

# **Scientific Rationale**

# What is known about 3cl<sup>pro</sup>?

- There is no proven cure for COVID-19
- The 3C-like protease (3cl<sup>pro</sup>), also known as the main protease (M<sup>pro</sup>),
  - is a key part of the life cycle of the COVID-19 virus
  - cleaves polyproteins to allow the virus to assemble
- 3cl-pro is a possible target for structure-based drug design
  - Proteases with similar function are established drug targets in other viruses, like HIV
  - A high-resolution (2.16 Å) structure in complex with an inhibitor has been solved and deposited into the protein data bank as [6LU7](#) [1]
  - The enzyme is inhibited by several compounds with a micromolar IC<sub>50</sub> [1]

