

## Title (en)

STABLE *ZYMONONAS MOBILIS* /i> XYLOSE AND ARABINOSE FERMENTING STRAINS

## Title (de)

STABILE XYLOSE- UND ARABINOSEVERGÄRENDE *ZYMONONAS MOBILIS* STÄMME

## Title (fr)

SOUCHES DE *ZYMONONAS MOBILIS* STABLES INDUISANT LA FERMENTATION DU XYLOSE ET DE L'ARABINOSE

## Publication

**EP 1278876 A2 20030129 (EN)**

## Application

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## Priority

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## Abstract (en)

[origin: WO0183786A2] The present invention briefly includes a transposon for stable insertion of foreign genes into a bacterial genome, comprising at least one operon having structural genes encoding enzymes selected from the group consisting of *xylA*, *xylB*, *araBAD* and *tal/tkt*, and at least one promoter for expression of the structural genes in the bacterium, a pair of inverted insertion sequences, the operons contained inside the insertion sequences, and a transposase gene located outside of the insertion sequences. A plasmid shuttle vector for transformation of foreign genes into a bacterial genome, comprising at least one operon having structural genes encoding enzymes selected from the group consisting of *xylA*, *xylB*, *araBAD* and *tal/tkt*, at least one promoter for expression of the structural genes in the bacterium, and at least two DNA fragments having homology with a gene in the bacterial genome to be transformed, is also provided. The transposon and shuttle vectors are useful in constructing significantly different *Zymomonas mobilis* strains, according to the present invention, which are useful in the conversion of the cellulose derived pentose sugars into fuels and chemicals, using traditional fermentation technology, because they are stable for expression in a non-selection medium.

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## Citation (search report)

See references of WO 0183786A2

## Citation (examination)

- DE LORENZO V ET AL: "MINI-TN5 TRANSPOSON DERIVATIVES FOR INSERTION MUTAGENESIS PROMOTER PROBING AND CHROMOSOMAL INSERTION OF CLONED DNA IN GRAM-NEGATIVE EUBACTERIA", JOURNAL OF BACTERIOLOGY, vol. 172, no. 11, 1990, pages 6568 - 6572, ISSN: 0021-9193
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- HERRERO M ET AL: "TRANSPOSON VECTORS CONTAINING NON-ANTIBIOTIC RESISTANCE SELECTION MARKERS FOR CLONING AND STABLE CHROMOSOMAL INSERTION OF FOREIGN GENES IN GRAM-NEGATIVE BACTERIA", JOURNAL OF BACTERIOLOGY, vol. 172, no. 11, 1990, pages 6557 - 6567, ISSN: 0021-9193

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