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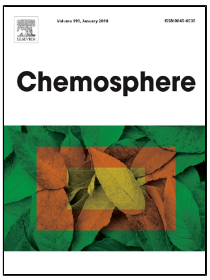

Bioconversion of alkaloids to high-value chemicals: Comparative analysis of newly isolated lupanine degrading strains

Stella Parmaki, Ioannis Vyrides, Marlen I. Vasquez, Viki Hartman, Irene Zacharia, Ioanna Hadjiadamou, Catarina B.M. Barbeitos, Frederico C. Ferreira, Carlos A.M. Afonso, Chrysoulla Drouza, Michalis Koutinas

PII:	S0045-6535(17)31750-2
DOI:	10.1016/j.chemosphere.2017.10.165
Reference:	CHEM 20187
To appear in:	*Chemosphere*
Received Date:	10 August 2017
Revised Date:	21 October 2017
Accepted Date:	30 October 2017

Please cite this article as: Stella Parmaki, Ioannis Vyrides, Marlen I. Vasquez, Viki Hartman, Irene Zacharia, Ioanna Hadjiadamou, Catarina B.M. Barbeitos, Frederico C. Ferreira, Carlos A.M. Afonso, Chrysoulla Drouza, Michalis Koutinas, Bioconversion of alkaloids to high-value chemicals: Comparative analysis of newly isolated lupanine degrading strains, *Chemosphere* (2017), doi: 10.1016/j.chemosphere.2017.10.165

Highlights

- Eight aerobic and anaerobic lupanine metabolizing strains were isolated
- Lupanine is toxic for *V. fischeri*, *D. magna* and monocotyledonous plants
- The alkaloid acted as growth promoter for a dicotyledonous plant
- *Rhodococcus rhodochrous* LPK211 achieved 81% removal for 1.5 g L^{-1} of lupanine
- *P. putida* LPK411 formed 17-oxolupanine and other alkaloid derivatives as products