

# CardiOVID19: Re-purposing of proprietary small molecules for the treatment of COVID19



**Micar Innovation  
(Micar21)**

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**Coronavirus cases**

**198.959**

**Deaths:**

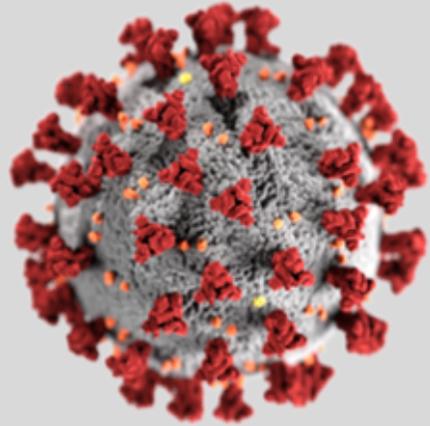
**7991**

On December 31 last year, China alerted WHO to several cases of unusual pneumonia in Wuhan

On March 18<sup>th</sup> this year there were close to 200 000 cases and 8000 death worldwide

The peak of number of cases in Europe and USA is yet to come

# 7 known types of Corona Viruses (CoVs)



**229E, OC43, HKU1, MERS,  
NL63 (Genfa Alphacoronavirus),  
SARS (Genus Betacoronavirus),  
2019-nCoV (COVID-19)**

The entire structure of **COVID-19** was obtained on **4<sup>th</sup> of March 2020**. To do so we used cryogenic electron microscopy (method published in Science magazine on **04. 03. 2020**).

This methodology open countless opportunities for scientists around the world to create vaccines and novel drug entities.

**Science**  
JOURNAL S  AAAS

# Micar21 - 3 ways/approaches-Coronavirus Micar21

**01.01.2020 – 12.03.2020**

*Different scientific journals*

## **CCR5/CCR7**

R & D activities developing strong CCR7 antagonist. The approach will be: develop CCR7 antagonist with double potency, once as a sole inhibitor and second time as a CCR5 inhibitor.

**24.02.2020**

*Cell Discovery*

DOI: <https://doi.org/10.1038/s41421-020-0147-1>

## **ACE2**

R & D activities to discover suitable and specific inhibitor, who will stop ACE2 connecting with COVID-19

**09.03.2020**

*Science*

DOI: [10.1126/science.abb2762](https://doi.org/10.1126/science.abb2762)

## **SLC6A19**

Micar21 have already in place strong candidate named SLC6A5. Further R & D efforts are needed to optimize the SLC6A19 candidate until clinic.

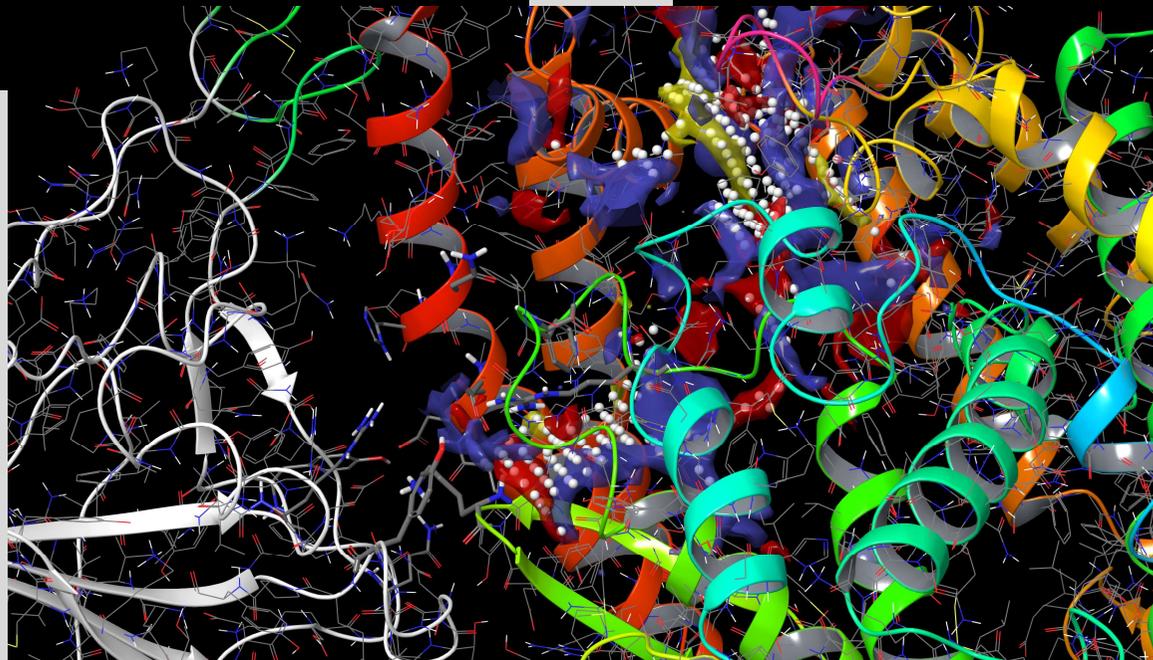
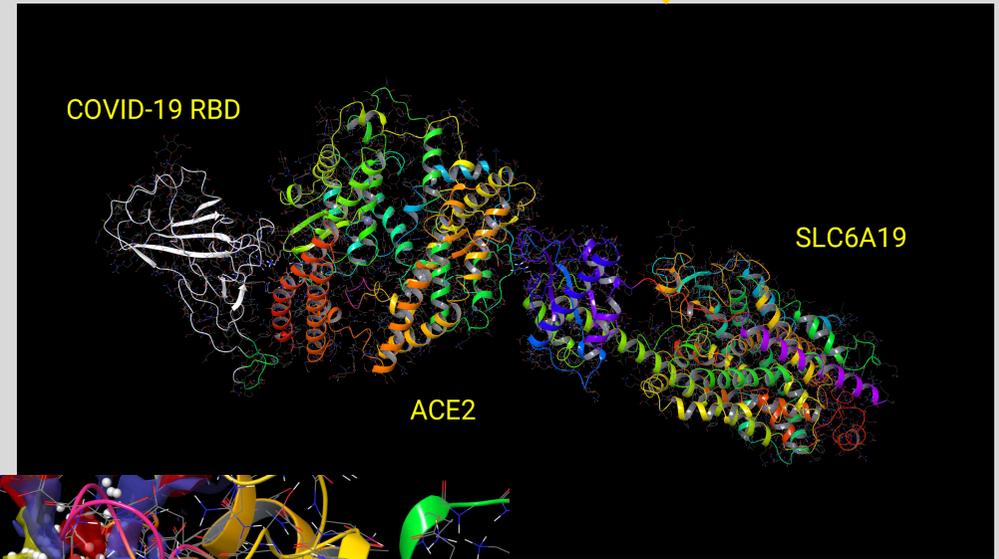
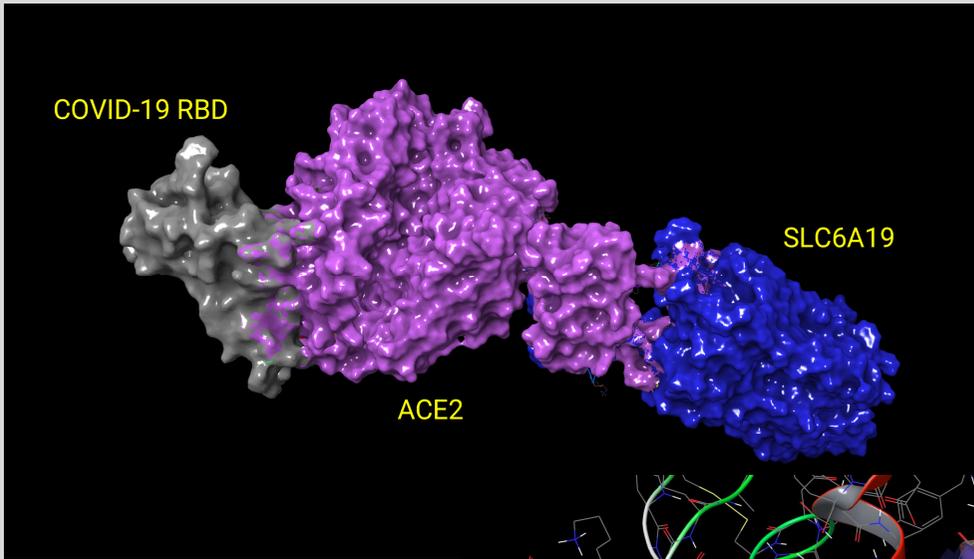
*(Micar21 ACS Med Chem Lett. 2019 May 22;10(6):904-910)*

**Repurposing and optimizing of  
proprietary molecules to for treatment of COVID19**



**Micar Innovation  
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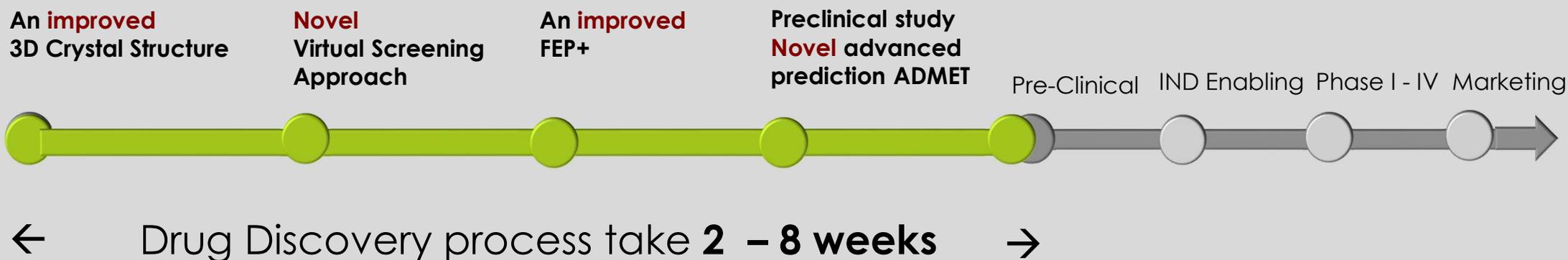
# Connections Covid19-ACE2-SLC6A19



# Micar21 Drug Discovery Platform



Discovering novel small molecule and the demonstration of **true non-clinical proof-of-concept** is a key value-creation step in the clinical development of a medicine.



nature

SCIENTIFIC  
REPORTS



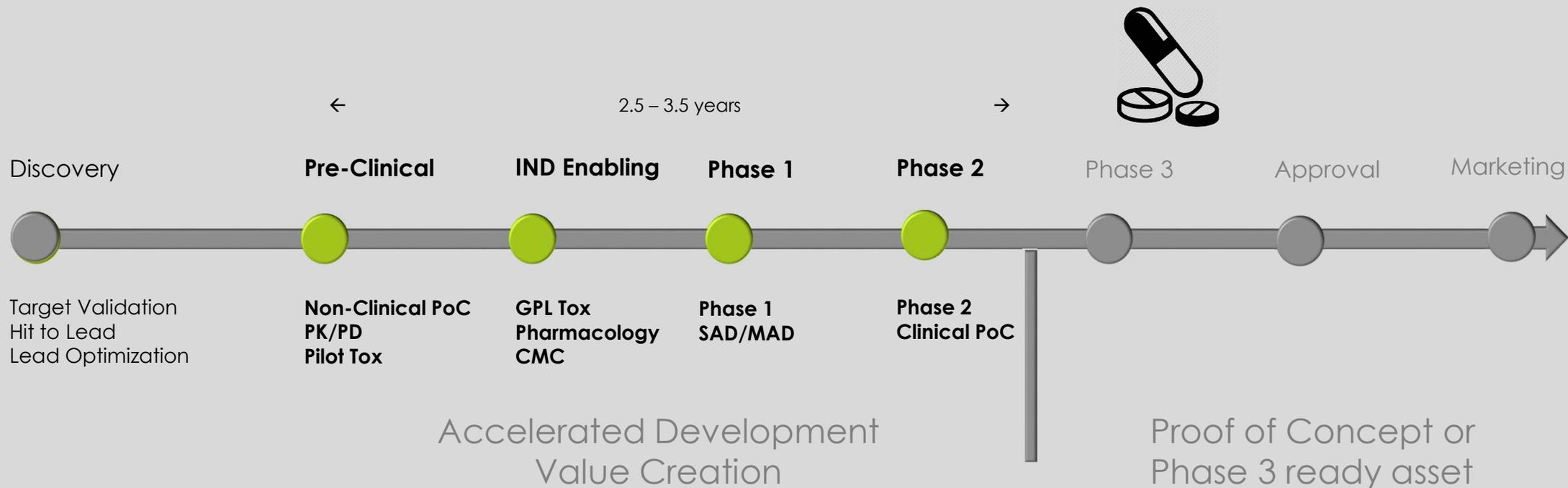
ACS Medicinal  
Chemistry Letters

IND (Investigation New Drug application)

# Envisaged Roadmap



Clinical proof-of-concept is a key value-creation step in the clinical development of our novel medicinal product



# CardiOVID19 External Strategic Partners



REPUBLIC OF BULGARIA  
Ministry of Economy



MEDICAL  
UNIVERSITY  
OF PLOVDIV

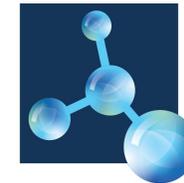
SOFIA UNIVERSITY  
ST. KLIMENT OHRIDSKI



ИАНМСП

**BESCO**

Bulgarian Startup Association



HEALTH & LIFE SCIENCES  
CLUSTER



BULGARIAN INDUSTRIAL ASSOCIATION  
UNION OF THE BULGARIAN BUSINESS  
MEMBER OF BUSINESSEUROPE



SOFIA UNIVERSITY  
"ST. KLIMENT OHRIDSKI"

>30 scientific publications



nature

SCIENTIFIC  
REPORTS

ACS Medicinal  
Chemistry Letters

PCCP  
Physical Chemistry Chemical Physics

ASBMB  
American Society for Biochemistry and Molecular Biology

J | A | C | S  
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY

JOURNAL OF  
CHEMICAL INFORMATION  
AND MODELING

International Journal of  
Molecular Sciences

molecular  
pharmaceutics

PROTEINS  
STRUCTURE • FUNCTION • BIOINFORMATICS

BMC  
Structural Biology

ACS  
Chemistry for Life

# Micar21 in World analytic reports



**Micar21, is one of the world's 130** companies in  
*Deep Knowledge Analytics report:*

**AI for Drug Discovery Landscape 2018, 2019, 2020**

Source: <https://www.dka.global/>

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**Micar21, is one of the world's 198** companies in  
*Roots Analysis Study report:*

**“In Silico/Computer-Aided Drug Discovery Services Market 2020-2030”**

Source: [https://www.rootsanalysis.com/reports/view\\_document/in-silico-drug-discovery/298.html](https://www.rootsanalysis.com/reports/view_document/in-silico-drug-discovery/298.html)

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**Micar21, is one of the world's 250** companies in  
*Roots Analysis Study report:*

**“Computer-Aided Drug Discovery Services Market 2018-2030”**

Source: [https://www.rootsanalysis.com/reports/view\\_document/computer-aided-drug-discovery-services-market-2018-2030/207.html](https://www.rootsanalysis.com/reports/view_document/computer-aided-drug-discovery-services-market-2018-2030/207.html)

7 awards for 2 Y



**Investor of the  
year 2018**



**Innovative Enterprise  
of the Year**

**Best Biotech Startup**



**Micar Innovation  
(Micar21)**

**Thank you for your attention!**

A fully integrated spectrum of expertise for rational drug discovery.

We are an early stage drug discovery and development biotechnology company fuelled by a suite of disruptive technologies to advance innovative medicines for the treatment of diseases with high unmet medical need.

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