

# Mannitol Dehydrogenase

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## Recent Publications on Mannitol Dehydrogenase:

- [Metabolic engineering for bioproduction of sugar alcohols.](#)  
*Sugar alcohols find applications in pharmaceuticals, oral and personal...* 2nd September, 2008  
Department of Chemical Engineering, Pennsylvania State University,- *Curr Opin Biotechnol.* 2008 Sep 16. ([DOI Direct Link](#))
- [Thermotoga maritima TM0298 is a highly thermostable mannitol dehydrogenase.](#)  
*Thermotoga maritima TM0298 is annotated as an alcohol dehydrogenase, yet...* 23rd August, 2008  
Department of Biochemistry and Molecular Biology, Michigan State- *Appl Microbiol Biotechnol.* 2008 Aug 22. ([DOI Direct Link](#))
- [Mannitol biosynthesis is required for plant pathogenicity by Alternaria alternata.](#)  
*Mannitol has been hypothesized to play a role in antioxidant defense. In...* 14th June, 2008  
Department of Plant Pathology, NC State University, Raleigh, NC 27695,- *FEMS Microbiol Lett.* 2008 Aug;285(1):122-9. Epub 2008 Jun 28. ([DOI Direct Link](#))
- [D-mannitol production by resting state whole cell biotransformation of D-fructose by heterologous mannitol and formate dehydrogenase gene expression in Bacillus megaterium.](#)  
*An in vivo system was developed for the biotransformation of D-fructose...* 8th January, 2008  
Institute of Biotechnology 1, Research Centre Julich GmbH, Julich,- *Biotechnol J.* 2007 Nov;2(11):1408-16. ([DOI Direct Link](#))
- [Identification and characterization of the Tuber borchii D-mannitol dehydrogenase which defines a new subfamily within the polyol-specific medium chain dehydrogenases.](#)  
*A novel NADP(+)-dependent D-mannitol dehydrogenase and the corresponding...* 21st December, 2007  
Istituto di Chimica Biologica Giorgio Fornaini, Universita degli Studi di- *Fungal Genet Biol.* 2007 Oct;44(10):965-78. Epub 2007 Jan 10. ([DOI Direct Link](#))
- [Expression of glf Z.m. increases D-mannitol formation in whole cell biotransformation with resting cells of Corynebacterium glutamicum.](#)  
*A recombinant oxidation/reduction cycle for the conversion of D-fructose...* 7th December, 2007  
Institut fur Biotechnologie 1, Forschungszentrum Julich GmbH, 52425,- *Appl Microbiol Biotechnol.* 2007 Sep;76(3):545-52. Epub 2007 May 15. ([DOI Direct Link](#))
- [Alternaria alternata NADP-dependent mannitol dehydrogenase is an important fungal allergen.](#)  
*BACKGROUND: Alternaria alternata is one of the most important allergenic...* 21st July, 2007  
Division of Genetics, Department of Cell Biology, University of Salzburg,- *Clin Exp Allergy.* 2006 Dec;36(12):1513-24. ([DOI Direct Link](#))
- [Ca<sup>2+</sup> and Cu<sup>2+</sup> supplementation increases mannitol production by Candida magnoliae.](#)  
*Supplementation with CaCl(2).2H(2)O (50 mg l(-1)) or CuSO(4).5H(2)O (10 mg...* 27th June, 2007

Department of Chemical Engineering, Konkuk University, 1 Hwayang-Dong,- Biotechnol Lett. 2007 Feb;29(2):291-4. Epub 2006 Nov 22. ([DOI Direct Link](#))

- [Crystallization, preliminary X-ray diffraction and structure analysis of \*Thermotoga maritima\* mannitol dehydrogenase.](#)  
*Diffraction data have been collected from a crystal of Thermotoga maritima...*1st June, 2007  
Department of Biochemistry, University of Saskatchewan, Saskatoon,- Acta Crystallogr Sect F Struct Biol Cryst Commun. 2007 Apr 1;63(Pt ([DOI Direct Link](#)))
- [Utilization and transport of mannitol in \*Olea europaea\* and implications for salt stress tolerance.](#)  
*Mannitol is one of the primary photosynthetic products and the major...*19th May, 2007  
Departamento de Biologia, Universidade do Minho, Campus de Gualtar,- Plant Cell Physiol. 2007 Jan;48(1):42-53. Epub 2006 Nov 21. ([DOI Direct Link](#))
- [Mannitol metabolism in the phytopathogenic fungus \*Alternaria alternata\*.](#)  
*Mannitol metabolism in fungi is thought to occur through a mannitol cycle...*19th May, 2007  
Department of Plant Pathology, NC State University, Raleigh, NC 27695,- Fungal Genet Biol. 2007 Apr;44(4):258-68. Epub 2006 Nov 7. ([DOI Direct Link](#))
- [Mannitol is required for asexual sporulation in the wheat pathogen \*Stagonospora nodorum\* \(glume blotch\).](#)  
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Australian Centre for Necrotrophic Fungal Pathogens, SABC, Division of- Biochem J. 2006 Oct 15;399(2):231-9. ([DOI Direct Link](#))
- [NADP-dependent mannitol dehydrogenase, a major allergen of \*Cladosporium herbarum\*.](#)  
*Cladosporium herbarum is an important allergenic fungal species that has...*2nd August, 2006  
Department of Cell Biology, University of Salzburg, Hellbrunnerstrasse 34,- J Biol Chem. 2006 Jun 16;281(24):16354-60. Epub 2006 Apr 11. ([DOI Direct Link](#))
- [Glass-fiber disks provide suitable medium to study polyol production and gene expression in \*Eurotium rubrum\*.](#)  
*Eurotium species often dominate the fungal population in stored grain and...*11th March, 2006  
Department of Botany & Plant Pathology, Purdue University, 915 State- Mycologia. 2005 Jul-Aug;97(4):743-50.

## Mannitol Dehydrogenase Patents:



- 5268288- [Mannitol oxidoreductase isolated from vascular plants](#)
- 6340597- [Electrochemical biosensors and process for their preparation](#)
- 6395299- [Matrices for drug delivery and methods for making and using the same](#)
- 6399861- [Methods and compositions for the production of stably transformed, fertile monocot plants and cells thereof](#)
- 6416985- [DNA encoding mannose 6-phosphate reductase and recombinants produced therefrom](#)
- 6495317- [DNA encodingmannose 6-phosphate reductase and recombinants produced therefrom](#)
- 6583275- [Nucleic acid sequences and expression system relating to \*Enterococcus faecium\* for diagnostics and therapeutics](#)
- 6602691- [Process for the production of mannitol by immobilized micro-organisms](#)
- 6617123- [Method for detection of 4-hydroxybutyric acid and its precursor\(s\) in fluids](#)
- 6664082- [Genetically engineered L-sorbose reductase-deficient mutants](#)

- 6700038- [Plant expression vectors based on the flock house virus genome](#)
- 6340582- [Process for preparing xylitol](#)
- 6329574- [High lysine fertile transgenic corn plants](#)
- 6306445- [Methods for using dehydrogenases in baking](#)
- 5319076- [Oligosaccharide derivatives suitable for .alpha.-amylase determination](#)
- 5624813- [NAD\(P\).sup.+ /NAD\(P\)H based chemiluminescent diagnostics](#)
- 5750379- [Process for the production of carthamin](#)
- 5780239- [Method for the determination of cast in urine](#)
- 5780709- [Transgenic maize with increased mannitol content](#)
- 5783382- [Method for storing liquid diagnostic reagents](#)
- 5990390- [Methods and compositions for the production of stably transformed, fertile monocot plants and cells thereof](#)
- 6025545- [Methods and compositions for the production of stably transformed, fertile monocot plants and cells thereof](#)
- 6133504- [DNA encoding mannose 6-phosphate reductase and recombinants produced therefrom](#)
- 6281411- [Transgenic monocots plants with increased glycine-betaine content](#)
- 6720164- [Method of determining substrate, and biosensor](#)
- 6777589- [Methods and compositions for the production of stably transformed, fertile monocot plants and cells thereof](#)
- 7326557- [Increasing intracellular NADPH availability in E. coli](#)
- 7332310- [Mutant of homoserine dehydrogenase from Corynebacterium and DNA encoding thereof](#)
- 7335813- [Expression cassettes for guard cell-preferential expression in plants](#)
- 7342147- [Expression cassettes for root-preferential expression in plants](#)
- 7345216- [Expression cassettes for meristem-preferential expression in plants](#)
- 7358072- [Fermentative production of mannitol](#)
- 7365178- [Acyl-nucleotide probes and methods of their synthesis and use in proteomic analysis](#)
- 7371927- [Methods for modulating plant growth and biomass](#)
- 7375209- [Expression cassettes for seed-preferential expression in plants](#)
- 7378572- [Constitutive expression cassettes for regulation of plant expression](#)
- 7317136- [Methods for modifying plant cell walls and modified plants produced thereby](#)
- 7270984- [Polynucleotides encoding a 6-phosphogluconolactonase polypeptide from corynebacterium glutamicum](#)
- 7247441- [Nucleic acid sequence and protein in addition to polypeptides coding for mannitol dehydrogenases or parts thereof and the production and use thereof in diagnosis and therapy](#)
- 6803499- [Methods and compositions for the production of stably transformed, fertile monocot plants and cells thereof](#)
- 6825018- [Sorbitol dehydrogenase, gene encoding the same and use thereof](#)
- 6855526- [Method for making mannitol with Lactobacillus intermedius](#)
- 6960705- [Nucleic acid encoding a hypersensitive response elicitor from Xanthomonas campestris](#)
- 6962989- [Corynebacterium glutamicum genes encoding novel proteins](#)
- 7052913- [Matrices for drug delivery and methods for making and using the same](#)
- 7098313- [DNA sequences coding for a polyol carrier and their use, in particular for the preparation of transgenic plants](#)
- 7186887- [Nucleic acids encoding oryza sativa nuclear cap binding protein 80 and methods of use](#)
- 7211713- [Methods and compositions for the production of stably transformed, fertile monocot plants and cells thereof](#)
- 7217865- [Transgenic high tryptophan plants](#)
- 7390937- [Plants with enhanced levels of nitrogen utilization proteins in their root epidermis and uses thereof](#)

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Send comments and feedback to:

Peter Barfoot Managing Director, BioPortfolio Ltd.

UK Tel: (+44) 1300 321501

USA Voicemail and Fax: (+1) 415 680 2472

[Peter Barfoot peter.barfoot@bioportfolio.com](mailto:peter.barfoot@bioportfolio.com)

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