



**By email**

Our ref: 11/09/21/ag/1287

28 September 2021

**Re: Purification of SARS-COV-2 and Variants**

Thank you for your request received on 11 September 2021 addressed to Public Health England (PHE). In accordance with Section 1(1)(a) of the Freedom of Information Act 2000 (the Act), I can confirm that PHE does not hold the information you have specified.

***Request***

***All studies and/or reports in the possession, custody or control of Public Health England describing the purification of any "COVID-19 virus" (aka "SARS-COV-2", including any alleged "variants" i.e. "B.1.1.7", "B.1.351", "P.1") (for example: via filtration, ultracentrifugation and chromatography), directly from a sample taken from a diseased human where the patient sample was not first combined with any other source of genetic material (i.e. monkey kidney cells aka Vero cells; fetal bovine serum).***

***Please note that I am not requesting studies/reports where researchers failed to purify the suspected "virus" and instead:***

- cultured an unpurified sample or other unpurified substance, and/or***
- performed an amplification test (i.e. a PCR test) on all the RNA from a patient sample or from a cell culture, or on genetic material from any unpurified substance, and/or***
- fabricated a "genome" by editing/assembling/aligning sequences detected in the total RNA from a patient sample or from a cell culture or from any unpurified substance, and/or***
- produced electron microscopy images of unpurified things.***

In accordance with Section 1(1)(a) of the FOI Act, PHE can confirm that it does not hold the information you have requested.

Viruses are not independent living entities. They require a host cell substrate to replicate.

PHE's microbiology teams use the term "isolation" to mean culture in the laboratory. It is used sometimes interchangeably to mean isolation from a patient or clinical

material – but usually implies that the organism has been grown in culture. An organism is identified by looking for its unique genetic material in a clinical sample and further identification is refined and confirmed by whole genome sequencing.

The Virus Reference Laboratory at PHE, Colindale, London has grown the virus, SARS-CoV-2. The virus culture method has been published in the following peer-reviewed paper: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2020.25.32.2001483>

Several strains of the SARS-CoV-2 virus has been deposited to the European Virus Archive by PHE.

PHE's culture work on other SARS-CoV-2 variants is in progress and has not been published in any peer-reviewed papers at present.

Under Section 16, a public authority has a duty to provide advice and assistance. Accordingly, please find the following links below regarding evidence of COVID-19:

- SARS-CoV-2 has been cultured and then subjected to electron microscopy. Evidence of the Electron Micrograph is available at the following link: <https://publichealthmatters.blog.gov.uk/2021/02/05/what-do-we-know-about-the-new-covid-19-variants/>
- General information pertaining to SARS-CoV-2, which causes the disease known as COVID-19: <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-background-information/wuhan-novel-coronavirus-epidemiology-virology-and-clinical-features>

If you have any queries regarding the information that has been supplied to you, please refer your query to me in writing in the first instance. If you remain dissatisfied and would like to request an internal review, then please contact us at the address above or by emailing [foi@phe.gov.uk](mailto:foi@phe.gov.uk).

Please note that you have the right to an independent review by the Information Commissioner's Office if a complaint cannot be resolved through the PHE complaints procedure. The Information Commissioner's Office can be contacted by calling the ICO's helpline on 0303 123 1113, visiting the ICO's website at [www.ico.org.uk](http://www.ico.org.uk) or writing to the ICO at Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF.

Yours sincerely  
FOI Team