



PLpro: Covid-19

 drishtias.com/printpdf/plpro-covid-19

Why in News

According to a new study on **Covid-19**, pharmacological **inhibition of PLpro blocks virus replication** and also **strengthens immune response** in humans.

Key Points

- Usually, when a virus attacks human cells, the **infected body cells release messenger substances known as ‘type 1 interferons’** which attract the **killer cells** in human bodies. These killer cells **kill the infected cells and save humans** from getting sick.
- When the **novel coronavirus (SARS-CoV-2)** enters a human cell, it hijacks the cell mechanism and **fights back by letting the human cell produce PLpro.**
 - **PLpro is a protein** which **suppresses the development of type 1 interferons.** Due to which, **killer cells are not informed** about the infection.
 - Hence, **PL pro plays a crucial role in the replication** of the virus.
- **Significance of the Research:**
 - Researchers can now monitor these processes in a cell culture (artificial environment).
 - By **blocking PLpro, virus production can be controlled.**
 - In the **absence** of the PLpro, **type 1 interferons will be released** informing the killer cells and thus, **strengthening the innate immune response** of the human cells.

Source: IE