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Chikungunya virus nonstructural protein 1 as an antiviral target

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List of publications

Kovacikova K and van Hemert MJ. Small-Molecule Inhibitors of Chikungunya Virus: Mechanisms of Action and Antiviral Drug Resistance. *Antimicrob Agents Chemother.* 2020 Nov 17;64(12):e01788-20.

Abdelnabi R*, **Kovacikova K***, Moesslacher J, Donckers K, Battisti V, Leyssen P, Langer T, Puerstinger G, Quérat G, Li C, Decroly E, Tas A, Marchand A, Chaltin P, Coutard B, van Hemert M, Neyts J, Delang L. Novel Class of Chikungunya Virus Small Molecule Inhibitors That Targets the Viral Capping Machinery. *Antimicrob Agents Chemother.* 2020 Jun 23;64(7):e00649-20.

(* contributed equally)

Albulescu IC, White-Scholten L, Tas A, Hoornweg TE, Ferla S, **Kovacikova K**, Smit JM, Brancale A, Snijder EJ, van Hemert MJ. Suramin Inhibits Chikungunya Virus Replication by Interacting with Virions and Blocking the Early Steps of Infection. *Viruses.* 2020 Mar 17;12(3):314.

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Hussain S, Turnbull ML, Wise HM, Jagger BW, Beard PM, **Kovacikova K**, Taubenberger JK, Vervelde L, Engelhardt OG, Digard P. Mutation of Influenza A Virus PA-X Decreases Pathogenicity in Chicken Embryos and Can Increase the Yield of Reassortant Candidate Vaccine Viruses. *J Virol*. 2019 Jan 4;93(2):e01551-18.

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Curriculum Vitae

Kristina Kovacikova was born on 24 September 1991 in Zilina, Czechoslovakia (now Slovakia). She obtained Slovak-Spanish bilingual education at the Bilingual Secondary Grammar School in Zilina before starting her undergraduate studies in 2011. In June 2015, Kristina graduated from the University of Edinburgh, United Kingdom, with a first-class Bachelor of Science with Honors degree in Biomedical Sciences (Infectious Diseases). During her final year, she performed an internship at the Roslin Institute under the supervision of Dr Nikki Smith and Prof Paul Digard. In the Honors project, she investigated the antiviral effect of heat shock protein inhibitors on the replication of influenza A viruses. Between 2013 and 2014, Kristina participated in the International Exchange Program at the National University of Singapore and performed an internship at Dr Katja Fink's laboratory at the Agency for Science, Technology and Research (A*STAR). There, she worked on elucidating the role of B cells in protective immunity against dengue virus infection.

In September 2015, Kristina obtained a position as a PhD student within the Marie Skłodowska-Curie Initial Training Network ANTIVIRALS at the Leiden University Medical Center, the Netherlands, under the supervision of Dr Martijn van Hemert and Prof Eric Snijder. In her PhD research project, she studied the antiviral effect of chikungunya virus small molecule inhibitors on nonstructural protein 1. This research has led to the identification of novel chikungunya virus nonstructural protein 1-targeting compounds and characterization of their mechanisms of action. During her PhD research project, Kristina benefited from the excellent training program provided by both the academic and industrial partners of the ANTIVIRALS consortium. Since May 2020, Kristina has been continuing her scientific career as a postdoctoral researcher at the same department, focusing on the development of antiviral strategies against Severe acute respiratory syndrome coronavirus 2 in animal models. From June 2021, Kristina will join the German biopharmaceutical company CureVac as a Scientist Viral & Infectious Diseases where she will focus on developing mRNA vaccines against emerging viral pathogens.