



# JST's approach toward COVID-19

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IMAZU Sugiko, Chief, Department of International Affairs

EU S&T Counsellors' meeting

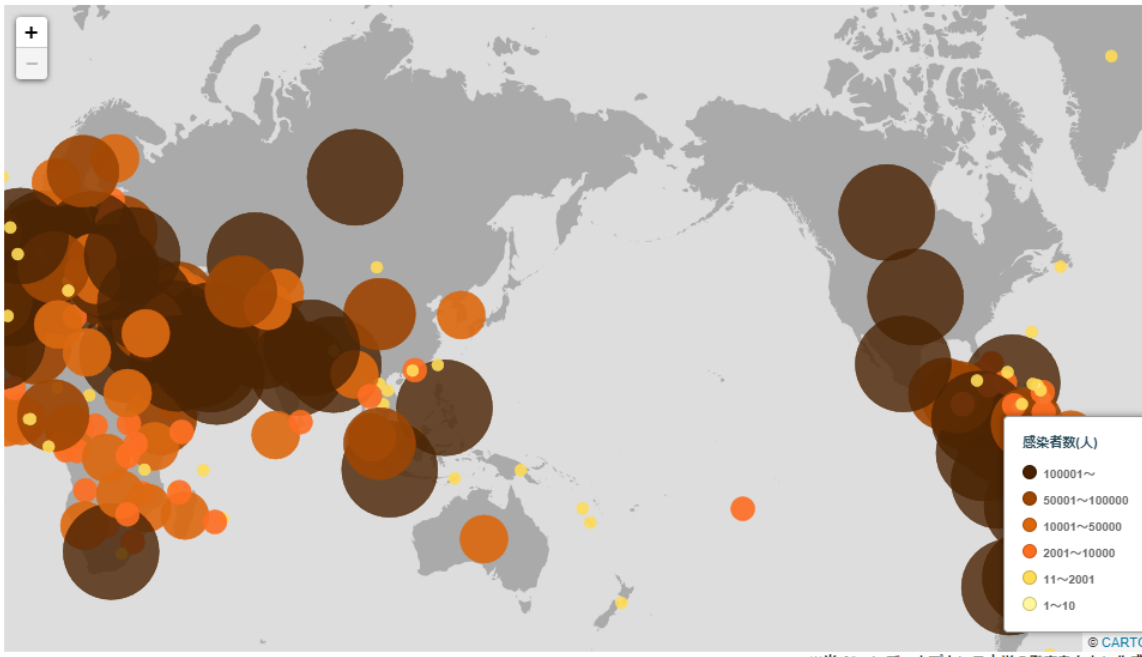
2020.10.22

# The COVID Crisis changed our life style

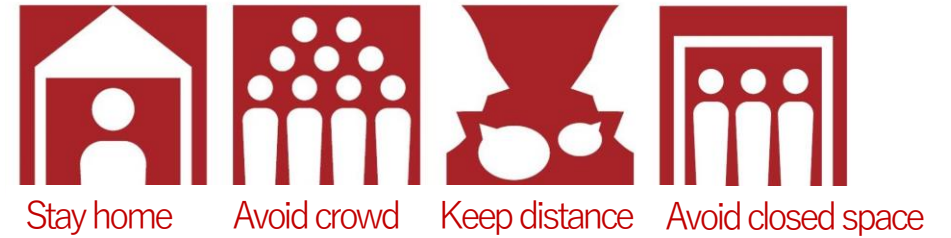
As of 13, Oct, 2020

Number of people infected: 37,801,526

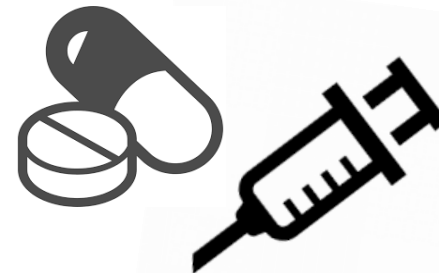
Number of Death: 1,080,680



## Change in lifestyles



## Development of vaccines and antiviral drugs



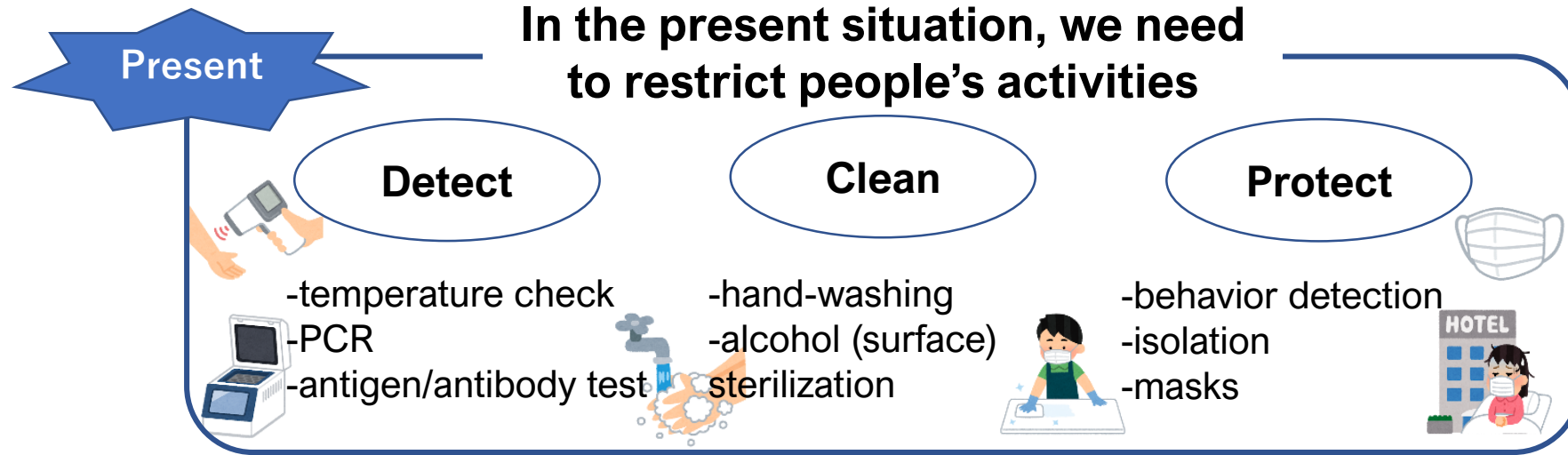
Vaccine Candidate: 189  
On Clinical Studies: 40 \*

\*WHO report on 9/25.

<https://www3.nhk.or.jp/news/special/coronavirus/world-data/>

Based on the data reported by the John's Hopkins University.

# JST's activities against COVID-19



## We need to

- create a society in which **we can move, meet, gather and do business freely** under COVID-19 conditions while we develop vaccines and drugs.

Upgrade our policy-measures using STI innovation by utilizing and concentrating knowledge other than medicine, such as engineering, ICT, nanotech and so on.



# Balancing demand and supply for quick deployment

- Vulnerabilities in hospitals, nursing facilities, schools
- Quantity and quality required



- Cost
- Production capacity
- Complexity of the technology

**Hospital / clinic**  
-Protect the people-



**Nursing facility**  
-Protect the elderly-




**School**  
-Protect the future-




**Protect**


**Retail**



**Pubs and Restaurants**



**Events / Transportation**



**Keep economy going**

Quick deployment to each facility, optimal technology in optimal quantity.

# J-RAPID Program

## –Urgent International Collaboration R&D on disasters

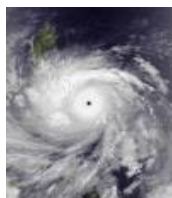









### Concept

The *J-RAPID* program supports **urgent** collaboration between Japanese and foreign researchers following natural or anthropogenic disasters or similar unanticipated events.

### Objective

To play an **initial response role** by promptly supporting activities before ordinary projects are implemented by the national government, academic societies, or others.



Month/Year		Research/investigation areas
Apr 2020		J-RAPID Collaborative Research/Survey Program for Urgent Research on the <b>Coronavirus Disease 2019 (COVID-19)</b>
Feb 2019		Japan-Indonesia Urgent Collaborative Projects regarding <b>Sunda Straits tsunami</b>
Apr 2016		International Urgent Collaborative Projects regarding <b>Kumamoto Earthquake</b>
Jun 2015		Japan-Nepal Urgent Collaborative Projects regarding the <b>Nepal earthquake</b>
Feb 2014		Japan-Philippine Urgent Collaborative Projects regarding <b>Typhoon Yolanda</b>
Feb 2012		Japan-Thai Urgent Collaborative Projects in response to <b>Thai flood disaster</b>
Apr 2011		International Urgent Collaborative Projects regarding the <b>Great East Japan Earthquake</b>

# 11 new J-RAPID projects targeting COVID-19



Real-time monitoring of novel coronavirus infections using wastewater-based epidemiology approach



🇯🇵 **Prof. Eiji Haramoto**, Univ. Yamanashi

🇺🇸 **Dr. Kyle Bibby**, Univ. Notre Dame

*Detects viruses in sewage and captures local infections.*

Paper-Based Sensor Devices for Rapid and Accurate Detection of COVID-19

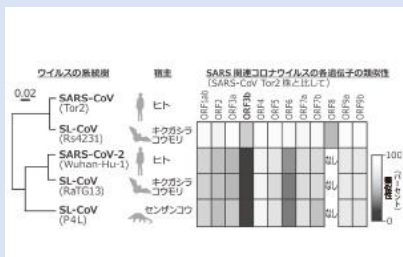


🇯🇵 **Dr. Tsuyoshi Minami**, Univ. Tokyo

🇫🇷 **Dr. Anthony Genot**, CNRS

*Inexpensive paper sensors and machine learning - aiming for virus detection within minutes.*

Investigation of the roles of SARS-CoV2-encoding genes on the COVID-19 pathogenesis and viral cross-species transmission



🇯🇵 **Dr. Kei Sato**, Univ. Tokyo

🇬🇧 **Prof. Massimo Palmarini**, Univ. Glasgow

*Elucidating the molecular mechanisms of cross-species transmission of coronaviruses and their pathogenicity.*

National Online Survey of Children's Quality of Life and Health in the COVID-19 Pandemic in Japan



🇯🇵 **Dr. Naho Morisaki**, Nat. Center for Child Health and Development

🇬🇧 **Dr. Polly Waite**, Univ. Oxford

*Delivering the voices of children - connecting to society through a national survey.*



# CREST special project on COVID-19

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- CREST (Core Research for evolutionary science and technology) :  
**Team-type research** to produce excellent achievements leading to scientific and technological innovation.
- Create new technology seeds that contribute to coexistence with emerging infectious diseases such as COVID-19
- Promote **interdisciplinary research** in various fields.  
\* excludes research limited to the medical field.

<Schedule>

Open call : ~ October 27<sup>th</sup>

Research start: February 2021 (planned)



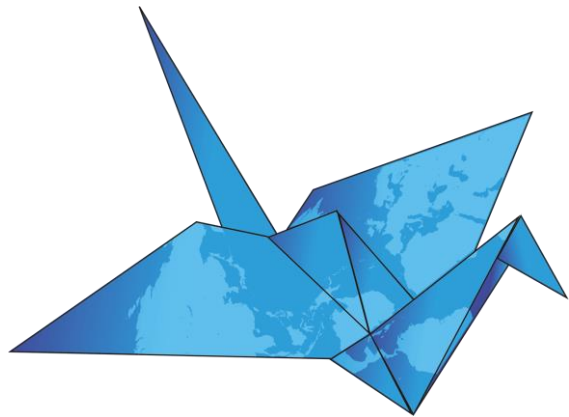
# JST Connect 2020

## Webinar to promote cooperation opportunities

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### JST Connect 2020



Explore cooperation opportunities  
at the Japan Science and Technology Agency

● **1<sup>st</sup> Edition**  
JST's international cooperation and  
Moonshot R&D  
Tuesday, October 27<sup>th</sup> (17:00~18:30)

● **2<sup>nd</sup> & 3<sup>rd</sup> Edition**  
will be held in November and December  
(TBD)



Agenda and Register: <https://www.jst.go.jp/inter/connect/>  
Contact: [jst-connect@jst.go.jp](mailto:jst-connect@jst.go.jp)



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Thank you!