



Czech Academy
of Sciences

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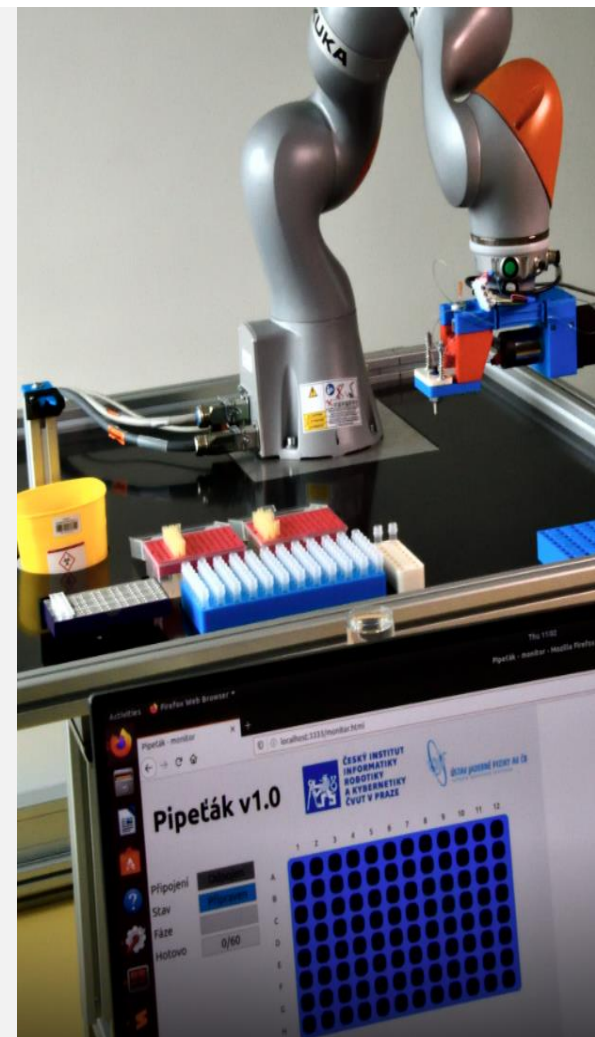
*„ACTIVITIES DURING COVID-19 PANDEMIC
& HELP FOR UKRAINE“*

Eva Zažímalová
26. 5. 2022



Covid-19 Testing

- Immediately after the outbreak of the pandemic, the CAS offered **instrumentation and scientific staff** for testing on Covid-19.
- Involved **CAS Institutes**:
 - › Biology Centre
 - › Biotechnology and Biomedicine Centre and Charles University (BIOCEV)
 - › Institute of Molecular Genetics
 - › Institute of Biophysics
 - › Institute of Biotechnology
- A **new method of RNA isolation** developed by the Institute of Organic Chemistry and Biochemistry of the CAS.
- **Robot „Pipeták“ facilitating Covid-19 Testing** in the Bulovka hospital developed by the Czech Institute of Informatics, Robotics and Cybernetics (CIIRC) of the Czech Technical University in Prague (CTU) in cooperation with the Nuclear Physics Institute of the CAS.



Reusable Biosensor for Rapid Testing

- **Czech scientists from the Institute of Physics of the CAS developed reusable biosensor for rapid testing:**
 - › detecting the coronavirus before the start of the formation of antibodies
 - › determining the concentration of viral antigens
 - › detecting the coronavirus in samples collected from surfaces and even wastewater
 - › reusable biochip in case of a negative test result
 - › commercial release being prepared



Protection against coronavirus transmission

- Institute of Chemical Processes of the CAS began **testing materials** to produce protective aids against the spread of viruses.
- CARDAM – subsidiary of the Institute of Physics of the CAS started production of **protective masks**, capacity 50,000 pcs per week.
- Nuclear Physics Institute of the CAS offered its capacities to hospitals for **sterilization by an electron accelerator**.
- Institute of Chemical Processes of the CAS in cooperation with company „Security Paper Mill“ developed **special paper with virucidal effects**.
- Institute of Physics of the CAS in cooperation with Transport Company of the City of Prague tested the **occurrence of coronavirus in Prague Public Transport**.



Not only biologists and chemists, but also economists, informatics and psychologists

- **Scientific studies for the Czech Government**
 - › Economics Institute of the CAS developed economic models of the covid-19 impact on the Czech society.
- **Website „Epidemics Ethics“**
 - › Institute of Computer Science of the CAS, in cooperation with Karel Čapek Centre for the Study of Values in Science and Technology together with Institute of State and Law of the CAS created website „Epidemics Ethics“.
- **How to deal with isolation during covid-19**
 - › Institute of Psychology of the CAS in cooperation with the Institute of Sociology of the CAS dealt with the public's recommendation on how to cope with extremely psychologically demanding periods.

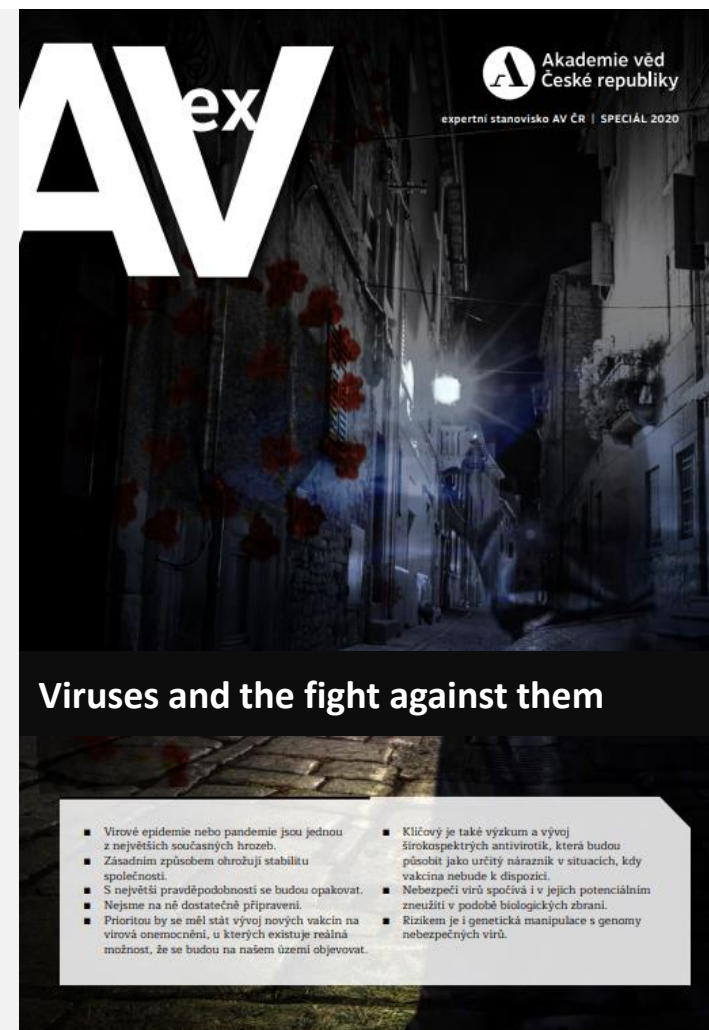
IDEA Anti COVID-19

A project to provide expert ideas and recommendations to mitigate the negative economic effects of the pandemic



Communication during a pandemic

- **Explanatory and educational activities** related to covid-19 (professors Konvalinka, Hořejší, Grubhoffer etc.)
- **Spontaneous activities of popularisers** of the CAS
 - › new website [Vedanadoma.cz](https://vedanadoma.cz) and social networks of the CAS [#Vedanadoma](https://twitter.com/Vedanadoma)
- **Videos [#Na_Minutu](https://www.youtube.com/hashtag/NaMinutu)**
 - › refutation of misinformation, myths and explanation the principles of vaccination, vaccines, etc.
- **AVex**
 - › **brief expert surveys** of various complex issues, such as drought or genetic modification, to lawmakers, inspired by similar practice of „POSTnotes“ in British Parliament
 - › special issue „**Viruses and the fight against them**“



Antonín Holý National Virology Centre



Visualization

Ing. arch. Ivan Sobotka

- **Scientific content of activities:** research of virus genetics, genomics, structure and life-cycle of human, animal and plant viruses, including impacts on society.
- **Application potential:** medicine, veterinary medicine, agriculture, pharmaceutical industry, security aspects, national authority for the fight against viral infections.

Plan: To build the Antonín Holý National Virology Centre with a headquarter in Prague, serving as a national authority for the fight against viral infections. The project will include the construction of a Translation Research Centre from own resources of the Institute of Organic Chemistry and Biochemistry of the CAS (both projects in the CAS Science Complex in Krč).

CAS Activities to Help Ukraine

The CAS has taken following measures:

#VĚDASTOJÍZAUKRAJINOU
WE SUPPORT UKRAINE!



Akademie věd
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RESIDENCE PERMITS AND VISAS

Information for Ukrainian citizens in the Czech Republic intended for both newly arrived Ukrainians and those who already have a residence permit in the Czech Republic.

FELLOWSHIPS AND EMPLOYMENT

Information about job vacancies, fellowships, including funding opportunities and job market procedures for Czech employers and job seekers.

OTHER TYPES OF AID

Information about specific types of aid currently offered by the individual institutes of then CAS to Ukrainian citizens.

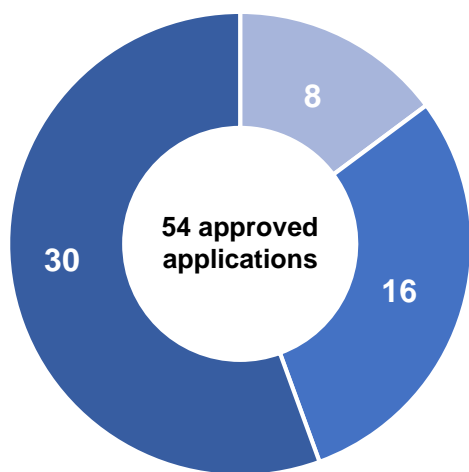
HOW WE HAVE HELPED SO FAR

- Researchers at Risk Fellowship Programme
- Special Accommodation Scheme under Researchers at Risk Fellowship – Ukraine Programme
- Special Website [Help for Ukraine – CAS](#)

Researchers at Risk Fellowship Programme

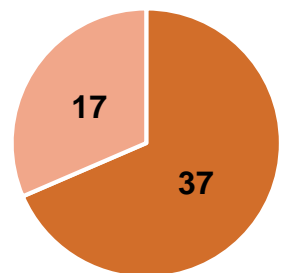
- **54 approved applications** received in 53 days from announcement of the call
- **more than 53 million CZK** (approx. 2,1 million euro)

Category of Researcher



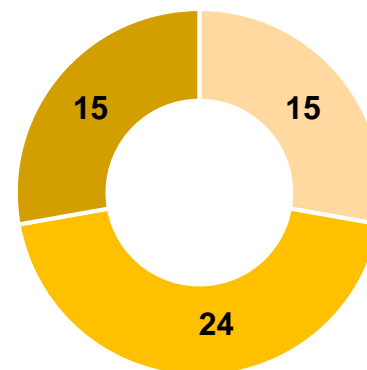
■ PhD Students ■ Postdocs ■ Researchers

Gender



■ Women ■ Men

Research Areas



■ I. Mathematics, Physics and Earth Sciences
■ II. Life and Chemical Sciences
■ III. Humanities and Social Sciences

Thank you for your attention