endSARS

Although there is currently no known drug against SARS-CoV-2, it would be desperately needed. Thus, acib has developed endSARS (enzyme-driven SARS-CoV-2 Anti-Receptor-Strategy) to turn SARS-CoV-2's own weapons against it!

BACKGROUND

SARS-CoV-2 is rapidly spreading worldwide despite frantic efforts to contain the virus. Pharmaceutical compounds to treat COVID-19 would be invaluable and a very promising route is to inhibit the spread of SARS-Cov-2 by interference with its attachment-mechanism onto cells. One possibility, which already has entered clinical trials is to provide large amounts of a soluble form of the respective receptor molecule ACE2 (angiotensin converting enzyme 2) to compete for binding to the normal ACE2 receptor molecule fixed on the host cells. Here we present an alternative using an enzymatic approach able to cure, as well as prophylactically protect from SARS-CoV-2.

TECHNOLOGY

Based on proprietary BOSS technology (Biotechnological Optimizations by Selection Systems; https://www.acib.at/wp-content/uploads/28-acib-projectoffer-boss.pdf), acib has come up with endSARS (enzyme-driven SARS-CoV-2 Anti-Receptor-Strategy): By proteolytically removing just a small N-terminal part from the cellular ACE2, which is specifically crucial for viral attachment, we can block virus-binding and its entry into our cells. Strikingly, a promising protease to fulfil this task is one of the virus itself, namely protease M^{pro} which is predicted to cut suitably within ACE2. For further optimization using the BOSS-Technology M^{pro} can be easily tailored for highly specific ACE2 recognition turning the viruses own weapons against it.

Since acting enzymatically only low amounts of M^{pro} would be sufficient to block the virus enabling also aerosolic treatment via inhaler. Thus providing easy therapeutic, as well as prophylactic routines to increase the safety of health care workers or high risk-groups upon unsafe close contact with infected persons. In case that an efficient drug to inhibit viral M^{pro} will also be available, even a simultaneous double treatment could be possible; namely, if the used aerosolic M^{pro} is based on a respectively resistant version of M^{pro} which again could easily be obtained via a BOSS-technique, namely MUTATRACER (https://www.acib.at/wp-content/uploads/49_Covid_MUTATRACER.pdf).

OFFER

We can offer you with a detailed working plan on endSARS! Contact us as soon as possible … **#fightthevirus**

EXPERTS

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AVAILABLE FOR

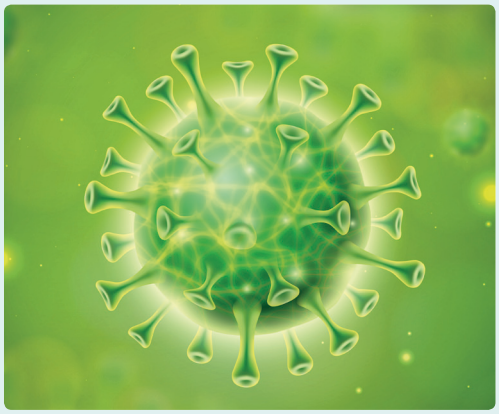
- Joint Research Project
- Contract Research
- COMET Funding call

DEVELOPMENT STATUS

TRL 2

KEYWORDS

- SARS-CoV-2
- COVID-19
- ACE2
- Enzyme Engineering
- Proteolytic cleavage
- SARS-Therapeutic
- SARS-Propylactic
- #fightthevirus



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