CURES – SARS-CoV-2

At present there is no known drug against SARS-CoV-2. Although there is a big effort to repurpose currently existing drugs, there is the possibility that we have to develop fully new compounds. acib has developed CURES (COVID-19 Ultra-fast Recombinatorial peptide Expression Screening) as a novel and rapid *in vivo* screening method for billions of anti-COVID-19 peptides!

BACKGROUND

SARS-CoV-2 is rapidly spreading despite efforts to contain or mitigate the virus. Pharmaceutical compounds to treat COVID-19 could be invaluable, but how to develop them quickly? While computational modelling can come up with some candidates, they will have to be tested in an in vivo system eventually. Why not start with an ultra-fast system providing prompt *in vivo* results …

TECHNOLOGY

Based on proprietary BOSS (Biotechnological Optimizations by Selection Systems; https://www.acib.at/wp-content/uploads/28-acib- projectoffer-boss.pdf) technology, acib has come up with CURES (COVID-19 Ultra-fast Recombinatorial peptide Expression Screening): The cleavage sites of viral proteases such as M^{pro} or PL^{pro} are introduced in vital bacterial enzymes and as long as these proteases are active, cells are not able to survive. If a peptide library is fused to the protease close to the catalytic site, only peptides able to inhibit the viral protease confer the ability to live and grow. By linking the bacteria's survival to viral inhibition an ultra-fast (over-night) screening with an easy read-out (bacterial growth) is possible. *In vivo* incorporation of noncanonical amino acids into the random peptides can even increase the possible structural variations enormously. This tool enables to identify peptide drug candidates and peptidomimetics to efficiently combat SARS-Cov-2 infections!

OFFER

We offer to use CURES for your drug development program and provide you with a detailed working plan tailored to your specific needs!
This technology can also be used for other targets than proteases (from viral and fungal infections to cancer kinases).

EXPERTS

Prof. Dr. Rainer Schneider
Prof. Dr. Eduard Stefan
Dr. Birgit Wiltschi

AVAILABLE FOR

- Joint Research Project
- Contract Research
- COMET Funding call

DEVELOPMENT STATUS

TRL 2

KEYWORDS

- SARS-CoV-2
- COVID-19
- Peptides
- Drug Screening
- Recombinatorial expression
- Rapid *in vivo* screening
- #fightthevirus

Foto: Shutterstock

CONTACT

acib GmbH, Krenngasse 37, 8010 Graz
☎ +43 316 873 9316
✉ bd@acib.at
🌐 www.acib.at