

## Isolation of solvent-responsive genes using mRNA differential display from *Pseudomonas* sp. BCNU 106

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*Pseudomonas* sp. BCNU 106 was isolated from waste water. The strain is a solvent-tolerant strain able to grow in a culture medium containing more than 50%. Solvent-tolerant strain *Pseudomonas* sp. BCNU 106 was studied to identify solvent-tolerant related genes. Using the mRNA differential display technique, a total of 60 differentially expressed cDNA fragments were identified by comparing band intensities among fingerprints obtained from Luria-Bertani(LB) medium with 10% toluene. The mRNA expression levels were detected after 10%(v/v) toluene treatments for 24hrs. Transcripts induced under 10% toluene exhibited homologies to ; manganese superoxide dismutase, catechol-o- transferase, catalase isozyme CatA gene, beta-hexosaminidase, putative ABC transporter, transcriptional regulator, heat-shock protein, and toluene dioxygenase. Especially, the toluene dioxygenase, one of the enzyme well known in the toluene degradation pathway of *Pseudomonas putida* was identified under toluene treatment<sup>4</sup>. Therefore, toluene-responsive *Pseudomonas* sp. BCNU 106 transcripts isolated using mRNA differential display showed to encode proteins related antioxidation and toluene degradation pathway.

### References

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