

**PRESS RELEASE**

Press Contact:

**Dr. Linda Kirchner**

L.Kirchner@corat-therapeutics.com

Phone: +49 1522 4047488

## **Human SARS-CoV-2 neutralizing antibody COR-101 demonstrates high efficacy in a COVID-19 animal model and is ready to be used in clinical studies to treat COVID-19 patients**

- **COR-101 decreased virus load in the lung by more than 99 %**
- **COR-101 induced recovery after 2 days, compared to 7 days untreated**

Braunschweig, December 18, 2020 – CORAT Therapeutics GmbH today reports the successful conclusion of hamster disease model tests of their lead candidate COR-101 against COVID-19. "Our antibody induced recovery of SARS-CoV-2 infected hamsters within two days. In contrast, without treatment, the hamsters only started to reach the same health status after a full week." comments Dr. Andreas Herrmann, CEO of CORAT Therapeutics.

Treatment with COR-101 substantially reduced the weight loss after infection, which indicates the general health state. But since the main life-threatening effects of the virus are happening in the lung, the virus titer was measured directly in this organ which mainly contributes to lethality of SARS-CoV-2.

Dr. Herrmann says: "We are especially happy to report that COR-101 drastically reduced the amount of SARS-CoV-2 in the lung. Already after three days, an average of less than 1 % of the virus titer of the untreated control group could be detected after treatment with COR-101. This confirms the excellent neutralizing capability that we already measured in the laboratory. It demonstrates that COR-101 efficiently neutralizes the virus in a living organism and prevents disease progression".

In that respect, Dr. Herrmann also emphasized the difference in effector mechanisms compared to other antibodies: "In contrast to plasma therapy and the currently emergency approved antibodies in the US, our recombinant antibody is especially designed not to induce overshooting immune responses which contribute to the lethality in the lung. We achieved this by carefully removing the respective signals from the molecule before starting its production."

CORAT Therapeutics currently intensively works to get regulatory approval for the start of the first-in-man studies next month. In contrast to all vaccine studies so far, these clinical studies will include COVID-19 patients from the start, since the treatment aims to directly protect infected patients. Therefore, preliminary efficacy is chosen as secondary endpoint of the study. It is also expected that this effect can be clinically demonstrated much quicker than in the vaccine studies.

COR-101 is a fully human monoclonal IgG antibody that binds a very broad area of the virus surface. Its mode of action recently has been discovered by solving the atomic structure of its interaction with SARS-CoV-2. The results showed that it covers a much larger surface than other antibodies currently in development. "This also explains why COR-101 is more resistant to mutations of the virus surface than other antibodies. It is capable to neutralize even a virus version with seven mutations in the receptor binding region of the SARS-CoV-2 spike protein", comments Dr. Herrmann.

Publication on the molecular interaction (crystal structure) of COR-101 / Coronavirus interaction:

<https://doi.org/10.1101/2020.12.03.409318>

Animated 3D-Model of the molecular interaction of COR-101 with Coronavirus:

<http://corat-therapeutics.com/#mab-turning-virus-burning>

CORAT Therapeutics website:

<http://corat-therapeutics.com/news-and-events/>

Further information:

Dr. Andreas Herrmann,

CORAT Therapeutics GmbH

Inhoffenstr. 7

38124 Braunschweig

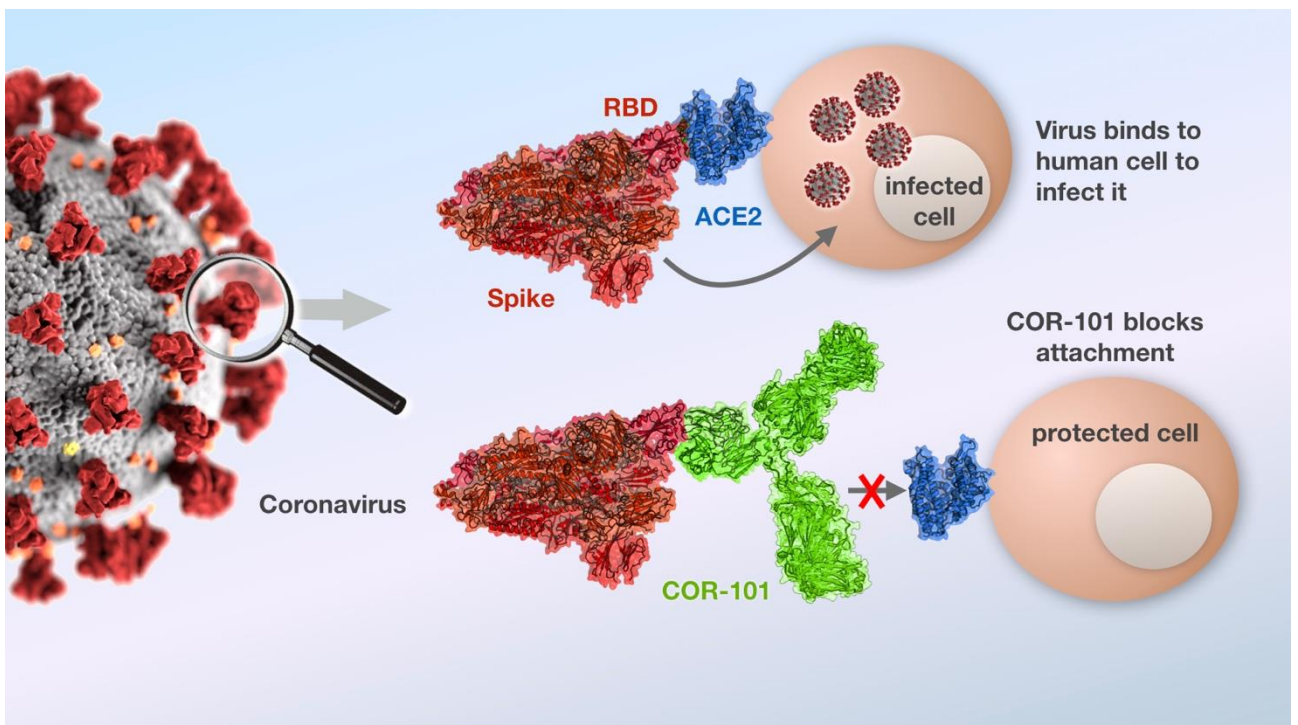
Phone: +49 (0)152 2404 7488

info@corat-therapeutics.com

[www.corat-therapeutics.com](http://www.corat-therapeutics.com)



*Image text: Doses of COR-101 ready for clinical testing (Photo: Holger Ziehr, Fraunhofer ITEM).*



*Image text: Mechanism of action of COR-101: The binding site of the fully human antibody COR-101 (green) on the virus surface is almost identical to that of the human receptor ACE2 (blue), which is the docking site of the coronavirus to our tissue. When COR-101 is bound, the virus is unable to use its spike structure (red) to attach itself to cells in order to infect them, thus preventing it from multiplying (Image: CORAT Therapeutics GmbH).*