From lead to pre-clinical candidate and proof-of-concept in small-animal and non-human primate models

Work Package 6

CARE
CORONA ACCELERATED R&D IN EUROPE

Leads

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Key Objectives of WP 6

- ADME & PBPK evaluation of lead compounds before in vivo studies
- In vivo efficacy of lead compounds in small rodents (mouse, hamster incl. transgenic mice) expressing human ACE2. Evaluation of most promising leads for efficacy and safety in Non-Human Primate (NHP) model

CONNECTIONS

with other work packages

Work package 1-3
Perform proof of concept/in vivo efficacy and safety evaluation of lead small molecules discovered in WP1-3, as well as evaluating ADME/PK properties

Work package 4
Perform proof of concept/in vivo efficacy and safety evaluation of antibodies discovered in WP4, as well as evaluating ADME/PK properties

BREAKTHROUGH *moments*

2020 — **Establishment of hACE2-KI, K18 mouse models and the Syrian Hamster model against SARs-COV-2**

2021 — **Non-human primate model for SARS-CoV-2 infection and disease is fully characterised and knowledge disseminated to the community**

2021-4 — **Evaluation of efficacy of multiple small molecules and antibodies in-vivo against SARS-CoV-2 (multiple variants)**

KEY STATISTICS

4 In-vivo animal models set up

10 Lead small molecules tested in-vivo (Rodent)

5 Antibodies tested in-vivo for efficacy (NHP)

36 In-vivo experiments conducted

7 Publications

PUBLIC DELIVERABLES

D6.1 Report on rodent models (Nov 2020)
D6.2 Report on suitability of mouse adapted SARS-CoV-2 virus for lethal humanised ACE-2 model (March 2021)
D6.3 Report on reverse genetics system (Sept 2020)
D6.7 Report on rodent model (Mar 2021)
D6.11 Harmonisation SOP across WP1-7

Partner Organisations

cea · Johnson&Johnson · Takeda · Merck · Novartis · LUMC Leiden University Medical Center · KU Leuven · Innovation Campus Berlin (A Nuvisan Company) · HZI Helmholtz Zentrum für Infektionsforschung · AiCuris · Bill & Melinda Gates foundation · Pfizer · Schweizerische Eidgenossenschaft, Confédération suisse, Confederazione Svizzera, Confederaziun svizra – Institute of Virology and Immunology (IVI) · Universität Bern · Stiftung Tierärztliche Hochschule Hannover

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