

戦略的国際共同研究プログラム(SICORP)
日本 - フランス共同研究
終了報告書 概要

1. 研究課題名 : 「アジアのコウモリにおける SARS-CoV-2 の起源の調査および解明」
2. 研究期間 : 令和 3 年 5 月 ~ 令和 4 年 9 月
3. 主な参加研究者名 :
日本側チーム

	氏名	役職	所属	研究分担
研究代表者	Christian Ernest VINCENOT	助教	京都大学大学院 情報学 研究科	Project lead
研究参加者	Anja Maria COLLAZO	研究員	京都大学大学院 情報学 研究科	Project coordination
研究期間中の全参加研究者数			2名	

相手側チーム

	氏名	役職	所属	研究分担
研究代表者	Alexandre HASSANIN	Maître de Conférences	Sorbonne University / French National Museum of Natural History	Genetics interpretation
研究参加者	Vuong Tan TU		Vietnam Academy of Science and Technology	
研究参加者	Sébastien WURTZER	Director	Direction of Research and Development of Water Quality of Paris	
研究期間中の全参加研究者数			3名	

4. 国際共同研究の概要

This project aims to find the origin of SARS-CoV-2 and reconstruct the geographical spread of Sarbecoviruses. It will increase knowledge of coronaviruses and their bat hosts and may identify future potential zones of spillovers and transmission pathways.

For this project, Rhinolophus bats were captured using harp traps and a high-tech acoustic lure in the Ryukyu archipelago in order to collect tissue and faeces samples. Trapped bats were maintained in captivity for the time to sex and photograph them, gather basic morphometrics (weight, forearm length) and collect patagium and faeces samples that were stored in RNAlater. The animals were then released into the wild as fast as possible. Ultrasound recordings were also used to confirm taxonomic identification. These samples are currently being analysed jointly with this project's collaborating team under the lead of Prof. Hassanin at the National Museum of Natural History in Paris, France.

The schedule of this project was impacted strongly and delayed by travel restrictions due to the COVID-19 pandemic.

5 . 国際共同研究の成果

5-1 国際共同研究の学術成果および実施内容

The schedule of this project was impacted strongly and delayed by travel restrictions due to the COVID-19 pandemic.

5-2 国際共同研究による相乗効果

This project has resulted in the start of a collaboration between the institutions of the two PIs. The collaboration and exchanges have, however, been impaired by COVID travel restrictions. The synergy has therefore been suboptimal, yet we did our best to make things work nevertheless.

5-3 国際共同研究成果の波及効果と今後の展望

Two scientific publications were produced at this stage, and some more are expected in the near future. Furthermore, the PIs on both sides have been contacted repeatedly by the media (e.g. Le Figaro, NHK) to provide insights on SARS-CoV-2, bat ecology, and zoonotic spillover prevention in general.

Strategic International Collaborative Research Program (SICORP)
Japan - France Joint Research Program
Executive Summary of Final Report

- 1 . Project title : 「 Tracing and understanding the origin of SARS-CoV-2 in Asian bats 」
- 2 . Research period : May 2021 ~ September 2022
- 3 . Main participants :

Japan-side

	Name	Title	Affiliation	Role in the research project
PI	Christian Ernest VINCENOT	Assistant Professor	Kyoto University	Project lead
Collaborator	Anja Maria COLLAZO	Researcher	Kyoto University	Project coordination
Total number of participants throughout the research period: 2				

Partner-side

	Name	Title	Affiliation	Role in the research project
PI	Alexandre HASSANIN	Maître de Conférences	Sorbonne University / French National Museum of Natural History	Genetics interpretation
Collaborator	Vuong Tan TU		Vietnam Academy of Science and Technology	
Collaborator	Sébastien WURTZER	Director	Direction of Research and Development of Water Quality of Paris	
Total number of participants throughout the research period: 3				

4 . Summary of the international joint research

This project aims to find the origin of SARS-CoV-2 and reconstruct the geographical spread of Sarbecoviruses. It will increase knowledge of coronaviruses and their bat hosts and may identify future potential zones of spillovers and transmission pathways.

For this project, Rhinolophus bats were captured using harp traps and a high-tech acoustic lure in the Ryukyu archipelago in order to collect tissue and faeces samples. Trapped bats were maintained in captivity for the time to sex and photograph them, gather basic morphometrics (weight, forearm length) and collect patagium and faeces samples that were stored in RNAlater. The animals were then released into the wild as fast as possible. Ultrasound recordings were also used to confirm taxonomic identification. These samples are currently being analysed jointly with this project's collaborating team under the lead of Prof. Hassanin at the National Museum of Natural History in Paris, France.

The schedule of this project was impacted strongly and delayed by travel restrictions due to the COVID-19 pandemic.

5 . Outcomes of the international joint research

5-1 Scientific outputs and implemented activities of the joint research

Under this project, bat samples collection in Vietnam and Japan. The analysis of these samples is still yielding results and we are still hoping for new discoveries with the bioinformatics processing underway.

5-2 Synergistic effects of the joint research

This project has resulted in the start of a collaboration between the institutions of the two PIs. The collaboration and exchanges have, however, been impaired by COVID travel restrictions. The synergy has therefore been suboptimal, yet we did our best to make things work nevertheless.

5-3 Scientific, industrial or societal impacts/effects of the outputs

Two scientific publications were produced at this stage, and some more are expected in the near future. Furthermore, the PIs on both sides have been contacted repeatedly by the media (e.g. Le Figaro, NHK) to provide insights on SARS-CoV-2, bat ecology, and zoonotic spillover prevention in general.

国際共同研究における主要な研究成果リスト

1. 論文発表等

* 原著論文 (相手側研究チームとの共著論文) 発表件数 : 計 0 件

・ 査読有り : 発表件数 : 計 0 件

該当なし

・ 査読無し : 発表件数 : 計 0 件

該当なし

* 原著論文 (相手側研究チームを含まない日本側研究チームの論文) : 発表件数 : 計 0 件

・ 査読有り : 発表件数 : 計 0 件

該当なし

・ 査読無し : 発表件数 : 計 0 件

該当なし

* その他の著作物 (相手側研究チームとの共著総説、書籍など) : 発表件数 : 計 0 件

該当なし

* その他の著作物 (相手側研究チームを含まない日本側研究チームの総説、書籍など) : 発表件数 : 計 0 件

該当なし

2. 学会発表

* 口頭発表 (相手側研究チームとの連名発表)

発表件数 : 計 0 件 (うち招待講演 : 0 件)

該当なし

* 口頭発表 (相手側研究チームを含まない日本側研究チームの発表)

発表件数 : 計 0 件 (うち招待講演 : 0 件)

該当なし

* ポスター発表 (相手側研究チームとの連名発表)

発表件数 : 計 0 件

該当なし

* ポスター発表 (相手側研究チームを含まない日本側研究チームの発表)

発表件数 : 計 0 件

該当なし

3. 主催したワークショップ・セミナー・シンポジウム等の開催

該当なし

4. 研究交流の実績 (主要な実績)

該当なし

5 . 特許出願

研究期間累積出願件数 : 0 件
該当なし

6 . 受賞 ・ 新聞報道等

該当なし

7 . その他

該当なし