

Question on notice no. 74

Portfolio question number: BI-74

2021-22 Budget estimates

Economics Committee, Industry, Science, Energy and Resources Portfolio

Senator the Hon. Matthew Canavan: asked the Commonwealth Scientific and Industrial Research Organisation on 3 June 2021—

Senator CANAVAN: That's fine. I don't need that. What other work have you done with scientists from the Wuhan Institute of Virology in the last few years? Ms Zielke: I would need to take that on notice. I don't believe it's a lengthy list. Senator CANAVAN: If you could take that on notice. Ms Zielke: Yes.

Answer —

Please see attachment.

Economics Legislation Committee
ANSWERS TO QUESTIONS ON NOTICE
Department of Industry, Science, Energy and Resources
2021 - 2022 Budget Estimates

AGENCY/DEPARTMENT: Commonwealth Scientific and Industrial Research Organisation

TOPIC: CSIRO engagement with Wuhan Institute of Virology

REFERENCE: Spoken Question (Hansard Page 120)

QUESTION DATE: 03 June 2021

QUESTION No.: BI-74

Senator CANAVAN: That's fine. I don't need that. What other work have you done with scientists from the Wuhan Institute of Virology in the last few years?

Ms Zielke: I would need to take that on notice. I don't believe it's a lengthy list.

Senator CANAVAN: If you could take that on notice.

Ms Zielke: Yes.

ANSWER

Background

CSIRO collaborates with research organisations from many countries around the world. Critical to research for human health is the understanding of how humans, animals, and the environment interact to pose threats to our health and biosecurity.

CSIRO has worked with China (including the Wuhan Institute of Virology), the US, Singapore, Japan, Malaysia, France, Indonesia, India, the UK and PNG on infectious disease research to help protect Australians from current and potential future pandemics.

CSIRO undertakes all research in accordance with strict biosecurity and legislative requirements.

Work with the Wuhan Institute of Virology

CSIRO has not identified any financial or contractual agreements with the Wuhan Institute of Virology in the last few years (taken to mean the last 5 years).

Over the same period, we have identified two scientific papers where CSIRO scientists are co-authors with the Wuhan Institute of Virology. When publishing, scientists generally state their affiliation at the time the research was conducted, however, as they can move between scientific institutions during long-term research projects, this may result in a listing of multiple affiliations.

It should be noted that as research may be conducted over several years, there is often an extended period of time between the conclusion of a research program and the publication of its outcomes in a peer reviewed scientific journal.

Two publications with scientists listing their affiliation as the Wuhan Institute of Virology from January 2015 to June 2021 were co-authored with CSIRO:

1. Chen M, Tachedjian M, Marsh GA, Cui J, Wang LF. Distinct Cell Transcriptomic Landscapes Upon Henipavirus Infections. *Front Microbiol.* 2020;11:986. Published 2020 May 19. doi:10.3389/fmicb.2020.00986
 - a. The research program concluded in 2014 and “All virology work was conducted at the BSL-4 facility of the CSIRO Australian Animal Health Laboratory (Geelong, Australia).”
2. Hayward JA, Tachedjian M, Cui J, Cheng AZ, Johnson A, Baker ML, Harris RS, Wang LF, Tachedjian G. Differential Evolution of Antiretroviral Restriction Factors in Pteropid Bats as Revealed by APOBEC3 Gene Complexity. *Mol Biol Evol.* 2018 Jul 1;35(7):1626-1637. doi: 10.1093/molbev/msy048. PMID: 29617834; PMCID: PMC5995163.
 - a. Research led by Burnett Institute, no direct collaboration with Wuhan Institute of Virology by CSIRO.

During the 5 year period, CSIRO scientists and scientists affiliated with Wuhan Institute of Virology have also been co-authors on “The European Virus Archive goes global” and six taxonomy updates through the International Committee on the Taxonomy of Viruses (ICTV), the group responsible for the standardised naming of viruses. These publications are a common publication type with a large number of authors from around the world and are not the result of a joint research program with Wuhan Institute of Virology.

Clarification of evidence

Further to our clarification letter to the Committee dated 4 June 2021, regarding reference to 'Bat super immunity to lethal disease could help protect people', the publication is; Zhou, P.; Tachedjian, M.; Wynne, J. W.; Boyd, V.; Cui, J.; Smith, I.; Cowled, C.; Ng, J. H. J.; Mok, L.; Michalski, W. P.; Mendenhall, I. H.; Tachedjian, G.; Wang, L.-F. & Baker, M. L. 2016. Contraction of the type I IFN locus and unusual constitutive expression of IFN- α in bats. *Proceedings of the National Academy of Sciences*, 113, 2696.

It has since been confirmed that Wuhan Institute of Virology was not involved in this research program. At the time, Peng Zhou, Lin-Fa Wang and Jie Cue were conducting the research for CSIRO and Duke University (Singapore).

As indicated in the papers above, CSIRO’s only co-authored research papers over the past five years with the Wuhan Institute of Virology, relate to 1) Henipavirus (Hendra virus is a member of the genus Henipavirus) and 2) the genetic makeup of Pteropid Bats.

Regarding CSIRO bat research, a statement outlining CSIRO’s work in this space can be found on CSIRO’s website.

<https://www.csiro.au/en/news/News-releases/2021/Response-to-The-Australian-25-June-2021>