

Article

# Cranberry Pomace Extract Exerts Antiviral Activity against Zika and Dengue Virus at Safe Doses for Adult Zebrafish

Laura Tamkutė <sup>1,2,†</sup>, Juliano G. Haddad <sup>1,†</sup>, Nicolas Diotel <sup>3</sup>, Philippe Desprès <sup>1</sup>, Petras Rimantas Venskutonis <sup>2</sup> and Chaker El Kalamouni <sup>1,\*</sup>

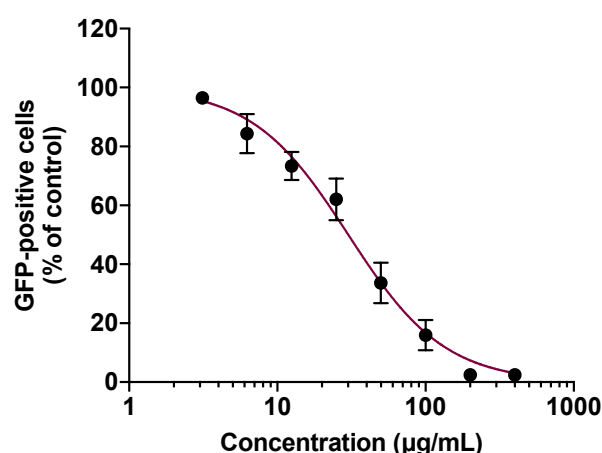
<sup>1</sup> Université De La Réunion, INSERM U1187, CNRS UMR 9192, IRD UMR 249, Unité Mixte Processus Infectieux En Milieu Insulaire Tropical, Plateforme Technologique CYROI, 94791 Sainte Clotilde, France; laura.tamkute@ktu.lt (L.T.); juliano.haddad@univ-reunion.fr (J.G.H.); philippe.despres@univ-reunion.fr (P.D.)

<sup>2</sup> Department of Food Science and Technology, Kaunas University of Technology, Radvilenu, pl. 19, LT-50254 Kaunas, Lithuania; rimas.venskutonis@ktu.lt

<sup>3</sup> Université de La Réunion, INSERM, UMR 1188 Diabète Athéromatose Thérapies Réunion Océan Indien (DÉTRO), 97490 Saint-Denis de La Réunion, France; nicolas.diotel@univ-reunion.fr

\* Correspondence: chaker.el-kalamouni@univ-reunion.fr

† These authors contributed equally to this work.



**Figure S1.** Cranberry pomace extract exhibits a dose-dependent antiviral activity against ZIKV-GFP. A549 cells were infected with the recombinant molecular clone ZIKV<sup>GFP</sup> at MI of 1 and continuously treated with different non cytotoxic concentrations of CP extract (0–400 µg/mL). Flow cytometric analysis of GFP fluorescence was performed 24 hours post infection. The results shown are means ± SD of four independent experiments and are expressed as relative value compared to untreated infected cells.

**Citation:** Tamkutė, L.; Haddad, J.G.; Diotel, N.; Desprès, P.; Venskutonis, P.R.; El Kalamouni, C. Cranberry Pomace Extract Exerts Antiviral Activity against Zika and Dengue Virus at Safe Doses for Adult Zebrafish. *Viruses* **2022**, *14*, x. <https://doi.org/10.3390/xxxxx>

Academic Editor(s): Leen Delang

Received: 31 March 2022

Accepted: 20 May 2022

Published: 20 May 2022

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



**Copyright:** © 2022 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).