ACS Books, Applied Biochemistry and Biotechnology, Archives of Biochemistry, Biotechnology and Bioengineering, Biotechnology Letters, Journal of Applied Bacteriology, Journal of Industrial Microbiology, Journal of Pulp and Paper Science, Nature Biotechnology, Progress in Paper Recycling, TAPPI Journal, Science, Nature, Proc. National Acad. Science, USDA, USDOE, NSF, SBIR, CSREES McArthur Foundation, NSERC (Canada), FRD (South Africa); FWF der Wissenschaftsfonds (Austria)*
- Government DOE Yeast Platform Colloquium, Washington D.C. July 2001; NSF/Joint Agency advisory workshop on Metabolic Engineering (2002); DOE advisory workshop on Genomes to Life program (2004) DOE advisory workshop on global climate change technology (2005); USDA/NRI Program Panel review (2008); National Science Foundation Program Review Panel (2008, 2009); U.S. Department of Agriculture Program Review Panel Chair (March-Aug. 2009)
- Professional leadership Chair-elect, Chairman, Past-Chair, Fermentation and Biotechnology Division, American Society for Microbiology (2006-2009); Director, Society for Industrial Microbiology (2007-2009); President, Society for Industrial Microbiology and Biotechnology, 2012-2013

Collaborators and Other Affiliations:

Baker, S., (DOE, JGI); Balan, V., (MBI, MSU, East Lansing); Bilek, E.M., (FPL, Madison, WI); Chen, Y.F. (Tianjin); Choi, I-G., (Seoul National, Korea); Clum, A., (DOE, JGI); Consentino, S.L., (Univ. of Catania, Italy); Cregg, J.M., (Keck Institute, CA); Cullen, D., (FPL, Madison, WI); Dale, B., (MSU, East Lansing); Dietrich, D., (FPL, Madison, WI); Gasch, A., (GLBRC, UW Madison); Goodwin, S.B., (USDA, ARS); Grigoriev, I.V., (DOE, JGI, Walnut Creek); Gunwan, C., (DOE, JGI, Walnut Creek); Hibbett, D., (Clark Univ, MA); Higbee, A., (UW Madison); Houtman, C.J., (FPL, Madison, WI); Illman, B.L., (FPL, Madison, WI); Ince, P.J., (FPL, Madison, WI); Jin, M., (DOE, JGI, Walnut Creek); Karry, K., (DOE, JGI, Walnut Creek); Kenealy, W.R., (Mascoma); Kim H.J., (Seoul National, Korea); Kubicek, C.P., (Tech. Univ. Vienna); Kuo, A., (DOE, LBL, JGI); Kuske, C., (DOE, Los Alamos NL); LaButti, K., (DOE, JGI); Lapidus, A., (DOE, JGI); Lee, J.W., (Chonnam Nat. Univ., South Korea); Lindquist, E., (DOE, JGI); Long, T.M., (Virent, Madison, WI); Lucas, S., (DOE, JGI); Magnuson, J., (DOE, PNNL); Martin, F., (INRA, France); Nielsen, J., (Chalmers University, Sweden); Olsson, L., (Chalmers University, Sweden); Otero, J.M., (Chalmers University, Sweden); Pangilinan, J.L., (DOE, JGI); Potts, K.M., (UW Madison); Rodrigues, R.C.L.B., (Univ. de São Paulo, BR); Rudie, A.W., (FPL, Madison, WI); Salamov, A.S., (DOE, JGI); Sato, T., (GLBRC, UW Madison); Scalcinati, G., (Chalmers University, Sweden); Scordia, D., (University of Catania, Italy); Spatafora, J., (Oregon State University, Corvallis, OR); Su, Y.---K., (UW Madison); Wang, G.S., (Tianjin Univ., China); Wang, Jin (Auburn); Wegner, T.H., (FPL, Madison, WI); Wolbach, D., (UW Madison); Zhu, J.Y., (FPL, Madison, WI); Zinkel, R., (GLBRC, UW Madison). **Advisees:** (Total number of Graduate Students Advised: X Total number of Postdoctoral Scholars Sponsored: X) Calvey, Chris (UW Madison); Gagne, JM (UW Madison); Headman, J.R., (Verdezyne, CA); Su, Yi-Kai Sun, H., (DOE, JGI); Willis, L.B., (UW Madison)