

# Betaine-Aldehyde Dehydrogenase

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## Recent Publications on Betaine-Aldehyde Dehydrogenase:



- [OsBADH1 is possibly involved in acetaldehyde oxidation in rice plant peroxisomes.](#)  
*Although rice (Oryza sativa L.) produces little glycine betaine (GB), it...*24th October, 2009  
Graduate School of Bioagricultural Sciences, Nagoya University, Chikusa,- FEBS Lett. 2009 Oct 20. ([DOI Direct Link](#))
- [The origin and evolution of fragrance in rice \(Oryza sativa L.\).](#)  
*Fragrance in the grain is one of the most highly valued grain quality...*29th September, 2009  
Department of Plant Breeding and Genetics, Cornell University, Ithaca, NY- Proc Natl Acad Sci U S A. 2009 Aug 25;106(34):14444-9. Epub 2009 Aug 17. ([DOI Direct Link](#))
- [\[Overexpression of Spinacia oleracea betaine aldehyde dehydrogenase \(SoBADH\) gene confers the salt and cold tolerant in Gossypium hirsutum L\]](#)  
*The open reading frame of Spinacia oleracea Betaine Aldehyde Dehydrogenase...*25th September, 2009  
Institute of Cotton Research, Shanxi Academy of Agricultural Science,- Sheng Wu Gong Cheng Xue Bao. 2008 Aug;24(8):1464-9.
- [Genetic and molecular basis of fragrance in rice.](#)  
*Fragrance or aroma in rice is considered as a special trait with huge...*5th September, 2009  
Biotechnology Laboratory, Crop Improvement Section, Directorate of Rice- Biotechnol Adv. 2009 Jul-Aug;27(4):468-73. Epub 2009 Apr 14. ([DOI Direct Link](#))
- [Preferential accumulation of betaine uncoupled to choline monooxygenase in young leaves of sugar beet-importance of long-distance translocation of betaine under normal and salt-stressed conditions.](#)  
*It has been reported that glycinebetaine (betaine) is synthesized in...*4th August, 2009  
Graduate School of Environmental and Human Sciences, Meijo University,- J Plant Physiol. 2009 Dec 15;166(18):2058-70. Epub 2009 Aug 3. ([DOI Direct Link](#))
- [Betaine aldehyde dehydrogenase in plants.](#)  
*Plant betaine aldehyde dehydrogenases (BADHs) have been the target of...*14th April, 2009  
Grain Foods CRC, Centre for Plant Conservation Genetics, Southern Cross- Plant Biol (Stuttg). 2009 Mar;11(2):119-30. ([DOI Direct Link](#))
- [Reaction of the catalytic cysteine of betaine aldehyde dehydrogenase from Pseudomonas aeruginosa with arsenite-BAL and phenylarsine oxide.](#)  
*Betaine aldehyde dehydrogenase (BADH) catalyses the irreversible oxidation...*28th February, 2009  
Departamento de Bioquímica, Facultad de Química, Universidad Nacional- Chem Biol Interact. 2009 Mar 16;178(1-3):64-9. Epub 2008 Nov 5. ([DOI Direct Link](#))
- [RNAi-directed downregulation of OsBADH2 results in aroma \(2-acetyl-1-pyrroline\) production in rice](#)

[\(Oryza sativa L.\)](#).

- BACKGROUND: Aromatic rice is popular worldwide because of its...*5th February, 2009  
Ministry of Education Key Laboratory for Bio-resource and Eco-environment,- BMC Plant Biol. 2008  
Oct 8;8:100. ([DOI Direct Link](#))
- [Enzymatic characterization of peroxisomal and cytosolic betaine aldehyde dehydrogenases in barley.](#)  
*Betaine aldehyde dehydrogenase (BADH; EC 1.2.1.8) is an important enzyme...*3rd February, 2009  
Graduate School of Bioagricultural Sciences, Nagoya University, Chikusa,- Physiol Plant. 2008  
Sep;134(1):22-30. Epub 2008 Apr 18. ([DOI Direct Link](#))
  - [Badh2, encoding betaine aldehyde dehydrogenase, inhibits the biosynthesis of 2-acetyl-1-pyrroline, a major component in rice fragrance.](#)  
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National Maize Improvement Center of China, China Agricultural University,- Plant Cell. 2008  
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  - [Inactivation of an aminoaldehyde dehydrogenase is responsible for fragrance in rice.](#)  
*Rice (Oryza sativa) has two betaine aldehyde dehydrogenase homologs, BAD1...*17th December, 2008  
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  - [Characterization of the major fragrance gene from an aromatic japonica rice and analysis of its diversity in Asian cultivated rice.](#)  
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UMR 5096, IRD-CNRS-Universite de Perpignan, Laboratoire Genome et- Theor Appl Genet. 2008  
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  - [Screening of genes regulated by cold shock in Shewanella piezotolerans WP3 and time course expression of cold-regulated genes.](#)  
*The differential gene transcription of a deep-sea bacterium Shewanella...*24th September, 2008  
Key Laboratory of Marine Biogenetic Resources, Third Institute of- Arch Microbiol. 2008  
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  - [Genetic tools for allelic replacement in Burkholderia species.](#)  
*Allelic replacement in the Burkholderia genus has been problematic due to...*1st August, 2008  
Department of Microbiology, College of Natural Sciences, University of- Appl Environ Microbiol. 2008  
Jul;74(14):4498-508. Epub 2008 May 23. ([DOI Direct Link](#))

## BioNews Results for Betaine-Aldehyde Dehydrogenase

- [Clinical Data on Aldagen's Cardiovascular Therapies to Be Presented at the American Heart Association Scientific](#)  
*Pharmacy Choice: Nov 10 2009 9:29PM Matching: aldehyde dehydrogenase*
- [Clinical Data on Aldagen's Cardiovascular Therapies to Be Presented at the American Heart Association Scientific](#)  
*Genetic Engineering News: Nov 10 2009 5:33PM Matching: aldehyde dehydrogenase*



## Betaine-Aldehyde Dehydrogenase Patents:

- 7547820- [Method for altering the nutritional content of plant seed](#)
- 6631332- [Methods for using functional site descriptors and predicting protein function](#)
- 6281412- [Method for creating osmotic-pressure-tolerant plant](#)
- 6281411- [Transgenic monocots plants with increased glycine-betaine content](#)
- 6271016- [Anthranilate synthase gene and method of use thereof for conferring tryptophan overproduction](#)
- 6118047- [Anthranilate synthase gene and method of use thereof for conferring tryptophan overproduction](#)
- 5981842- [Production of water stress or salt stress tolerant transgenic cereal plants](#)
- 5780709- [Transgenic maize with increased mannitol content](#)
- 5731419- [Freezing tolerance proteins Wcs19 and Wcor410 from gramineae](#)
- 6703539- [Method and compositions for modifying levels of secondary metabolic compounds in plants](#)
- 6791012- [Salt-tolerant transgenic turfgrass](#)
- 6831165- [Corynebacterium glutamicum genes encoding proteins involved in homeostasis and adaptation](#)
- 7462758- [Methods for the transformation of vegetal plastids](#)
- 7319181- [Transgenic rice plants with reduced expression of Os2AP and elevated levels of 2-acetyl-1-pyrroline](#)
- 7288403- [Anthranilate synthase gene and method for increasing tryptophan production](#)
- 7279619- [Methods and compositions for modifying levels of secondary metabolic compounds in plants](#)
- 7141720- [Transcriptional factor enhancing the resistance of plants to osmotic stress](#)
- 7064248- [Method of preparing fertile transgenic corn plants by microprojectile bombardment](#)
- 6960709- [Method for altering the nutritional content of plant seed](#)
- 6951971- [Method of making water stress or salt stress tolerant transgenic cereal plants](#)
- 5633153- [Aldehyde dehydrogenase selectable markers for plant transformation](#)

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