The quest for broad-spectrum coronavirus inhibitors

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LIST OF PUBLICATIONS

(presented in chronological order)

Jing-Wen Lin[#], Chao Tang[#], Han-Cheng Wei[#], Baowen Du[#], Chuan Chen[#], Minjin Wang[#], Yongzhao Zhou[#], Ming-Xia Yu[#], Lu Cheng[#], Suvi Kuivanen, **Natacha S Ogando**, Lev Levanov, Yuancun Zhao, Chang-Ling Li, Ran Zhou, Zhidan Li, Yiming Zhang, Ke Sun, Chengdi Wang, Li Chen, Xia Xiao, Xiuran Zheng, Sha-Sha Chen, Zhen Zhou, Ruirui Yang, Dan Zhang, Mengying Xu, Junwei Song, Danrui Wang, Yupeng Li, ShiKun Lei, Wanqin Zeng, Qingxin Yang, Ping He, Yaoyao Zhang, Lifang Zhou, Ling Cao, Feng Luo, Huayi Liu, Liping Wang, Fei Ye, Ming Zhang, Mengjiao Li, Wei Fan, Xinqiong Li, Kaiju Li, Bowen Ke, Jiannan Xu, Huiping Yang, Shusen He, Ming Pan, Yichen Yan, Yi Zha, Lingyu Jiang, Changxiu Yu, Yingfen Liu, Zhiyong Xu, Qingfeng Li, Yongmei Jiang, Jiufeng Sun, Wei Hong, Hongping Wei, Guangwen Lu, Olli Vapalahti, Yunzi Luo, Yuquan Wei, Thomas Connor, Wenjie Tan, Eric J Snijder, Teemu Smura, Weimin Li, Jia Geng, Binwu Ying, Lu Chen (2021). Genomic monitoring of SARS-CoV-2 uncovers an Nsp1 deletion variant that modulates type I interferon response. Cell Host Microbe 29(3): 489-502.

Ilaria Manfredonia, Chandran Nithin, Almudena Ponce-Salvatierra, Pritha Ghosh, Tomasz K Wirecki, Tycho Marinus, **Natacha S Ogando**, Eric J Snijder, Martijn J van Hemert, Janusz M Bujnicki, Danny Incarnato (2020). Genome-wide mapping of SARS-CoV-2 RNA structures identifies therapeutically-relevant elements. Nucleic Acids Res. 48(22): 12436-12452.

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Clarisse Salgado-Benvindo[#], Melissa Thaler[#], Ali Tas, **Natacha S Ogando**, Peter J Bredenbeek, Dennis K Ninaber, Ying Wang, Pieter S Hiemstra, Eric J Snijder, Martijn J van Hemert (2020). Suramin inhibits SARS-CoV-2 infection in cell culture by interfering with early steps of the replication cycle. Antimicrob. Agents Chemother. 64(8):e00900-00920.

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Natacha S Ogando, Francois Ferron, Etienne Decroly, Bruno Canard, Clara C Posthuma[#], Eric J Snijder[#] (2019). The curious case of the nidovirus exoribonuclease: its role in RNA synthesis and replication fidelity. Front. Microbiol. 10:1813.

Ji-Seong Yoon, Gyudong Kim, Dnyandev B Jarhad, Hong-Rae Kim, Young-Sup Shin, Shuhao Qu, Pramod K Sahu, Hea Ok Kim, Hyuk Woo Lee, Su Bin Wang, Yun Jeong Kong, Tong-Shin Chang, **Natacha S Ogando**, Kristina Kovacikova, Eric J Snijder, Clara C Posthuma, Martijn J van Hemert, Lak Shin Jeong (2019). Design, synthesis, and anti-RNA virus activity of 6'-fluorinated-aristeromycin analogues. J. Med. Chem. 62(13):6346-5362.

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[#] These authors contributed equally to this work.

Natacha Ogando was born in Porto (Sé), Portugal, on January 13th, 1988. In 2005, she started her Bachelor studies in Bioscience with specialization in Microbiology at the Faculty of Biotechnology of the Catholic University of Portugal, where she obtained her degree in 2008. Subsequently, between 2009 and 2012, she studied Virology at the same University and developed a Master project on detection of enteric viruses in environmental and biological samples using molecular biological techniques under the supervision of Prof. Dr. São José Nascimento and Prof. Dr. Ana Gomes. Her Master project included an internship at the Virology department of the Biological Research Center of the University of Santiago de Compostela. While writing her Master thesis, she contributed as a researcher to the identification and study of microorganisms in the development of ectomycorrhizas at the Centre of Biotechnology and Fine Chemistry of the Catholic University of Portugal. In 2012, she performed an internship at the Molecular Biology Department of Genentech, working on the identification of targets of lung adenocarcinoma using *in vivo* models. Next, she accepted a position at MedImmune where she worked in the research department, developing seasonal influenza live-attenuated vaccines. In 2015, she was awarded a PhD fellowship integrated in the Marie Skłodowska-Curie ANTIVIRALS Training Network, supported by the European Union's Horizon 2020 program. Since then, she has been working at the Leiden University Medical Center under the supervision of Dr. Clara Posthuma and Prof. Dr. Eric Snijder, and performed the research described in this thesis. Natacha Ogando's research has focused on the search for coronavirus inhibitors targeting host factors or viral functions that are important for viral replication. Between May 2020 and July 2021, she joined the Swift COronavirus therapeutics REsponse (SCORE) project funded by the European Union's Horizon 2020 program. From July 2021 onwards, Natacha will look for new challenges to continue her scientific career.