

Sr. No.	144
Name of Technology	<b>Recombinant <i>Zymomonas</i> for pentose fermentation</b>
Sector	<b>INDUSTRIAL BIOTECHNOLOGY</b>
Sub-sector	<b>Microbiology / Strain Improvement</b>
Keywords	Pentose sugar, ethano, <i>Zymomonas mobilis</i> , xylose isomerase, xylulokinase, transaldolase, transketolase, L-arabinose isomerase, L-ribulokinase, and L-ribulose-5-phosphate 4-epimerase
Inventor	Min Zhang
Description	The invention relates to micro-organisms which normally do not ferment pentose sugar and which are genetically altered to ferment pentose sugar to produce ethanol and fermentation processes utilizing the same. Examples include <i>Zymomonas mobilis</i> which has been transformed with combinations of <i>E. coli</i> genes for xylose isomerase, xylulokinase, transaldolase, transketolase, L-arabinose isomerase, L-ribulokinase and L-ribulose-5-phosphate 4-epimerase. Expression of the added genes are under the control of <i>Zymomonas mobilis</i> promoters. These newly created micro-organisms are useful for fermenting pentoses and glucose, produced by hydrolysis of hemicellulose and cellulose, to produce ethanol.
Application of Technology	For pentose fermentation.
IP Status	U.S. Patent 5,726,053
Source	<a href="http://www.nrel.gov">http://www.nrel.gov</a>



Government of Gujarat

