





Article

Advances on Antiviral Activity of *Morus* spp. Plant Extracts: Human Coronavirus and Virus-Related Respiratory Tract Infections in the Spotlight

Inès Thabti ^{1,2}, Quentin Albert ¹ , Stéphanie Philippot ¹, François Dupire ¹ ,
Brenda Westerhuis ^{3,4}, Stéphane Fontanay ^{1,5} , Arnaud Risler ¹, Thomas Kassab ¹,
Walid Elfalleh ^{2,6} , Ali Aferchichi ² and Mihayl Varbanov ^{1,*}

¹ L2CM, Université de Lorraine, CNRS, F-54000 Nancy, France; thabtiines@yahoo.fr (I.T.); quentin.albert@univ-lorraine.fr (Q.A.); stephanie.philippot@univ-lorraine.fr (S.P.); francois.dupire@univ-lorraine.fr (F.D.); stephane.fontanay@univ-lyon1.fr (S.F.); arnaud.risler@univ-lorraine.fr (A.R.); thomas.kassab@me.com (T.K.)

² Laboratoire d'Aridoculture et Cultures Oasiennes, Institut des régions Arides de Médenine, Route el Djorf, Médenine 4119, Tunisia; walid.elfalleh@fst.rnu.tn (W.E.); ferchichi.ali1@yahoo.fr (A.A.)

³ Department of Medical Microbiology, Academic Medical Center, Meibergdreef 15, 1105 AZ Amsterdam, The Netherlands; b.westerhuis@erasmusmc.nl

⁴ Department of Viroscience, Erasmus MC, 3015 GD Rotterdam, The Netherlands

⁵ INSA de Lyon, Université de Lyon, CNRS, UMR5240, F-69622 Villeurbanne, France

⁶ Energy, Water, Environment and Process Laboratory, (LR18ES35), National Engineering School of Gabes, University of Gabes, Gabes 6072, Tunisia

* Correspondence: mihayl.varbanov@univ-lorraine.fr

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Abstract: (1) Background: Viral respiratory infections cause life-threatening diseases in millions of people worldwide every year. Human coronavirus and several picornaviruses are responsible for worldwide epidemic outbreaks, thus representing a heavy burden to their hosts. In the absence of specific treatments for human viral infections, natural products offer an alternative in terms of innovative drug therapies. (2) Methods: We analyzed the antiviral properties of the leaves and stem bark of the mulberry tree (*Morus* spp.). We compared the antiviral activity of *Morus* spp. on enveloped and nonenveloped viral pathogens, such as human coronavirus (HCoV 229E) and different members of the *Picornaviridae* family—human poliovirus 1, human parechovirus 1 and 3, and human echovirus 11. The antiviral activity of 12 water and water–alcohol plant extracts of the leaves and stem bark of three different species of mulberry—*Morus alba* var. *alba*, *Morus alba* var. *rosa*, and *Morus rubra*—were evaluated. We also evaluated the antiviral activities of kuwanon G against HCoV-229E. (3) Results: Our results showed that several extracts reduced the viral titer and cytopathogenic effects (CPE). Leaves' water-alcohol extracts exhibited maximum antiviral activity on human coronavirus, while stem bark and leaves' water and water-alcohol extracts were the most effective on picornaviruses. (4) Conclusions: The analysis of the antiviral activities of *Morus* spp. offer promising applications in antiviral strategies.

Keywords: *Morus* spp.; human coronavirus; respiratory viruses; picornaviruses; crude extract; antiviral activities

1. Introduction

The last decades have seen the lack of new therapeutic drug developments against infectious diseases. Thus, emergence of several resistances and new epidemics are more and more noticed all