IUPHAR and COVID-19

IUPHAR is responding to the current crisis by coordinating pharmacological resources worldwide, particularly the responses of the pharmacological community, and posting key documents, on this site and on the site of the IUPHAR/BPS www.guidetopharmacology.org which holds a list of the drugs being currently proposed or assessed for treatment (https://www.guidetopharmacology.org/coronavirus.jsp). This effort is being continually updated by the Guide’s curators in Pr Jamie Davies’ group at the University of Edinburgh, supported by (at least) weekly meetings of NC-IUPHAR (chaired by Steve Alexander, backed up by the many IUPHAR expert subcommittees). An article on drug testing against SARS-CoV-2 is in final preparation. In this first webpage announcement we list the most advanced progress of some of the world’s pharmacological societies, but this will be continuously updated, as we have more news from societies, and key recommendations, with the aim of global coverage.

A key issue for us is the alliance we announced last year, with the International Union of Pharmacological Societies (IUIS), and the reinforcement of IUPHAR’s immunology group, Immuphar, led by Francesca Levi-Schaffer (Tiligada et al., 2015, Ishii, 2017). This alliance, coupled with a 0.5M£ three-year grant from the Wellcome trust, allowed us to create the Guide to Immunopharmacology (https://www.guidetoimmunopharmacology.org/immuno/index.jsp). This Guide lists up-to-date information on the science underlying each immune target, coupled to the immunological cell type involved. It is important to note that these freely-available databases are constantly evolving, so can never be perfect, and always benefit from constructive criticism and input from users – please help!

The best way to use these databases are outlined in Harding et al. (2018,2020).

Coronaviruses have major immunological effects after targeting ACE2 (Pinto et al, 2020), or their other targets. The cytokine storm, and massive lung fibrosis following SARS in very seriously affected patients, is mediated by the classical immunological mediators recently described by Fung et al., (2020). The immunological profile of patients in recovery is a critical factor to be defined..

In addition to this the clinical division of IUPHAR, led by Caroline Samer, who is also IUPHAR’s representative to WHO, is working on clinical trials, and data assessment, co-organizing a review with the Chinese Pharmacology Society, CNPHARS, on the clinical data coming from the first country to be confronted by this worldwide health challenge.

IUPHAR, in conjunction with the Medicines for Malaria Venture, MMV, funded by the Gates Foundation, has also produced the www.Guidetomaliapharmacology.org, (Armstrong et al., 2020) of interest considering the evolving situation with chloroquine and hydroxychloroquine and therapy of COVID-19.

Clinical case studies are also described in ,Immunopaedia (https://www.immunopaedia.org.za/), the IUIS immunology education platform, which is now linked to the IUPHAR Pharmacology Education Project (PEP) (www.pharmacologyeducation.org/pharmacology/immunopharmacology); so education in both pharmacology and immunology is now linked.
Furthermore, the IUPHAR Early Career Investigators Committee, led by Carl White, unites 14 young investigators nominated by pharmacology societies around the world, who are eager to help.

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We will add the progress made by the world’s pharmacology societies here and keep them updated.

References:


