Coronavirus (CoV) proteins in GtoPdb v.2022.2

Stephen P.H. Alexander1, Jonathan K. Ball1 and Theocharis Tsoleridis1

1. University of Nottingham, UK

Abstract

Coronaviruses are large, often spherical, enveloped, single-stranded positive-sense RNA viruses, ranging in size from 80-220 nm. Their genomes and protein structures are highly conserved. Three coronaviruses have emerged over the last 20 years as serious human pathogens: SARS-CoV was identified as the causative agent in an outbreak in 2002-2003, Middle East respiratory syndrome (MERS) CoV emerged in 2012 and the novel coronavirus SARS-CoV-2 emerged in 2019-2020. SARS-CoV-2 is the virus responsible for the infectious disease termed COVID-19 (WHO Technical Guidance 2020).

Contents

This is a citation summary for Coronavirus (CoV) proteins in the Guide to Pharmacology database (GtoPdb). It exists purely as an adjunct to the database to facilitate the recognition of citations to and from the database by citation analyzers. Readers will almost certainly want to visit the relevant sections of the database which are given here under database links.

GtoPdb is an expert-driven guide to pharmacological targets and the substances that act on them. GtoPdb is a reference work which is most usefully represented as an on-line database. As in any publication this work should be appropriately cited, and the papers it cites should also be recognized. This document provides a citation for the relevant parts of the database, and also provides a reference list for the research cited by those parts. For further details see [15].

Please note that the database version for the citations given in GtoPdb are to the most recent preceding version in which the family or its subfamilies and targets were substantially changed. The links below are to the current version. If you need to consult the cited version, rather than the most recent version, please contact the GtoPdb curators.

Database links

Coronavirus (CoV) proteins
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1034
Introduction to Coronavirus (CoV) proteins
https://www.guidetopharmacology.org/GRAC/FamilyIntroductionForward?familyId=1034

Targets
CoV Envelope protein
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=3116
CoV 3C-like (main) protease
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=3111
CoV Membrane glycoprotein
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=3117
CoV Non-structural protein 6
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=3118
CoV Non-structural protein 7b
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=3123
CoV Non-structural protein 8
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=3120
CoV Non-structural protein 14
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=3198
CoV Nucleoprotein
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=3121
CoV Papain-like protease
References


infectious bronchitis virus: crystal structure of its N-terminal domain and multimerization properties. *Structure* **13**: 1859-68 [PMID:16338414]


causes endoplasmic reticulum stress and induces ligand-independent downregulation of the type 1 interferon.


119. PostEra AI. MPro Activity Data


from Molecular Sculpting of the Drug Perampanel Guided by Free Energy Perturbation Calculations

