

# New Insights into Antibacterial and Antifungal Properties, Cytotoxicity, and Aquatic Ecotoxicity of Flame Retardant PA6/DOPO-Derivative Nanocomposite Textile Fibers

Jelena Vasiljević <sup>1,\*</sup>, Danaja Štular <sup>2</sup>, Gabriela Kalčíková <sup>3</sup>, Janja Zajc <sup>4</sup>, Matic Šobak <sup>2</sup>, Andrej Demšar <sup>1</sup>, Brigita Tomšič <sup>1</sup>, Barbara Simončič <sup>1</sup>, Marija Čolović <sup>2</sup>, Vid Simon Šelih <sup>2</sup> and Ivan Jerman <sup>2</sup>

- <sup>1</sup> Faculty of Natural Sciences and Engineering, University of Ljubljana, Aškerčeva 12, 1000 Ljubljana, Slovenia; andrej.demsar@ntf.uni-lj.si (A.D.); brigita.tomsic@ntf.uni-lj.si (B.T.); barbara.simoncic@ntf.uni-lj.si (B.S.)  
<sup>2</sup> National Institute of Chemistry, Hajdrihova 19, 1000 Ljubljana, Slovenia; danaja.stular@ki.si (D.S.); matic.sobak@ki.si (M.C.); marija.colovic@ki.si; vid.selih@ki.si (V.S.S.); ivan.jerman@ki.si (I.J.)  
<sup>3</sup> Faculty of Chemistry and Chemical Technology, University of Ljubljana, Večna pot 113, 1000 Ljubljana, Slovenia; gabriela.kalcikova@fkkt.uni-lj.si  
<sup>4</sup> Agricultural Institute of Slovenia, Hacquetova 17, 1000 Ljubljana, Slovenia, Slovenia; janja.zajc@kis.si  
\* Correspondence: jelena.vasiljevic@ntf.uni-lj.si; Tel.: +386 1 20 03 255

**Citation:** Vasiljević, J.; Štular, D.; Kalčíková, G.; Zajc, J.; Šobak, M.; Demšar, A.; Tomšič, B.; Simončič, B.; Čolović, M.; V.S., Šelih, I. Jerman. New Insights into Antibacterial and Antifungal Properties, Cytotoxicity, and Aquatic Ecotoxicity of Flame Retardant PA6/DOPO-Derivative Nanocomposite Textile Fibers. *Polymers* **2021**, *13*, x. <https://doi.org/10.3390/polym13060905>

Academic Editor: Marco Zanetti

Received: 24 February 2021

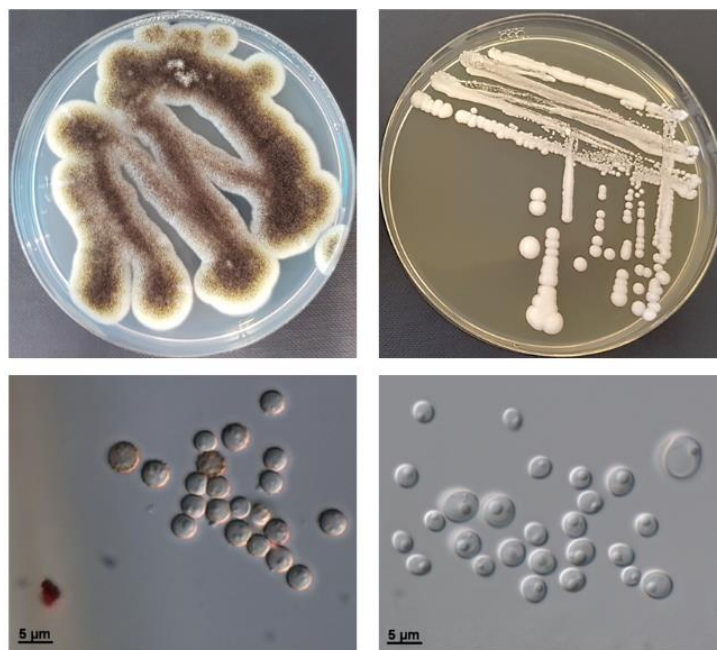
Accepted: 12 March 2021

Published: date

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).



**Figure S1.** *A. niger* (upper left) and *C. albicans* (upper right) grown on agar medium at 30 °C for 7 and 5 days, respectively. Micrograph of *A. niger* conidia (lower left) and *C. albicans* cells (lower right) using light microscopy with differential interference contrast.



**Figure S2.** The *Lemna minor* fronds at the beginning of the experiment.