Department of Energy
Washington, DC 20585

Lewis Kamp

Via email: lewis@usrtk.org

HQ-2025-03244-F

This is a second partial response to the request for information that you sent to the U.S. Department of Energy (DOE) under the Freedom of Information Act (FOIA), 5 U.S.C. § 552. You requested the following:

> We request the DOE's latest assessment or intelligence report of the origin of the COVID-19 pandemic at the time this request is received. Please also provide any reports, analyses or appendices directly referred to, described in, or attached to this assessment or intelligence report. For context, such an assessment by DOE of the pandemic's origin is referred to among several "IC assessments" made by federal agencies that are summarized in the Office of the Director of National Intelligence's report, "Updated Assessment of Covid-19 Origins." Such an assessment by DOE was also widely reported by media outlets in 2023, including in news stories published on Feb. 26, 2023, by The New York Times and the Wall Street Journal. If the assessment reported on in these stories is the latest version by DOE, we are seeking that record. If DOE has conducted a subsequent assessment, we are seeking the latest such assessment.

Your request was assigned to DOE's Office of Intelligence and Counterintelligence (IN) to conduct a search for responsive documents. These documents were previously released under HQ-2023-01098-F and include the original redactions included in those partials.

Upon review, DOE has determined that certain information should be withheld from the documents pursuant to Exemptions 1, 3, 5, and 6 of the FOIA, 5 U.S.C. §§ 552 (b)(1), (b)(3), (b)(5), and (b)(6).

Title 5, United States Code, section 552(b)(l) (Exemption 1), provides that an agency may exempt from disclosure matters that are "(A) specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy and (B) are in fact properly classified pursuant to such Executive order ...." 5 U.S.C. 552(b)(l).

Exemption 1 authorizes, under criteria established by an Executive order, information to be kept secret in the interest of National defense or foreign policy. The portions deleted from the subject documents pursuant to Exemption 1 contain information about intelligence activities (including covert action), intelligence sources or methods, or cryptology and are classified under section 1.4 (c) of Executive Order 13526 (E.O.

13526). It has been determined that release of the information could reasonably be expected to cause damage to national security.

Exemption 3 protects from disclosure information "specifically exempted from disclosure by statute (other than section 552(b) of this title), if that statute—(A)(i) requires that the matters be withheld from the public in such a manner as to leave no discretion on the issue; or (ii) establishes particular criteria for withholding or refers to particular types of matters to be withheld[.]" The National Security Act of 1947 (the Act), 50 U.S.C. § 3001, et seq., is one such statute that falls within the coverage of Exemption 3. See CIA v. Sims, 471 U.S. 159, 167 (1985) ("Section 102(d)(3) of the National Security Act of 1947, which calls for the Director of Central Intelligence to protect 'intelligence sources and methods,' clearly 'refers to particular types of matters,' 5 U.S.C. § 552(b)(3)(B), and thus qualifies as a withholding statute under Exemption 3.").

The Act permits the redactions of both sensitive unclassified information and classified information, such as intelligence methodology and intelligence and counterintelligence personnel involved in these activities. The information withheld under Exemption 3 consists of specific sources and methods used in intelligence and counterintelligence methods, methodology and research, the disclosure of which could reveal the nature of intelligence activities.

Exemption 5 protects from mandatory disclosure "inter-agency or intra-agency memorandums or letters that would not be available by law to a party other than an agency in litigation with the agency." 5 U.S.C. § 552 (b)(5). Exemption 5 incorporates the deliberative process privilege which protects recommendations, advice, and opinions that are part of the process by which agency decisions and polices are formulated. The information withheld under Exemption 5 consists of inter/intra-agency pre-decisional, deliberative information.

Some of the information withheld under Exemption 5 has been deemed pre-decisional and deliberative in nature, including pre-decisional discussions between/among DOE staff and other governmental agencies discussing the origins of the novel coronavirus, COVID-19, as well as pre-decisional discussions among DOE staff regarding draft reports and opinions on the origins of the COVID-19 coronavirus. The information is both predecisional because it was developed before the agency adopted a final position, and deliberative, in that it reflects the opinions of individuals who were consulted as part of a decision-making process that will lead to the agency's final policy decision about these matters. The DOE may consider these preliminary views as part of the process that will lead to the agency's final decision about these matters. The information does not represent a final agency position, and its release would compromise the deliberative process by which the government makes its decisions. Therefore, portions of the documents are being withheld under Exemption 5 of the FOIA as pre-decisional material that is part of the agency's deliberative process.

With respect to the discretionary disclosure of deliberative information, the quality of agency decisions would be adversely affected if frank, written discussion of policy matters were inhibited by the knowledge that the content of such discussion might be made public. For this reason, DOE has determined that discretionary disclosure of the deliberative material is not in the public interest because foreseeable harm would result from such disclosure.

Exemption 6 is generally referred to as the “personal privacy” exemption; it provides that the disclosure requirements of FOIA do not apply to “personnel and medical files and similar files the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.” 5 U.S.C. § 552(b)(6). In applying Exemption 6, the DOE considered: 1) whether a significant privacy interest would be invaded; 2) whether the release of the information would further the public interest by shedding light on the operations or activities of the Government; and 3) whether in balancing the privacy interests against the public interest, disclosure would constitute a clearly unwarranted invasion of privacy.

The information withheld under Exemption 6 consists of names of private individuals, phone numbers, and email addresses of intelligence personnel. This information qualifies as “similar files” because it is information in which an individual has a privacy interest. Moreover, releasing the information could subject the individuals to unwarranted or unsolicited communications. Since no public interest would be served by disclosing this information, and since there is a viable privacy interest that would be threatened by such disclosure, Exemption 6 authorizes withholding the information. Therefore, we have determined that the public interest in the information’s release does not outweigh the overriding privacy interests in keeping it confidential.

This satisfies the standard set forth at 5 U.S.C. § 552(a)(8)(A) that agencies shall withhold information under FOIA “only if (I) the agency reasonably foresees that disclosure would harm an interest protected by an exemption…; or (II) disclosure is prohibited by law…”. 5 U.S.C. § 552(a)(8)(A) also provides that whenever full disclosure of a record is not possible, agencies shall “consider whether partial disclosure of information is possible…and (II) take reasonable steps necessary to segregate and release nonexempt information.” Therefore, we have determined that, in certain instances, a partial disclosure is proper.

Pursuant to Title 10, Code of Federal Regulations, section 1004.6 (10 C.F.R. §1004.6), the DOE’s Office of Classification, Office of Environment, Health, Safety and Security, in DOE has completed its review of these documents responsive to your request. These documents located in IN’s files contain information properly classified as National Security Information; therefore, they are provided to you with deletions.

Pursuant to 10 C.F.R. §1004.6(d), Edith A. Chalk, Director, Office of Classification, Office of Environment, Health, Safety and Security, is the official responsible for the denial of the DOE classified information.

To the extent permitted by law, DOE, pursuant to 10 C.F.R. 1004.1, will make available records it is authorized to withhold under FOIA whenever it determines that such disclosure is in the public interest. With respect to the information withheld from disclosure pursuant to Exemption 1, DOE has no further discretion under FOIA or DOE regulations to release information currently and properly classified pursuant to E.O. 13526.

Pursuant to 10 C.F.R. § 1004.7(c)(2), I am the individual responsible for the determination to withhold the information described above. The FOIA requires that "any reasonably segregable portion of a record shall be provided to any person requesting such record after deletion of the portions which are exempt." 5 U.S.C. § 552(b). As a result, a redacted version of the documents is being released to you in accordance with 10 C.F.R. §1004.7(c)(3).

You may contact David Bettwy, Assistant United States Attorney, U.S. Attorney's Office at David.Bettwy@usdoj.govfor any further assistance and to discuss any aspect of your request. Additionally, you may contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. The contact information for OGIS is as follows: Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, Maryland 20740-6001, e-mail at ogis@nara.gov; telephone at 202-741-5770; toll free at 1-877-684-6448; or facsimile at 202-741-5769.

I appreciate the opportunity to assist you with this matter.

Sincerely,

Todd Burns
Assistant General Counsel for
Finance and Information Law

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Request #: HQ-2023-01500-F

Second partial response to:

> We request the DOE’s latest assessment or intelligence report of the origin of the COVID-19 pandemic at the time this request is received. Please also provide any reports, analyses or appendices directly referred to, described in, or attached to this assessment or intelligence report. For context, such an assessment by DOE of the pandemic’s origin is referred to among several “IC assessments” made by federal agencies that are summarized in the Office of the Director of National Intelligence's report, "Updated Assessment of Covid-19 Origins." Such an assessment by DOE was also widely reported by media outlets in 2023, including in news stories published on Feb. 26, 2023, by The New York Times and the Wall Street Journal. If the assessment reported on in these stories is the latest version by DOE, we are seeking that record. If DOE has conducted a subsequent assessment, we are seeking the latest such assessment.

At this time, DOE’s Office of Intelligence and Counterintelligence (IN) has located twenty-eight (28) additional documents responsive to your request.

• *Twenty-eight (28) documents are being withheld in part pursuant to Exemptions (b)(1), (b)(3),(b)(5), and (b)(6).*

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U.S. DEPARTMENT OF
ENERGY
Intelligence and
Counterintelligence

BAR
BACKGROUND ANALYSIS REPORT

(b) (3) (A)
(b) (3) (A)

12 April 2021

(U//FOUO) SARS-CoV-2 Origins

Los Alamos
NATIONAL LABORATORY

(b) (6)

Classified By: TBD
Derived From: TBD
Declassify On: TBD

Comments and queries are welcome and may be addressed to
DOE, Office of Intelligence and Counterintelligence
DOE-IN POC: xxxxxx, 202-xxx-xxxx (U), 361-xxxx (S)
DOE-IN POC email address: name@doe.ic.gov

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(U//FOUO) SARS-CoV-2 Origins

(U) Summary

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(U) Scope Note

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(U) Our information cutoff date is April 14 2021.

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Table of Contents

(b) (1) (A)

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(U) During serial passage[a] of viruses, laboratory conditions apply selection pressures that differ from nature, and viruses that undergo serial passage in a laboratory may develop a different set of mutations and phenotypes when compared to viruses that evolve in 'the wild,' where a large number of simultaneous and constantly changing external pressures exists.

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[a] (U) Serial passage is laboratory growth of a virus—often under selective pressures, such as heat, drugs or a new host—that may be used to drive adaptations and change characteristics over generations. This can either be performed in vitro (cell culture) or in vivo (live animal).

[b] (U) A star phylogeny can be a signature of a single recent founder in a genetic population.

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[c] (U) China is the only country that has conducted systematic sampling for CoV in the wild, due to the SARS-CoV-1 outbreak. Thousands of other CoV strains could exist in the wild, but we have no way to accurately estimate the size of the set.

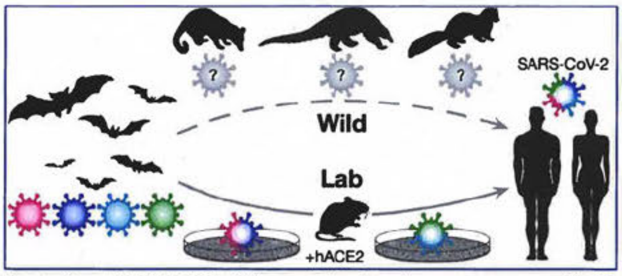

Figure 1 (U) General overview of SARS-CoV-2 origin scenarios, based on open-source publications by Wuhan Institute of Virology authors. Figure 1 is a conceptual representation of notional pathways to infection. It is not intended to represent the time or effort required for any step. Different viral strains are denoted by different colors, and multicolored viruses indicate recombinant viruses. The steps needed for SARS-CoV-2's recombinant laboratory origin (bottom arc) are well understood, and involve mice engineered to express human ACE2 (+hACE2), the SARS-CoV-1 and SARS-CoV-2 cell-surface receptor. The steps needed for a "wild" origin (top arc) are not well documented, but likely require infections in at least three species (From top left: civet, pangolin, mink or ferret).

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Disease	*R_0*	*Incubation (days)*	*Proportion with mild symptoms*	*Proportion with hospitalization*	*Reference*
Pandemic influenza 2009	1.7	2	High	Low	[35] [36] [37] [38] [39] [40]
Pandemic Influenza 1918	2.0	Unknown	High	Low	[41] [42] [43]
SARS-1	1.7-1.8	2-7	Low	High (70%)	[44] [45] [46] [47] [48] [49] [50]
SARS-2 (Wuhan variant)	3.5	4-12 OR 2-10	High	Low (20%)	[51] [52] [53] [54] [55] [56] [57] [58] [59]
Measles	12-18*	8-14	High**	Low (25%)	[60] [61] [62] [63] [64] [65] [66] [67]
*Values have been reported as low as 5 and high as 60 but this is the most commonly used range of values.					
**Rates of disease severity in measles are highly dependent on the level of vaccination in a given population/outbreak. Values noted are in unvaccinated populations.					

Figure 2: (U) R_0 Comparison

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(U) Plausible Origin Scenarios

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(U) A Natural Origin

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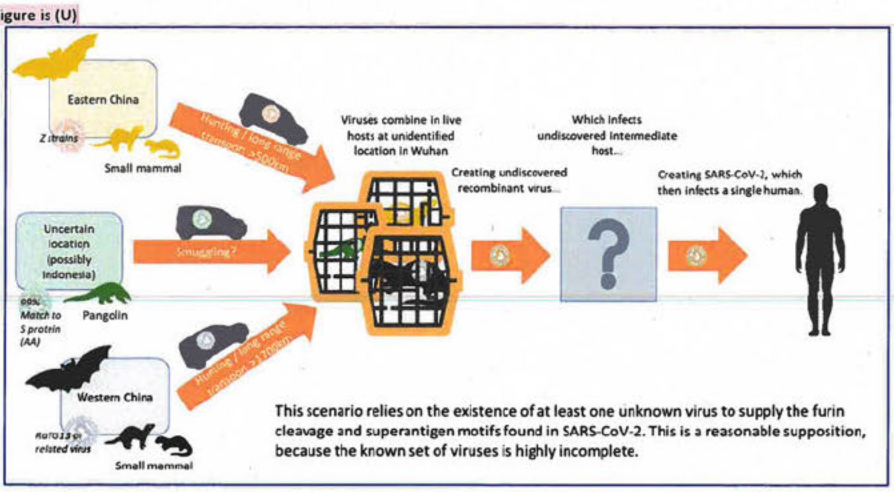

This scenario relies on the existence of at least one unknown virus to supply the furin cleavage and superantigen motifs found in SARS-CoV-2. This is a reasonable supposition, because the known set of viruses is highly incomplete.

Figure 3 (U) Potential natural origin pathway for SARS-CoV-2, adapted from Hassanin *et al*. [83] As required by Boni et al,[84] this scenario includes pangolin coronaviruses as the source of the SARS-CoV-2 Spike protein.[85]

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(U) Hassanin *et al*[96] note that for their theory to be validated, a nearly identical (at least 99 percent nucleotide identity) virus must be located in animals sold in wet markets.

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Table is (U)

Safety Levels	Used for	Common PPE and Engineering Controls
BSL-1	Non-infectious organisms	Optional/institutional discretion
BSL-2	• *E. coli* • Salmonella	• All waste autoclaved • Class II biosafety cabinet • Gloves • Lab coat • Negative air pressure • Safety glasses
BSL-3	• Rabbit fever • HIV • SARS-CoV-1 • MERS-CoV	• Double nitrile gloves • Lab gowns • Pass-through autoclave • Planned work routes • Respirator/PAPR • Tyvek coveralls
BSL-4	• Ebola • Marburg	Pathogen dependent, but typically all of the above, plus class III biosafety cabinet and extreme engineering and administrative controls
PPE/restrictions are cumulative (i.e., BSL-4 also adopts all safety precautions used in BSL-1, BSL-2, and BSL-3)		

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(U) Intelligence Gaps

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1. (b) (1) (A)
2. (U) Sanche, Hengartner, Romero, *et al.*[255] calculated the basic reproductive number of nCoV/COVID-19 based on other-province disease detection and rail traffic from Wuhan to other provinces in China. For this calculation to work, Wuhan has to be the site of initial human-to-human transmission. Hard to forge.
3. (b) (3) (A)
4. (U) GISAID phylogeny with geo-tagged viral sequences indicates a single origin associated with Wuhan-labeled virus sequences. This is corroborated by authors from the WIV.[257,258 259] Not forgeable.
5. (b) (1) (A)
6. (U) SARS-CoV-2's star phylogeny establishes a single emergence event early in the pandemic.[261,262,263] (In contrast to #5 above looking for later recombination with the undiscovered co-circulating pre-pandemic SARS-CoV-2's). Star phylogeny has a long history in HIV studies.[264,265] Not forgeable.

(b) (3) (A)

7. (b) (1) (A)
8. (b) (1) (A)
9. (U) Report of the WHO-China Joint Mission on Coronavirus Disease 2019[270] relates that stored serum samples from outside Hubei provinces were tested, and the samples indicated SARS-CoV-2 arrived outside Hubei after Wuhan cases were observed. Unlikely to be forged.
10. (U) Claims of SARS-CoV-2 outside Wuhan before the pandemic started all rely on (a) testing stored serum for anti-SARS-2 antibodies, or (b) PCR "detection" of SARS-CoV-2 in the absence of sequencing (i.e., no proof or demonstration against contamination of the PCR reaction). Furthermore, none of the serum antibody papers look way back in time to get a "zero cases" to argue against cross-reactivity with other human CoVs such as CoV-OC43.[f] Not forgeable.

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[f] The human betacoronavirus CoV-OC43 is one of seven betacoronaviruses known to infect humans and is one of the viruses responsible for the common cold.

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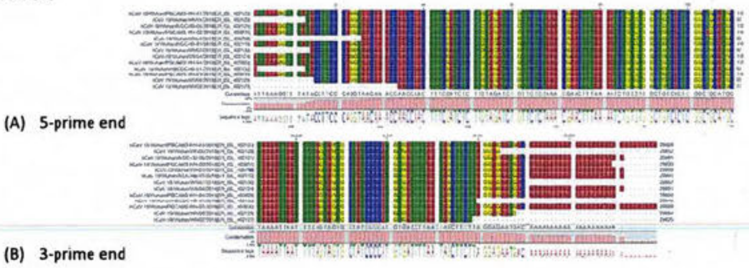

(A) 5-prime end

(B) 3-prime end

Figure B1: (U) Low genetic diversity in earliest available sequences consistent with single human introduction. Alignment of (A) 5- and (B) 3-prime ends of earliest SARS-CoV-2 sequences available from GISAID;[272] alignment generated in CLC Genetics Workbench.[273] Gaps (dashes) indicate missing data, due to differences in sequence coverage. Only one point mutation appears here, T to A at position 104 in panel (A). The middle 29,700 nucleotides exhibit similarly low diversity (not shown).

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(b) (3) (A) [redacted]

Figure is (U).

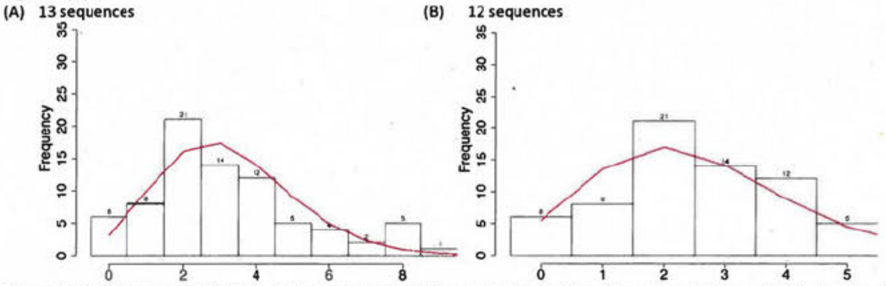

Figure B2: (U) Sequence diversity data support single human introduction. Hamming distance distribution for (A) 13 and (B) 12 (i.e. excluding outlier IPBCAMS-WH-02|EPI_ISL_403931) earliest SARS-CoV-2 sequences available from GISAID[275] shows quantitative agreement between differences observed (black bars) and predicted by simple model of descent from one founder (red line). The *x*-axis indicates the number of mutations (Hamming distance) between any pair of sequences. Test results give p=0.05511 and p=0.5748, respectively, and do not support rejecting the null hypothesis given by the simple Poisson model.

(U) Appendix C: Concealment, Disinformation, and Lies

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(U) Concealment and Elimination of Evidence

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(U) Explicit Mistruths and Lies

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(U) In 2013, a group led by Shi Zheng-Li at WIV was the first to isolate SARS-like coronaviruses from rufous horseshoe bats (*Rhinolophus* sp.), a genus widespread in China and Southeast Asia.[318,319] Most of their funding for unclassified research comes from domestic Chinese sources, however the United States, Germany, and Canada have contributed as well, according to our search in SCOPUS. Notably funding from the United States National Institutes of Health was pulled from the EcoHealth Alliance (which included the WIV) after the COVID-19 outbreak (early 2020) and later restored with restrictions.[320,321]

[redacted]

(b) (1) (A)

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(U) Collaboration between neighboring WIV and WIBP, focused on the coronavirus diversity in bats, is openly documented.[325] Additionally, prior to the building of the Jiangxia WIV campus, WIBP had worked on development of a coronavirus vaccine.[326]

(U) Early COVID-19 cases were documented at a Wuhan hospital less than 3km from a biological laboratory campus, far away from the southern, warmer regions that one Chinese expert identified as the most likely location of a zoonotic outbreak of a novel coronavirus.[327]

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References

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[5] (U) | Journal Article | (b) (3) (A)
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[6] (U) | Article | (b) (3) (A)
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U.S. DEPARTMENT OF **ENERGY** | Intelligence and Counterintelligence

TIN
TECHNICAL INTELLIGENCE NOTE

(b) (3) (A)
Lab Document Number

XX November 2020

(b) (3) (A)

(U) Summary

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(CLASSIFICATION (b) (3) (A)

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Prepared By:
(b) (6)
Los Alamos National Laboratory

Comments and queries are welcome and may be addressed to
DOE, Office of Intelligence and Counterintelligence
DOE-IN POC (b) (6) 202-586-xxxx (U), 361-xxxx (S)
DOE-IN POC email address (b) (6)

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Derived From: TBD
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Figure is U

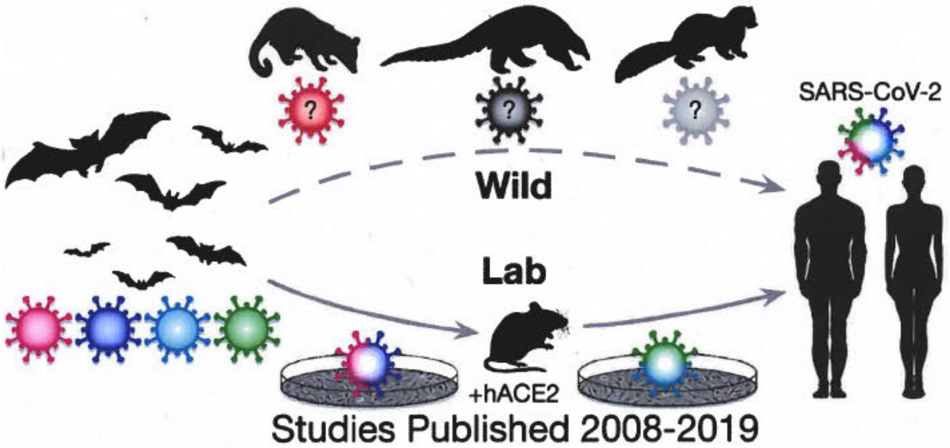

Figure 2: (U) Competing SARS-CoV-2 origin scenarios, based on open-source publications. Animals on the left: Bats. Top: civet, pangolin, mink or ferret. Right: people. Bottom: Mouse, including mice engineered to express human ACE2 (+hACE2), the SARS-CoV-1 and SARS-CoV-2 cell-surface receptor. Different viral strains are denoted by different color. Multicolored viruses indicate recombinant viruses.

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(U) Key Judgments

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- (b) (3) (A)
  - (b) (1) (A)
  - (U) The rate of genetic drift seen in SARS-CoV-2 during the pandemic is approximately one third lower than that of the SARS-CoV-1.[12] (Appendix A) (b) (3) (A)

    (b) (3) (A)

Viral diversity during the COVID-19 pandemic is not growing as quickly as was seen in the 2003 SARS-CoV epidemic.[15] [16] (Appendix A)

  - (b) (1) (A)
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Figures are (U).

Figure 3: (U) The range of PPE in media presentations of WIV SARS-CoV specialist Shi Zheng-Li. Left panel: Shi Zheng-Li and colleague at WIV in BSL-4 personal protective equipment (PPE);[69] right panel: Shi Zheng-Li is depicted releasing a wild fruit bat in Guangxi Province (2004) after sample collection, wearing only gloves as PPE.[70] These two depictions of the scientist responsible for oversight of SARS-CoV collection and engineering experiments demonstrate image management in media relations and knowledge of the risks of working with wild animals and the laboratory.

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(U) Scope Note

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(U) Our information cutoff date is 30 October 2020.

(U) Conclusion

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(U) Alternate hypotheses

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(U) Intelligence Gaps

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(U) Definitions

(U) Biosafety levels (BSL) are defined by the World Health Organization[141] and US National Institutes of Health[142] and detail the facility engineering and administrative controls needed to work with different categories (Risk Groups) of bacterial, fungi and viruses. Precautions taken are cumulative, so that BSL4 includes and expands on measures taken for the lesser levels. In some countries such as France and China, these are referred to as the Pathogen or "P" level.

- (U) BSL-1 (P1) – low/no individual and community risk
    - (U) Suitable for work with agents that do not cause disease in healthy humans
    - (U) PPE is considered optional or at institutional discretion.
- (U) BSL-2 (P2) – moderate individual and low community risk
    - (U) Suitable for moderate hazard agents. This includes some human pathogens for which treatments are available (such as most *Escherichia coli* and *Salmonella* strains) but not those that can be reasonably contracted via aerosolization.
    - (U) PPE generally includes laboratory coat, gloves and safety glasses with side shields to guard against splashes.
- (U) BLS-3 (P3) – high individual but low community risk
    - (U) Suitable for with pathogens that can cause serious and potentially lethal disease, such as *Francisella tularensis* (rabbit fever) and HIV.
    - (U) Laboratory design and physical security (access control) is crucial, including negative air pressure and planned work routes
    - (U) PPE is dependent on the agents being researched and may include respiratory isolation (such as the use of as powered air-purifying respirator or PAPR). Items such as double nitrile gloves, laboratory gowns or Tyvek coveralls, and more are common.
- (U) BSL-4 (P4) – high individual and community risk
    - (U) Extreme engineering controls in addition to administrative controls make this facility suitable for work with those pathogens with are easily transmitted via aerosol and for which there is no accepted treatment, such as Ebola and Marburg viruses.
    - (U) Facilities are carefully designed to contain any potential release and staff are equipped with controls to fully isolate the air they breathe from that of the laboratory

(U) **Chimeric viruses** are produced through recombination, by either natural or synthetic means.

(U) A **furin cleavage site** is a common form of a polybasic site that utilizes the host furin enzyme, and is generally associated with viral virulence.

(U) The isoelectric point, often referred to as the **pI**, is the state of equal electric potential.

(U) **Polybasic sites** within proteins are cleavage sites and often required for the maturation and activation of the protein and are often associated with viral virulence and pathogenicity. They are also associated with membrane insertion.

(U) A **pseudovirus** (pseudo-typed virus) is a virus engineered to express a particular Spike (fusion) protein on its surface, typically by cloning a Spike gene into the genome of a standard virus backbone, so any differences among pseudoviruses result primarily from the introduced Spike gene.

(U) **Serial Passage** is the laboratory *or* natural growth of a virus in a particular host cell or cell type, often under selective pressures (heat, drugs, etc.).

(U) **Viral recombination** is the process in which two or more viruses infect the same cell and the two exchange genetic material resulting in anew combination. This can and does happen during natural outbreaks but can also be directed using molecular techniques in a laboratory.

(U) Appendix A: (b) (3) (A)

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(U) WIV investigators and their collaborators were clearly aware of the biosafety risks of their work, writing in 2015, "On the basis of these findings, scientific review panels may deem similar studies building chimeric viruses based on circulating strains too risky to pursue, as increased pathogenicity in mammalian models cannot be excluded. Coupled with restrictions on mouse-adapted strains and the development of monoclonal antibodies using escape mutants, research into CoV emergence and therapeutic efficacy may be severely limited moving forward. Together, these data and restrictions represent a crossroads of GOF (gain-of-function) research concerns; the potential to prepare for and mitigate future outbreaks must be weighed against the risk of creating more dangerous pathogens."[223]

(b) (3) (A)

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Figure is (U).

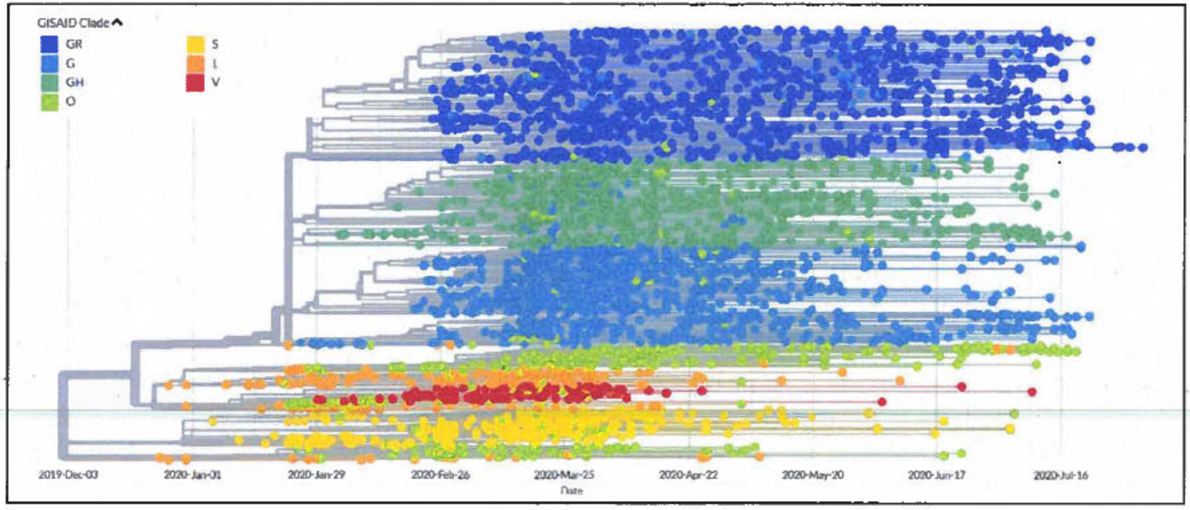
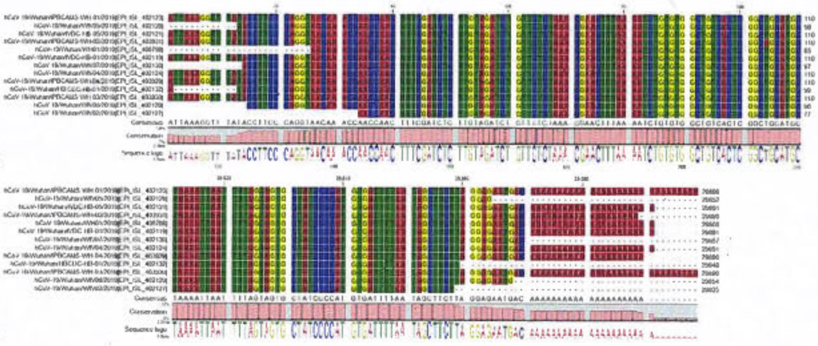


Figure B1: (U) Time-resolved genomic phylogeny of SARS-COV-2 [227] indicates outgrowth from one initial human host. The *x*-axis indicates submission date, not necessarily collection or infection date.

(b) (3) (A)

Figure is (U).



(A) 5-prime end

(B) 3-prime end

Figure B2: (U) Low genetic diversity in earliest available sequences consistent with single human introduction. Alignment of (A) 5- and (B) 3-prime ends of earliest SARS-CoV-2 sequences available from GISAID; [228] alignment generated in CLC Genomics Workbench[229]. Gaps (dashes) indicate missing data, due to differences in sequence coverage. Only one point mutation appears here, T to A at position 104 in panel (A). The middle 29,700 nucleotides exhibit similarly low diversity (not shown).

(U) Further, quantitative analysis of sequence diversity among these 13 earliest available SARS-CoV-2 genome sequences corroborates the hypothesis of descent from a single first human infection. A simple model of virus evolution predicts a star phylogeny and Poisson distribution of distances between sequences. [230] The model assumes a single variant established the outbreak, with exponential population growth and random selection. This test is extremely sensitive to presence of multiple founders and non-random mutations. Testing the null hypothesis of a Poisson distribution of sequence Hamming distances gives p=0.05511 (**Figure B3A**), and supports a star phylogeny. One sequence, designated IPBCAMS-WH-02|EPI_ISL_403931, carried a cluster of 6 mutations in the 5-prime end, just outside the region depicted in **Figure B2A**. Holding it out as potential outlier or low-quality sequencing error and repeating the analysis gives p=0.5748 (**Figure B3B**), and strongly supports a star phylogeny with random mutations. This pattern of single introduction is not expected in zoonotic spillover from a wild reservoir to a susceptible host population.

Figure is (U).

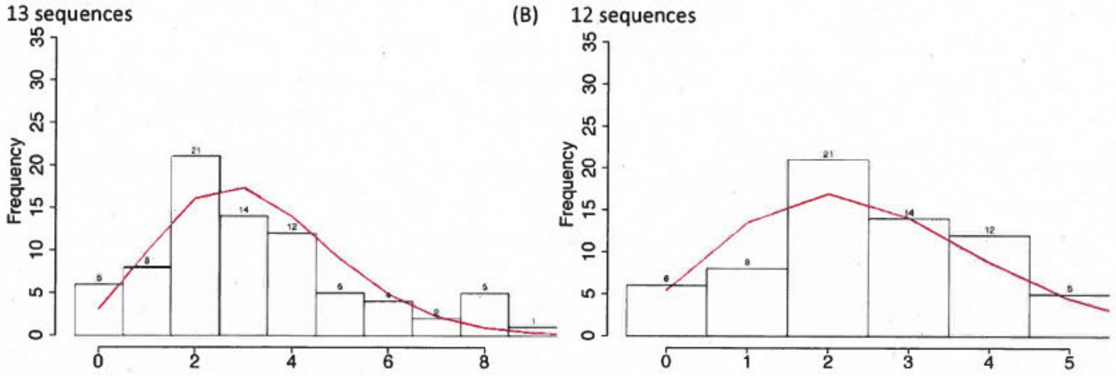


Figure B3: (U) Sequence diversity data support single human introduction. Hamming distance distribution for (A) 13 and (B) 12 (i.e. excluding outlier IPBCAMS-WH-02|EPI_ISL_403931) earliest SARS-CoV-2 sequences available from GISAID [231] shows quantitative agreement between differences observed (black bars) and predicted by simple model of descent from one founder (red line). The *x*-axis indicates the number of mutations (Hamming distance) between any pair of sequences. Test results give p=0.05511 and p=0.5748, respectively, and do not support rejecting the null hypothesis given by the simple Poisson model.

(b) (3) (A)

- (b) (1) (A)
- (U) In 2013 a group led by Shi Zheng-Li at WIV was the first to isolate SARS-like coronaviruses from rufous horseshoe bats (*Rhinolophus* sp.), a genus widespread in China and Southeast Asia. [238,239] Most of their funding for unclassified research comes from domestic Chinese sources, however the United States, Germany and Canada have contributed as well (SCOPUS finding). Notably funding from the United States National Institutes of Health was pulled from the EcoHealth Alliance (which included the WIV) after the COVID-19 outbreak (early 2020) and later restored with restrictions. [240,241]
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(U) Appendix D: Concealment, Disinformation and Lies

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U.S. DEPARTMENT OF
ENERGY | Intelligence and Counterintelligence

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TECHNICAL INTELLIGENCE NOTE

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Lab Document Number

XX November 2020

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Prepared By:
(b) (6)
Los Alamos National Laboratory

Comments and queries are welcome and may be addressed to
DOE, Office of Intelligence and Counterintelligence
DOE-IN POC (b) (6) 202-586-xxxx (U), 361-xxxx (S)
DOE-IN POC email address (b) (6)

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Derived From: TBD
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Figure is U

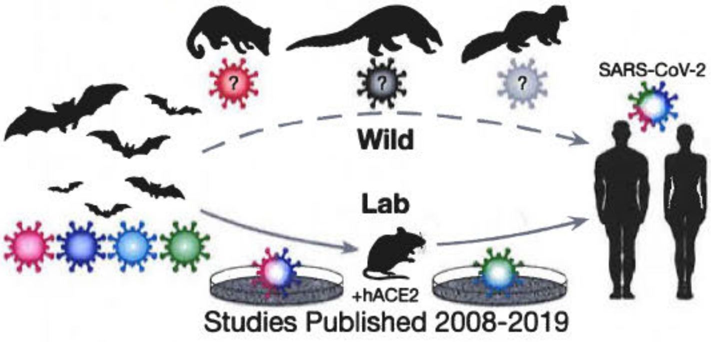

Figure 2: (U) Competing SARS-CoV-2 origin scenarios, based on open-source publications. Animals on the left: Bats. Top: civet, pangolin, mink or ferret. Right: people. Bottom: Mouse, including mice engineered to express human ACE2 (+hACE2), the SARS-CoV-1 and SARS-CoV-2 cell-surface receptor. Different viral strains are denoted by different color. Multicolored viruses indicate recombinant viruses.

(b) (1) (A)

(U) Key Judgments

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(b) (3) (A)

- (b) (3) (A)
    - (b) (1) (A)
    - (U) The rate of genetic drift seen in SARS-CoV-2 during the pandemic is approximately one third lower than that of the SARS-CoV-1.[12] (Appendix A) (b) (3) (A)

(b) (3) (A)

Viral diversity during the COVID-19 pandemic is not growing as quickly as was seen in the 2003 SARS-CoV epidemic.[15] [16] (Appendix A)

  - ○ (b) (1) (A)
  - ○ (U) The furin cleavage site [21,22,23] or putative endoplasmic reticulum (ER) retention [24] motif in SARS-CoV-2 is rare in SARS-like sarbecoviruses and known viruses in general,[25] and did not occur by point mutations, but rather by genomic recombination (4 codons) or possibly serial passage [26] [27]. The presence of this site makes viral recombination between known lineages improbable and laboratory recombination a simpler explanation than wild (b) (3) (A)

    (b) (3) (A)

- (b) (3) (A)
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(b) (3) (A)

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Figures are (U).

Figure 3: (U) The range of PPE in media presentations of WIV SARS-CoV specialist Shi Zheng-Li. Left panel: Shi Zheng-Li and colleague at WIV in BSL-4 personal protective equipment (PPE);[69] right panel: Shi Zheng-Li is depicted releasing a wild fruit bat in Guangxi Province (2004) after sample collection, wearing only gloves as PPE.[70] These two depictions of the scientist responsible for oversight of SARS-CoV collection and engineering experiments demonstrate image management in media relations and knowledge of the risks of working with wild animals and the laboratory.

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(U) Scope Note

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(U) Our information cutoff date is 30 October 2020.

(U) Conclusion

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(U) Alternate hypotheses

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(U) Intelligence Gaps

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(U) Definitions

(U) Biosafety levels (BSL) are defined by the World Health Organization[141] and US National Institutes of Health[142] and detail the facility engineering and administrative controls needed to work with different categories (Risk Groups) of bacterial, fungi and viruses. Precautions taken are cumulative, so that BSL4 includes and expands on measures taken for the lesser levels. In some countries such as France and China, these are referred to as the Pathogen or "P" level.

- (U) BSL-1 (P1) – low/no individual and community risk
    - (U) Suitable for work with agents that do not cause disease in healthy humans
    - (U) PPE is considered optional or at institutional discretion.
- (U) BSL-2 (P2) – moderate individual and low community risk
    - (U) Suitable for moderate hazard agents. This includes some human pathogens for which treatments are available (such as most *Escherichia coli* and *Salmonella* strains) but not those that can be reasonably contracted via aerosolization.
    - (U) PPE generally includes laboratory coat, gloves and safety glasses with side shields to guard against splashes.
- (U) BLS-3 (P3) – high individual but low community risk
    - (U) Suitable for with pathogens that can cause serious and potentially lethal disease, such as *Francisella tularensis* (rabbit fever) and HIV.
    - (U) Laboratory design and physical security (access control) is crucial, including negative air pressure and planned work routes
    - (U) PPE is dependent on the agents being researched and may include respiratory isolation (such as the use of as powered air-purifying respirator or PAPR). Items such as double nitrile gloves, laboratory gowns or Tyvek coveralls, and more are common.
- (U) BSL-4 (P4) – high individual and community risk
    - (U) Extreme engineering controls in addition to administrative controls make this facility suitable for work with those pathogens with are easily transmitted via aerosol and for which there is no accepted treatment, such as Ebola and Marburg viruses.
    - (U) Facilities are carefully designed to contain any potential release and staff are equipped with controls to fully isolate the air they breathe from that of the laboratory

(U) **Chimeric viruses** are produced through recombination, by either natural or synthetic means.

(U) A **furin cleavage site** is a common form of a polybasic site that utilizes the host furin enzyme, and is generally associated with viral virulence.

(U) The isoelectric point, often referred to as the **pI**, is the state of equal electric potential.

(U) **Polybasic sites** within proteins are cleavage sites and often required for the maturation and activation of the protein and are often associated with viral virulence and pathogenicity. They are also associated with membrane insertion.

(U) A **pseudovirus** (pseudo-typed virus) is a virus engineered to express a particular Spike (fusion) protein on its surface, typically by cloning a Spike gene into the genome of a standard virus backbone, so any differences among pseudoviruses result primarily from the introduced Spike gene.

(U) **Serial Passage** is the laboratory *or* natural growth of a virus in a particular host cell or cell type, often under selective pressures (heat, drugs, etc.).

(U) **Viral recombination** is the process in which two or more viruses infect the same cell and the two exchange genetic material resulting in anew combination. This can and does happen during natural outbreaks but can also be directed using molecular techniques in a laboratory.

(U) Appendix A: (b) (3) (A)

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(U) WIV investigators and their collaborators were clearly aware of the biosafety risks of their work, writing in 2015, "On the basis of these findings, scientific review panels may deem similar studies building chimeric viruses based on circulating strains too risky to pursue, as increased pathogenicity in mammalian models cannot be excluded. Coupled with restrictions on mouse-adapted strains and the development of monoclonal antibodies using escape mutants, research into CoV emergence and therapeutic efficacy may be severely limited moving forward. Together, these data and restrictions represent a crossroads of GOF (gain-of-function) research concerns; the potential to prepare for and mitigate future outbreaks must be weighed against the risk of creating more dangerous pathogens."[223]

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Figure is (U).

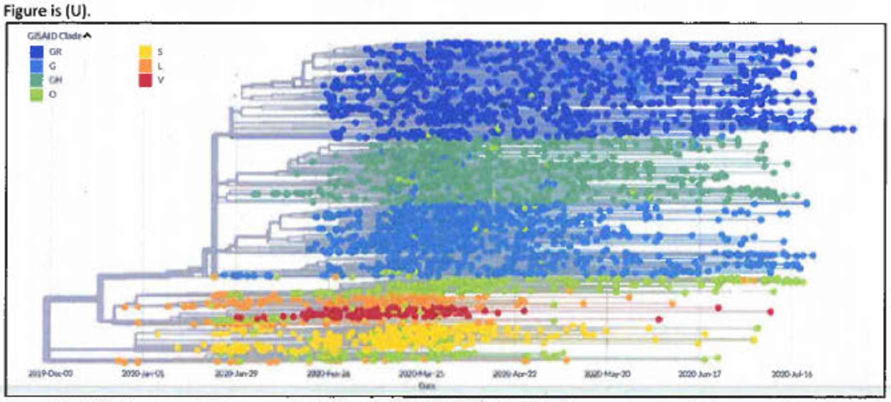

Figure B1: (U) Time-resolved genomic phylogeny of SARS-COV-2 [227] indicates outgrowth from one initial human host. The *x*-axis indicates submission date, not necessarily collection or infection date.

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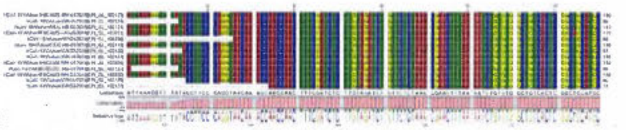
Figure is (U).


(A) 5-prime end

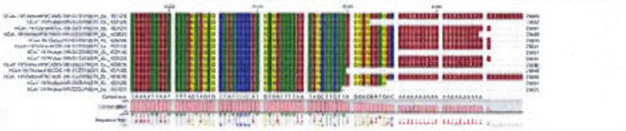
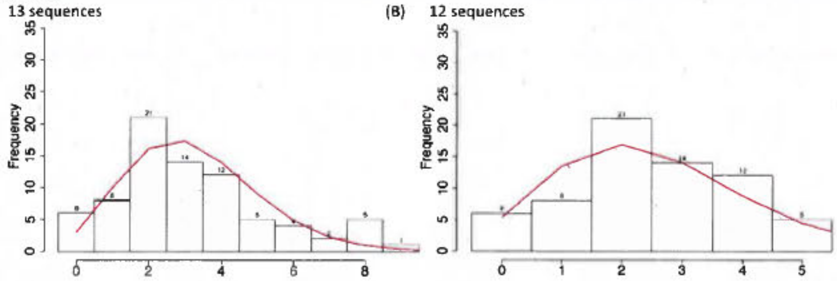

(B) 3-prime end

Figure B2: (U) Low genetic diversity in earliest available sequences consistent with single human introduction. Alignment of (A) 5- and (B) 3-prime ends of earliest SARS-CoV-2 sequences available from GISAID; [228] alignment generated in CLC Genomics Workbench[229]. Gaps (dashes) indicate missing data, due to differences in sequence coverage. Only one point mutation appears here, T to A at position 104 in panel (A). The middle 29,700 nucleotides exhibit similarly low diversity (not shown).

(U) Further, quantitative analysis of sequence diversity among these 13 earliest available SARS-CoV-2 genome sequences corroborates the hypothesis of descent from a single first human infection. A simple model of virus evolution predicts a star phylogeny and Poisson distribution of distances between sequences. [230] The model assumes a single variant established the outbreak, with exponential population growth and random selection. This test is extremely sensitive to presence of multiple founders and non-random mutations. Testing the null hypothesis of a Poisson distribution of sequence Hamming distances gives p=0.05511 (**Figure B3A**), and supports a star phylogeny. One sequence, designated IPBCAMS-WH-02|EPI_ISL_403931, carried a cluster of 6 mutations in the 5-prime end, just outside the region depicted in **Figure B2A**. Holding it out as potential outlier or low-quality sequencing error and repeating the analysis gives p=0.5748 (**Figure B3B**), and strongly supports a star phylogeny with random mutations. This pattern of single introduction is not expected in zoonotic spillover from a wild reservoir to a susceptible host population.

Figure is (U).


(A) 13 sequences

(B) 12 sequences

Figure B3: (U) Sequence diversity data support single human introduction. Hamming distance distribution for (A) 13 and (B) 12 (i.e. excluding outlier IPBCAMS-WH-02|EPI_ISL_403931) earliest SARS-CoV-2 sequences available from GISAID [231] shows quantitative agreement between differences observed (black bars) and predicted by simple model of descent from one founder (red line). The *x*-axis indicates the number of mutations (Hamming distance) between any pair of sequences. Test results give p=0.05511 and p=0.5748, respectively, and do not support rejecting the null hypothesis given by the simple Poisson model.

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- (U) In 2013 a group led by Shi Zheng-Li at WIV was the first to isolate SARS-like coronaviruses from rufous horseshoe bats (*Rhinolophus* sp.), a genus widespread in China and Southeast Asia. [238,239] Most of their funding for unclassified research comes from domestic Chinese sources, however the United States, Germany and Canada have contributed as well (SCOPUS finding). Notably funding from the United States National Institutes of Health was pulled from the EcoHealth Alliance (which included the WIV) after the COVID-19 outbreak (early 2020) and later restored with restrictions. [240,241]
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(U) Appendix D: Concealment, Disinformation and Lies

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Los Alamos
NATIONAL LABORATORY

ANALYSIS SUPPORTING THE INTELLIGENCE COMMUNITY

(b) (3) (A)

(U//FOUO) SARS-CoV-2 Origins

20 January 2022

Prepared by: (b) (6)
(b) (6)
(b) (3) (A)

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Analytics, Intelligence, and Technology Division
Los Alamos National Laboratory

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(U) November 2021 Preface

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(U//FOUO) SARS-CoV-2 Origins

(U) Summary

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(U) Scope Note

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(U) Our information cutoff date is 4 June 2021.

(U) Table of Contents

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(U) During serial passage[a] of viruses, laboratory conditions apply selection pressures that differ from nature, and viruses that undergo serial passage in a laboratory may develop a different set of mutations and phenotypes when compared to viruses that evolve in natural environments, where a large number of simultaneous and constantly changing external pressures exist.

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[a] (U) Serial passage is laboratory growth of a virus—often under selective pressures, such as heat, drugs, or a new host—that may be used to drive adaptations and change characteristics over generations. This can either be performed *in vitro* (cell culture) or *in vivo* (live animal).

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[c] (U) A star phylogeny can be a signature of a single recent founder in a genetic population.

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Figure is (U)

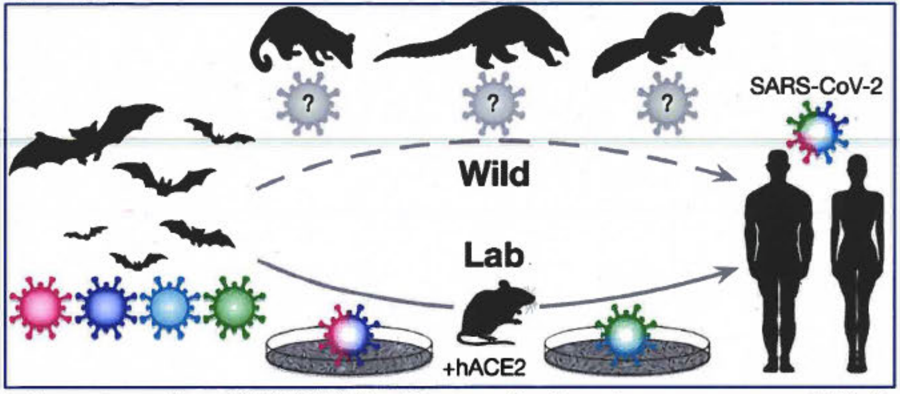

Figure 1 (U) General overview of SARS-CoV-2-origin scenarios, based on open-source publications by WIV authors. Figure 1 is a conceptual representation of notional pathways to infection. It is not intended to represent the time or effort required for any step. Different viral strains are denoted by different colors, and multicolored viruses indicate recombinant viruses. The steps needed for SARS-CoV-2's recombinant laboratory origin (bottom arc) involve mice engineered to express human ACE2 (+hACE2), the SARS-CoV-1 and SARS-CoV-2 cell-surface receptor. The steps needed for a natural origin (top arc) likely required infections in at least two species (from top left: civet, pangolin, mink, or ferret) (b) (3) (A)

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[d] (U) China is the only country that has conducted systematic sampling for CoV in the wild, due to the SARS-CoV-1 outbreak. Thousands of other CoV strains could exist in the wild, but we have no way to accurately estimate the size of the set.

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Table 1 (U) Virus Reproductive Number (R_0) Comparison

Table is (U)

Disease	R_0	Incubation (days)	Proportion with mild symptoms	Proportion with hospitalization	Reference
Pandemic influenza 2009	1.7	2	High	Low	60,61,62,63,64,65
Pandemic Influenza 1918	2.0	Unknown	High	Low	66,67,68
SARS-1	1.7–1.8	2–7	Low	High (70%)	69,70,71,72,73,74,75
SARS-2 (Wuhan variant)	3.5	4–12 or 2–10	High	Low (20%)	76,77,78,79,80,81,82,83,84
Measles	12–18*	8–14	High**	Low (25%)	85,86,87,88,89,90,91,92
*Values have been reported as low as 5 and as high as 60 but this is the most commonly used range of values.					
**Rates of disease severity in measles are highly dependent on the level of vaccination in a given population/outbreak. Values noted are in unvaccinated populations.					

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(U) Plausible Origin Scenarios

(U) The following sections present two of many plausible origin scenarios. We present these only to highlight the various requirements of each type of scenario. (b) (3) (A) (b) (3) (A)

(U) A Natural Origin

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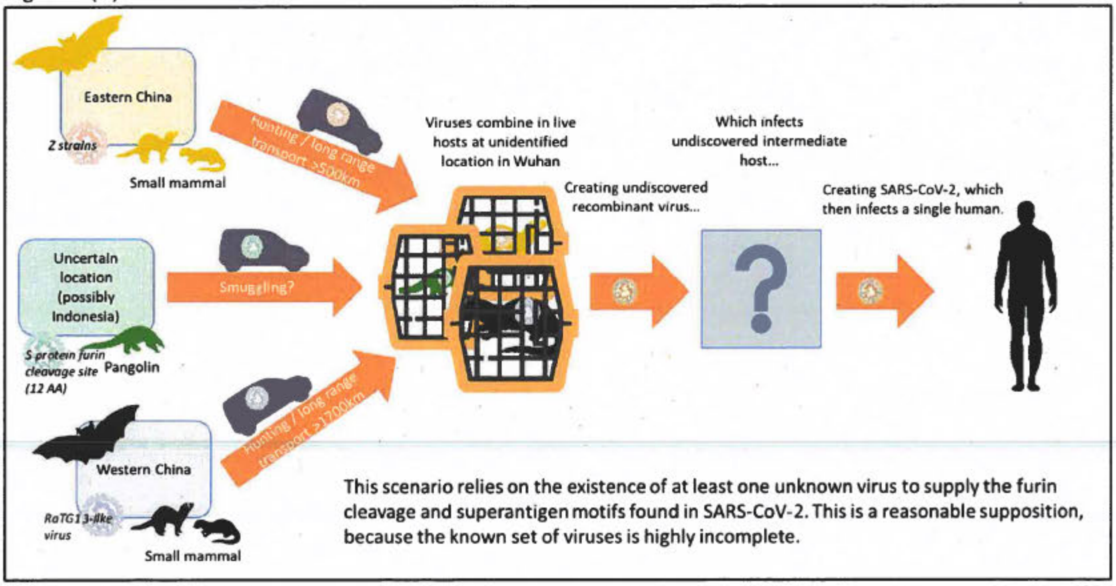

This scenario relies on the existence of at least one unknown virus to supply the furin cleavage and superantigen motifs found in SARS-CoV-2. This is a reasonable supposition, because the known set of viruses is highly incomplete.

Figure 2 (U) Potential natural-origin pathway for SARS-CoV-2, adapted from Hassanin et al.[105] As required by Boni et al.,[106] this scenario includes pangolin CoVs as the source of the SARS-CoV-2 S.[107]

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(U) Hassanin et al.[118] note that for their theory to be validated, a nearly identical (at least 99-percent nucleotide identity) virus must be located in animals sold in wet markets.

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[h] (U) Biosafety Level-3. See table 2 for more on the four biosafety levels.

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Table 2 (U) Comparison of Biosafety Levels

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Biosafety Level	Used for	Common PPE and Engineering Controls	
BSL-1	Non-infectious organisms	Optional/institutional discretion	
BSL-2	• *E. coli O157* • Salmonella	• All waste autoclaved • Class II biosafety cabinet • Gloves	• Lab coat • Negative air pressure • Safety glasses
BSL-3	• Rabbit fever • HIV • SARS-CoV-1 • MERS-CoV	• Double nitrile gloves • Lab gowns • Pass-through autoclave	• Planned work routes • Respirator/PAPR • Tyvek coveralls
BSL-4	• Ebola • Marburg	Pathogen-dependent, but typically all of the above, plus class III biosafety cabinet and extreme engineering and administrative controls	
PPE/restrictions are cumulative (i.e., BSL-4 also adopts all safety precautions used in BSL-1, BSL-2, and BSL-3)			

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(U) Intelligence Gaps

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2. (U) Sanche et al.[271] calculated the basic reproductive number of nCoV/COVID-19 based on other-province disease detections and rail traffic data from Wuhan to other provinces in China. For this calculation of the reproductive number to work, Wuhan has to be the site of initial human-to-human transmission. The data are hard to forge because the connection to CoV is not self-evident prior to publication of the article.
3. (b) (1) (A)
4. (U) GISAID phylogeny with geo-tagged viral sequences indicates a single origin associated with Wuhan-labeled virus sequences. This is corroborated by authors from the WIV.[273,274 275] Not forgeable.
5. (b) (1) (A)
6. (U) SARS-CoV-2's star phylogeny establishes a single emergence event early in the pandemic[277,278,279] (in contrast to #5 above looking for later recombination with the undiscovered co-circulating pre-pandemic SARS-CoV-2's). Star phylogeny has a long history in HIV studies.[280,281] Not forgeable.
7. (b) (1) (A)
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9. (U) Report of the WHO-China Joint Mission on Coronavirus Disease 2019[286] relates that stored serum samples from outside Hubei provinces were tested, and the samples indicated SARS-CoV-2 arrived outside Hubei after Wuhan cases were observed. Unlikely to be forged.
10. (U) Claims of SARS-CoV-2 outside Wuhan before the pandemic started all rely on (a) testing stored serum for anti-SARS-2 antibodies, or (b) PCR "detection" of SARS-CoV-2 in the absence of

sequencing (i.e., no proof or demonstration against contamination of the PCR reaction). Furthermore, none of the serum antibody papers look way back in time to get a “zero cases” to argue against cross-reactivity with other human CoVs such as CoV-OC43.[k] Not forgeable.

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[k] (U) The human betacoronavirus CoV-OC43 is one of seven betacoronaviruses known to infect humans and is one of the viruses responsible for the common cold.

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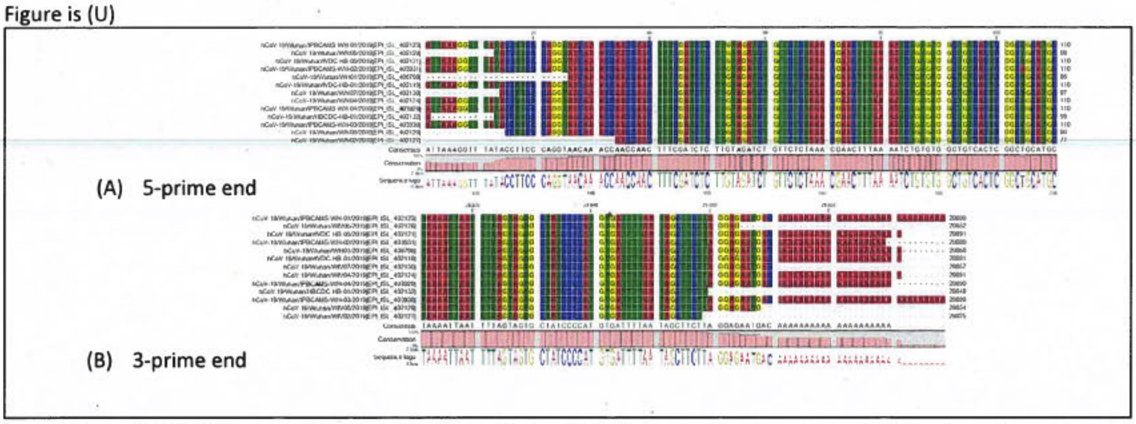

Figure B1 (U) Low genetic diversity in earliest available sequences consistent with single human introduction. Alignment of (A) 5- and (B) 3-prime ends of earliest SARS-CoV-2 sequences available from GISAID;[288] alignment generated in CLC Genetics Workbench.[289] Gaps (dashes) indicate missing data due to differences in sequence coverage. Only one point mutation appears here, T to A at position 104 in panel (A). The middle 29,700 nucleotides exhibit similarly low diversity (not shown).

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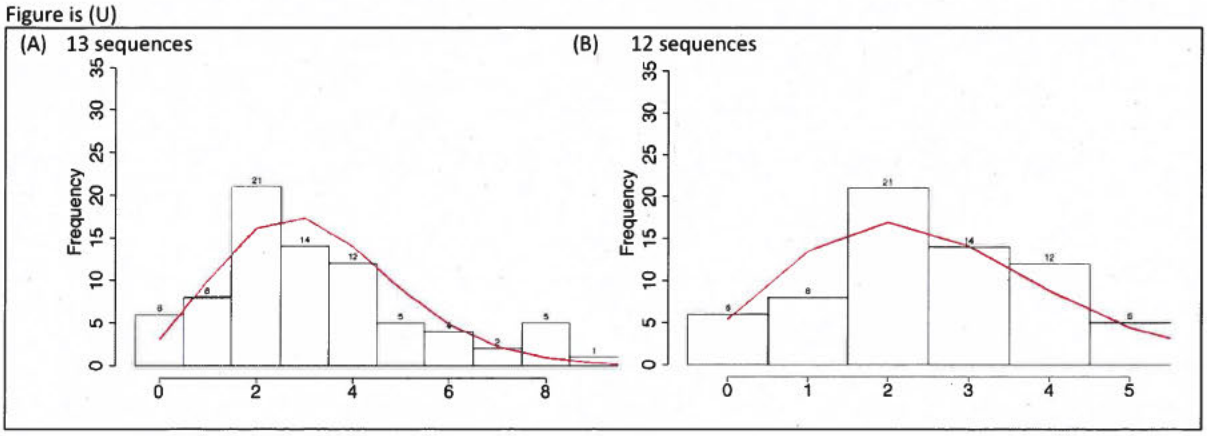

Figure B2 (U) Sequence diversity data support single human introduction. Hamming distance distribution for (A) 13 and (B) 12 (i.e., excluding outlier IPBCAMS-WH-02|EPI_ISL_403931) earliest SARS-CoV-2 sequences available from GISAID[291] shows quantitative agreement between differences observed (black bars) and predicted by a simple model of descent from one founder (red line). The *x*-axis indicates the number of mutations (Hamming distance) between any pair of sequences. Test results give p=0.05511 and p=0.5748, respectively, and do not support rejecting the null hypothesis given by the simple Poisson model.

(U) Appendix C: Concealment, Disinformation, and Lies

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(U) Concealment and Elimination of Evidence

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(U) Explicit Mistruths and Lies

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(U) In 2013, a group led by Shi Zhengli at WIV was the first to isolate SARS-like CoVs from rufous horseshoe bats (*Rhinolophus* sp.), a genus widespread in China and Southeast Asia.[326,327] Most of the funding for public research comes from domestic Chinese sources. However, the United States, Germany, and Canada have contributed as well, according to our search in SCOPUS. Notably, funding from the United States National Institutes of Health was pulled from the EcoHealth Alliance (which included WIV) after the COVID-19 outbreak (early 2020) and later restored with restrictions.[328,329]

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(U) Wuhan Hospital General, (b) (3) (A)

(U) Early COVID-19 cases were documented at a Wuhan hospital less than 3 km from a biological laboratory campus, far away from the southern, warmer regions that one Chinese expert identified as the most likely location of a zoonotic outbreak of a novel CoV.[353]

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U.S. DEPARTMENT OF ENERGY | Intelligence and Counterintelligence

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(U) Lawrence Livermore National Laboratory's Collection Questions and Priorities

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(U) Lawrence Livermore National Laboratory's Collection Questions and Priorities

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Document #2

~~(U//FOUO~~) Comparing COVID-19 Pandemic to Past Infectious Disease Outbreaks

	Ebola (2014-16)	**Nipah (1998-99)**	**HIV-1 (mid-late 70s)**[1][a]	**SARS (2002-04)**	**MERS (2012)**	**COVID-19 (2019-20)**
Location	West Africa	Malaysia[2][3]	Probably the Democratic Republic of Congo[4]	China, Worldwide[5]	Jordan, Saudi Arabia[6]	China, Worldwide
Time of Year	Spring	Fall/Spring	Unspecified[7]	Winter	Spring/Summer	Winter
Initial Exposure Type	Likely forest exposure	Direct contact with pigs[8][9]	Probably butchery and consumption of infected chimpanzees[10]	Likely wet market[11][12]	Close contact with camels[13]	Unknown
Asymptomatic Infection (Y/N)	Probably Not[14]	Yes[15][16]	Unknown	Yes[17]	Yes[18]	Yes[19]
Probable Reservoir Species	Bats[20]	Fruit bat (flying fox)[21]	(U) Probably Chimpanzees[22][23]	Horseshoe bats (Rhinolophus sinicus) in Yunnan Province, China[24]	Dromedary camels[25]	Unknown
Year Reservoir Species Determined	Not Determined[26]	1999[27]	1999[28]	2016[29]	2012[30]	N/A
Probable Intermediate Species	Unknown[31]	pigs[32][33]	N/A	Himalayan palm civets and Raccoon dogs[34]	Bats[35][36]	Unknown
Year Intermediate Species Determined	N/A	1998[37][38]	N/A	2003[39]	2013[40][41]	N/A

*Table is Unclassified

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[a] (U) HIV is believed to have crossed from chimpanzees to humans in the 1920s; however, the current epidemic probably started in the mid-late 1970s

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[1] (b) (3) (A) (b) (3) (A)

[2] (b) (3) (A) (b) (3) (A)

[3] (b) (3) (A) (b) (3) (A)

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[8] (b) (3) (A) (b) (3) (A)

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[14] (b) (3) (A) (b) (3) (A)

[15] (b) (3) (A) (b) (3) (A)

[16] (b) (3) (A) (b) (3) (A)

[17] (b) (3) (A) (b) (3) (A)

[18] (b) (3) (A) (b) (3) (A)

[19] (b) (3) (A)

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[21] (b) (3) (A) (b) (3) (A)

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[23] (b) (3) (A) (b) (3) (A)

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[25] (b) (3) (A) (b) (3) (A)

[26] (b) (3) (A) (b) (3) (A)

[27] (b) (3) (A) (b) (3) (A)

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[28] (b) (3) (A)
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[38] (b) (3) (A)
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[40] (b) (3) (A)
(b) (3) (A)

(b) (3) (A)
(b) (3) (A)

(b) (1) (A) [redacted]

Notes:

- (b) (1) (A) [redacted]
  - (b) (1) (A) [redacted]

- Observations:
  - (b) (1) (A) [redacted]
  - (b) (1) (A) [redacted]
  - (b) (1) (A) [redacted]

Classified By: (b) (6)
Derived From: (b) (3) (A)
Declassify On: 20461231

Triage Level

(b) (1) (A) [redacted]

[redacted]

- (b) (1) (A) [redacted]
    - [redacted]
        - [redacted]
    - [redacted]
        - [redacted]
    - [redacted]
        - [redacted]
    - [redacted]
        - [redacted]
    - [redacted]
        - [redacted]
    - [redacted]
        - [redacted]

(b) (1) (A)

[redacted] [redacted]

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[redacted] [redacted]

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(b) (1) (A) [redacted]

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(b) (1) (A) [redacted]

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[redacted]

[redacted]

[redacted]

Document #4

(U) Summary of the Two Hypotheses on COVID-19 Origins

(b) (1) (A)

(b) (1) (A)

(b) (1) (A)

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[1] (b) (3) (A)

(b) (1) (A)

16 (b) (3) (A)

(b) (1) (A)

(b) (1) (A) [redacted]

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[24] (b) (3) (A) [redacted]

[25] (b) (3) (A)
(b) (3) (A) [redacted]

[26] (b) (3) (A) [redacted]

[27] (b) (3) (A) [redacted]

[28] (b) (3) (A) [redacted]
(b) (3) (A) [redacted]

[29] (b) (3) (A)
(b) (3) (A) [redacted]

[30] (b) (3) (A) [redacted]

[31] (b) (3) (A)
(b) (3) (A) [redacted]

(b) (1) (A)

[36] (b) (3) (A)
(b) (3) (A)

[37] (b) (3) (A)
(b) (3) (A)

[38] (b) (3) (A)
(b) (3) (A)

(b) (1) (A)

(U) IC Assessments of COVID-19 Pandemic Origins

(U) Areas of Broad Agreement:

- (b) (3) (A)

(b) (1) (A)

(b) (1) (A)

(b) (1) (A)

(U) Two Plausible Hypotheses on Initial Human Exposure:

(b) (1) (A)

[redacted]

[redacted]

(U) Chinese Cooperation Key to Understanding Origins

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[1] (b) (3) (A)
(b) (3) (A)

[2] (b) (3) (A)
(b) (3) (A)

[3] (b) (3) (A)
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[4] (b) (3) (A)
(b) (3) (A)

(b) (1) (A)

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

Document #5

U.S. DEPARTMENT OF ENERGY | Intelligence and Counterintelligence

INTELLIGENCE NOTE

25 Aug 2021

~~(TS//~~(b) (1) (A) [redacted] Department of Energy Positions on SARS-CoV-2 Origins: Explanatory Q's and A's

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

- (1) (A) [redacted]
- (1) (A) [redacted]
- [redacted]

---

a (b) (3) (A)
(b) (3) (A)

Classified By: (b) (6)
Derived From: Multiple Sources, CG-IN-2, 3/2019
Declassify On: See source list.

Comments and queries are welcome and may be addressed to
DOE, Office of Intelligence and Counterintelligence
DOE-IN POC: (b) (6)
DOE-IN POC email address: (b) (6)

(b) (1) (A) [redacted]

(b) (1) (A) [redacted] [redacted]

[redacted] [redacted]

[redacted] [redacted]

[redacted]

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(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

[redacted]

[redacted]

This Intelligence Note was coordinated with LLNL, LANL and PNNL.

---

[c] (b) (3) (A)

(b) (3) (A)

(U) Click here to evaluate this product

REFERENCES

(b) (1) (A) [redacted]

[2] (U) | Article (b) (3) (A) (b) (3) (A)

(b) (1) (A) [redacted]

[4] (b) (3) (A) (b) (3) (A)

[5] (b) (3) (A) (b) (3) (A)

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

U.S. DEPARTMENT OF
ENERGY
Intelligence and
Counterintelligence

INTELLIGENCE
NOTE

25 Aug 2021

(TS//(b) (1) (A) [redacted] Department of Energy Positions on SARS-CoV-2 Origins: Explanatory Q's and A's

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

- (b) (1) (A) [redacted]
- (b) (1) (A) [redacted]

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

(b) (3) (A), (b) (6) [redacted] Recommend adding a brief description of the finding, (b) (5)

(b) (1) (A) [redacted]

Deleted (b) (5)

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

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[a] (b) (3) (A)
(b) (3) (A)

Classified By: (b) (6)
Derived From: Multiple Sources, CG-IN-2, 3/2019
Declassify On: See source list.

Comments and queries are welcome and may be addressed to
DOE, Office of Intelligence and Counterintelligence
DOE-IN POC: (b) (6)
DOE-IN POC email address: (b) (6)

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

- (b) (1) (A) [redacted]
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Deleted: (b) (5)

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(b) (1) (A) [redacted]

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(b) (1) (A) [redacted]

[redacted]

This Intelligence Note was coordinated with LLNL, LANL and PNNL.

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c (b) (3) (A)

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(U) Click here to evaluate this product

REFERENCES

(b) (1) (A) [redacted]

[2] (U) (b) (3) (A)
(b) (3) (A)

(b) (1) (A) [redacted]

[4] (b) (3) (A)
(b) (3) (A)

[5] (b) (3) (A)
(b) (3) (A)

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

Document #7

From: (b) (6) DOE HQ USA GOV
To: (b) (6) DOE LANL USA CTR
Subject: FW: ~~(S//NF)~~ Unclassified NICA and Finishing Up Memos
Date: Wednesday, September 15, 2021 2:56:00 PM
Attachments: (b) (1) (A)

Classification: TOP SECRET(b) (1) (A)

Classified By:(b) (6) Technical Advisor
Derived From: CG-IN-2 DOE OC
Declassify On: 20461231

===

Hi (b) (6)

Here's a note from (b) (6) re: path forward…

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Wednesday, September 15, 2021 1:56 PM
To: (b) (6) DOE LLNL USA CTR (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) (b) (6) DOE HQ USA GOV (b) (6) DOE LANL USA CTR (b) (6) DOE PNNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6)
Subject: ~~(S//NF)~~ Unclassified NICA and Finishing Up Memos

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6)
Derived From: CG-IN-2 DOE OC
Declassify On: 20461231

===

Colleagues,

I wanted to reach out to two issues. (b) (5)

(b) (5)

The other issue I wanted to reach out about is finishing up and/or closing out the efforts on the memos you prepared for the 90 day study. (b) (5)

(b) (5)

(b) (5) While public statements by the White House, other policymakers and Congress indicate that analysis related to COVID Origins will remain a priority, (b) (5)

(b) (5)

(b) (5)

(b) (6)
Director, (b) (6)
DOE-IN
Office: (b) (6)
Secure (b) (6)
Govt Cell: (b) (6)

========================== =====
Classification: TOP SECRET(b) (1) (A)

Document #8

From: (b) (6) DOE HQ USA GOV
To: (b) (6) DOE HQ USA GOV; (b) (6) DOE HQ USA GOV
Subject: FW: ~~(S//REL)~~ DRAFT memo on Primer Sets
Date: Monday, July 12, 2021 3:34:56 PM
Attachments: (b) (1) (A)

Classification: (b) (3) (A)

Classified By: (b) (6) Branch Chief
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
===

(b) (1) (A)

From: (b) (6)
Sent: Friday, July 9, 2021 9:01 PM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) (b) (6) DOE PNNL USA CTR (b) (6) H DOE LANL USA CTR (b) (6) DOE LANL USA CTR <Shannon.Johnson@doe.ic.gov>
Cc: (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6)
Subject: RE: ~~(S//REL)~~ DRAFT memo on Primer Sets

Classification: (b) (3) (A)

Classified By: (b) (1) (A)
Derived From: C 08/13/01 DOE OC
Declassify On: 20461231
===

~~(S//REL)~~ This time with a word document that actually has content! Not sure how that happened, sorry!

(b) (6)

From: (b) (6) DOE LLNL USA CTR
Sent: Friday, July 9, 2021 5:59 PM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6)

(b) (6) DOE PNNL USA CTR(b) (6) DOE LANL USA CTR(b) (6) DOE LANL USA CTR
(b) (6)
Cc: (b) (6) DOE LLNL USA CTR(b) (6) DOE LLNL USA CTR(b) (6) DOE LLNL USA CTR
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(b) (6) DOE LLNL USA CTR
(b) (6) DOE LLNL USA CTR (b) (6)
Subject: ~~(S//REL)~~ DRAFT memo on Primer Sets

Classification: (b) (3) (A)

Classified By: (b) (1) (A)
Derived From: C 08/13/01 DOE OC
Declassify On: 20461231
==

Colleagues:

(b) (1) (A) We're looking forward to your critical review, edits and comments.

Best,
(b) (6)
Lawrence Livermore National Laboratory, Z Program
(b) (6)

================ (b) (3) (A) ==============
Classification: (b) (3) (A)

================ (b) (3) (A) ==============
Classification: (b) (3) (A)

================ (b) (3) (A) ==============
Classification: (b) (3) (A)

Document #9

From: (b) (6) DOE HQ USA GOV
To: (b) (6) DOE HQ USA GOV; (b) (6) DOE HQ USA GOV
Subject: FW: (U) Illness
Date: Friday, August 20, 2021 1:57:43 PM
Attachments: Illnesses_PNNL_sourced_Consolidated_Final2.docx

```
Classification: TOP SECRET(b) (1) (A)

Classified By:(b) (6)   Technical Advisor
Derived From:           ces
Declassify On: 20461231
=======================================================
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From (b) (6) DOE PNNL USA CTR (b) (6)
Sent: Friday, July 30, 2021 5:08 PM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV
(b) (6) DOE HQ USA GOV (b) (6)
A DOE HQ USA GOV (b) (6) DOE LLNL USA CTR
(b) (6) DOE LANL USA CTR
(b) (6)
Cc: (b) (6) DOE PNNL USA CTR (b) (6) DOE PNNL USA
CTR (b) (6) DOE PNNL USA CTR (b) (6)
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(b) (6) DOE PNNL USA CTR (b) (6)
(b) (6) DOE PNNL USA CTR (b) (6) DOE PNNL USA CTR
(b) (6)
Subject: (U) Illness

```
Classification: TOP SECRET(b) (1) (A)

(b) (6)     By: (b) (6)
            PNNL
Derived From: Multiple Sources
Declassify On: 20461231
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```

All,

(b) (1) (A)

(b) (1) (A) [redacted]

(U) Please note that published meta-analysis of studies on the prevalence of diarrhea in influenza show that it occurs in 3.7 to 7.3% of cases in adults for influenza A and 5.2 to 13.6% of cases in adults for influenza B, essentially the same as the 10% occurrence for COVID-19. Some individual studies have placed the occurrence in influenza even higher in adults with influenza B (>20%), but we cited the results from a meta-analysis. The occurrence is even higher in children and young adults. See for example the cited review by L Minodier et al.

Best,
(b) (6)

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Classification: TOP SECRET(b) (1) (A) [redacted]

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Classification: TOP SECRET(b) (1) (A) [redacted]
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Document #10

From: (b) (6) DOE HQ USA GOV
To: (b) (6) DOE HQ USA GOV
Subject: FW: ~~(U//FOUO)~~ 90 Day Workplan
Date: Thursday, June 24, 2021 4:03:00 PM
Attachments: POTUS-90Day-Workplan-DOE-IN Final.docx

```
Classification: TOP SECRET(b) (1) (A)

Classified By:(b) (6) Technical Advisor DOE-IN
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
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From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Tuesday, June 22, 2021 5:57 PM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) (b) (6) DOE HQ USA GOV (b) (6)
Cc: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6)
Subject: FW: ~~(U//FOUO)~~ 90 Day Workplan

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Classification: TOP SECRET(b) (1) (A)

Classified By:(b) (6)
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
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Team – updates on the plan are attached (b) (6) nothing here should be a surprise to you based on our earlier conversation).

Thanks (b) (6)

From: (b) (6) DOE HQ USA GOV
Sent: Tuesday, June 22, 2021 5:55 PM
To: (b) (6) DOE LANL USA CTR (b) (6) DOE LANL USA CTR (b) (6) DOE LANL USA CTR (b) (6) DOE LANL USA CTR (b) (6) DOE LANL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) (b) (6) DOE PNNL USA CTR (b) (6) DOE PNNL USA CTR (b) (6) DOE PNNL USA CTR (b) (6) DOE PNNL USA CTR (b) (6)
Cc: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6)

Subject: ~~(U//FOUO)~~ 90 Day Workplan

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Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6)
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
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Team

These are the combined efforts written in short form by a non-bio manager playing in your world.

That said, I think it demonstrates the main focus for (b) (5) and the need to be responsive to each other in real time as well as the HQ's here.

Few reminders:

- (b) (5)
- (b) (5)

We have the LANL BAR here for pushing through ODNI this week, (b) (6) is on point for that.

(b) (6) is on point for (b) (5)

(b) (6) and I will be out the rest of the week, I'll be available Monday.

Please plan on a status update next Wednesday 6/30, time tbd.

Thanks for all you are doing!

(b) (6)

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Classification: TOP SECRET(b) (1) (A)

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Classification: TOP SECRET(b) (1) (A)

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Classification: TOP SECRET(b) (1) (A)
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Document #11

From: (b) (6) DOE HQ USA GOV
To: (b) (6) NL USA CTR (b) (6) (b) (6) DOE PNNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LANL USA CTR; (b) (6) DOE LANL USA CTR; (b) (6) OE LANL USA CTR; (b) (6) DOE PNNL USA CTR; (b) (6) DOE PNNL USA CTR; (b) (6) DOE PNNL USA CTR (b) (6) DOE LLNL USA CTR
Cc: (b) (6) OE LLNL USA CTR; (b) (6) DOE LANL USA CTR
Subject: FW: DOE: SARS-CoV-2 Origins Background Analysis
Date: Wednesday, June 23, 2021 4:34:00 PM
Attachments: DOE-IN-(b) (5)

```
Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Technical Advisor DOE-IN
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
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Dear Colleagues,

We have lift off! Thanks so much for all of your hard work. I know it's been difficult but I think it will pay dividends on many levels. The attached went to ODNI (thanks, (b) (6) and the Word doc is in our editing shop for proofreading and 'polishing.' There will be no rewrites at this point UNLESS (b) (6) and (b) (6) come back with something that is a show stopper (we don't anticipate that.)

Let us know if you have any questions or concerns. (b) (6) and I are here tomorrow and I will be here on Friday.

Regards,

(b) (6) and (b) (6)

From (b) (6) DOE HQ USA GOV (b) (6)
Sent: Wednesday, June 23, 2021 4:10 PM
To: (b) (6)
Cc (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6)
Subject: DOE: SARS-CoV-2 Origins Background Analysis

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Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6)
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
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Hi (b)(6), (b) (3) (A)

(b) (1) (A)

(b) (1) (A) [redacted] While not perfectly polished, this report has been internally coordinated and is in a good state to serve as background and documentation for community deliberations during the 90-day study. The (b) (3) (A) release process for this report has been started, but has not been completed.

We will defer to your guidance on how, when, and where to disseminate this document within the rest of the IC. Let us know if you still have concerns about the contents in the report in its current form and we will address them post haste.

Thanks – (b) (6)

(U)(b) (3) (A)

(b) (3) (A)

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Classification: TOP SECRET(b) (1) (A) [redacted]

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Classification: TOP SECRET(b) (1) (A) [redacted]

Document #12

From: (b) (6) DOE HQ USA GOV
To: (b) (6) DOE NT50 USA GOV
Subject: FW: IC Coord by COB Monday, 20 September: DOE COVID Origins Explanatory Q"s and As
Date: Wednesday, September 15, 2021 1:30:00 PM
Attachments: DOE COVID Origins Q"s and A"s_IC Coord.docx

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Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Technical Advisor
Derived From: CG-IN-2 DOE OC
Declassify On: 20461231
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(b) (6)

Here's the document I mentioned .

(b) (6)

From: (b) (6) DOE HQ USA GOV
Sent: Tuesday, September 14, 2021 4:51 PM
To: (b) (1) (A) ;(b) (6) DOE LLNL USA CTR (b) (6) (b) (6) ;(b) (1) (A)
Cc: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6)
Subject: IC Coord by COB Monday, 20 September: DOE COVID Origins Explanatory Q's and As

```
Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Technical Advisor
```

Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
==

Colleagues:

Please find attached for your coordination the draft Intel Note “Department of Energy Positions on SARS-CoV-2 Origins: Explanatory Q’s and A’s.” We were motivated, in part, to draft this short memo in anticipation of questions we may face from policy makers and The Hill in light of our stated positions in the 90-day COVID Study. (b) (3) (A)

(b) (3) (A)

(b) (3) (A) We do intend to disseminate the final version through IC channels and our EnergyCenter portal.

Please provide any feedback, comments or questions by COB Monday, 20 SEP. Thank you in advance for your consideration.

Best regards,

(b) (6)

(b) (6)
(b) (6)
(b) (6)
☎
☎ (b) (6)

============================
Classification: TOP SECRET(b) (1) (A)

============================
Classification: TOP SECRET(b) (1) (A)

Document #13

From: (b) (6) DOE HQ USA GOV
To: (b) (6) OE HQ USA GOV; (b) (6) DOE HQ USA GOV
Cc: (b) (6) DOE HQ USA GOV
Subject: FW: Preliminary Assessment - FINAL_SOURCED
Date: Wednesday, July 28, 2021 2:18:00 PM
Attachments: Preliminary Assessment - FINAL_SOURCED.docx

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6)
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231

\==

Thanks for sending (b) (6) I know that (b) (6) really needs this and don't see any reason to hold it back from her any longer, so I suggest you or (b) (6) go ahead and send it. (b) (1) (A) [redacted]

Let me know if any of this doesn't make sense, and thanks again.

(b) (6)
DOE-IN
Office: (b) (6)
Secure: (b) (6)
Govt Cell (b) (6)

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Wednesday, July 28, 2021 1:45 PM
To: (b) (6) DOE HQ USA GOV (b) (6)
Subject: Preliminary Assessment - FINAL_SOURCED

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Technical Advisor
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231

\==

Here it is (b) (6) said not to wait for him if we want to send it to (b) (6) and (b) (6)

\============================ ============
Classification: TOP SECRET(b) (1) (A)

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==========================                ============
Classification: TOP SECRET(b) (1) (A)
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Document #14

From: (b) (6) OE HQ USA GOV
To: (b) (6) DOE HQ USA GOV; (b) (6) DOE HQ USA GOV; (b) (6) DOE HQ USA GOV
Cc: (b) (6) DOE HQ USA GOV
Subject: FW: Preliminary Assessment
Date: Friday, July 23, 2021 12:52:08 PM
Attachments: Preliminary Assesment - FINAL.docx

```
Classification: TOP SECRET(b) (1) (A)

Classified By:(b) (6) Branch Chief
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
=======================================================
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Team

(b) (1) (A)

Happy to engage on any questions. Right now, we are talking this through with the NIC and providing short form memo's for incorporation into the NIC product that begins drafting next week. Of note, they've asked for several areas of DOE's work by next Wednesday, so that they can incorporate that info into the body and annexes of their product.

I think the labs have acted in good faith with one another and have put their best foot forward. Separately, (b) (6) and (b) (6) have been truly stellar, in my view.

Thanks, (b) (6)

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Friday, July 23, 2021 11:49 AM
To: (b) (6) DOE HQ USA GOV (b) (6) (b) (6) DOE HQ USA GOV (b) (6); (b) (6) DOE HQ USA GOV (b) (6)
Subject: RE: Preliminary Assessment

```
Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6)
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
=======================================================
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Final draft attached.

--- (U) (b) (6)

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Friday, July 23, 2021 10:33 AM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV
(b) (6) DOE HQ USA GOV (b) (6)
Subject: RE: Preliminary Assessment

Classification: TOP SECRET (b) (1) (A)

Classified By: (b) (6) Technical Advisor
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231

==

Couple of minor things and an answer to (b) (6) question re: sampling logs.

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Friday, July 23, 2021 9:55 AM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV
(b) (6) DOE HQ USA GOV (b) (6)
Subject: RE: Preliminary Assessment

Classification: TOP SECRET (b) (1) (A)

Classified By: (b) (6) Branch Chief
Derived From: 3/01 DOE OC
Declassify On: 20461231

==

Some reaction to the comments with suggestions. I also think we need to put in at least some of the key underlying intel in citations, given the possibility you'll get asked. (b) (1) (A)

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Friday, July 23, 2021 9:40 AM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV
(b) (6) DOE HQ USA GOV (b) (6)
Subject: RE: Preliminary Assessment

Classification: TOP SECRET (b) (1) (A)

Classified By: (b) (6)
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231

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(b) (3) (A)

--- (U) (b) (6)

From: (b) (6) DOE HQ USA GOV
Sent: Friday, July 23, 2021 9:33 AM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV
(b) (6) DOE HQ USA GOV
(b) (6)
Subject: Preliminary Assessment

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6)
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
===

See attached for a word doc copy-pasted from yesterday's slides.
I've added my thoughts as comments / tracked changes.

(U) (b) (6)
(b) (6)
(b) (6)
...

(U) (b) (3) (A)
(b) (3) (A)

=========================== =====
Classification: TOP SECRET(b) (1) (A)

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Classification: TOP SECRET(b) (1) (A)

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Classification: TOP SECRET(b) (1) (A)

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Classification: TOP SECRET(b) (1) (A)

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Classification: TOP SECRET(b) (1) (A)

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Classification: TOP SECRET(b) (1) (A)
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Document #15

(b) (1) (A)

[redacted] [redacted]

- [redacted] [redacted]
    - [redacted] [redacted]
- [redacted] [redacted]
    - [redacted] [redacted]

Classified By: (b) (6)
Derived From: (b) (3) (A)
Declassify On: 20461231

~~(U//FOUO)~~ 90-Day Study Initial Workplan (agreed to on HQ/Lab call on 17 June):

1. ~~(U//FOUO)~~ **LANL.** Objective. (b) (1) (A)
    a. (U) Finish BAR. As part of this, LANL may also attempt to quantify the number of times pandemics have started from a "single human infection" vs. multiple infections in roughly the same time period.
    (b) (1) (A)
2. (b) (1) (A)
3. (b) (1) (A)

(U) Parking lot (no initial approvals).

1. (U//FOUO) (b) (3) (A)
   (b) (3) (A)
2. (U//FOUO) (b) (3) (A)
   (b) (3) (A)

(U) Challenges that have not been resolved.

Classified By: (b) (6)
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231

1. [redacted](b) (1) (A)
2. ~~(U//FOUO)~~ How to present the results of our analysis? We need to all think of this as a group in terms or graphics, text, and/or tabular results to very quickly capture what we think we learned.

Document #16

From: (b) (6) DOE HQ USA GOV
To: (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LANL USA CTR; (b) (6) DOE PNNL USA CTR; (b) (6) DOE LANL USA CTR; (b) (6) DOE PNNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE PNNL USA CTR; (b) (6) DOE PNNL USA CTR; (b) (6) DOE LANL USA CTR; (b) (6) DOE PNNL USA CTR
Cc: (b) (6) DOE HQ USA GOV; (b) (6) DOE HQ USA GOV; (b) (6) DOE HQ USA GOV
Subject: Pre COVID Sync Call Pre Tag Up
Date: Wednesday, January 26, 2022 10:49:00 AM

```
Classification: TOP SECRET(b) (1) (A)

Classified By:(b) (6) Technical Advisor
Derived From: CG-IN-2 DOE OC
Declassify On: 25X1, 20721231
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All,

We thought it would be a good idea to have a quick tag up in preparation for the call on Friday with ODNI—just an informal conversation to see if you all have anything specific you plan to raise at the meeting. (b) (6) mentioned LLNL's gaps paper which could be a good jumping off point for our discussion. It builds on the August 2020 questions and priorities document and the 2021 DOE-IN Q & A paper. I'm proposing a call for **tomorrow at 3 PM EST** in hopes most, if not all, of you will be available. Let us know if that works.

(b) (6)

(b) (6)
Technical Advisor (b) (6)
(b) (6)
☎ (b) (6)
☎ (b) (6)

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==========================                 ===========
Classification: TOP SECRET(b) (1) (A)
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U.S. DEPARTMENT OF
ENERGY
Intelligence and
Counterintelligence

90-Day Study on Covid-19 Origins
Office of Intelligence & Counterintelligence
July 23, 2021

(U) (b) (3) (A)

(b) (3) (A)

[redacted] (b) (1) (A) [redacted]

[redacted] (b) (1) (A) [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Classified By: <Working Document>
Derived From : Multiple Sources
Declassify On: 20461231

U.S. DEPARTMENT OF
ENERGY
Intelligence and
Counterintelligence

90-Day Study on Covid-19 Origins
Office of Intelligence & Counterintelligence
July 23, 2021

(U) (b) (3) (A)

(b) (3) (A)

[redacted] (b) (1) (A) [redacted]

Comment (b) (5), (b)(6), (b) (3) (A)

(b)(5), (b)(6), (b) (3) (A)

[redacted] (b) (1) (A) [redacted]

- [redacted] (b) (1) (A) [redacted]

[redacted]

[redacted]

Commented (b) (6) This is good language (b) (5)
(b) (5)

Commented (b) (6) (b) (5)
(b) (5)

Commented (b) (6) (b) (1) (A) [redacted]

Commented (b) (6) I don't know that this is something I would include in language we provide for the NICA.
(b) (5)

Classified By: <Working Document>
Derived From : Multiple Sources
Declassify On: 20461231

- [redacted] (b) (1) (A) [redacted]

[redacted] [redacted]

Commented (b) (6) (b) (5)
(b) (5)

(b) (1) (A) [redacted]

(b) (5)

Commented (b) (6) (b) (5)
(b) (5)

U.S. DEPARTMENT OF
ENERGY
Intelligence and
Counterintelligence

90-Day Study on Covid-19 Origins
Office of Intelligence & Counterintelligence
July 23, 2021

(U) (b) (3) (A)

(b) (3) (A)

(b) (1) (A) [redacted]

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Classified By: <Working Document>
Derived From : Multiple Sources
Declassify On: 20461231

1. (U) | Article | (b) (3) (A)
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    (b) (3) (A)

TOP SECRET//(b) (1) (A) [redacted]

U.S. DEPARTMENT OF ENERGY | Intelligence and Counterintelligence

90-Day Study on Covid-19 Origins
Office of Intelligence & Counterintelligence
July 23, 2021

[redacted] (b) (1) (A) [redacted]

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- [redacted]
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- [redacted]
- [redacted]

Commented (b) (6) (b) (3) (A)
(b) (3) (A)

(b) (6) This feels like an awkward dangle
(b) (5)

Commented (b) (6) (b) (1) (A) [redacted]

Commented (b) (6) [redacted]: Italics & capitalization?

Classified By: <Working Document>
Derived From : Multiple Sources
Declassify On: 20461231

TOP SECRET(b) (1) (A) [redacted]

U.S. DEPARTMENT OF
ENERGY
Intelligence and
Counterintelligence

90-Day Study on Covid-19 Origins
Office of Intelligence & Counterintelligence
July 23, 2021

(U) (b) (3) (A)

(b) (3) (A)

(b) (1) (A)

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Classified By: <Working Document>
Derived From : Multiple Sources
Declassify On: 20461231

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1. (U) (b) (3) (A) (b) (3) (A)
2. (U) | Article (b) (3) (A) (b) (3) (A)
3. (U) | Article (b) (3) (A) (b) (3) (A)
4. (U) | Article (b) (3) (A) (b) (3) (A)
5. (U) | Article (b) (3) (A) (b) (3) (A)
6. (U) | Article (b) (3) (A) (b) (3) (A)
7. (U) | Article (b) (3) (A) (b) (3) (A)
8. (U) | Article (b) (3) (A) (b) (3) (A)
9. (U) | Article (b) (3) (A) (b) (3) (A)
10. (U) | Article (b) (3) (A) (b) (3) (A)

[11] [(U) | Journal Article (b) (3) (A) (b) (3) (A)

[12] [(U) | Journal Article (b) (3) (A) (b) (3) (A)

(b) (3) (A)

- [redacted]
- [redacted]
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- [redacted]
- [redacted]
- [redacted]

(b) (1) (A) [redacted]

(b) (1) (A) [redacted]

[redacted]

Document #20

From: (b) (6) DOE PNNL USA CTR
To: (b) (6) DOE LLNL USA CTR; (b) (6) DOE HQ USA GOV; (b) (6) DOE HQ USA GOV; (b) (6) (b) (6) DOE HQ USA GOV; (b) (6) DOE LANL USA CTR; (b) (6) DOE LANL USA CTR
Cc: (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE PNNL USA CTR; (b) (6) DOE PNNL USA CTR
Subject: RE: ~~(S//REL)~~ DRAFT memo on Primer Sets
Date: Monday, July 12, 2021 2:41:29 PM
Attachments: (b) (1) (A)

Classification: (b) (3) (A)
(b) (6) By: (b) (6)
PNNL
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
===

Attachment is (b) (3) (A)

Hi (b) (6)

(b) (1) (A) Minor edits are in the attached. Separately, I'd be happy to discuss my comments on the (b) (6) (b) (5)

Best,
(b) (6)

From (b) (6) DOE LLNL USA CTR (b) (6)
Sent: Friday, July 9, 2021 6:01 PM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) Bonheyo George T DOE PNNL USA CTR (b) (6) DOE LANL USA CTR (b) (6) DOE LANL USA CTR (b) (6)
Cc: (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6)
Subject: RE: ~~(S//REL)~~ DRAFT memo on Primer Sets

Classification: (b) (3) (A)

Classified By: (b) (1) (A)
Derived From: C 08/13/01 DOE OC
Declassify On: 20461231
===

~~(S//REL)~~ This time with a word document that actually has content! Not sure how that happened, sorry!

(b) (6)

From: (b) (6) DOE LLNL USA CTR
Sent: Friday, July 9, 2021 5:59 PM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) (b) (6) DOE PNNL USA CTR (b) (6) DOE LANL USA CTR (b) (6) DOE LANL USA CTR (b) (6)
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Subject: ~~(S//REL)~~ DRAFT memo on Primer Sets

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Classification: (b) (3) (A)

Classified By: (b) (1) (A)
Derived From: C          08/13/01 DOE OC
Declassify On: 20461231
=======================================================
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Colleagues:

(b) (1) (A) We're looking forward to your critical review, edits and comments.

Best,
(b) (6)
Lawrence Livermore National Laboratory, Z Program
(b) (6)

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================ (b) (3) (A) =============
Classification: 

================ (b) (3) (A) =============
Classification: 

================ (b) (3) (A) =============
Classification: 
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Document #21

From: (b) (6) DOE LANL USA CTR
To: (b) (6) A DOE LLNL USA CTR; (b) (6) DOE HQ USA GOV; (b) (6) DOE HQ USA GOV; (b) (6) (b) (6) DOE HQ USA GOV; (b) (6) OE PNNL USA CTR; (b) (6) DOE LANL USA CTR
Cc: (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR; (b) (6) DOE LLNL USA CTR
Subject: RE: ~~(S//REL)~~ DRAFT memo on Primer Sets
Date: Monday, July 12, 2021 7:09:26 PM
Attachments: (b) (1) (A)

Classification: (b) (3) (A)

Classified By: (b) (6) LANL PM
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20461231
===

Hi (b) (6)

I had our newly (b) (3) (A) assay expert review this and provide the comments within.

(b) (6)

From (b) (6) DOE LLNL USA CTR (b) (6)
Sent: Friday, July 9, 2021 7:01 PM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV (b) (6) (b) (6) DOE PNNL USA CTR (b) (6) DOE LANL USA CTR (b) (6) OE LANL USA CTR (b) (6)
Cc: (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6) DOE LLNL USA CTR (b) (6)
Subject: RE: ~~(S//REL)~~ DRAFT memo on Primer Sets

Classification: (b) (3) (A)

Classified By: (b) (1) (A)
Derived From: C 08/13/01 DOE OC
Declassify On: 20461231
===

~~(S//REL)~~ This time with a word document that actually has content! Not sure how that happened, sorry!

(b) (6)

From: (b) (6) DOE LLNL USA CTR

Sent: Friday, July 9, 2021 5:59 PM
To: (b) (6) DOE HQ USA GOV (b) (6) DOE HQ USA GOV
(b) (6) DOE HQ USA GOV (b) (6)
(b) (6) DOE PNNL USA CTR (b) (6) DOE LANL
USA CTR (b) (6) DOE LANL USA CTR
(b) (6)
Cc: (b) (6) DOE LLNL USA CTR (b) (6) DOE
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(b) (6) DOE LLNL USA CTR
(b) (6) DOE LLNL USA CTR
(b) (6) DOE LLNL USA CTR (b) (6)
Subject: ~~(S//REL)~~ DRAFT memo on Primer Sets

Classification: (b) (3) (A)

Classified By: (b) (1) (A)
Derived From: C 08/13/01 DOE OC
Declassify On: 20461231

==

Colleagues:

(b) (1) (A) We're looking forward to your critical review, edits and comments.

Best,
(b) (6)
Lawrence Livermore National Laboratory, Z Program
(b) (6)

================ (b) (3) (A) =============
Classification: (b) (3) (A)

================= (b) (3) (A) ============
Classification: (b) (3) (A)

================= (b) (3) (A) ============
Classification: (b) (3) (A)

Document #22

(b) (6) DOE HQ USA CTR

From: (b) (6) DOE HQ USA GOV
Sent: Thursday, January 20, 2022 12:05 PM
To: (b) (6) DOE HQ USA GOV
Cc: (b) (6) DOE HQ USA CTR
Subject: RE: revision language for your approval
Attachments: LANL SARS-CoV-2 Origins 101521 FINAL ADMIN REV slj.docx

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Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Technical Advisor
Derived From: CG-IN-2 DOE OC
Declassify On: 20471231
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(b) (6) has reviewed the document and has offered language re: the highlighted text (b) (5)

(b) (1) (A)

If you are satisfied with the changes let's finalize and re-post. Thanks!

(b) (6)

From (b) (6) DOE HQ USA GOV (b) (6)
Sent: Thursday, January 20, 2022 11:05 AM
To: (b) (6) DOE HQ USA GOV (b) (6)
Cc: (b) (6) DOE HQ USA CTR (b) (6)
Subject: FW: revision language for your approval

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Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Production Officer, (b) (6)
(b) (6)
Derived From: CG-IN-2 DOE OC
Declassify On: 20471231
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Hi (b) (6)

(U) The administrative revision language has been added to the document.

Thanks,

(b) (6)
Office of Intelligence and Counterintelligence
U.S. Department of Energy
(b) (6)

From: (b) (6) DOE HQ USA CTR (b) (6)
Sent: Thursday, January 20, 2022 10:53 AM
To: (b) (6) DOE HQ USA GOV (b) (6)
Subject: FW: revision language for your approval

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Editor
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20471231
==

(b) (6) asked that you add the revision language to this paper and she will then send it back to (b) (6)
Revision language below. Thanks.

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Thursday, January 20, 2022 10:50 AM
To: (b) (6) DOE HQ USA CTR (b) (6)
Subject: RE: revision language for your approval

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Technical Advisor
Derived From: CG-IN-2 DOE OC
Declassify On: 20471231
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Maybe use the word “discrepancies” instead of errors? It’s a little softer. LOL

From: (b) (6) DOE HQ USA CTR (b) (6)
Sent: Thursday, January 20, 2022 10:31 AM
To: (b) (6) DOE HQ USA GOV (b) (6)
Subject: RE: revision language for your approval

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Editor
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20471231
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Thanks!

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Thursday, January 20, 2022 10:31 AM
To: (b) (6) DOE HQ USA CTR (b) (6)
Subject: RE: revision language for your a

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Technical Advisor
Derived From: CG-IN-2 DOE OC
Declassify On: 20471231

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I will come by.

From: (b) (6) DOE HQ USA CTR (b) (6)
Sent: Thursday, January 20, 2022 10:23 AM
To: (b) (6) DOE HQ USA GOV (b) (6)
Subject: revision language for your approval

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Editor
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20471231

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~~(U//FOUO)~~ Administrative Revision for (b) (5) *SARS-CoV-2 Origins*, dated 15 December 2021 and posted 16 December 2021. This revision corrects discrepancies in formatting and references. The revised product contains a new document number (b) (5) Please destroy any physical and digital copies of the previous version.

(b) (6) I have some questions about this paper that I don't know how to resolve. Could you stop by to discuss?

Thanks.

(b) (6)

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Wednesday, January 19, 2022 11:27 AM
To: (b) (6) DOE HQ USA CTR (b) (6)
Subject: RE: edited version of covid paper attached

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Technical Advisor
Derived From: CG-IN-2 DOE OC
Declassify On: 20471231

==

Perfect. Thanks!

From (b) (6) DOE HQ USA CTR (b) (6)
Sent: Wednesday, January 19, 2022 11:25 AM
To: (b) (6) DOE HQ USA GOV (b) (6)
Subject: RE: edited version of covid p

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Editor
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20471231
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We can. I'll draft the revision language and send it to you for review.

From: (b) (6) DOE HQ USA GOV (b) (6)
Sent: Wednesday, January 19, 2022 11:06 AM
To: (b) (6) DOE HQ USA CTR (b) (6)
Subject: RE: edited version of covid paper attached

Classification: TOP SECRET//(b) (1) (A)

Classified By: (b) (6) Technical Advisor
Derived From: CG-IN-2 DOE OC
Declassify On: 20471231
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Sorry. You said that…Can we replace with the corrected version?

From: (b) (6) DOE HQ USA CTR (b) (6)
Sent: Tuesday, January 18, 2022 3:50 PM
To: (b) (6) DOE HQ USA GOV (b) (6)
Subject: edited version of covid paper attached

Classification: TOP SECRET(b) (1) (A)

Classified By: (b) (6) Editor
Derived From: CG-IN-1 08/13/01 DOE OC
Declassify On: 20471231
===

Hi, (b) (6)

I was curious about this paper and opened it and found some mistakes (b) (5)
(b) (5)

(b) (5)

I'm sorry it was posted (b) (5)

Thanks.

(b) (6)

(U (b) (3) (A)

(b) (3) (A)

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Classification: TOP SECRET(b) (1) (A)

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