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PII: S0168-1656(17)30132-3
DOI: http://dx.doi.org/doi:10.1016/j.jbiotec.2017.03.027
Reference: BIOTEC 7835

To appear in: *Journal of Biotechnology*

Received date: 28-10-2016
Revised date: 21-3-2017
Accepted date: 23-3-2017

Please cite this article as: Rivero, Cintia W., De Benedetti, Eliana C., Gallego, Fernando López, Pessela, Benevides C., Guisán, José M., Trelles, Jorge A., Biosynthesis of an antiviral compound using a stabilized phosphopentomutase by multipoint covalent immobilization.Journal of Biotechnology http://dx.doi.org/10.1016/j.jbiotec.2017.03.027

Biosynthesis of an antiviral compound using a stabilized phosphopentomutase by multipoint covalent immobilization

Cintia W. Rivero[a,b], Eliana C. De Benedetti[a,b], Fernando López Gallego[c,d], Benevides C. Pessela[e,f], José M. Guisán[g], Jorge A. Trelles[a,b]*.

[a]*Sustainable Biotechnology Laboratory (LIBioS), National University of Quilmes, Roque Sáenz Peña 352, Bernal B1876BXD, Argentina*

[b]*National Scientific and Technical Research Council (CONICET), Godoy Cruz 2290 CABA C1425FQB, Argentina*

[c]*Heterogeneous Biocatalysis Group, CIC Biomagune, Edificio Empresarial "C", Paseo Miramón 182, Donostia-San Sebastián 20009, Spain*

[d]*Ikerbasque, Basque Foundation for Science, Alda. Urquijo, Urkixo Zumarkalea 36, Bilbao 48011, Spain*

[e]*Research Institute of Food Science (CIAL-CSIC), Campus UAM-Cantoblanco, Madrid 28049, Spain*

[f]*Department of Engineering and Technologies. Polytechnic Institute of Science and Technology, Av. Luanda Sul, Rua Lateral Via S10, Talatona-Luanda Sul-Republic of Angola.*

[g]*Institute of Catalysis and Petrochemistry (ICP-CSIC), Campus UAM-Cantoblanco, Madrid 28049, Spain*

**Corresponding author. Tel.: +54 1143657100 (ext. 5645); fax: +54 1143657132.*

E-mail address: jtrelles@unq.edu.ar (Jorge A. Trelles).

Graphical Abstract

Phosphopentomutase from *E. coli* ATCC 4157 has been stabilized by addition of glycerol (10%, v/v), allowing for the first time their immobilization at pH 10 on glyoxyl support.

This kind of immobilization enabled to improve thermal stability of PPM favoring its application in the biosynthesis of a commonly used antiviral compound.

An efficient one-pot bioprocess based on a bi-enzyme system was developed, and meets the requirements of high stability and short reaction times needed for low cost production in a future preparative application.