

The metabolic switch can be activated in a recombinant strain of *Streptomyces lividans* by a low oxygen transfer rate in shake flasks

Ramsés A. Gamboa-Suasnavart¹, Norma A. Valdez-Cruz¹, Gerardo Gaytan-Ortega¹,
Greta I. Reynoso-Cereceda¹, Daniel Cabrera-Santos¹, Lorena López-Griego¹, Wolf
Klöckner^{2,3}, Jochen Büchs² and Mauricio A. Trujillo-Roldán^{1*}

1. Programa de Investigación de Producción de Biomoléculas, Unidad de Bioprocesos, Departamento de Biología Molecular y Biotecnología, Instituto de Investigaciones Biomédicas, Universidad Nacional Autónoma de México. AP. 70228, Ciudad de México, CP. 04510, México.

2. Department of Biochemical Engineering (AVT.BioVT), RWTH Aachen University of Technology, Forckenbeckstraße 51, D-52074 Aachen, Germany.

3. Bayer AG, Engineering and Technology, Chempark, 51368 Leverkusen, Germany.

*** Corresponding author: Dr. Mauricio A Trujillo-Roldán**

Unidad de Bioprocesos, Instituto de Investigaciones Biomédicas, Universidad Nacional Autónoma de México, AP. 70228, México D.F., CP. 04510, México, Tel.: +525556229192; maurotru@gmail.com, maurotru@biomedicas.unam.mx

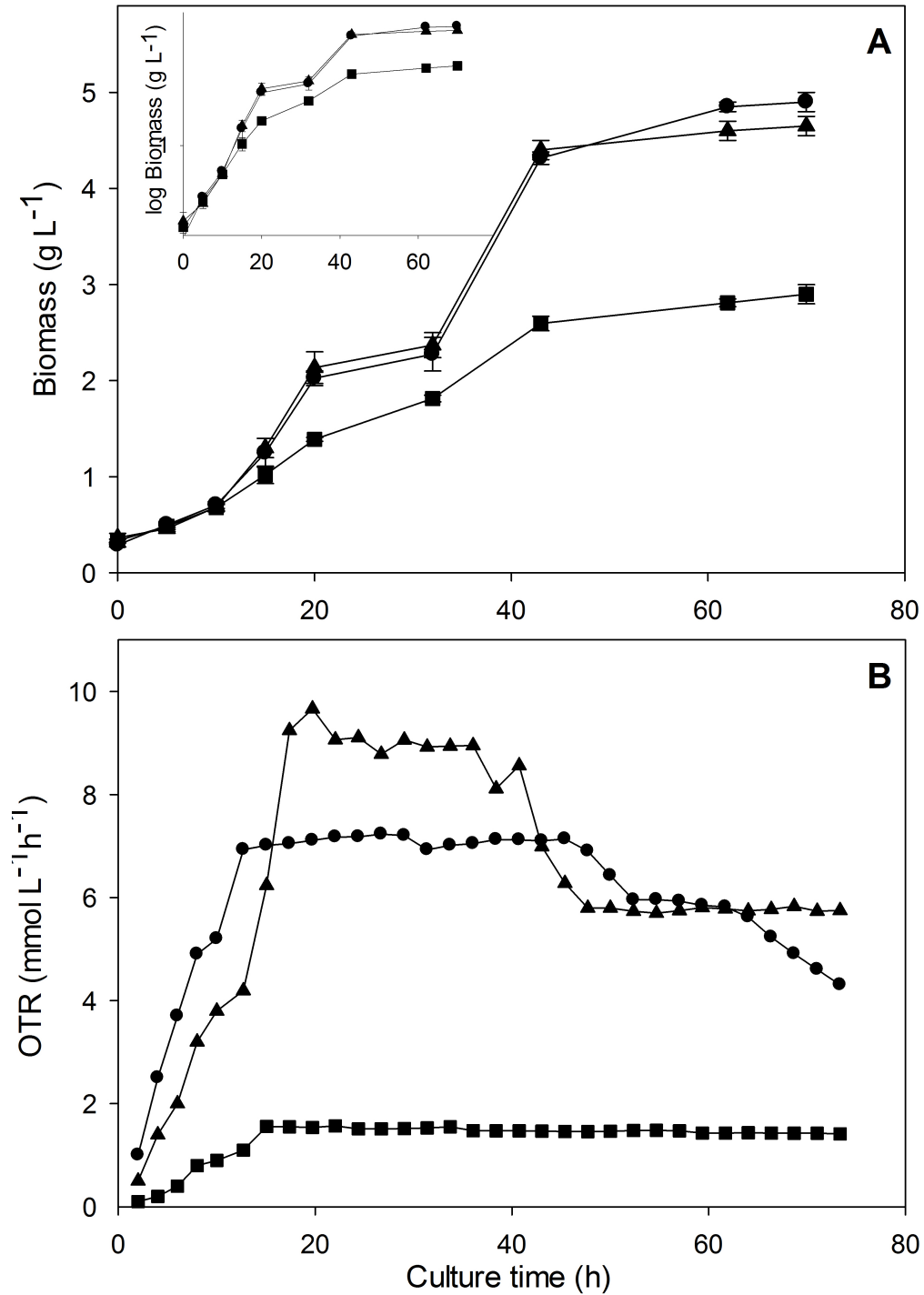


Figure S1. Kinetics of *S. lividans* wild type in conventional normal (NF, squares), coiled (CF, circles), and baffled (BF, triangles) shake flask cultures. **A:** Biomass dry weight growth; the inset presents the growth by a logarithmic scale. **B:** Oxygen transfer rate (OTR) trends.

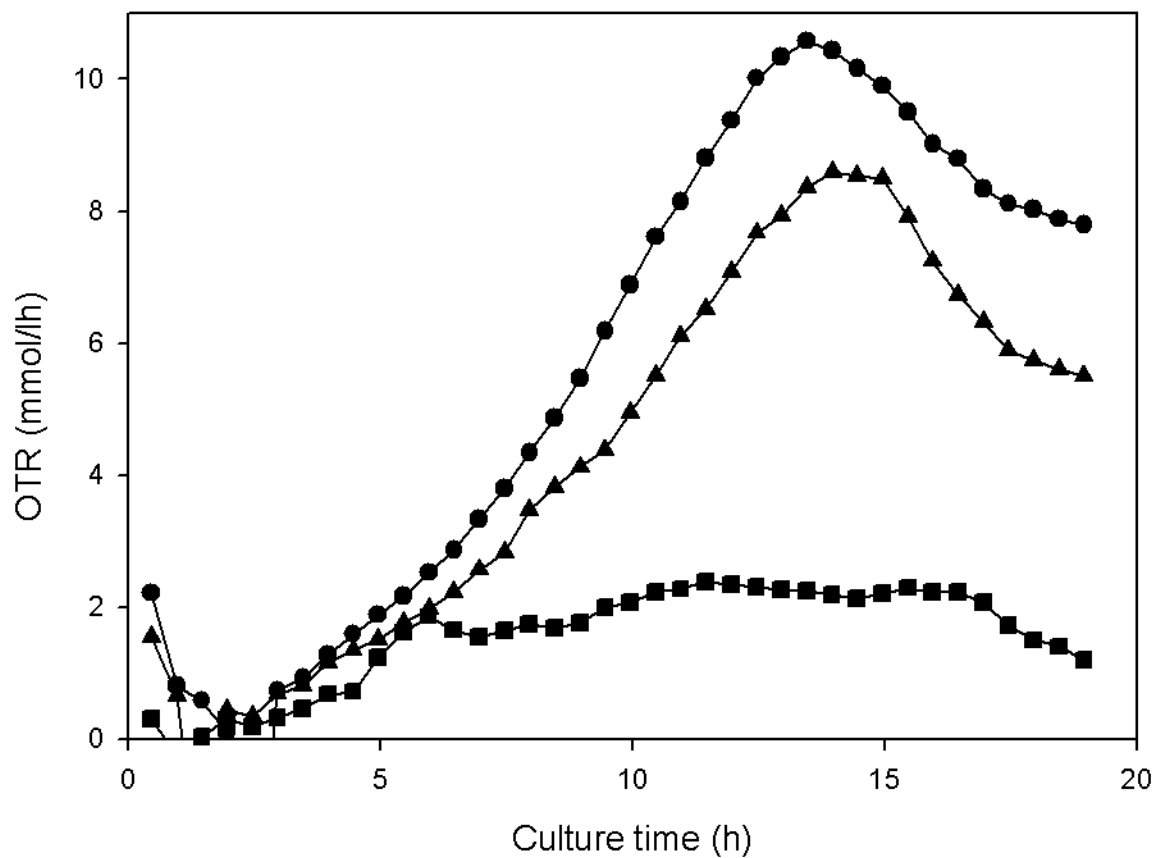


Figure S2. OTR measurements for *C. glutamicum* cultures in CF (circles), BF (triangles), and NF (squares). Cultures were carried out at 30°C, 150 rpm in 250-mL shake flasks with 50 mL filling volume.