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Selected Publications

Biological Research

Phylogenomically guided identification of industrially relevant GH1 β -glucosidases through DNA synthesis and nanostructure-initiator mass spectrometry. (2014) Heins, Cheng, et al. *ACS Chem Biol.* 9(9):2082-91. doi: 10.1021/cb500244v

Metagenomes of tropical soil-derived anaerobic switchgrass-adapted consortia with and without iron. (2013) Deangelis, D'Haeseleer, et al. *Stand Genomic Sci.* 7(3):382-98. doi: 10.4056/sigs.3377516

Tracing determinants of dual substrate specificity in glycoside hydrolase family 5. (2012) Chen, Friedland, et al. *J Biol Chem.* 287(30):25335-43. doi: 10.1074/jbc.M112.362640

Optimization of a heterologous mevalonate pathway through the use of variant HMG-CoA reductases. (2011) Ma, Garcia, et al. *Metab Eng.* 13(5):588-97. doi: 10.1016/j.ymben.2011.07.001

Environmental genomics reveals a single-species ecosystem deep within Earth. (2008) Chivian, Brodie, et al. *Science.* 322(5899):275-8. doi: 10.1126/science.1155495

Superfamily assignments for the yeast proteome through integration of structure prediction with the gene ontology. (2007) Malmström, Riffle, et al. *PLoS Biol.* 5(4):e76. doi: 10.1371/journal.pbio.0050076

Tool Development

MetaMicrobesOnline: phylogenomic analysis of microbial communities. (2012) Chivian, Dehal, et al. *Nucleic Acids Res.* 41(Database issue):D648-54. doi: 10.1093/nar/gks1202

GLAMM: Genome-Linked Application for Metabolic Maps. (2011) Bates, Chivian, & Arkin. *Nucleic Acids Res.* 39(Web Server issue):W400-5. doi: 10.1093/nar/gkr433

MicrobesOnline: an integrated portal for comparative and functional genomics. (2010) Dehal, Joachimiak, et al. *Nucleic Acids Res.* 238(Database issue):D396-400. doi: 10.1093/nar/gkp919.

Homology modeling using parametric alignment ensemble generation with consensus and energy-based model selection. (2006) Chivian & Baker. *Nucleic Acids Res.* 34(17):e112. doi: 10.1093/nar/gkl480

Automated prediction of CASP-5 structures using the Robetta server. (2003) Chivian, Kim, et al. *Proteins.* 53(Suppl 6):524-33. doi: 10.1002/prot.10529

Rosetta in CASP4: progress in ab initio protein structure prediction. (2001) Bonneau, Tsai, et al. *Proteins.* Suppl 5:119-26. doi: 10.1002/prot.1170