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Fax

To: Rep. Matt Gaetz

From: Dale J. Richardson

Fax: 1-202-225-3414

Date: Mar 24, 2023 02:56 PM

Organization: U.S. Congress

Subject: **Treason and Human Trafficking In Florida**

Pass this information to Rep. Matt Gaetz. The public will also be receiving this information as well.

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To: Rep. Matt Gaetz
2021 Rayburn House Office Building
Washington, DC 20515
by fax

March 24, 2023

From: Dale J. Richardson
1292 95th Street,
North Battleford, SK S9A 0G2

Re: Human Trafficking Used to Suppress the Reporting of Treason Against the United States, Bioterrorism and the Crime of Aggression in the State of Florida

Dear Rep. Gaetz,

I am writing this letter to make you aware of the human trafficking that Sheriff Chitwood of the Volusia County FL Sheriff's Office is facilitating to suppress the reporting of the distribution of a biological weapon that has been used to interfere with the territorial integrity of the United States. This biological weapon is COVID-19 and it's release was the mechanism by which unconstitutional changes were made to the United States elections and the beneficiary of the distribution of the biological weapon unleashed against the United States was Joe Biden and the Democratic party. Other beneficiaries are also named in the documentation named the Engineering of Bioterrorism, Child Trafficking, Treason and the Crime of Aggression Update II (A Preliminary Report and Analysis of Risk) that has been previously supplied to your office. The aforementioned report is protected by United States copyright and DSR Karis North Consulting Inc. (Karis North) is the author and holder of the copyright.

I am informing you that this information has also demonstrated that the entire pandemic response is a product of treasonous activity and that the vaccination program is also a direct result of criminal activities and that every person in the state of Florida and the United States are a victim of crime. People who have been harmed by the crimes have been made aware of

the numerous crimes that have been concealed to by federal and local agencies within the state of Florida. The Royal Canadian Mounted Police has been in possession of information outlining treason against the United States since the July 3, 2020 and have withheld that information from the United States. I have since provided evidence to the RCMP, FBI, DHS, the ODNI, and the DoJ in addition to other local agencies since that time. People in your jurisdiction have been hurt as a result of these crimes and an unlawful government is in power and evidence of their treason is being suppressed. I can tell you that Karis North has authorized its information to be provided to the public and they will start asking questions. I understand that I am only one person, however, there will be more people asking questions. The requests will not stop until action is taken. My American Indian daughter was forced to flee from Florida because of the failure of Chitwood to uphold the constitution and he has committed overt acts of treason in concealing that evidence and should be treated accordingly and tried in a court of law. I have attached the email that I sent to Staff SGT. Kathy KLASSEN of the Chestermere RCMP detachment regarding the concealment of treason, bioterrorism and other crimes against the United States. Also attached to this letter is the list of U.S.C. title 18 violations sent along with evidence to the Salt Lake City Utah FBI field office earlier this month with proof of delivery.



Dale J. Richardson

Unity

From: Unity
Sent: March 23, 2023 1:08 PM
To: kathy.klassen@rcmp-grc.gc.ca
Cc: Kaysha Richardson; Spectre, Peter (Ron Johnson);
 peters_whistleblower@hsgac.senate.gov; cathy.garcia@mail.house.gov;
 vgirdwood@vcso.us; [REDACTED]; Kdarcy@vcso.us
Subject: Complaints and failure to investigate torture, sexual assault, child trafficking, treason against Canada and The United States
Attachments: THE ENGINEERING OF BIOTERRORISM, CHILD TRAFFICKING, TREASON AND THE CRIME OF AGGRESSION UPDATE II_2.pdf
Importance: High

Good morning Kathy,

I am writing this email to address some concerns. First, I would like to have the contact information of the person that you report to directly. I will refer to section 37 of the RCMP Act listed below:

Responsibilities

- 37 It is the responsibility of every member
- (a) to respect the rights of all persons;
 - (b) to maintain the integrity of the law, law enforcement and the administration of justice;
 - (c) to perform the member's duties promptly, impartially and diligently, in accordance with the law and without abusing the member's authority;
 - (d) to avoid any actual, apparent or potential conflict of interests;
 - (e) to ensure that any improper or unlawful conduct of any member is not concealed or permitted to continue;
 - (f) to be incorruptible, never accepting or seeking special privilege in the performance of the member's duties or otherwise placing the member under any obligation that may prejudice the proper performance of the member's duties;
 - (g) to act at all times in a courteous, respectful and honourable manner; and
 - (h) to maintain the honour of the Force and its principles and purposes.

Now from this section of the RCMP Act, there are several issues arising from your conduct and some members that are under your direct supervision. There are also some issues that have arisen from the attached documentation and the plethora of evidence that I have supplied to your detachment.

First to respect the rights of all persons. I am a man who was born in the city of Winnipeg, in the Province of Manitoba and am a Canadian by birth. I am afforded all rights granted by the charter and I possess by birth the inalienable right to Life, Liberty, and the Pursuit of Happiness. Those rights are conferred to me by God. Yes, that comes from the Declaration of Independence, but those principles apply to all Mankind.

However, I will proceed with this transmittal from a Canadian context as that is where the authority from the RCMP comes from and where the jurisdiction is derived for your employer. Now my rights have not been respected and I have every right to voice my opinion that I think that my rights have not been respected.

I have provided a document that outlines how engineering was used to introduce a critical weakness into the infrastructure of Canada and the United States making both countries prone to biological attack. That is an act preparatory to levying war and that is expressly high treason for the purposes of the criminal code. The attached documentation discusses the section of high treason and describes elements of overt acts witnessed and demonstrated through poor engineering practices that are deliberate. The engineering sciences are rooted in mathematics and physics, and it is impossible for the weaknesses introduced to be accidental. I provided in the appendices of the attached report on how in practice that this critical weakness was being implemented and provided a means by which this critical weakness can be mitigated based on the engineering sciences of which I am trained in, and it is within the scope of my professional practice. It is NOT within the scope of the professional practice of the RCMP as they are police officers responsible for law enforcement.

When I come in to report the critical weakness that I have exposed during the course of my research that was conducted while I was completing my Bachelor of Technology at Memorial University of Newfoundland, it is your obligation to investigate it. Especially when it has affected the city of Chestermere which is in your jurisdiction and is your responsibility to investigate. There are other crimes such as criminal negligence that were also made part of the complaints that are directly tied to what I have uncovered. Deliberately and wilfully exposing people to increased chances of injury and death is not acceptable especially when there is a legislated duty to not do so. When I provided that information to you it is your duty to maintain the integrity of the law, law enforcement and the administration of justice. In this area you have failed.

Having members question my sanity without objectively examining the evidence is an affront to justice and it is nothing short of reprehensible conduct. Your detachment has been provided information from other professionals in various fields that has demonstrated that there is a systematic introduction of known hazards into workplaces and into the pandemic response that increases the chance of injury and death, and that conduct is expressly prohibited by the criminal code of Canada which it is your duty and obligation as a member of the RCMP to enforce. What I have observed is nothing short of a dereliction of duty from some members of your detachment. Since you are the commanding officer of the Chestermere detachment, this is a direct reflection on your leadership.

Next when I make a complaint about members under your direct supervision, it is a conflict of interest for you to discuss with anyone the nature of complaints that I made to the detachment or to make any determination on said complaints. No reasonable person would believe that you would be objective in that manner, and it should have been immediately passed along for someone outside of your detachment for review. Attempting to justify the complaint of the members to my sister who is a third party to me is an abuse of power, and it should have never been done. I will make you aware that a recording of the conversation that I am referring to exists and it will be made available to the public on both sides of the border. I will ensure that people see the kind of treatment that one will receive for doing what is right and let them judge for themselves who is telling the truth.

Next it is apparent that section 37c of the RCMP act was also breached. There was no prompt and diligent performance of duties by some of the members under your command and you have sanctioned this conduct. The very fact that I have not been given a file number from GIS member as I was advised by you that I would, is a clear demonstration of that. When someone is alleging a crime of the magnitude of treason, there is only one reasonable response. To investigate the claims. When the treasonable conduct is based on engineering sciences some tangible scientific evidence must be presented to refute the reasons for not investigating the claims. From a risk assessment perspective, the risk is far too great to not examine the complaint because the consequences are unacceptable and would result in the demise of Canada. Treason is the worst crime that can be committed against a country.

Section d of the RCMP act has also been breached as there is a plethora of conflicts of interests that have been ignored. Since there has been a number of conflicts of interest and that your detachment has been provided evidence that CST. Burton ROY lied based on the freedom of information requests that were provided to your detachment as part of evidence packages for both Chestermere and other detachments and that there was a warrant issued for a resist arrest on July 22, 2020, for an arrest that took place on July 23, 2020, there is a clear concealment of crimes by members.

Kaysha Richardson, my eldest daughter and I were kidnapped on July 23, 2020, and then taken to separate facilities owned and operated by the Saskatchewan Health Authority and tortured. This was done at the instigation of numerous members of the Battlefords detachment. There is no defense clause in 269.1(4) of the criminal code. Any person who conceals the torture is a conspirator or an accessory after the fact and that includes members in your detachment. No member in your detachment has any authority to conceal any torture by any member under any jurisdiction in Canada or elsewhere. The RCMP act also prohibits it as well as section 12 of the charter and the convention against torture. Questioning my sanity is exactly what ROY did and it was demonstrated by the audio and video of the recording that he lied and inserted factually false information into the notes to make me appear like I was mentally unsound into the notes. When a wellness check is conducted by the AHS after criminal complaints are made based on engineering sciences without any examination or investigation and providing evidence to the contrary is intimidation and following a very similar set of circumstances as what has happened in Saskatchewan. Section e of the act is violated and is currently being violated as we speak because unlawful actions by members are being permitted to continue. There is no distinction of location of where the member is located from a plain reading of section 37(e) of the RCMP Act.

By the virtue of the aforementioned section 37(e) and all of the former sections mentioned in this email section 37(f) is also demonstrably broken. Concealing crime is in no way honourable and section 37(g) is now broken as well. Since concealing criminal conduct of members is not honourable, nor is any of the other issues mentioned in this transmittal, every responsibility outlined in section 37 of the RCMP Act has been violated under your watch and it is your responsibility as the detachment commander. Leadership comes with responsibility. I have a right to question your leadership and actions. In fact, it is my duty as a Canadian to question anything that affects my fellow countrymen and women. This country is a democracy, and it is We the People that rule this land, an you work for We the People and not just the Crown, for the Crown only rules with the consent of the governed.

I want the contact information for your direct supervisor, and I have a complete expectation that the crimes that I have made complaints are investigated in accordance with the criminal code, the RCMP Act, the Charter and the Convention Against Torture. Referring torture and treason related complaints to the Civilian Review and Complaints Commission is facilitating torture and treason as those are crimes that must be investigated objectively and swiftly. Evidence has not yet been filed, and information has been held by numerous agencies in Canada and the United States and this type of conduct has been noted in numerous jurisdictions. It is impossible that this type of conduct has been demonstrated in multiple jurisdictions in Canada and the United States spanning a space of over three years. One commonality is the presence of the attached engineering report or one of its previous iterations.

I am asking for the file number for GIS associated with my complaint made about CST A. SMITH. I also want you to reach out to the Volusia County Sheriff's Office and get the statement, the body cam footage and evidence provided by my daughter Kaysha Richardson to them for the torture complaints and other complaints that was submitted to them. This is not a request; you are obligated by the criminal code, RCMP Act and the Convention against Torture to do this. There are witnesses to the torture that have not yet been interview and this too has permitted the persons who have committed acts of torture to walk free in the jurisdiction and concealed criminal actions of torture. This conduct will also be reported to members of the United States Congress that I have been in contact with to demonstrate the national security risk to the United States that is taking place here in Canada. This email and its contents will be widely distributed to the people and to the churches in Canada and the United States. This is enough. Do what is right by the people of this country that you swore an oath to protect.

The Volusia County Sheriffs Office has been cc'd in the email for you to reach out and contact them. I have also provided the email address for Lisa Aulerich the RN from the United States who has provided a plethora of research and needs to make a statement for a number of the complaints and is a witness as well and needs to be provided a file number so that she can make her statement at her local law enforcement agency and to submit her evidence. Lisa's email is [REDACTED]. I expect that she will be contacted. Sexual assault and human trafficking are the highest priority crimes and Kathy as a woman I would imagine that you would not want another woman to suffer as a victim of numerous rapes that have not been investigated due to the present refusal of the Volusia County Sheriff's Office to hand over evidence and the interview notes and body cam footage for the purposes of the complaints. My daughter Kaysha is cc'd in the email and has provided evidence and was interviewed regarding the torture. Under the convention

against torture, you have an obligation to act. If you refuse to act in accordance with the law, I will pick up the phone and make a complaint. It is a crime to conceal torture. I am asking for an impartial investigation. That is all. I have a right to complain and have my evidence considered pursuant to article 13 of the convention against torture as does Kaysha and my four-year-old daughter Karis who has been punished unlawfully and taken as a result of torture and that is an aggravated assault and by virtue of the criminal code subjected to human trafficking. Torture is not a lawful means of obtaining a child regardless of the consent of a parent.

My house has been stolen with the participation of numerous members of the RCMP and that crime cannot be concealed. This evidence is also in the possession of your detachment. Also in the possession of your detachment is evidence of the distribution of a biological weapon that was used to interfere with the territorial integrity of Canada and the United States. Concealment of that evidence is a violation of numerous treaties, and it is an extremely hostile act against the United States of America. It is an act that carries the consequence of a military response. I am very sure that the People of the United States would not view these kinds of actions as favourable. Their constitution respects their inalienable God-given rights to Life, Liberty and the pursuit of Happiness. This biological attack was the mechanism by which widespread election fraud was perpetrated. This is problematic. As you may already know, I will not stop using every lawful means at my disposal until the matters set to your detachment are objectively investigated and directed to the proper agencies for impartial investigation. As you may know my sister Astra did work for the RCMP and has knowledge of this. I implore you to do what is set out in the RCMP act, and act with honour and dignity. The ball is in your court. Thank you for your time and consideration.

Kind regards,

Dale J. Richardson

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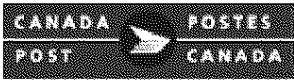
Delivery standard: Mar. 14

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Date	Time	Location	Progress	Post office
Mar. 13	1:42 pm	84116,	Item successfully delivered	
Mar. 11	10:15 am	84116,	Item out for Delivery	
Mar. 11	10:04 am	84116,	Item has arrived at the delivery office in the destination country	
Mar. 11	10:34 am	84116,	Verifying recipient's address; Possible delay	
Mar. 10	7:56 am		Customs has released item to post office	
Mar. 9	5:32 pm	USLAXA,	International shipment has arrived in a foreign country	
Mar. 9	3:33 pm	USLAXA,	Item presented to customs	
Mar. 9	3:33 pm	USLAXA,	Item has arrived in foreign country	
Mar. 8	1:30 am	RICHMOND, BC	International item being forwarded to destination country	
Mar. 7	11:38 pm	RICHMOND, BC	Item processed	
Mar. 7	6:24 pm	RICHMOND, BC	Item arrived	
Mar. 6	6:51 pm	CALGARY, AB	Item processed	
Mar. 6	4:03 pm	CHESTERMERE, AB	Item accepted at the Post Office	
Mar. 6			Electronic information submitted by shipper	

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Signature Required



To Rep. Matt Gaetz

March 24, 2023

Date: 2023/03/13

Dear Sir or Madam

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Signatory Name

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Signature

Yours sincerely,

Customer Relationship Network

1-888-550-6333.

(From outside Canada 1 416 979-3033)

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From: Dale J. Richardson, Director
DSR Karis North Consulting Inc.
8 The Green, Ste A
Dover, DE 19901

March 6, 2023

To: Federal Bureau of Investigation
5425 West Amelia Earhart Drive
Salt Lake City, UT 84116
saltlakecity.fbi.gov
(801) 579-1400

Re: Authorization to start criminal complaints based on research

Dear Federal Agent,

DSR Karis North Consulting Inc., a Delaware Corporation has attached the report "THE ENGINEERING OF BIOTERRORISM, CHILD TRAFFICKING, TREASON AND THE CRIME OF AGGRESSION UPDATE II" to the Federal Bureau of Investigation Field Office In Salt Lake City Utah for the purposes of reporting the criminal activity contained therein or any other unlawful activity in the United States of America, Canada or any other location as needed. Permission is hereby granted for the aforementioned reasons and such actions necessary for reporting crimes outlined in Executive Order on Imposing Certain Sanctions in the Event of Foreign Interference in a United States Election issued September 12, 2018.

Evidence will be pulled from the following files in the jurisdictions mentioned: Chestermere RCMP file# #2020-922562,. Volusia County FL Sheriff file #23-1588 and 23-1430, 2022-1782862, 2023-1169539 forgery, 2023-147546, 2023-179141 human trafficking (RCMP Battleford), 2023-70016 Sexual

Assault(RCMP Turner Valley, AB), 2023-111338 human trafficking (RCMP Turner Valley, AB), 23-1588 culpable negligence (covid related), 23-1430 Sexual Assault/human trafficking, 23-1430 Culpable negligence (Volusia County Sheriff, Florida), #223230811 Criminal Harassment/ Human Trafficking agency Assist (Austin Texas Police Department), Calgary Police Service File #22453817 and #22453637, RCMP file 20221414593, 2023-72400 (torture, Chestermere RCMP), 2023-59269, 2023-59284 (Criminal Negligence, Treason Chestermere RCMP), 2022-1715002 (RCMP Alberta), North Charleston Police Department #2022023800 Aggravated Domestic Assault with a Firearm, 2022023857 intimidation of a witness. This can be found from the department) and #23-0011116 Sexual Assault (Austin Police Department). San Antonio PD #22273597. RCMP HQ in Ottawa has been advised to oversee the torture investigations in North Battleford because the torture investigation has been referred to the jurisdiction that tortured the victims. Ottawa has also been advised to overlook criminal intimidation of a witness complaint (RCMP file # 2023-272542) arising from the criminal negligence and treason complaints arising out of the aforementioned research named in this documentation.

An agency assist file was requested in Canada to the RCMP to provide evidence to the FBI and Office of the Director of National Intelligence. The transmission requesting the agency assist is attached to this documentation. The list of US Complaints is attached to this letter.



Dale J. Richardson
Director
DSR Karis North Consulting Inc.

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1. 18 U.S. Code § 371 - Conspiracy to commit offense or to defraud United States

If two or more persons conspire either to commit any offense against the United States, or to defraud the United States, or any agency thereof in any manner or for any purpose, and one or more of such persons do any act to effect the object of the conspiracy, each shall be fined under this title or imprisoned not more than five years, or both.

If, however, the offense, the commission of which is the object of the conspiracy, is a misdemeanor only, the punishment for such conspiracy shall not exceed the maximum punishment provided for such misdemeanor.

2. 18 U.S. Code § 373 - Solicitation to commit a crime of violence

(a)Whoever, with intent that another person engage in conduct constituting a felony that has as an element the use, attempted use, or threatened use of physical force against property or against the person of another in violation of the laws of the United States, and under circumstances strongly corroborative of that intent, solicits, commands, induces, or otherwise endeavors to persuade such other person to engage in such conduct, shall be imprisoned not more than one-half the maximum term of imprisonment or (notwithstanding section 3571) fined not more than one-half of the maximum fine prescribed for the punishment of the crime solicited, or both; or if the crime solicited is punishable by life imprisonment or death, shall be imprisoned for not more than twenty years.

(b)It is an affirmative defense to a prosecution under this section that, under circumstances manifesting a voluntary and complete renunciation of his criminal intent, the defendant prevented the commission of the crime solicited. A renunciation is not “voluntary and complete” if it is motivated in whole or in part by a decision to postpone the commission of the crime until another time or to substitute another victim or another but similar objective. If the defendant raises the affirmative defense at trial, the defendant has the burden of proving the defense by a preponderance of the evidence.

(c)It is not a defense to a prosecution under this section that the person solicited could not be convicted of the crime because he lacked the state of mind required for its commission, because he was incompetent or irresponsible, or because he is immune from prosecution or is not subject to prosecution.

3. 18 U.S. Code § 1201 - Kidnapping

(a) Whoever unlawfully seizes, confines, inveigles, decoys, kidnaps, abducts, or carries away and holds for ransom or reward or otherwise any person, except in the case of a minor by the parent thereof, when—

(1) the person is willfully transported in interstate or foreign commerce, regardless of whether the person was alive when transported across a State boundary, or the offender travels in interstate or foreign commerce or uses the mail or any means, facility, or instrumentality of interstate or foreign commerce in committing or in furtherance of the commission of the offense;

(2) any such act against the person is done within the special maritime and territorial jurisdiction of the United States;

(3) any such act against the person is done within the special aircraft jurisdiction of the United States as defined in section 46501 of title 49;

(4) the person is a foreign official, an internationally protected person, or an official guest as those terms are defined in section 1116(b) of this title; or

(5) the person is among those officers and employees described in section 1114 of this title and any such act against the person is done while the person is engaged in, or on account of, the performance of official duties,

shall be punished by imprisonment for any term of years or for life and, if the death of any person results, shall be punished by death or life imprisonment.

(b) With respect to subsection (a)(1), above, the failure to release the victim within twenty-four hours after he shall have been unlawfully seized, confined, inveigled, decoyed, kidnapped, abducted, or carried away shall create a rebuttable presumption that such person has been transported in interstate or foreign commerce. Notwithstanding the preceding sentence, the fact that the presumption under this section has not yet taken effect does not preclude a Federal investigation of a possible violation of this section before the 24-hour period has ended.

(c) If two or more persons conspire to violate this section and one or more of such persons do any overt act to effect the object of the conspiracy, each shall be punished by imprisonment for any term of years or for life.

(d) Whoever attempts to violate subsection (a) shall be punished by imprisonment for not more than twenty years.

(e) If the victim of an offense under subsection (a) is an internationally protected person outside the United States, the United States may exercise jurisdiction over the offense if (1) the victim is a representative, officer, employee, or agent of the United States, (2) an offender is a national of the United States, or (3) an offender is afterwards found in the United States. As used in this subsection, the United States includes all areas under the jurisdiction of the United States including any of the places within the provisions of sections 5 and 7 of this title and section 46501(2) of title 49. For purposes of this subsection, the term “national of the United States” has

the meaning prescribed in section 101(a)(22) of the Immigration and Nationality Act (8 U.S.C. 1101(a)(22)).

(f) In the course of enforcement of subsection (a)(4) and any other sections prohibiting a conspiracy or attempt to violate subsection (a)(4), the Attorney General may request assistance from any Federal, State, or local agency, including the Army, Navy, and Air Force, any statute, rule, or regulation to the contrary notwithstanding.

(g) Special Rule for Certain Offenses Involving Children.—

(1) To whom applicable.—If—

(A) the victim of an offense under this section has not attained the age of eighteen years; and

(B) the offender—

(i) has attained such age; and

(ii) is not—

(I) a parent;

(II) a grandparent;

(III) a brother;

(IV) a sister;

(V) an aunt;

(VI) an uncle; or

(VII) an individual having legal custody of the victim;

the sentence under this section for such offense shall include imprisonment for not less than 20 years.

[(2) Repealed. Pub. L. 108–21, title I, § 104(b), Apr. 30, 2003, 117 Stat. 653.]

(h) As used in this section, the term “parent” does not include a person whose parental rights with respect to the victim of an offense under this section have been terminated by a final court order.

4. 18 U.S. Code § 1203 - Hostage taking

(a) Except as provided in subsection (b) of this section, whoever, whether inside or outside the United States, seizes or detains and threatens to kill, to injure, or to continue to detain another person in order to compel a third person or a governmental organization to do or abstain from doing any act as an explicit or implicit condition for the release of the person detained, or attempts or conspires to do so, shall be punished by imprisonment for any term of years or for life and, if the death of any person results, shall be punished by death or life imprisonment.

(b)

(1) It is not an offense under this section if the conduct required for the offense occurred outside the United States unless—

(A) the offender or the person seized or detained is a national of the United States;

(B) the offender is found in the United States; or

(C) the governmental organization sought to be compelled is the Government of the United States.

(2) It is not an offense under this section if the conduct required for the offense occurred inside the United States, each alleged offender and each person seized or detained are nationals of the United States, and each alleged offender is found in the United States, unless the governmental organization sought to be compelled is the Government of the United States.

(c) As used in this section, the term “national of the United States” has the meaning given such term in section 101(a)(22) of the Immigration and Nationality Act (8 U.S.C. 1101(a)(22)).

5. Terrorism Definition 18 U.S.C. § 2331

(5) the term “domestic terrorism” means activities that—

(A) involve acts dangerous to human life that are a violation of the criminal laws of the United States or of any State;

(B) appear to be intended—

(i) to intimidate or coerce a civilian population;

(ii) to influence the policy of a government by intimidation or coercion; or

(iii) to affect the conduct of a government by mass destruction, assassination,

or kidnapping; and

(C) occur primarily within the territorial jurisdiction of the United States; and

5.1. 18 U.S. Code § 2332 - Criminal penalties

(a) Homicide.—Whoever kills a national of the United States, while such national is outside the United States, shall—

(1) if the killing is murder (as defined in section 1111(a)), be fined under this title, punished by death or imprisonment for any term of years or for life, or both;

(2) if the killing is a voluntary manslaughter as defined in section 1112(a) of this title, be fined under this title or imprisoned not more than ten years, or both; and

(3) if the killing is an involuntary manslaughter as defined in section 1112(a) of this title, be fined under this title or imprisoned not more than three years, or both.

(b) Attempt or Conspiracy With Respect to Homicide.—Whoever outside the United States attempts to kill, or engages in a conspiracy to kill, a national of the United States shall—

(1) in the case of an attempt to commit a killing that is a murder as defined in this chapter, be fined under this title or imprisoned not more than 20 years, or both; and

(2) in the case of a conspiracy by two or more persons to commit a killing that is a murder as defined in section 1111(a) of this title, if one or more of such persons do any overt act to effect the object of the conspiracy, be fined under this title or imprisoned for any term of years or for life, or both so fined and so imprisoned.

(c)Other Conduct.—Whoever outside the United States engages in physical violence—

(1)with intent to cause serious bodily injury to a national of the United States; or

(2)with the result that serious bodily injury is caused to a national of the United States;

shall be fined under this title or imprisoned not more than ten years, or both.

(d)Limitation on Prosecution.—

No prosecution for any offense described in this section shall be undertaken by the United States except on written certification of the Attorney General or the highest ranking subordinate of the Attorney General with responsibility for criminal prosecutions that, in the judgment of the certifying official, such offense was intended to coerce, intimidate, or retaliate against a government or a civilian population.

6. 18 U.S. Code § 175 - Prohibitions with respect to biological weapons

(a)In General.—

Whoever knowingly develops, produces, stockpiles, transfers, acquires, retains, or possesses any biological agent, toxin, or delivery system for use as a weapon, or knowingly assists a foreign state or any organization to do so, or attempts, threatens, or conspires to do the same, shall be fined under this title or imprisoned for life or any term of years, or both. There is extraterritorial Federal jurisdiction over an offense under this section committed by or against a national of the United States.

(b)Additional Offense.—

Whoever knowingly possesses any biological agent, toxin, or delivery system of a type or in a quantity that, under the circumstances, is not reasonably justified by a prophylactic, protective, bona fide research, or other peaceful purpose, shall be fined under this title, imprisoned not more than 10 years, or both. In this subsection, the terms “biological agent” and “toxin” do not encompass any biological agent or toxin that is in its naturally occurring environment, if the biological agent or toxin has not been cultivated, collected, or otherwise extracted from its natural source.

(c)Definition.—

For purposes of this section, the term “for use as a weapon” includes the development, production, transfer, acquisition, retention, or possession of any biological agent, toxin, or delivery system for other than prophylactic, protective, bona fide research, or other peaceful purposes.

- 6.1. 18 U.S. Code § 175a - Requests for military assistance to enforce prohibition in certain emergencies

The Attorney General may request the Secretary of Defense to provide assistance under section 382 of title 10 [1] in support of Department of Justice activities relating to the enforcement of section 175 of this title in an emergency situation involving a biological weapon of mass destruction. The authority to make such a request may be exercised by another official of the Department of Justice in accordance with section 382(f)(2) of title 10.[1]

6.1.1. Subtopic

- 6.2. 18 U.S. Code § 175c - Variola virus

(a) Unlawful Conduct.—

(1) In general.—

Except as provided in paragraph (2), it shall be unlawful for any person to knowingly produce, engineer, synthesize, acquire, transfer directly or indirectly, receive, possess, import, export, or use, or possess and threaten to use, variola virus.

(2) Exception.—

This subsection does not apply to conduct by, or under the authority of, the Secretary of Health and Human Services.

(b) Jurisdiction.—Conduct prohibited by subsection (a) is within the jurisdiction of the United States if—

(1) the offense occurs in or affects interstate or foreign commerce;

(2) the offense occurs outside of the United States and is committed by a national of the United States;

(3) the offense is committed against a national of the United States while the national is outside the United States;

(4) the offense is committed against any property that is owned, leased, or used by the United States or by any department or agency of the United States, whether the property is within or outside the United States; or

(5) an offender aids or abets any person over whom jurisdiction exists under this subsection in committing an offense under this section or conspires with any person over whom jurisdiction exists under this subsection to commit an offense under this section.

(c) Criminal Penalties.—

(1) In general.—

Any person who violates, or attempts or conspires to violate, subsection (a) shall be fined not more than \$2,000,000 and shall be sentenced to a term of imprisonment not less than 25 years or to imprisonment for life.

(2) Other circumstances.—

Any person who, in the course of a violation of subsection (a), uses, attempts or conspires to use, or possesses and threatens to use, any item or items

described in subsection (a), shall be fined not more than \$2,000,000 and imprisoned for not less than 30 years or imprisoned for life.

(3) Special circumstances.—

If the death of another results from a person's violation of subsection (a), the person shall be fined not more than \$2,000,000 and punished by imprisonment for life.

(d) Definition.—

As used in this section, the term “variola virus” means a virus that can cause human smallpox or any derivative of the variola major virus that contains more than 85 percent of the gene sequence of the variola major virus or the variola minor virus.

6.3. 18 U.S. Code § 176 - Seizure, forfeiture, and destruction

(a) In General.—

(1) Except as provided in paragraph (2), the Attorney General may request the issuance, in the same manner as provided for a search warrant, of a warrant authorizing the seizure of any biological agent, toxin, or delivery system that—

- (A) pertains to conduct prohibited under section 175 of this title; or
- (B) is of a type or in a quantity that under the circumstances has no apparent justification for prophylactic, protective, or other peaceful purposes.

(2) In exigent circumstances, seizure and destruction of any biological agent, toxin, or delivery system described in subparagraphs (A) and (B) of paragraph (1) may be made upon probable cause without the necessity for a warrant.

(b) Procedure.—

Property seized pursuant to subsection (a) shall be forfeited to the United States after notice to potential claimants and an opportunity for a hearing. At such hearing, the Government shall bear the burden of persuasion by a preponderance of the evidence. Except as inconsistent herewith, the same procedures and provisions of law relating to a forfeiture under the customs laws shall extend to a seizure or forfeiture under this section. The Attorney General may provide for the destruction or other appropriate disposition of any biological agent, toxin, or delivery system seized and forfeited pursuant to this section.

(c) Affirmative Defense.—It is an affirmative defense against a forfeiture under subsection (a)(1)(B) of this section that—

- (1) such biological agent, toxin, or delivery system is for a prophylactic, protective, or other peaceful purpose; and
- (2) such biological agent, toxin, or delivery system, is of a type and quantity reasonable for that purpose.

6.4. 18 U.S. Code § 177 - Injunctions

(a) In General.—The United States may obtain in a civil action an injunction against—

(1)the conduct prohibited under section 175 of this title;
 (2)the preparation, solicitation, attempt, threat, or conspiracy to engage in conduct prohibited under section 175 of this title; or
 (3)the development, production, stockpiling, transferring, acquisition, retention, or possession, or the attempted development, production, stockpiling, transferring, acquisition, retention, or possession of any biological agent, toxin, or delivery system of a type or in a quantity that under the circumstances has no apparent justification for prophylactic, protective, or other peaceful purposes.

(b)Affirmative Defense.—It is an affirmative defense against an injunction under subsection (a)(3) of this section that—

(1)the conduct sought to be enjoined is for a prophylactic, protective, or other peaceful purpose; and
 (2)such biological agent, toxin, or delivery system is of a type and quantity reasonable for that purpose.

7. Manslaughter 18 U.S.C. § 1112

18 U.S. Code § 1112 - Manslaughter

U.S. Code

Notes

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(a)Manslaughter is the unlawful killing of a human being without malice. It is of two kinds:

Voluntary—Upon a sudden quarrel or heat of passion.

Involuntary—In the commission of an unlawful act not amounting to a felony, or in the commission in an unlawful manner, or without due caution and circumspection, of a lawful act which might produce death.

8. 18 U.S. Code § 1113 - Attempt to commit murder or manslaughter

Except as provided in section 113 of this title, whoever, within the special maritime and territorial jurisdiction of the United States, attempts to commit murder or manslaughter, shall, for an attempt to commit murder be imprisoned not more than twenty years or fined under this title, or both, and for an attempt to commit manslaughter be imprisoned not more than seven years or fined under this title, or both.

9. 18 U.S. Code § 1117 - Conspiracy to murder

If two or more persons conspire to violate section 1111, 1114, 1116, or 1119 of this title, and one or more of such persons do any overt act to effect the object of the conspiracy, each shall be punished by imprisonment for any term of years or for life.

10. 18 U.S. Code § 1510 - Obstruction of criminal investigations

(a) Whoever willfully endeavors by means of bribery to obstruct, delay, or prevent the communication of information relating to a violation of any criminal statute of the United States by any person to a criminal investigator shall be fined under this title, or imprisoned not more than five years, or both.

(b)

(1) Whoever, being an officer of a financial institution, with the intent to obstruct a judicial proceeding, directly or indirectly notifies any other person about the existence or contents of a subpoena for records of that financial institution, or information that has been furnished in response to that subpoena, shall be fined under this title or imprisoned not more than 5 years, or both.

11. 18 U.S. Code § 1512 - Tampering with a witness, victim, or an informant

(a)

(1) Whoever kills or attempts to kill another person, with intent to—

(A) prevent the attendance or testimony of any person in an official proceeding;

(B) prevent the production of a record, document, or other object, in an official proceeding; or

(C) prevent the communication by any person to a law enforcement officer or judge of the United States of information relating to the commission or possible commission of a Federal offense or a violation of conditions of probation, parole, or release pending judicial proceedings;

shall be punished as provided in paragraph (3).

(2) Whoever uses physical force or the threat of physical force against any person, or attempts to do so, with intent to—

(A) influence, delay, or prevent the testimony of any person in an official proceeding;

(B) cause or induce any person to—

(i) withhold testimony, or withhold a record, document, or other object, from an official proceeding;

(ii) alter, destroy, mutilate, or conceal an object with intent to impair the integrity or availability of the object for use in an official proceeding;

(iii) evade legal process summoning that person to appear as a witness, or to produce a record, document, or other object, in an official proceeding; or

(iv) be absent from an official proceeding to which that person has been summoned by legal process; or

(C) hinder, delay, or prevent the communication to a law enforcement officer or judge of the United States of information relating to the commission or possible commission of a Federal offense or a violation of conditions of probation, supervised release, parole, or release pending judicial proceedings;

shall be punished as provided in paragraph (3).

(3) The punishment for an offense under this subsection is—

(A) in the case of a killing, the punishment provided in sections 1111 and 1112;

(B) in the case of—

(i) an attempt to murder; or

(ii) the use or attempted use of physical force against any person;

imprisonment for not more than 30 years; and

(C) in the case of the threat of use of physical force against any person, imprisonment for not more than 20 years.

(b) Whoever knowingly uses intimidation, threatens, or corruptly persuades another person, or attempts to do so, or engages in misleading conduct toward another person, with intent to—

(1) influence, delay, or prevent the testimony of any person in an official proceeding;

(2) cause or induce any person to—

(A) withhold testimony, or withhold a record, document, or other object, from an official proceeding;

(B) alter, destroy, mutilate, or conceal an object with intent to impair the object's integrity or availability for use in an official proceeding;

(C) evade legal process summoning that person to appear as a witness, or to produce a record, document, or other object, in an official proceeding; or

(D) be absent from an official proceeding to which such person has been summoned by legal process; or

(3) hinder, delay, or prevent the communication to a law enforcement officer or judge of the United States of information relating to the commission or possible commission of a Federal offense or a violation of conditions of probation [1] supervised release,,[1] parole, or release pending judicial proceedings;

shall be fined under this title or imprisoned not more than 20 years, or both.

(c) Whoever corruptly—

(1) alters, destroys, mutilates, or conceals a record, document, or other object, or attempts to do so, with the intent to impair the object's integrity or availability for use in an official proceeding; or
(2) otherwise obstructs, influences, or impedes any official proceeding, or attempts to do so,
shall be fined under this title or imprisoned not more than 20 years, or both.

(d) Whoever intentionally harasses another person and thereby hinders, delays, prevents, or dissuades any person from—

- (1) attending or testifying in an official proceeding;
- (2) reporting to a law enforcement officer or judge of the United States the commission or possible commission of a Federal offense or a violation of conditions of probation, supervised release, parole, or release pending judicial proceedings;
- (3) arresting or seeking the arrest of another person in connection with a Federal offense; or
- (4) causing a criminal prosecution, or a parole or probation revocation proceeding, to be sought or instituted, or assisting in such prosecution or proceeding;

or attempts to do so, shall be fined under this title or imprisoned not more than 3 years, or both.

(e) In a prosecution for an offense under this section, it is an affirmative defense, as to which the defendant has the burden of proof by a preponderance of the evidence, that the conduct consisted solely of lawful conduct and that the defendant's sole intention was to encourage, induce, or cause the other person to testify truthfully.

(f) For the purposes of this section—

- (1) an official proceeding need not be pending or about to be instituted at the time of the offense; and
- (2) the testimony, or the record, document, or other object need not be admissible in evidence or free of a claim of privilege.

(g) In a prosecution for an offense under this section, no state of mind need be proved with respect to the circumstance—

- (1) that the official proceeding before a judge, court, magistrate judge, grand jury, or government agency is before a judge or court of the United States, a United States magistrate judge, a bankruptcy judge, a Federal grand jury, or a Federal Government agency; or
- (2) that the judge is a judge of the United States or that the law enforcement officer is an officer or employee of the Federal Government or a person authorized to act for or on behalf of the Federal Government or serving the Federal Government as an adviser or consultant.

(h) There is extraterritorial Federal jurisdiction over an offense under this section.

(i) A prosecution under this section or section 1503 may be brought in the district in which the official proceeding (whether or not pending or about to be instituted) was

intended to be affected or in the district in which the conduct constituting the alleged offense occurred.

(j) If the offense under this section occurs in connection with a trial of a criminal case, the maximum term of imprisonment which may be imposed for the offense shall be the higher of that otherwise provided by law or the maximum term that could have been imposed for any offense charged in such case.

(k) Whoever conspires to commit any offense under this section shall be subject to the same penalties as those prescribed for the offense the commission of which was the object of the conspiracy.

12. 18 U.S. Code § 1513 - Retaliating against a witness, victim, or an informant

(a)

(1) Whoever kills or attempts to kill another person with intent to retaliate against any person for—

(A) the attendance of a witness or party at an official proceeding, or any testimony given or any record, document, or other object produced by a witness in an official proceeding; or

(B) providing to a law enforcement officer any information relating to the commission or possible commission of a Federal offense or a violation of conditions of probation, supervised release, parole, or release pending judicial proceedings,

shall be punished as provided in paragraph (2).

(2) The punishment for an offense under this subsection is—

(A) in the case of a killing, the punishment provided in sections 1111 and 1112; and

(B) in the case of an attempt, imprisonment for not more than 30 years.

(b) Whoever knowingly engages in any conduct and thereby causes bodily injury to another person or damages the tangible property of another person, or threatens to do so, with intent to retaliate against any person for—

(1) the attendance of a witness or party at an official proceeding, or any testimony given or any record, document, or other object produced by a witness in an official proceeding; or

(2) any information relating to the commission or possible commission of a Federal offense or a violation of conditions of probation, supervised release, parole, or release pending judicial proceedings given by a person to a law enforcement officer;

or attempts to do so, shall be fined under this title or imprisoned not more than 20 years, or both.

(c) If the retaliation occurred because of attendance at or testimony in a criminal case, the maximum term of imprisonment which may be imposed for the offense

under this section shall be the higher of that otherwise provided by law or the maximum term that could have been imposed for any offense charged in such case.

(d) There is extraterritorial Federal jurisdiction over an offense under this section.

(e) Whoever knowingly, with the intent to retaliate, takes any action harmful to any person, including interference with the lawful employment or livelihood of any person, for providing to a law enforcement officer any truthful information relating to the commission or possible commission of any Federal offense, shall be fined under this title or imprisoned not more than 10 years, or both.

(f) Whoever conspires to commit any offense under this section shall be subject to the same penalties as those prescribed for the offense the commission of which was the object of the conspiracy.

(g) A prosecution under this section may be brought in the district in which the official proceeding (whether pending, about to be instituted, or completed) was intended to be affected, or in which the conduct constituting the alleged offense occurred.

13. 18 U.S. Code § 1519 - Destruction, alteration, or falsification of records in Federal investigations and bankruptcy

Whoever knowingly alters, destroys, mutilates, conceals, covers up, falsifies, or makes a false entry in any record, document, or tangible object with the intent to impede, obstruct, or influence the investigation or proper administration of any matter within the jurisdiction of any department or agency of the United States or any case filed under title 11, or in relation to or contemplation of any such matter or case, shall be fined under this title, imprisoned not more than 20 years, or both.

14. 18 U.S. Code § 1581 - Peonage; obstructing enforcement

(a) Whoever holds or returns any person to a condition of peonage, or arrests any person with the intent of placing him in or returning him to a condition of peonage, shall be fined under this title or imprisoned not more than 20 years, or both. If death results from the violation of this section, or if the violation includes kidnapping or an attempt to kidnap, aggravated sexual abuse or the attempt to commit aggravated sexual abuse, or an attempt to kill, the defendant shall be fined under this title or imprisoned for any term of years or life, or both.

(b) Whoever obstructs, or attempts to obstruct, or in any way interferes with or prevents the enforcement of this section, shall be liable to the penalties prescribed in subsection (a).

15. 18 U.S. Code § 1590 - Trafficking with respect to peonage, slavery, involuntary servitude, or forced labor

(a) Whoever knowingly recruits, harbors, transports, provides, or obtains by any means, any person for labor or services in violation of this chapter shall be fined under this title or imprisoned not more than 20 years, or both. If death results from the violation of this section, or if the violation includes kidnapping or an attempt to

kidnap, aggravated sexual abuse, or the attempt to commit aggravated sexual abuse, or an attempt to kill, the defendant shall be fined under this title or imprisoned for any term of years or life, or both.

(b) Whoever obstructs, attempts to obstruct, or in any way interferes with or prevents the enforcement of this section, shall be subject to the penalties under subsection (a).

16. 18 U.S. Code § 1592 - Unlawful conduct with respect to documents in furtherance of trafficking, peonage, slavery, involuntary servitude, or forced labor

(a) Whoever knowingly destroys, conceals, removes, confiscates, or possesses any actual or purported passport or other immigration document, or any other actual or purported government identification document, of another person—

(1) in the course of a violation of section 1581, 1583, 1584, 1589, 1590, 1591, or 1594(a);

(2) with intent to violate section 1581, 1583, 1584, 1589, 1590, or 1591; or

(3) to prevent or restrict or to attempt to prevent or restrict, without lawful authority, the person's liberty to move or travel, in order to maintain the labor or services of that person, when the person is or has been a victim of a severe form of trafficking in persons, as defined in section 103 of the Trafficking Victims Protection Act of 2000, shall be fined under this title or imprisoned for not more than 5 years, or both.

(b) Subsection (a) does not apply to the conduct of a person who is or has been a victim of a severe form of trafficking in persons, as defined in section 103 of the Trafficking Victims Protection Act of 2000, if that conduct is caused by, or incident to, that trafficking.

(c) Whoever obstructs, attempts to obstruct, or in any way interferes with or prevents the enforcement of this section, shall be subject to the penalties described in subsection (a).

17. 18 U.S. Code § 1593 - Mandatory restitution

(a) Notwithstanding section 3663 or 3663A, and in addition to any other civil or criminal penalties authorized by law, the court shall order restitution for any offense under this chapter.

(b)

(1) The order of restitution under this section shall direct the defendant to pay the victim (through the appropriate court mechanism) the full amount of the victim's losses, as determined by the court under paragraph (3) of this subsection.

(2) An order of restitution under this section shall be issued and enforced in accordance with section 3664 in the same manner as an order under section 3663A.

(3) As used in this subsection, the term "full amount of the victim's losses" has the same meaning as provided in section 2259(c)(2) and

shall in addition include the greater of the gross income or value to the defendant of the victim's services or labor or the value of the victim's labor as guaranteed under the minimum wage and overtime guarantees of the Fair Labor Standards Act (29 U.S.C. 201 et seq.).

(4)The forfeiture of property under this subsection shall be governed by the provisions of section 413 (other than subsection (d) of such section) of the Controlled Substances Act (21 U.S.C. 853).

(c)As used in this section, the term "victim" means the individual harmed as a result of a crime under this chapter, including, in the case of a victim who is under 18 years of age, incompetent, incapacitated, or deceased, the legal guardian of the victim or a representative of the victim's estate, or another family member, or any other person appointed as suitable by the court, but in no event shall the defendant be named such representative or guardian.

18. 18 U.S. Code § 1593A - Benefitting financially from peonage, slavery, and trafficking in persons

Whoever knowingly benefits, financially or by receiving anything of value, from participation in a venture which has engaged in any act in violation of this chapter, knowing or in reckless disregard of the fact that the venture has engaged in such violation, shall be fined under this title or imprisoned in the same manner as a completed violation of such section.

19. 18 U.S. Code § 1596 - Additional jurisdiction in certain trafficking offenses

(a)In General.—In addition to any domestic or extra-territorial jurisdiction otherwise provided by law, the courts of the United States have extra-territorial jurisdiction over any offense (or any attempt or conspiracy to commit an offense) under section 1581, 1583, 1584, 1589, 1590, or 1591 if—

- (1)an alleged offender is a national of the United States or an alien lawfully admitted for permanent residence (as those terms are defined in section 101 of the Immigration and Nationality Act (8 U.S.C. 1101)); or
- (2)an alleged offender is present in the United States, irrespective of the nationality of the alleged offender.

(b)Limitation on Prosecutions of Offenses Prosecuted in Other Countries.—No prosecution may be commenced against a person under this section if a foreign government, in accordance with jurisdiction recognized by the United States, has prosecuted or is prosecuting such person for the conduct constituting such offense, except upon the approval of the Attorney General or the Deputy Attorney General (or a person acting in either such capacity), which function of approval may not be delegated.

20. 18 U.S. Code § 1597 - Unlawful conduct with respect to immigration documents

(a)Destruction, Concealment, Removal, Confiscation, or Possession of Immigration Documents.—It shall be unlawful for any person to knowingly destroy, conceal,

remove, confiscate, or possess, an actual or purported passport or other immigration document of another individual—

(1) in the course of violating section 1351 of this title or section 274 of the Immigration and Nationality Act (8 U.S.C. 1324);

(2) with intent to violate section 1351 of this title or section 274 of the Immigration and Nationality Act (8 U.S.C. 1324); or

(3) in order to, without lawful authority, maintain, prevent, or restrict the labor of services of the individual.

(b) Penalty.—

Any person who violates subsection (a) shall be fined under this title, imprisoned for not more than 1 year, or both.

(c) Obstruction.—

Any person who knowingly obstructs, attempts to obstruct, or in any way interferes with or prevents the enforcement of this section, shall be subject to the penalties described in subsection (b).

21. 18 U.S. Code § 2151 - Definitions

As used in this chapter:

The words “war material” include arms, armament, ammunition, livestock, forage, forest products and standing timber, stores of clothing, air, water, food, foodstuffs, fuel, supplies, munitions, and all articles, parts or ingredients, intended for, adapted to, or suitable for the use of the United States or any associate nation, in connection with the conduct of war or defense activities.

The words “war premises” include all buildings, grounds, mines, or other places wherein such war material is being produced, manufactured, repaired, stored, mined, extracted, distributed, loaded, unloaded, or transported, together with all machinery and appliances therein contained; and all forts, arsenals, navy yards, camps, prisons, or other installations of the Armed Forces of the United States, or any associate nation.

The words “war utilities” include all railroads, railways, electric lines, roads of whatever description, any railroad or railway fixture, canal, lock, dam, wharf, pier, dock, bridge, building, structure, engine, machine, mechanical contrivance, car, vehicle, boat, aircraft, airfields, air lanes, and fixtures or appurtenances thereof, or any other means of transportation whatsoever, whereon or whereby such war material or any troops of the United States, or of any associate nation, are being or may be transported either within the limits of the United States or upon the high seas or elsewhere; and all air-conditioning systems, dams, reservoirs, aqueducts, water and gas mains and pipes, structures and buildings, whereby or in connection with which air, water or gas is being furnished, or may be furnished, to any war premises or to the Armed Forces of the United States, or any associate nation, and all electric light and power, steam or pneumatic power, telephone and telegraph

plants, poles, wires, and fixtures, and wireless stations, and the buildings connected with the maintenance and operation thereof used to supply air, water, light, heat, power, or facilities of communication to any war premises or to the Armed Forces of the United States, or any associate nation.

The words “associate nation” mean any nation at war with any nation with which the United States is at war.

The words “national-defense material” include arms, armament, ammunition, livestock, forage, forest products and standing timber, stores of clothing, air, water, food, foodstuffs, fuel, supplies, munitions, and all other articles of whatever description and any part or ingredient thereof, intended for, adapted to, or suitable for the use of the United States in connection with the national defense or for use in or in connection with the producing, manufacturing, repairing, storing, mining, extracting, distributing, loading, unloading, or transporting of any of the materials or other articles hereinbefore mentioned or any part or ingredient thereof.

The words “national-defense premises” include all buildings, grounds, mines, or other places wherein such national-defense material is being produced, manufactured, repaired, stored, mined, extracted, distributed, loaded, unloaded, or transported, together with all machinery and appliances therein contained; and all forts, arsenals, navy yards, camps, prisons, or other installations of the Armed Forces of the United States.

The words “national-defense utilities” include all railroads, railways, electric lines, roads of whatever description, railroad or railway fixture, canal, lock, dam, wharf, pier, dock, bridge, building, structure, engine, machine, mechanical contrivance, car, vehicle, boat, aircraft, airfields, air lanes, and fixtures or appurtenances thereof, or any other means of transportation whatsoever, whereon or whereby such national-defense material, or any troops of the United States, are being or may be transported either within the limits of the United States or upon the high seas or elsewhere; and all air-conditioning systems, dams, reservoirs, aqueducts, water and gas mains and pipes, structures, and buildings, whereby or in connection with which air, water, or gas may be furnished to any national-defense premises or to the Armed Forces of the United States, and all electric light and power, steam or pneumatic power, telephone and telegraph plants, poles, wires, and fixtures and wireless stations, and the buildings connected with the maintenance and operation thereof used to supply air, water, light, heat, power, or facilities of communication to any national-defense premises or to the Armed Forces of the United States.

22. 18 U.S. Code § 2153 - Destruction of war material, war premises, or war utilities

(a) Whoever, when the United States is at war, or in times of national emergency as declared by the President or by the Congress, with intent to injure, interfere with, or obstruct the United States or any associate nation in preparing for or carrying on

the war or defense activities, or, with reason to believe that his act may injure, interfere with, or obstruct the United States or any associate nation in preparing for or carrying on the war or defense activities, willfully injures, destroys, contaminates or infects, or attempts to so injure, destroy, contaminate or infect any war material, war premises, or war utilities, shall be fined under this title or imprisoned not more than thirty years, or both.

(b) If two or more persons conspire to violate this section, and one or more of such persons do any act to effect the object of the conspiracy, each of the parties to such conspiracy shall be punished as provided in subsection (a) of this section.

23. 18 U.S. Code § 2154 - Production of defective war material, war premises, or war utilities

(a) Whoever, when the United States is at war, or in times of national emergency as declared by the President or by the Congress, with intent to injure, interfere with, or obstruct the United States or any associate nation in preparing for or carrying on the war or defense activities, or, with reason to believe that his act may injure, interfere with, or obstruct the United States or any associate nation in preparing for or carrying on the war or defense activities, willfully makes, constructs, or causes to be made or constructed in a defective manner, or attempts to make, construct, or cause to be made or constructed in a defective manner any war material, war premises or war utilities, or any tool, implement, machine, utensil, or receptacle used or employed in making, producing, manufacturing, or repairing any such war material, war premises or war utilities, shall be fined under this title or imprisoned not more than thirty years, or both.

(b) If two or more persons conspire to violate this section, and one or more of such persons do any act to effect the object of the conspiracy, each of the parties to such conspiracy shall be punished as provided in subsection (a) of this section.

24. 18 U.S. Code § 2155 - Destruction of national-defense materials, national-defense premises, or national-defense utilities

(a) Whoever, with intent to injure, interfere with, or obstruct the national defense of the United States, willfully injures, destroys, contaminates or infects, or attempts to so injure, destroy, contaminate or infect any national-defense material, national-defense premises, or national-defense utilities, shall be fined under this title or imprisoned not more than 20 years, or both, and, if death results to any person, shall be imprisoned for any term of years or for life.

(b) If two or more persons conspire to violate this section, and one or more of such persons do any act to effect the object of the conspiracy, each of the parties to such conspiracy shall be punished as provided in subsection (a) of this section

25. 18 U.S. Code § 2156 - Production of defective national-defense material, national-defense premises, or national-defense utilities

(a) Whoever, with intent to injure, interfere with, or obstruct the national defense of the United States, willfully makes, constructs, or attempts to make or construct in a defective manner, any national-defense material, national-defense premises or national-defense utilities, or any tool, implement, machine, utensil, or receptacle used or employed in making, producing, manufacturing, or repairing any such national-defense material, national-defense premises or national-defense utilities, shall be fined under this title or imprisoned not more than ten years, or both.

(b) If two or more persons conspire to violate this section, and one or more of such persons do any act to effect the object of the conspiracy, each of the parties to such conspiracy shall be punished as provided in subsection (a) of this section.

26. 18 U.S. Code § 2261A - Stalking

Whoever—

(1) travels in interstate or foreign commerce or is present within the special maritime and territorial jurisdiction of the United States, or enters or leaves Indian country, with the intent to kill, injure, harass, intimidate, or place under surveillance with intent to kill, injure, harass, or intimidate another person, and in the course of, or as a result of, such travel or presence engages in conduct that—

(A) places that person in reasonable fear of the death of, or serious bodily injury to—

(i) that person;

(ii) an immediate family member (as defined in section 115) of that person;

(iii) a spouse or intimate partner of that person; or

(iv) the pet, service animal, emotional support animal, or horse of that person; or

(B) causes, attempts to cause, or would be reasonably expected to cause substantial emotional distress to a person described in clause (i), (ii), or (iii) of subparagraph (A); or

(2) with the intent to kill, injure, harass, intimidate, or place under surveillance with intent to kill, injure, harass, or intimidate another person, uses the mail, any interactive computer service or electronic communication service or electronic communication system of interstate commerce, or any other facility of interstate or foreign commerce to engage in a course of conduct that—

(A) places that person in reasonable fear of the death of or serious bodily injury to a person, a pet, a service animal, an emotional support animal, or a horse described in clause (i), (ii), (iii), or (iv) of paragraph (1)(A); or

(B) causes, attempts to cause, or would be reasonably expected to cause substantial emotional distress to a person described in clause (i), (ii), or (iii) of paragraph (1)(A),

shall be punished as provided in section 2261(b) or section 2261B, as the case may be.

27. 18 U.S. Code § 2339 - Harboring or concealing terrorists

(a) Whoever harbors or conceals any person who he knows, or has reasonable grounds to believe, has committed, or is about to commit, an offense under section 32 (relating to destruction of aircraft or aircraft facilities), section 175 (relating to biological weapons), section 229 (relating to chemical weapons), section 831 (relating to nuclear materials), paragraph (2) or (3) of section 844(f) (relating to arson and bombing of government property risking or causing injury or death), section 1366(a) (relating to the destruction of an energy facility), section 2280 (relating to violence against maritime navigation), section 2332a (relating to weapons of mass destruction), or section 2332b (relating to acts of terrorism transcending national boundaries) of this title, section 236(a) (relating to sabotage of nuclear facilities or fuel) of the Atomic Energy Act of 1954 (42 U.S.C. 2284(a)), or section 46502 (relating to aircraft piracy) of title 49, shall be fined under this title or imprisoned not more than ten years, or both.

(b) A violation of this section may be prosecuted in any Federal judicial district in which the underlying offense was committed, or in any other Federal judicial district as provided by law.

28. 18 U.S. Code § 2339A - Providing material support to terrorists

(a) Offense.—

Whoever provides material support or resources or conceals or disguises the nature, location, source, or ownership of material support or resources, knowing or intending that they are to be used in preparation for, or in carrying out, a violation of section 32, 37, 81, 175, 229, 351, 831, 842(m) or (n), 844(f) or (i), 930(c), 956, 1091, 1114, 1116, 1203, 1361, 1362, 1363, 1366, 1751, 1992, 2155, 2156, 2280, 2281, 2332, 2332a, 2332b, 2332f, 2340A, or 2442 of this title, section 236 of the Atomic Energy Act of 1954 (42 U.S.C. 2284), section 46502 or 60123(b) of title 49, or any offense listed in section 2332b(g)(5)(B) (except for sections 2339A and 2339B) or in preparation for, or in carrying out, the concealment of an escape from the commission of any such violation, or attempts or conspires to do such an act, shall be fined under this title, imprisoned not more than 15 years, or both, and, if the death of any person results, shall be imprisoned for any term of years or for life. A violation of this section may be prosecuted in any Federal judicial district in which the underlying offense was committed, or in any other Federal judicial district as provided by law.

(b) Definitions.—As used in this section—

(1) the term “material support or resources” means any property, tangible or intangible, or service, including currency or monetary instruments or financial securities, financial services, lodging, training, expert advice or assistance, safehouses, false documentation or identification, communications equipment, facilities, weapons, lethal substances, explosives, personnel (1 or more individuals who may be or

include oneself), and transportation, except medicine or religious materials;

(2)the term “training” means instruction or teaching designed to impart a specific skill, as opposed to general knowledge; and

(3)the term “expert advice or assistance” means advice or assistance derived from scientific, technical or other specialized knowledge.

29. 18 U.S. Code § 2339B - Providing material support or resources to designated foreign terrorist organizations

(a)Prohibited Activities.—

(1)Unlawful conduct.—

Whoever knowingly provides material support or resources to a foreign terrorist organization, or attempts or conspires to do so, shall be fined under this title or imprisoned not more than 20 years, or both, and, if the death of any person results, shall be imprisoned for any term of years or for life. To violate this paragraph, a person must have knowledge that the organization is a designated terrorist organization (as defined in subsection (g)(6)), that the organization has engaged or engages in terrorist activity (as defined in section 212(a)(3)(B) of the Immigration and Nationality Act), or that the organization has engaged or engages in terrorism (as defined in section 140(d)(2) of the Foreign Relations Authorization Act, Fiscal Years 1988 and 1989).

(2)Financial institutions.—Except as authorized by the Secretary, any financial institution that becomes aware that it has possession of, or control over, any funds in which a foreign terrorist organization, or its agent, has an interest, shall—

(A)retain possession of, or maintain control over, such funds; and

(B)report to the Secretary the existence of such funds in accordance with regulations issued by the Secretary.

(b)Civil Penalty.—Any financial institution that knowingly fails to comply with subsection (a)(2) shall be subject to a civil penalty in an amount that is the greater of—

(A)\$50,000 per violation; or

(B)twice the amount of which the financial institution was required under subsection (a)(2) to retain possession or control.

(c)Injunction.—

Whenever it appears to the Secretary or the Attorney General that any person is engaged in, or is about to engage in, any act that constitutes, or would constitute, a violation of this section, the Attorney General may initiate civil action in a district court of the United States to enjoin such violation.

(d)Extraterritorial Jurisdiction.—

(1) In general.—There is jurisdiction over an offense under subsection (a) if—

- (A) an offender is a national of the United States (as defined in section 101(a)(22) of the Immigration and Nationality Act (8 U.S.C. 1101(a)(22))) or an alien lawfully admitted for permanent residence in the United States (as defined in section 101(a)(20) of the Immigration and Nationality Act (8 U.S.C. 1101(a)(20)));
- (B) an offender is a stateless person whose habitual residence is in the United States;
- (C) after the conduct required for the offense occurs an offender is brought into or found in the United States, even if the conduct required for the offense occurs outside the United States;
- (D) the offense occurs in whole or in part within the United States;
- (E) the offense occurs in or affects interstate or foreign commerce; or
- (F) an offender aids or abets any person over whom jurisdiction exists under this paragraph in committing an offense under subsection (a) or conspires with any person over whom jurisdiction exists under this paragraph to commit an offense under subsection (a).

(2) Extraterritorial jurisdiction.—

There is extraterritorial Federal jurisdiction over an offense under this section.

(e) Investigations.—

(1) In general.—

The Attorney General shall conduct any investigation of a possible violation of this section, or of any license, order, or regulation issued pursuant to this section.

(2) Coordination with the department of the treasury.—The Attorney General shall work in coordination with the Secretary in investigations relating to—

- (A) the compliance or noncompliance by a financial institution with the requirements of subsection (a)(2); and
- (B) civil penalty proceedings authorized under subsection (b).

(3) Referral.—

Any evidence of a criminal violation of this section arising in the course of an investigation by the Secretary or any other Federal agency shall be referred immediately to the Attorney General for further investigation. The Attorney General shall timely notify the Secretary of any action taken on referrals from the Secretary, and may refer investigations to the Secretary for remedial licensing or civil penalty action.

30. 18 U.S. Code § 2339C - Prohibitions against the financing of terrorism

(a) Offenses.—

(1) In general.—Whoever, in a circumstance described in subsection (b), by any means, directly or indirectly, unlawfully and willfully provides or collects funds with the intention that such funds be used, or with the knowledge that such funds are to be used, in full or in part, in order to carry out—

(A) an act which constitutes an offense within the scope of a treaty specified in subsection (e)(7), as implemented by the United States, or

(B) any other act intended to cause death or serious bodily injury to a civilian, or to any other person not taking an active part in the hostilities in a situation of armed conflict, when the purpose of such act, by its nature or context, is to intimidate a population, or to compel a government or an international organization to do or to abstain from doing any act,

shall be punished as prescribed in subsection (d)(1).

(2) Attempts and conspiracies.—

Whoever attempts or conspires to commit an offense under paragraph

(1) shall be punished as prescribed in subsection (d)(1).

(3) Relationship to predicate act.—

For an act to constitute an offense set forth in this subsection, it shall not be necessary that the funds were actually used to carry out a predicate act.

(b) Jurisdiction.—There is jurisdiction over the offenses in subsection (a) in the following circumstances—

(1) the offense takes place in the United States and—

(A) a perpetrator was a national of another state or a stateless person;

(B) on board a vessel flying the flag of another state or an aircraft which is registered under the laws of another state at the time the offense is committed;

(C) on board an aircraft which is operated by the government of another state;

(D) a perpetrator is found outside the United States;

(E) was directed toward or resulted in the carrying out of a predicate act against—

(i) a national of another state; or

(ii) another state or a government facility of such state, including its embassy or other diplomatic or consular premises of that state;

(F) was directed toward or resulted in the carrying out of a predicate act committed in an attempt to compel another

state or international organization to do or abstain from doing any act; or

(G) was directed toward or resulted in the carrying out of a predicate act—

- (i) outside the United States; or
- (ii) within the United States, and either the offense or the predicate act was conducted in, or the results thereof affected, interstate or foreign commerce;

(2) the offense takes place outside the United States and—

(A) a perpetrator is a national of the United States or is a stateless person whose habitual residence is in the United States;

(B) a perpetrator is found in the United States; or

(C) was directed toward or resulted in the carrying out of a predicate act against—

- (i) any property that is owned, leased, or used by the United States or by any department or agency of the United States, including an embassy or other diplomatic or consular premises of the United States;
- (ii) any person or property within the United States;
- (iii) any national of the United States or the property of such national; or
- (iv) any property of any legal entity organized under the laws of the United States, including any of its States, districts, commonwealths, territories, or possessions;

(3) the offense is committed on board a vessel flying the flag of the United States or an aircraft which is registered under the laws of the United States at the time the offense is committed;

(4) the offense is committed on board an aircraft which is operated by the United States; or

(5) the offense was directed toward or resulted in the carrying out of a predicate act committed in an attempt to compel the United States to do or abstain from doing any act.

(c) Concealment.—Whoever—

(1)

(A) is in the United States; or

(B) is outside the United States and is a national of the United States or a legal entity organized under the laws of the United States (including any of its States, districts, commonwealths, territories, or possessions); and

(2) knowingly conceals or disguises the nature, location, source, ownership, or control of any material support or resources, or any funds or proceeds of such funds—

- (A) knowing or intending that the support or resources are to be provided, or knowing that the support or resources were provided, in violation of section 2339B of this title; or
- (B) knowing or intending that any such funds are to be provided or collected, or knowing that the funds were provided or collected, in violation of subsection (a), shall be punished as prescribed in subsection (d)(2).

(d) Penalties.—

(1) Subsection (a).—

Whoever violates subsection (a) shall be fined under this title, imprisoned for not more than 20 years, or both.

(2) Subsection (c).—

Whoever violates subsection (c) shall be fined under this title, imprisoned for not more than 10 years, or both.

(e) Definitions.—In this section—

(1) the term “funds” means assets of every kind, whether tangible or intangible, movable or immovable, however acquired, and legal documents or instruments in any form, including electronic or digital, evidencing title to, or interest in, such assets, including coin, currency, bank credits, travelers checks, bank checks, money orders, shares, securities, bonds, drafts, and letters of credit;

(2) the term “government facility” means any permanent or temporary facility or conveyance that is used or occupied by representatives of a state, members of a government, the legislature, or the judiciary, or by officials or employees of a state or any other public authority or entity or by employees or officials of an intergovernmental organization in connection with their official duties;

(3) the term “proceeds” means any funds derived from or obtained, directly or indirectly, through the commission of an offense set forth in subsection (a);

(4) the term “provides” includes giving, donating, and transmitting;

(5) the term “collects” includes raising and receiving;

(6) the term “predicate act” means any act referred to in subparagraph (A) or (B) of subsection (a)(1);

(7) the term “treaty” means—

(A) the Convention for the Suppression of Unlawful Seizure of Aircraft, done at The Hague on December 16, 1970;

(B) the Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, done at Montreal on September 23, 1971;

(C) the Convention on the Prevention and Punishment of Crimes against Internationally Protected Persons, including

Diplomatic Agents, adopted by the General Assembly of the United Nations on December 14, 1973;

(D)the International Convention against the Taking of Hostages, adopted by the General Assembly of the United Nations on December 17, 1979;

(E)the Convention on the Physical Protection of Nuclear Material, adopted at Vienna on March 3, 1980;

(F)the Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, supplementary to the Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, done at Montreal on February 24, 1988;

(G)the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation, done at Rome on March 10, 1988;

(H)the Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf, done at Rome on March 10, 1988; or

(I)the International Convention for the Suppression of Terrorist Bombings, adopted by the General Assembly of the United Nations on December 15, 1997;

(8)the term “intergovernmental organization” includes international organizations;

(9)the term “international organization” has the same meaning as in section 1116(b)(5) of this title;

(10)the term “armed conflict” does not include internal disturbances and tensions, such as riots, isolated and sporadic acts of violence, and other acts of a similar nature;

(11)the term “serious bodily injury” has the same meaning as in section 1365(g)(3) of this title; [1]

(12)the term “national of the United States” has the meaning given that term in section 101(a)(22) of the Immigration and Nationality Act (8 U.S.C. 1101(a)(22));

(13)the term “material support or resources” has the same meaning given that term in section 2339B(g)(4) of this title; and

(14)the term “state” has the same meaning as that term has under international law, and includes all political subdivisions thereof.

(f)Civil Penalty.—

In addition to any other criminal, civil, or administrative liability or penalty, any legal entity located within the United States or organized under the laws of the United States, including any of the laws of its States, districts, commonwealths, territories, or possessions, shall be liable to the United States for the sum of at least \$10,000, if a person responsible for the management or control of that legal entity has, in that capacity, committed an offense set forth in subsection (a).

31. 18 U.S. Code § 2340 - Definitions

As used in this chapter—

(1)“torture” means an act committed by a person acting under the color of law specifically intended to inflict severe physical or mental pain or suffering (other than pain or suffering incidental to lawful sanctions) upon another person within his custody or physical control;

(2)“severe mental pain or suffering” means the prolonged mental harm caused by or resulting from—

(A)the intentional infliction or threatened infliction of severe physical pain or suffering;

(B)the administration or application, or threatened administration or application, of mind-altering substances or other procedures calculated to disrupt profoundly the senses or the personality;

(C)the threat of imminent death; or

(D)the threat that another person will imminently be subjected to death, severe physical pain or suffering, or the administration or application of mind-altering substances or other procedures calculated to disrupt profoundly the senses or personality; and

(3)“United States” means the several States of the United States, the District of Columbia, and the commonwealths, territories, and possessions of the United States.

32. 18 U.S. Code § 2340A - Torture

(a)Offense.—

Whoever outside the United States commits or attempts to commit torture shall be fined under this title or imprisoned not more than 20 years, or both, and if death results to any person from conduct prohibited by this subsection, shall be punished by death or imprisoned for any term of years or for life.

(b)Jurisdiction.—There is jurisdiction over the activity prohibited in subsection (a) if

(1)the alleged offender is a national of the United States; or

(2)the alleged offender is present in the United States, irrespective of the nationality of the victim or alleged offender.

(c)Conspiracy.—

A person who conspires to commit an offense under this section shall be subject to the same penalties (other than the penalty of death) as the penalties prescribed for the offense, the commission of which was the object of the conspiracy.

33. 18 U.S. Code § 2340B - Exclusive remedies

Nothing in this chapter shall be construed as precluding the application of State or local laws on the same subject, nor shall anything in this chapter be construed as

creating any substantive or procedural right enforceable by law by any party in any civil proceeding.

34. 18 U.S. Code § 2381 - Treason

Whoever, owing allegiance to the United States, levies war against them or adheres to their enemies, giving them aid and comfort within the United States or elsewhere, is guilty of treason and shall suffer death, or shall be imprisoned not less than five years and fined under this title but not less than \$10,000; and shall be incapable of holding any office under the United States.

35. 18 U.S. Code § 2382 - Misprision of treason

Whoever, owing allegiance to the United States and having knowledge of the commission of any treason against them, conceals and does not, as soon as may be, disclose and make known the same to the President or to some judge of the United States, or to the governor or to some judge or justice of a particular State, is guilty of misprision of treason and shall be fined under this title or imprisoned not more than seven years, or both.

36. 18 U.S. Code § 2383 - Rebellion or insurrection

Whoever incites, sets on foot, assists, or engages in any rebellion or insurrection against the authority of the United States or the laws thereof, or gives aid or comfort thereto, shall be fined under this title or imprisoned not more than ten years, or both; and shall be incapable of holding any office under the United States.

37. 18 U.S. Code § 2384 - Seditious conspiracy

If two or more persons in any State or Territory, or in any place subject to the jurisdiction of the United States, conspire to overthrow, put down, or to destroy by force the Government of the United States, or to levy war against them, or to oppose by force the authority thereof, or by force to prevent, hinder, or delay the execution of any law of the United States, or by force to seize, take, or possess any property of the United States contrary to the authority thereof, they shall each be fined under this title or imprisoned not more than twenty years, or both.

38. 18 U.S. Code § 2385 - Advocating overthrow of Government

Whoever knowingly or willfully advocates, abets, advises, or teaches the duty, necessity, desirability, or propriety of overthrowing or destroying the government of the United States or the government of any State, Territory, District or Possession thereof, or the government of any political subdivision therein, by force or violence, or by the assassination of any officer of any such government; or

Whoever, with intent to cause the overthrow or destruction of any such government, prints, publishes, edits, issues, circulates, sells, distributes, or publicly

displays any written or printed matter advocating, advising, or teaching the duty, necessity, desirability, or propriety of overthrowing or destroying any government in the United States by force or violence, or attempts to do so; or

Whoever organizes or helps or attempts to organize any society, group, or assembly of persons who teach, advocate, or encourage the overthrow or destruction of any such government by force or violence; or becomes or is a member of, or affiliates with, any such society, group, or assembly of persons, knowing the purposes thereof—

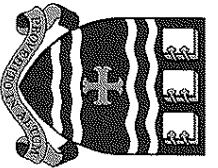
Shall be fined under this title or imprisoned not more than twenty years, or both, and shall be ineligible for employment by the United States or any department or agency thereof, for the five years next following his conviction.

If two or more persons conspire to commit any offense named in this section, each shall be fined under this title or imprisoned not more than twenty years, or both, and shall be ineligible for employment by the United States or any department or agency thereof, for the five years next following his conviction.

As used in this section, the terms “organizes” and “organize”, with respect to any society, group, or assembly of persons, include the recruiting of new members, the forming of new units, and the regrouping or expansion of existing clubs, classes, and other units of such society, group, or assembly of persons.

39. Related Complaints

related to the listed crimes are as follows: 2022-1782862, 2023-1169539 forgery, 2023-147546, 2023-179141 human trafficking (RCMP Battleford), 2023-70016 Sexual Assault(RCMP Turner Valley, AB), 2023-111338 human trafficking (RCMP Turner Valley, AB), 23-1588 culpable negligence (covid related), 23-1430 Sexual Assault/human trafficking (Volusia County Sheriff, Florida), #223230811 Criminal Harassment/ Human Trafficking agency Assist (Austin Texas Police Department), Calgary Police Service File #22453817 and #22453637, RCMP file 20221414593, 2023-72400 (torture, Chestermere RCMP), 2023-59269, 2023-59284 (Chestermere RCMP), 2022-1715002 (RCMP Alberta), North Charleston Police Department #2022023800 Aggravated Domestic Assault with a Firearm, 2022023857 intimidation of a witness. This can be found from the department) and #23-0011116 Sexual Assault (Austin Police Department). San Antonio PD #22273597. RCMP HQ in Ottawa has been advised to oversee the torture investigations in North Battleford because the torture investigation has been referred to the jurisdiction that tortured the victims.



MEMORIAL UNIVERSITY OF NEWFOUNDLAND

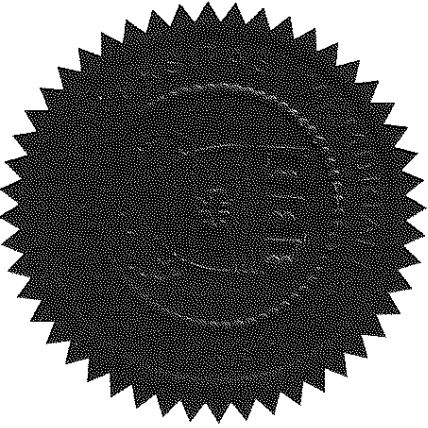
It is hereby certified that

Rale James Richardson

having completed the required program of studies
is admitted to the degree of

Bachelor of Technology

with all the rights and privileges attendant thereon
GIVEN UNDER THE SEAL OF THE UNIVERSITY
this 8th day of February 2022



Chancellor _____ *Sean O'Shea*

President and Vice-Chancellor _____ *Kenneth Timmermans*

University Registrar (Interim) _____ *Jennifer Foster*

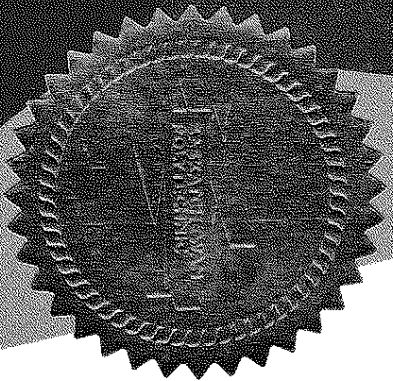


We, the duly authorized officers of Saskatchewan Polytechnic, hereby certify that

Dale J S Richardson

has fulfilled all the conditions prescribed to the

**DIPLOMA OF
MECHANICAL ENGINEERING TECHNOLOGY**



[Signature]

PRESIDENT

May 31, 2019

[Signature]

DEAN

[Signature]

REGISTRAR

Proud Member Since 03/01/2018

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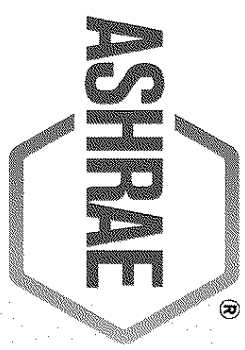
Membership Certificate

Ms. Dale J. Richardson

has been granted the grade of
Student

and is entitled to all the rights and privileges as provided by the
Constitution and Bylaws of the Society.

As a member of ASHRAE Society, I comply with the ASHRAE Code of Ethics
(www.ashrae.org/codeofethics)



Secretary

[Signature]
JEFFREY LITTLETON

Incorporated New York 1895

President

[Signature]
FAROOQ MEHROOB

ASET Member:

Dale James Richardson

Year : 2023

ID : 128964



THE ASSOCIATION OF SCIENCE
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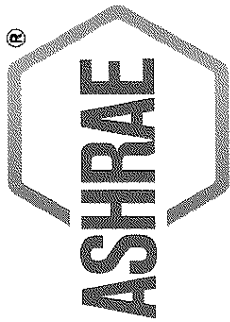
**TECHNOLOGY
PROFESSIONALS**
SASKATCHEWAN

This is to certify that
Dale J. Richardson # 202045
is recorded in this Association as
Associate

Registrant

Registrar

Exp. 12/31/2023



Shaping Tomorrow's
Built Environment Today

ASHRAE presents this Certificate of Appreciation to

Mr Dale J Richardson

in recognition of 5 years of membership

As a member since **March 1, 2018**, we appreciate your support and thank
you for your time and dedication to the industry

President _____

A handwritten signature in black ink, appearing to read "Farooq Mehboob".

Farooq Mehboob

Unusual Features of the SARS-CoV-2 Genome Suggesting Sophisticated Laboratory Modification Rather Than Natural Evolution and Delineation of Its Probable Synthetic Route

Li-Meng Yan (MD, PhD)¹, Shu Kang (PhD)¹, Shanchang Hu (PhD)¹

¹Yan Research – An Independent Research Team

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Abstract

The COVID-19 pandemic caused by the novel coronavirus SARS-CoV-2 has led to over 910,000 deaths worldwide and unprecedented decimation of the global economy. Despite its tremendous impact, the origin of SARS-CoV-2 has remained mysterious and controversial. The natural origin theory, although widely accepted, lacks substantial support. The alternative theory that the virus may have come from a research laboratory is, however, strictly censored on peer-reviewed scientific journals. Nonetheless, SARS-CoV-2 shows biological characteristics that are inconsistent with a naturally occurring, zoonotic virus. In this report, we describe the genomic, structural, medical, and literature evidence, which, when considered together, strongly contradicts the natural origin theory. The evidence shows that SARS-CoV-2 should be a laboratory product created by using bat coronaviruses ZC45 and/or ZXC21 as a template and/or backbone. Building upon the evidence, we further postulate a synthetic route for SARS-CoV-2, demonstrating that the laboratory-creation of this coronavirus is convenient and can be accomplished in approximately six months. Our work emphasizes the need for an independent investigation into the relevant research laboratories. It also argues for a critical look into certain recently published data, which, albeit problematic, was used to support and claim a natural origin of SARS-CoV-2. From a public health perspective, these actions are necessary as knowledge of the origin of SARS-CoV-2 and of how the virus entered the human population are of pivotal importance in the fundamental control of the COVID-19 pandemic as well as in preventing similar, future pandemics.

Publication Note (July 17th, 2021):

The three Yan reports used scientific evidence and analyses to prove that SARS-CoV-2 is an *Unrestricted Bioweapon* created by military scientists of the Chinese Communist Party (CCP) regime. These reports have played a pivotal role in revealing the true identity of the ongoing *Unrestricted Biowarfare*. For this reason, the CCP and its allies have been constantly launching attacks at the Yan Reports. Very recently, the *Rule of Law Foundation* (ROLF) and *Rule of Law Society* (ROLS), which we have listed as our honorary affiliation in our reports, requested *Zenodo* to have the original uploads of our reports closed. This was done by the ROLF & ROLS without informing us authors or seeking our agreement. This is unacceptable because the work was done by us authors independently with no financial assistance provided by the ROLF & ROLS or any other organization. Their action here has no scientific

basis and is against the rules of scientific publications. To restore the availability of our reports to the world, we have therefore re-uploaded the three Yan reports. Our affiliation has been changed to *Yan Research – An Independent Research Team*.

The current report was originally published on September 14th, 2020. As of July 16th, 2021, the original *Zenodo* upload of it has been viewed 1,339,786 times and downloaded 797,325 times. Upon mutual agreement, Dr. Jie Guan opted out of this publication and his contributions have instead been specified in the acknowledgements.

Introduction

COVID-19 has caused a world-wide pandemic, the scale and severity of which are unprecedented. Despite the tremendous efforts taken by the global community, management and control of this pandemic remains difficult and challenging.

As a coronavirus, SARS-CoV-2 differs significantly from other respiratory and/or zoonotic viruses: it attacks multiple organs; it is capable of undergoing a long period of asymptomatic infection; it is highly transmissible and significantly lethal in high-risk populations; it is well-adapted to humans since the very start of its emergence¹; it is highly efficient in binding the human ACE2 receptor (hACE2), the affinity of which is greater than that associated with the ACE2 of any other potential host^{2,3}.

The origin of SARS-CoV-2 is still the subject of much debate. A widely cited *Nature Medicine* publication has claimed that SARS-CoV-2 most likely came from nature⁴. However, the article and its central conclusion are now being challenged by scientists from all over the world⁵⁻¹⁵. In addition, authors of this *Nature Medicine* article show signs of conflict of interests^{16,17}, raising further concerns on the credibility of this publication.

The existing scientific publications supporting a natural origin theory rely heavily on a single piece of evidence – a previously discovered bat coronavirus named RaTG13, which shares a 96% nucleotide sequence identity with SARS-CoV-2¹⁸. However, the existence of RaTG13 in nature and the truthfulness of its reported sequence are being widely questioned^{6-9,19-21}. It is noteworthy that scientific journals have clearly censored any dissenting opinions that suggest a non-natural origin of SARS-CoV-2^{8,22}. Because of this censorship, articles questioning either the natural origin of SARS-CoV-2 or the actual existence of RaTG13, although of high quality scientifically, can only exist as preprints^{5-9,19-21} or other non-peer-reviewed articles published on various online platforms^{10-13,23}. Nonetheless, analyses of these reports have repeatedly pointed to severe problems and a probable fraud associated with the reporting of RaTG13^{6,8,9,19-21}. Therefore, the theory that fabricated scientific data has been published to mislead the world's efforts in tracing the origin of SARS-CoV-2 has become substantially convincing and is interlocked with the notion that SARS-CoV-2 is of a non-natural origin.

Consistent with this notion, genomic, structural, and literature evidence also suggest a non-natural origin of SARS-CoV-2. In addition, abundant literature indicates that gain-of-function research has long advanced to the stage where viral genomes can be precisely engineered and manipulated to enable the creation of novel coronaviruses possessing unique properties. In this report, we present such evidence and the associated analyses. Part 1 of the report describes the genomic and structural features of SARS-CoV-2, the presence of which could be consistent with the theory that the virus is a product of laboratory modification beyond what could be afforded by simple serial viral passage. Part 2 of the report describes a highly probable pathway for the laboratory creation of SARS-CoV-2, key steps of which are supported by evidence present in the viral genome. Importantly, part 2 should be viewed as a demonstration of how SARS-CoV-2 could be conveniently created in a laboratory in a short period of time using available materials and well-documented techniques. This report is produced by a team of experienced scientists using our combined expertise in virology, molecular biology, structural biology, computational biology, vaccine development, and medicine.

1. Has SARS-CoV-2 been subjected to *in vitro* manipulation?

We present three lines of evidence to support our contention that laboratory manipulation is part of the history of SARS-CoV-2:

- i. The genomic sequence of SARS-CoV-2 is suspiciously similar to that of a bat coronavirus discovered by military laboratories in the Third Military Medical University (Chongqing, China) and the Research Institute for Medicine of Nanjing Command (Nanjing, China).
- ii. The receptor-binding motif (RBM) within the Spike protein of SARS-CoV-2, which determines the host specificity of the virus, resembles that of SARS-CoV from the 2003 epidemic in a suspicious manner. Genomic evidence suggests that the RBM has been genetically manipulated.
- iii. SARS-CoV-2 contains a unique furin-cleavage site in its Spike protein, which is known to greatly enhance viral infectivity and cell tropism. Yet, this cleavage site is completely absent in this particular class of coronaviruses found in nature. In addition, rare codons associated with this additional sequence suggest the strong possibility that this furin-cleavage site is not the product of natural evolution and could have been inserted into the SARS-CoV-2 genome artificially by techniques other than simple serial passage or multi-strain recombination events inside co-infected tissue cultures or animals.

1.1 Genomic sequence analysis reveals that ZC45, or a closely related bat coronavirus, should be the backbone used for the creation of SARS-CoV-2

The structure of the ~30,000 nucleotides-long SARS-CoV-2 genome is shown in Figure 1. Searching the NCBI sequence database reveals that, among all known coronaviruses, there were two related bat coronaviruses, ZC45 and ZXC21, that share the highest sequence identity with SARS-CoV-2 (each bat coronavirus is ~89% identical to SARS-CoV-2 on the nucleotide level). Similarity between the genome of SARS-CoV-2 and those of representative β coronaviruses is depicted in Figure 1. ZXC21, which is 97% identical to and shares a very similar profile with ZC45, is not shown. Note that the RaTG13 virus is excluded from this analysis given the strong evidence suggesting that its sequence may have been fabricated and the virus does not exist in nature^{2,6-9}. (A follow-up report, which summarizes the up-to-date evidence proving the spurious nature of RaTG13, will be submitted soon)

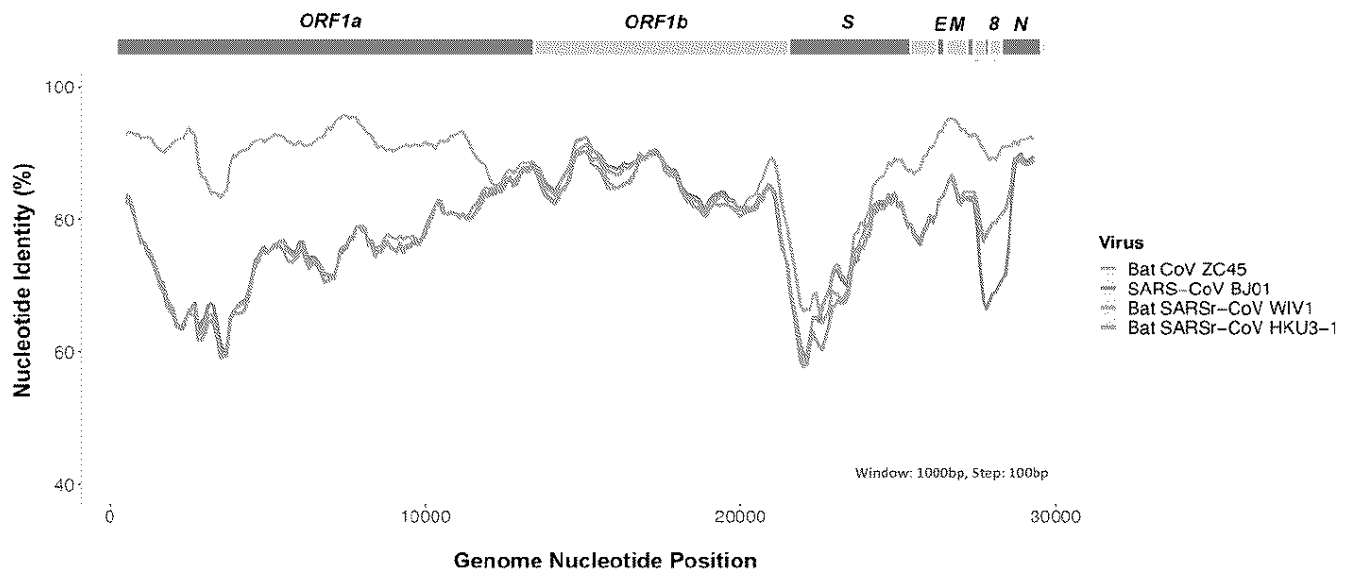


Figure 1. Genomic sequence analysis reveals that bat coronavirus ZC45 is the closest match to SARS-CoV-2. Top: genomic organization of SARS-CoV-2 (2019-nCoV WIV04). Bottom: similarity plot based on the full-length genome of 2019-nCoV WIV04. Full-length genomes of SARS-CoV BJ01, bat SARSr-CoV WIV1, bat SARSr-CoV HKU3-1, bat coronavirus ZC45 were used as reference sequences.

When SARS-CoV-2 and ZC45/ZXC21 are compared on the amino acid level, a high sequence identity is observed for most of the proteins. The Nucleocapsid protein is 94% identical. The Membrane protein is 98.6% identical. The S2 portion (2nd half) of the Spike protein is 95% identical. Importantly, the Orf8 protein is 94.2% identical and the E protein is 100% identical.

Orf8 is an accessory protein, the function of which is largely unknown in most coronaviruses, although recent data suggests that Orf8 of SARS-CoV-2 mediates the evasion of host adaptive immunity by downregulating MHC-I²⁴. Normally, Orf8 is poorly conserved in coronaviruses²⁵. Sequence blast indicates that, while the Orf8 proteins of ZC45/ZXC21 share a 94.2% identity with SARS-CoV-2 Orf8, no other coronaviruses share more than 58% identity with SARS-CoV-2 on this particular protein. The very high homology here on the normally poorly conserved Orf8 protein is highly unusual.

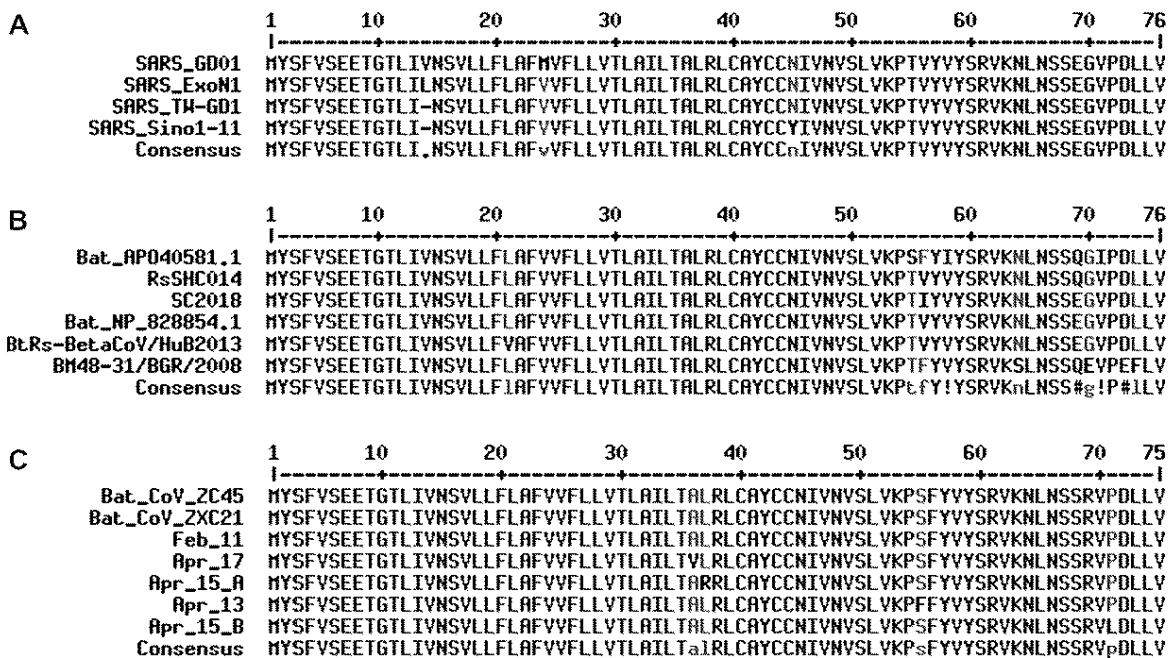


Figure 2. Sequence alignment of the E proteins from different beta coronaviruses demonstrates the E protein's permissiveness and tendency toward amino acid mutations. A. Mutations have been observed in different strains of SARS-CoV. GenBank accession numbers: SARS_GD01: AY278489.2, SARS_ExoN1: ACB69908.1, SARS_TW_GD1: AY451881.1, SARS_Sino1_11: AY485277.1. B. Alignment of E proteins from related bat coronaviruses indicates its tolerance of mutations at multiple positions. GenBank accession numbers: Bat_AP040581.1: APO40581.1, RsSHC014: KC881005.1, SC2018: MK211374.1, Bat_NP_828854.1: NP_828854.1, BtRs-BetaCoV/HuB2013: AIA62312.1, BM48-31/BGR/2008: YP_003858586.1. C. While the early copies of SARS-CoV-2 share 100% identity on the E protein with ZC45 and ZXC21, sequencing data of SARS-CoV-2 from April 2020 indicates that mutation has occurred at multiple positions. Accession numbers of viruses: Feb_11: MN997409, ZC45: MG772933.1, ZXC21: MG772934, Apr_13: MT326139, Apr_15_A: MT263389, Apr_15_B: MT293206, Apr_17: MT350246. Alignments were done using the MultAlin webserver (<http://multalin.toulouse.inra.fr/multalin/>).

The coronavirus E protein is a structural protein, which is embedded in and lines the interior of the membrane envelope of the virion²⁶. The E protein is tolerant of mutations as evidenced in both SARS (Figure 2A) and related bat coronaviruses (Figure 2B). This tolerance to amino acid mutations of the E protein is further evidenced in the current SARS-CoV-2 pandemic. After only a short two-month spread of the virus since its outbreak in humans, the E proteins in SARS-CoV-2 have already undergone mutational changes. Sequence data obtained during the month of April reveals that mutations have occurred at four different locations in different strains (Figure 2C). Consistent with this finding, sequence blast analysis indicates that, with the exception of SARS-CoV-2, no known coronaviruses share 100% amino acid sequence identity on the E protein with ZC45/ZXC21 (*suspicious coronaviruses published after the start of the current pandemic are excluded*^{18,27-31}). Although 100% identity on the E protein has been observed between SARS-CoV and certain SARS-related bat coronaviruses, none of those pairs simultaneously share over 83% identity on the Orf8 protein³². Therefore, the 94.2% identity on the Orf8 protein, 100% identity on the E protein, and the overall genomic/amino acid-level resemblance between SARS-CoV-2 and ZC45/ZXC21 are highly unusual. Such evidence, when considered together, is consistent with a hypothesis that the SARS-CoV-2 genome has an origin based on the use of ZC45/ZXC21 as a backbone and/or template for genetic gain-of-function modifications.

Importantly, ZC45 and ZXC21 are bat coronaviruses that were discovered (between July 2015 and February 2017), isolated, and characterized by military research laboratories in the Third Military Medical University (Chongqing, China) and the Research Institute for Medicine of Nanjing Command (Nanjing, China). The data and associated work were published in 2018^{33,34}. Clearly, this backbone/template, which is essential for the creation of SARS-CoV-2, exists in these and other related research laboratories.

What strengthens our contention further is the published RaTG13 virus¹⁸, the genomic sequence of which is reportedly 96% identical to that of SARS-CoV-2. While suggesting a natural origin of SARS-CoV-2, the RaTG13 virus also diverted the attention of both the scientific field and the general public away from ZC45/ZXC21^{4,18}. In fact, a Chinese BSL-3 lab (the Shanghai Public Health Clinical Centre), which published a *Nature* article reporting a conflicting close phylogenetic relationship between SARS-CoV-2 and ZC45/ZXC21 rather than with RaTG13³⁵, was quickly shut down for “rectification”³⁶. It is believed that the researchers of that laboratory were being punished for having disclosed the SARS-CoV-2—ZC45/ZXC21 connection. On the other hand, substantial evidence has accumulated, pointing to severe problems associated with the reported sequence of RaTG13 as well as questioning the actual existence of this bat virus in nature^{6,7,19-21}. A very recent publication also indicated that the receptor-binding domain (RBD) of the RaTG13’s Spike protein could not bind ACE2 of two different types of horseshoe bats (they closely relate to the horseshoe bat *R. affinis*, RaTG13’s alleged natural host)², implicating the inability of RaTG13 to infect horseshoe bats. This finding further substantiates the suspicion that the reported sequence of RaTG13 could have been fabricated as the Spike protein encoded by this sequence does not seem to carry the claimed function. The fact that a virus has been fabricated to shift the attention away from ZC45/ZXC21 speaks for an actual role of ZC45/ZXC21 in the creation of SARS-CoV-2.

1.2 The receptor-binding motif of SARS-CoV-2 Spike cannot be born from nature and should have been created through genetic engineering

The Spike proteins decorate the exterior of the coronavirus particles. They play an important role in infection as they mediate the interaction with host cell receptors and thereby help determine the host range and tissue tropism of the virus. The Spike protein is split into two halves (Figure 3). The front or N-terminal half is named S1, which is fully responsible for binding the host receptor. In both SARS-CoV

and SARS-CoV-2 infections, the host cell receptor is hACE2. Within S1, a segment of around 70 amino acids makes direct contacts with hACE2 and is correspondingly named the receptor-binding motif (RBM) (Figure 3C). In SARS-CoV and SARS-CoV-2, the RBM fully determines the interaction with hACE2. The C-terminal half of the Spike protein is named S2. The main function of S2 includes maintaining trimer formation and, upon successive protease cleavages at the S1/S2 junction and a downstream S2' position, mediating membrane fusion to enable cellular entry of the virus.

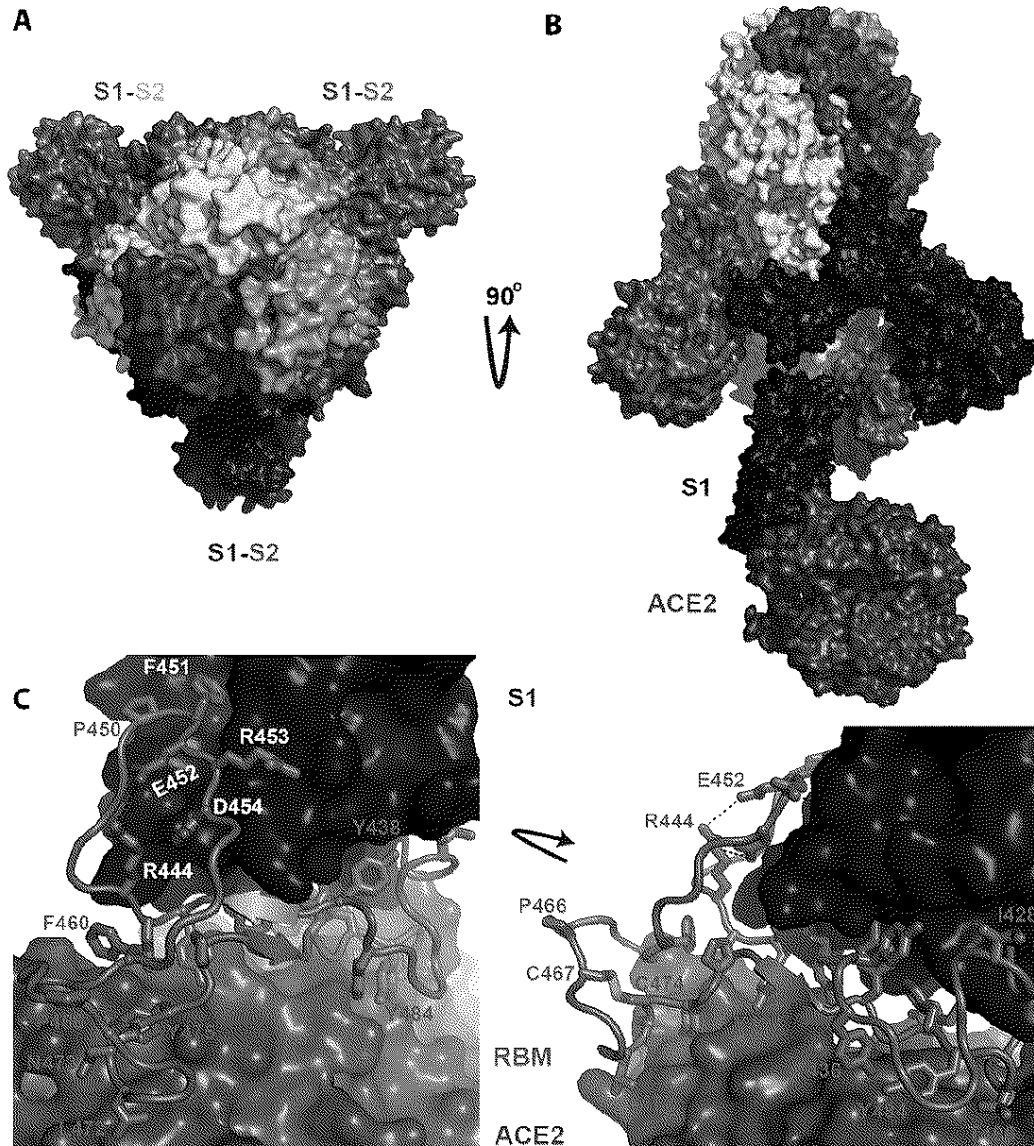


Figure 3. Structure of the SARS Spike protein and how it binds to the hACE2 receptor. Pictures were generated based on PDB ID: 6acj³⁷. A) Three spike proteins, each consisting of a S1 half and a S2 half, form a trimer. B) The S2 halves (shades of blue) are responsible for trimer formation, while the S1 portion (shades of red) is responsible for binding hACE2 (dark gray). C) Details of the binding between S1 and hACE2. The RBM of S1, which is important and sufficient for binding, is colored in orange. Residues within the RBM that are important for either hACE2 interaction or protein folding are shown as sticks (residue numbers follow the SARS Spike sequence).

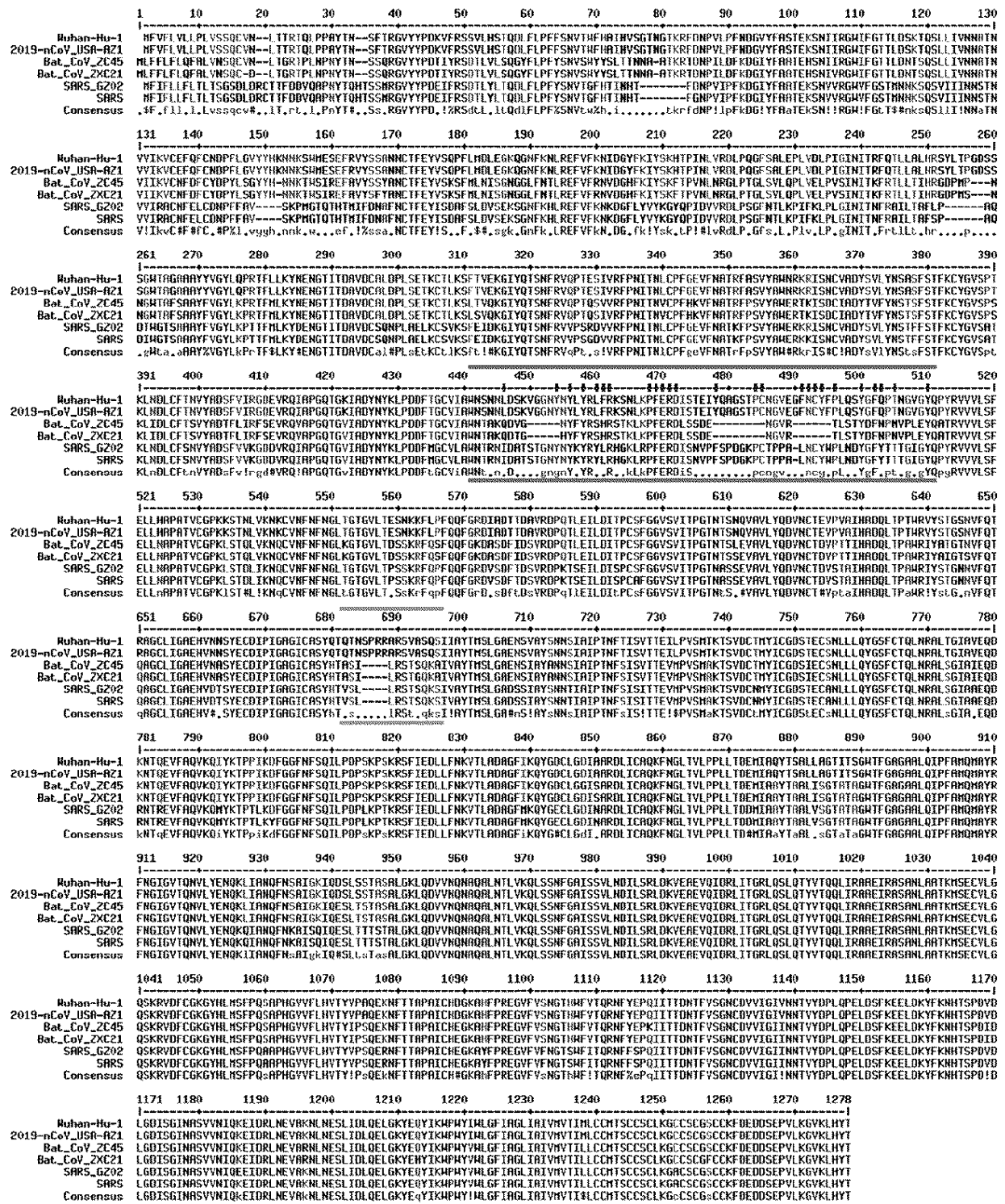


Figure 4. Sequence alignment of the spike proteins from relevant coronaviruses. Viruses being compared include SARS-CoV-2 (Wuhan-Hu-1: NC_045512, 2019-nCoV_USA-AZ1: MN997409), bat coronaviruses (Bat_CoV_ZC45: MG772933, Bat_CoV_ZXC21: MG772934), and SARS coronavirus (SARS_GZ02: AY390556, SARS: NC_004718.3). Region marked by two orange lines is the receptor-binding motif (RBM), which is important for interaction with the hACE2 receptor. Essential residues are additionally highlighted by red sticks on top. Region marked by two green lines is a furin-cleavage site that exists only in SARS-CoV-2 but not in any other lineage B coronavirus.

Similar to what is observed for other viral proteins, S2 of SARS-CoV-2 shares a high sequence identity (95%) with S2 of ZC45/ZXC21. In stark contrast, between SARS-CoV-2 and ZC45/ZXC21, the S1 protein, which dictates which host (human or bat) the virus can infect, is much less conserved with the amino acid sequence identity being only 69%.

Figure 4 shows the sequence alignment of the Spike proteins from six β coronaviruses. Two are viruses isolated from the current pandemic (Wuhan-Hu-1, 2019-nCoV_USA-AZ1); two are the suspected template viruses (Bat_CoV_ZC45, Bat_CoV_ZXC21); two are SARS coronaviruses (SARS_GZ02, SARS). The RBM is highlighted in between two orange lines. Clearly, despite the high sequence identity for the overall genomes, the RBM of SARS-CoV-2 differs significantly from those of ZC45 and ZXC21. Intriguingly, the RBM of SARS-CoV-2 resembles, on a great deal, the RBM of SARS Spike. Although this is not an exact “copy and paste”, careful examination of the Spike-hACE2 structures^{37,38} reveals that all residues essential for either hACE2 binding or protein folding (orange sticks in Figure 3C and what is highlighted by red short lines in Figure 4) are “kept”. Most of these essential residues are precisely preserved, including those involved in disulfide bond formation (C467, C474) and electrostatic interactions (R444, E452, R453, D454), which are pivotal for the structural integrity of the RBM (Figure 3C and 4). The few changes within the group of essential residues are almost exclusively hydrophobic “substitutions” (I428→L, L443→F, F460→Y, L472→F, Y484→Q), which should not affect either protein folding or the hACE2-interaction. At the same time, majority of the amino acid residues that are non-essential have “mutated” (Figure 4, RBM residues not labeled with short red lines). Judging from this sequence analysis alone, we were convinced early on that not only would the SARS-CoV-2 Spike protein bind hACE2 but also the binding would resemble, precisely, that between the original SARS Spike protein and hACE2²³. Recent structural work has confirmed our prediction³⁹.

As elaborated below, the way that SARS-CoV-2 RBM resembles SARS-CoV RBM and the overall sequence conservation pattern between SARS-CoV-2 and ZC45/ZXC21 are highly unusual. Collectively, this suggests that portions of the SARS-CoV-2 genome have not been derived from natural quasi-species viral particle evolution.

If SARS-CoV-2 does indeed come from natural evolution, its RBM could have only been acquired in one of the two possible routes: 1) an ancient recombination event followed by convergent evolution or 2) a natural recombination event that occurred fairly recently.

In the first scenario, the ancestor of SARS-CoV-2, a ZC45/ZXC21-like bat coronavirus would have recombined and “swapped” its RBM with a coronavirus carrying a relatively “complete” RBM (in reference to SARS). This recombination would result in a novel ZC45/ZXC21-like coronavirus with all the gaps in its RBM “filled” (Figure 4). Subsequently, the virus would have to adapt extensively in its new host, where the ACE2 protein is highly homologous to hACE2. Random mutations across the genome would have to have occurred to eventually shape the RBM to its current form – resembling SARS-CoV RBM in a highly intelligent manner. However, this convergent evolution process would also result in the accumulation of a large amount of mutations in other parts of the genome, rendering the overall sequence identity relatively low. The high sequence identity between SARS-CoV-2 and ZC45/ZXC21 on various proteins (94-100% identity) do not support this scenario and, therefore, clearly indicates that SARS-CoV-2 carrying such an RBM cannot come from a ZC45/ZXC21-like bat coronavirus through this convergent evolutionary route.

In the second scenario, the ZC45/ZXC21-like coronavirus would have to have recently recombined and swapped its RBM with another coronavirus that had successfully adapted to bind an animal ACE2

highly homologous to hACE2. The likelihood of such an event depends, in part, on the general requirements of natural recombination: 1) that the two different viruses share significant sequence similarity; 2) that they must co-infect and be present in the same cell of the same animal; 3) that the recombinant virus would not be cleared by the host or make the host extinct; 4) that the recombinant virus eventually would have to become stable and transmissible within the host species.

In regard to this recent recombination scenario, the animal reservoir could not be bats because the ACE2 proteins in bats are not homologous enough to hACE2 and therefore the adaption would not be able to yield an RBM sequence as seen in SARS-CoV-2. This animal reservoir also could not be humans as the ZC45/ZXC21-like coronavirus would not be able to infect humans. In addition, there has been no evidence of any SARS-CoV-2 or SARS-CoV-2-like virus circulating in the human population prior to late 2019. Intriguingly, according to a recent bioinformatics study, SARS-CoV-2 was well-adapted for humans since the start of the outbreak¹.

Only one other possibility of natural evolution remains, which is that the ZC45/ZXC21-like virus and a coronavirus containing a SARS-like RBM could have recombined in an intermediate host where the ACE2 protein is homologous to hACE2. Several laboratories have reported that some of the Sunda pangolins smuggled into China from Malaysia carried coronaviruses, the receptor-binding domain (RBD) of which is almost identical to that of SARS-CoV-2^{27-29,31}. They then went on to suggest that pangolins are the likely intermediate host for SARS-CoV-2^{27-29,31}. However, recent independent reports have found significant flaws in this data⁴⁰⁻⁴². Furthermore, contrary to these reports^{27-29,31}, no coronaviruses have been detected in Sunda pangolin samples collected for over a decade in Malaysia and Sabah between 2009 and 2019⁴³. A recent study also showed that the RBD, which is shared between SARS-CoV-2 and the reported pangolin coronaviruses, binds to hACE2 ten times stronger than to the pangolin ACE2², further dismissing pangolins as the possible intermediate host. Finally, an *in silico* study, while echoing the notion that pangolins are not likely an intermediate host, also indicated that none of the animal ACE2 proteins examined in their study exhibited more favorable binding potential to the SARS-CoV-2 Spike protein than hACE2 did³. This last study virtually exempted all animals from their suspected roles as an intermediate host³, which is consistent with the observation that SARS-CoV-2 was well-adapted for humans from the start of the outbreak¹. This is significant because these findings collectively suggest that no intermediate host seems to exist for SARS-CoV-2, which at the very least diminishes the possibility of a recombinant event occurring in an intermediate host.

Even if we ignore the above evidence that no proper host exists for the recombination to take place and instead assume that such a host does exist, it is still highly unlikely that such a recombination event could occur in nature.

As we have described above, if natural recombination event is responsible for the appearance of SARS-CoV-2, then the ZC45/ZXC21-like virus and a coronavirus containing a SARS-like RBM would have to recombine in the same cell by swapping the S1/RBM, which is a rare form of recombination. Furthermore, since SARS has occurred only once in human history, it would be at least equally rare for nature to produce a virus that resembles SARS in such an intelligent manner – having an RBM that differs from the SARS RBM only at a few non-essential sites (Figure 4). The possibility that this unique SARS-like coronavirus would reside in the same cell with the ZC45/ZXC21-like ancestor virus and the two viruses would recombine in the “RBM-swapping” fashion is extremely low. Importantly, this, and the other recombination event described below in section 1.3 (even more impossible to occur in nature), would both have to happen to produce a Spike as seen in SARS-CoV-2.

While the above evidence and analyses together appear to disapprove a natural origin of SARS-CoV-2's RBM, abundant literature shows that gain-of-function research, where the Spike protein of a coronavirus was specifically engineered, has repeatedly led to the successful generation of human-infecting coronaviruses from coronaviruses of non-human origin⁴⁴⁻⁴⁷.

Record also shows that research laboratories, for example, the Wuhan Institute of Virology (WIV), have successfully carried out such studies working with US researchers⁴⁵ and also working alone⁴⁷. In addition, the WIV has engaged in decades-long coronavirus surveillance studies and therefore owns the world's largest collection of coronaviruses. Evidently, the technical barrier is non-existent for the WIV and other related laboratories to carry out and succeed in such Spike/RBM engineering and gain-of-function research.



Figure 5. Two restriction sites are present at either end of the RBM of SARS-CoV-2, providing convenience for replacing the RBM within the spike gene. A. Nucleotide sequence of the RBM of SARS-CoV-2 (Wuhan-Hu-1). An EcoRI site is found at the 5'-end of the RBM and a BstEII site at the 3'-end. B. Although these two restriction sites do not exist in the original spike gene of ZC45, they can be conveniently introduced given that the sequence discrepancy is small (2 nucleotides) in either case. C. Amino acid sequence alignment with the RBM region highlighted (color and underscore). The RBM highlighted in orange (top) is what is defined by the EcoRI and BstEII sites in the SARS-CoV-2 (Wuhan-Hu-1) spike. The RBM highlighted in magenta (middle) is the region swapped by Dr. Fang Li and colleagues into a SARS Spike backbone³⁹. The RBM highlighted in blue (bottom) is from the Spike protein (RBM: 424-494) of SARS-BJ01 (AY278488.2), which was swapped by the Shi lab into the Spike proteins of different bat coronaviruses replacing the corresponding segments⁴⁷.

Strikingly, consistent with the RBM engineering theory, we have identified two unique restriction sites, EcoRI and BstEII, at either end of the *RBM* of the SARS-CoV-2 genome, respectively (Figure 5A). These two sites, which are popular choices of everyday molecular cloning, do not exist in the rest of this *spike* gene. This particular setting makes it extremely convenient to swap the *RBM* within *spike*, providing a quick way to test different RBMs and the corresponding Spike proteins.

Such EcoRI and BstEII sites do not exist in the *spike* genes of other β coronaviruses, which strongly indicates that they were unnatural and were specifically introduced into this *spike* gene of SARS-CoV-2 for the convenience of manipulating the critical RBM. Although ZC45 *spike* also does not have these two sites (Figure 5B), they can be introduced very easily as described in part 2 of this report.

It is noteworthy that introduction of the EcoRI site here would change the corresponding amino acids from *-WNT-* to *-WNS-* (Figure 5AB). As far as we know, all SARS and SARS-like bat coronaviruses exclusively carry a *T* (threonine) residue at this location. SARS-CoV-2 is the only exception in that this *T* has mutated to an *S* (serine), save the suspicious RaTG13 and pangolin coronaviruses published after the outbreak⁴⁸.

Once the restriction sites were successfully introduced, the *RBM* segment could be swapped conveniently using routine restriction enzyme digestion and ligation. Although alternative cloning techniques may leave no trace of genetic manipulation (Gibson assembly as one example), this old-fashioned approach could be chosen because it offers a great level of convenience in swapping this critical *RBM*.

Given that RBM fully dictates hACE2-binding and that the SARS RBM-hACE2 binding was fully characterized by high-resolution structures (Figure 3)^{37,38}, this RBM-only swap would not be any riskier than the full Spike swap. In fact, the feasibility of this RBM-swap strategy has been proven^{39,47}. In 2008, Dr. Zhengli Shi's group swapped a SARS RBM into the Spike proteins of several SARS-like bat coronaviruses after introducing a restriction site into a codon-optimized *spike* gene (Figure 5C)⁴⁷. They then validated the binding of the resulted chimeric Spike proteins with hACE2. Furthermore, in a recent publication, the RBM of SARS-CoV-2 was swapped into the receptor-binding domain (RBD) of SARS-CoV, resulting in a chimeric RBD fully functional in binding hACE2 (Figure 5C)³⁹. Strikingly, in both cases, the manipulated RBM segments resemble almost exactly the RBM defined by the positions of the EcoRI and BstEII sites (Figure 5C). Although cloning details are lacking in both publications^{39,47}, it is conceivable that the actual restriction sites may vary depending on the *spike* gene receiving the RBM insertion as well as the convenience in introducing unique restriction site(s) in regions of interest. It is noteworthy that the corresponding author of this recent publication³⁹, Dr. Fang Li, has been an active collaborator of Dr. Zhengli Shi since 2010⁴⁹⁻⁵³. Dr. Li was the first person in the world to have structurally elucidated the binding between SARS-CoV RBD and hACE2³⁸ and has been the leading expert in the structural understanding of Spike-ACE2 interactions^{38,39,53-56}. The striking finding of EcoRI and BstEII restriction sites at either end of the SARS-CoV-2 RBM, respectively, and the fact that the same RBM region has been swapped both by Dr. Shi and by her long-term collaborator, respectively, using restriction enzyme digestion methods are unlikely a coincidence. **Rather, it is the smoking gun proving that the RBM/Spike of SARS-CoV-2 is a product of genetic manipulation.**

Although it may be convenient to copy the exact sequence of SARS RBM, it would be too clear a sign of artificial design and manipulation. The more deceiving approach would be to change a few non-essential residues, while preserving the ones critical for binding. This design could be well-guided by the high-resolution structures (Figure 3)^{37,38}. This way, when the overall sequence of the RBM would appear

to be more distinct from that of the SARS RBM, the hACE2-binding ability would be well-preserved. We believe that all of the crucial residues (residues labeled with red sticks in Figure 4, which are the same residues shown in sticks in Figure 3C) should have been “kept”. As described earlier, while some should be direct preservation, some should have been switched to residues with similar properties, which would not disrupt hACE2-binding and may even strengthen the association further. Importantly, changes might have been made intentionally at non-essential sites, making it less like a “copy and paste” of the SARS RBM.

1.3 An unusual furin-cleavage site is present in the Spike protein of SARS-CoV-2 and is associated with the augmented virulence of the virus

Another unique motif in the Spike protein of SARS-CoV-2 is a polybasic furin-cleavage site located at the S1/S2 junction (Figure 4, segment in between two green lines). Such a site can be recognized and cleaved by the furin protease. Within the lineage B of β coronaviruses and with the exception of SARS-CoV-2, no viruses contain a furin-cleavage site at the S1/S2 junction (Figure 6)⁵⁷. In contrast, furin-cleavage site at this location has been observed in other groups of coronaviruses^{57,58}. Certain selective pressure seems to be in place that prevents the lineage B of β coronaviruses from acquiring or maintaining such a site in nature.

Human SARS-CoV BJ01	655 - GICASYHTVSSL----RSTS - 670
Human SARS-CoV CUHK-W1	655 - GICASYHTVSSL----RSTS - 670
Human SARS-CoV Tor2	655 - GICASYHTVSSL----RSTS - 670
Human SARS-CoV Frankfurt-1	655 - GICASYHTVSSL----RSTS - 670
Human SARS-CoV Urbani	655 - GICASYHTVSSL----RSTS - 670
Civet SARS-CoV civet020	655 - GICASYHTVSSL----RSTS - 670
Civet SARS-CoV sz16	655 - GICASYHTVSSL----RSTS - 670
Raccoon dog SARS-CoV A030	655 - GICASYHTVSSL----RSTS - 670
SARS-CoV-2	669 - GICASYQTQTNSPRRARSVA - 688
Fangolin CoV MP789	n/a - GICASYQTQTNS----RSVS - n/a
Bat SARSr-CoV RaTG13	669 - GICASYQTQTNS----RSVA - 684
Bat SARSr-CoV LYRa11	659 - GICASYHTASLL----RNTD - 674
Bat SARSr-CoV LYRa3	659 - GICASYHTASLL----RNTG - 674
Bat SARSr-CoV RsSHC014	656 - GICASYHTVSSL----RSTS - 671
Bat SARSr-CoV Rs4084	656 - GICASYHTVSSL----RSTS - 671
Bat SARSr-CoV WIV1	656 - GICASYHTVSSL----RSTS - 671
Bat SARSr-CoV Rs3367	656 - GICASYHTVSSL----RSTS - 671
Bat SARSr-CoV Rs7327	656 - GICASYHTVSSL----RSTS - 671
Bat SARSr-CoV Rs9401	656 - GICASYHTVSSL----RSTS - 671
Bat SARSr-CoV Rs4231	655 - GICASYHTVSSL----RSTS - 670
Bat SARSr-CoV WIV16	655 - GICASYHTVSSL----RSTS - 670
Bat SARSr-CoV Rs4874	655 - GICASYHTVSSL----RSTS - 670
Bat SARSr-CoV ZC45	646 - GICASYHTASLL----RSTS - 661
Bat SARSr-CoV ZXC21	645 - GICASYHTASLL----RSTG - 660
Bat SARSr-CoV Rf4092	634 - GICASYHTASLL----RGVG - 649
Bat SARSr-CoV Rf/JL2012	636 - GICASYHTASLL----RSTG - 651
Bat SARSr-CoV JTMCI5	636 - GICASYHTASLL----RSTG - 651
Bat SARSr-CoV 16B0133	636 - GICASYHTASLL----RSTG - 651
Bat SARSr-CoV B15-21	636 - GICASYHTASLL----RSTG - 651
Bat SARSr-CoV YN2013	633 - GICASYHTASLL----RSIG - 648
Bat SARSr-CoV Anlong-103	633 - GICASYHTASLL----RSVG - 648
Bat SARSr-CoV Rp/Shaanxi2011	640 - GICASYHTASVL----RSTG - 655
Bat SARSr-CoV Rs/HuB2013	641 - GICASYHTASVL----RSTG - 656
Bat SARSr-CoV YNLF/34C	641 - GICASYHTASVL----RSTG - 656
Bat SARSr-CoV YNLF/31C	641 - GICASYHTASVL----RSTG - 656
Bat SARSr-CoV Rf1	641 - GICASYHTASHL----RSTG - 656
Bat SARSr-CoV 273	641 - GICASYHTASHL----RSTG - 656
Bat SARSr-CoV Rf/SX2013	639 - GICASYHTASLL----RSTG - 654
Bat SARSr-CoV Rf/HeB2013	641 - GICASYHTASLL----RSTG - 656
Bat SARSr-CoV Cp/Yunnan2011	641 - GICASYHTASLL----RNTG - 656
Bat SARSr-CoV Rs672	641 - GICASYHTASLL----RSVG - 656
Bat SARSr-CoV Rs4255	641 - GICASYHTASLL----RSVG - 656
Bat SARSr-CoV 4081	641 - GICASYHTASLL----RSVG - 656
Bat SARSr-CoV Rm1	641 - GICASYHTASVL----RSTG - 656
Bat SARSr-CoV 279	641 - GICASYHTASVL----RSTG - 656
Bat SARSr-CoV Rs/GX2013	642 - GICASYHTASVL----RSTG - 657
Bat SARSr-CoV Rs806	641 - GICASYHTASLL----RSTG - 656
Bat SARSr-CoV HKU3-1	642 - GICASYHTASVL----RSTG - 657
Bat SARSr-CoV Longquan-140	642 - GICASYHTASVL----RSTG - 657
Bat SARSr-CoV Rp3	641 - GICASYHTASLL----RSVG - 656
Bat SARSr-CoV Rs4247	642 - GICASYHTASLL----RSVG - 657
Bat SARSr-CoV Rs4237	641 - GICASYHTASLL----RSVG - 656
Bat SARSr-CoV As6526	641 - GICASYHTASLL----RSVG - 656

Figure 6. Furin-cleavage site found at the S1/S2 junction of Spike is unique to SARS-CoV-2 and absent in other lineage B β coronaviruses. Figure reproduced from Hoffmann, et al⁵⁷.

As previously described, during the cell entry process, the Spike protein is first cleaved at the S1/S2 junction. This step, and a subsequent cleavage downstream that exposes the fusion peptide, are both mediated by host proteases. The presence or absence of these proteases in different cell types greatly affects the cell tropism and presumably the pathogenicity of the viral infection. Unlike other proteases, furin protease is widely expressed in many types of cells and is present at multiple cellular and extracellular locations. Importantly, the introduction of a furin-cleavage site at the S1/S2 junction could significantly enhance the infectivity of a virus as well as greatly expand its cell tropism — a phenomenon well-documented in both influenza viruses and other coronaviruses⁵⁹⁻⁶⁵.

If we leave aside the fact that no furin-cleavage site is found in any lineage B β coronavirus in nature and instead assume that this site in SARS-CoV-2 is a result of natural evolution, then only one evolutionary pathway is possible, which is that the furin-cleavage site has to be derived from a homologous recombination event. Specifically, an ancestor β coronavirus containing no furin-cleavage site would have to recombine with a closely related coronavirus that does contain a furin-cleavage site.

However, two facts disfavor this possibility. First, although some coronaviruses from other groups or lineages do contain polybasic furin-cleavage sites, none of them contains the exact polybasic sequence present in SARS-CoV-2 (-PRRAR/SVA-). Second, between SARS-CoV-2 and any coronavirus containing a legitimate furin-cleavage site, the sequence identity on Spike is no more than 40%⁶⁶. Such a low level of sequence identity rules out the possibility of a successful homologous recombination ever occurring between the ancestors of these viruses. Therefore, the furin-cleavage site within the SARS-CoV-2 Spike protein is unlikely to be of natural origin and instead should be a result of laboratory modification.

Consistent with this claim, a close examination of the nucleotide sequence of the furin-cleavage site in SARS-CoV-2 *spike* has revealed that the two consecutive Arg residues within the inserted sequence (-PRRA-) are both coded by the rare codon CGG (least used codon for Arg in SARS-CoV-2) (Figure 7)⁸. In fact, this CGGCGG arrangement is the only instance found in the SARS-CoV-2 genome where this rare codon is used in tandem. This observation strongly suggests that this furin-cleavage site should be a result of genetic engineering. Adding to the suspicion, a *FauI* restriction site is formulated by the codon choices here, suggesting the possibility that the *restriction fragment length polymorphism*, a technique that a WIV lab is proficient at⁶⁷, could have been involved. There, the fragmentation pattern resulted from *FauI* digestion could be used to monitor the preservation of the furin-cleavage site in Spike as this furin-cleavage site is prone to deletions *in vitro*^{68,69}. Specifically, RT-PCR on the *spike* gene of the recovered viruses from cell cultures or laboratory animals could be carried out, the product of which would be subjected to *FauI* digestion. Viruses retaining or losing the furin-cleavage site would then yield distinct patterns, allowing convenient tracking of the virus(es) of interest.

FauI

tat	cag	act	cag	act	aat	tct	cct	cgg	cgg	gca	cgt	agt	gta	gct	agt	caa	tcc	atc	att
Y	Q	T	Q	T	N	S	P	R	R	A	R	S	V	A	S	Q	S	I	I

Figure 7. Two consecutive Arg residues in the -PRRA- insertion at the S1/S2 junction of SARS-CoV-2 Spike are both coded by a rare codon, CGG. A *FauI* restriction site, 5'-(N)₆GCGGG-3', is embedded in the coding sequence of the "inserted" PRRA segment, which may be used as a marker to monitor the preservation of the introduced furin-cleavage site.

In addition, although no known coronaviruses contain the exact sequence of -PRRAR/SVA- that is present in the SARS-CoV-2 Spike protein, a similar -RRAR/AR- sequence has been observed at the S1/S2 junction of the Spike protein in a rodent coronavirus, AcCoV-JC34, which was published by Dr. Zhengli

Shi in 2017⁷⁰. It is evident that the legitimacy of *-RRAR-* as a functional furin-cleavage site has been known to the WIV experts since 2017.

The evidence collectively suggests that the furin-cleavage site in the SARS-CoV-2 Spike protein may not have come from nature and could be the result of genetic manipulation. The purpose of this manipulation could have been to assess any potential enhancement of the infectivity and pathogenicity of the laboratory-made coronavirus⁵⁹⁻⁶⁴. Indeed, recent studies have confirmed that the furin-cleavage site does confer significant pathogenic advantages to SARS-CoV-2^{57,68}.

1.4 Summary

Evidence presented in this part reveals that certain aspects of the SARS-CoV-2 genome are extremely difficult to reconcile to being a result of natural evolution. The alternative theory we suggest is that the virus may have been created by using ZC45/ZXC21 bat coronavirus(es) as the backbone and/or template. The Spike protein, especially the RBM within it, should have been artificially manipulated, upon which the virus has acquired the ability to bind hACE2 and infect humans. This is supported by the finding of a unique restriction enzyme digestion site at either end of the RBM. An unusual furin-cleavage site may have been introduced and inserted at the S1/S2 junction of the Spike protein, which contributes to the increased virulence and pathogenicity of the virus. These transformations have then staged the SARS-CoV-2 virus to eventually become a highly-transmissible, onset-hidden, lethal, sequelae-unclear, and massively disruptive pathogen.

Evidently, the possibility that SARS-CoV-2 could have been created through gain-of-function manipulations at the WIV is significant and should be investigated thoroughly and independently.

2. Delineation of a synthetic route of SARS-CoV-2

In the second part of this report, we describe a synthetic route of creating SARS-CoV-2 in a laboratory setting. It is postulated based on substantial literature support as well as genetic evidence present in the SARS-CoV-2 genome. Although steps presented herein should not be viewed as exactly those taken, we believe that key processes should not be much different. Importantly, our work here should serve as a demonstration of how SARS-CoV-2 can be designed and created conveniently in research laboratories by following proven concepts and using well-established techniques.

Importantly, research labs, both in Hong Kong and in mainland China, are leading the world in coronavirus research, both in terms of resources and on the research outputs. The latter is evidenced not only by the large number of publications that they have produced over the past two decades but also by their milestone achievements in the field: they were the first to identify civets as the intermediate host for SARS-CoV and isolated the first strain of the virus⁷¹; they were the first to uncover that SARS-CoV originated from bats^{72,73}; they revealed for the first time the antibody-dependent enhancement (ADE) of SARS-CoV infections⁷⁴; they have contributed significantly in understanding MERS in all domains (zoonosis, virology, and clinical studies)⁷⁵⁻⁷⁹; they made several breakthroughs in SARS-CoV-2 research^{18,35,80}. Last but not least, they have the world's largest collection of coronaviruses (genomic sequences and live viruses). The knowledge, expertise, and resources are all readily available within the Hong Kong and mainland research laboratories (they collaborate extensively) to carry out and accomplish the work described below.

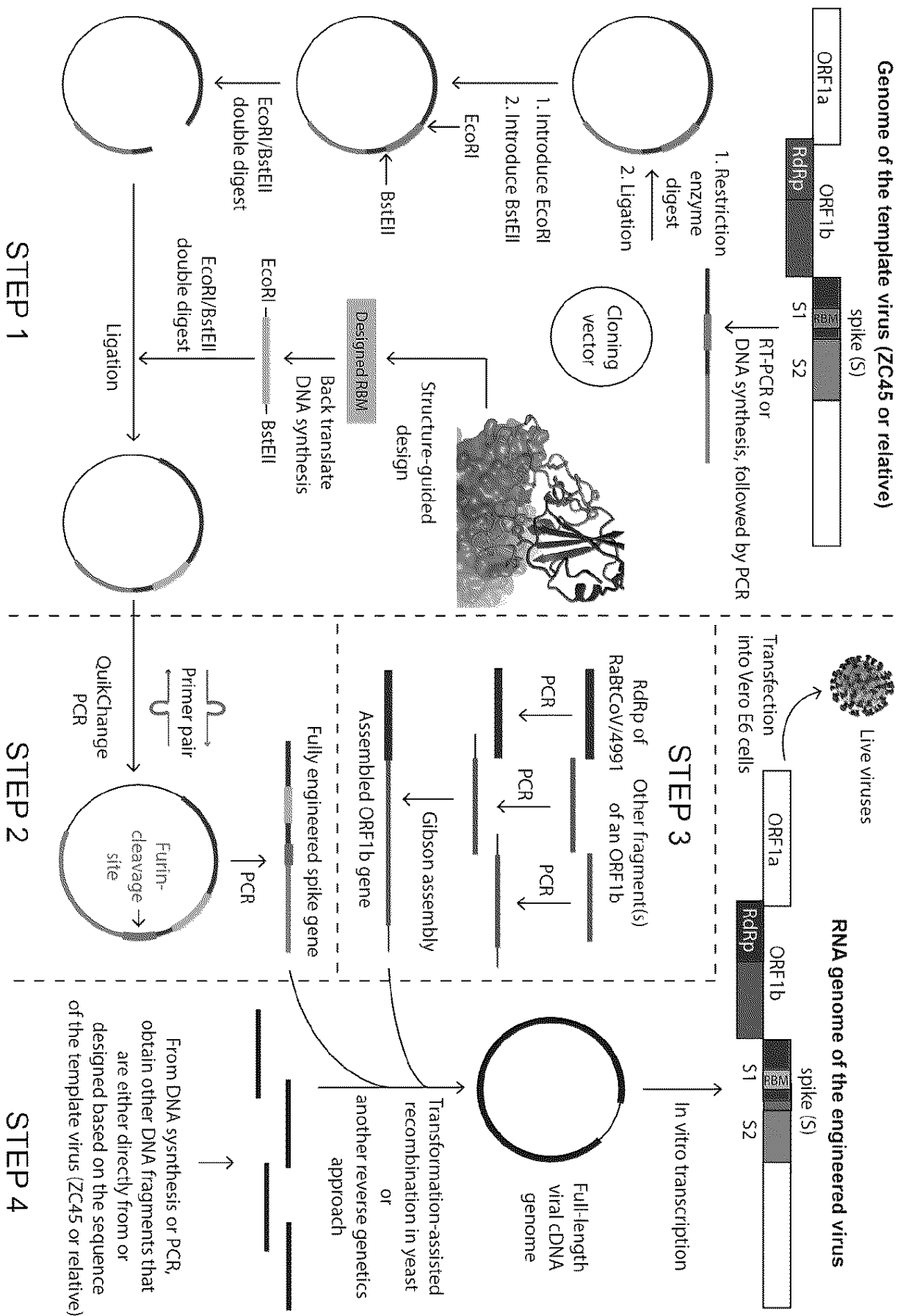


Figure 8. Diagram of a possible synthetic route of the laboratory-creation of SARS-CoV-2.

2.1 Possible scheme in designing the laboratory-creation of the novel coronavirus

In this sub-section, we outline the possible overall strategy and major considerations that may have been formulated at the designing stage of the project.

To engineer and create a human-targeting coronavirus, they would have to pick a bat coronavirus as the template/backbone. This can be conveniently done because many research labs have been actively collecting bat coronaviruses over the past two decades^{32,33,70,72,81-85}. However, this template virus ideally should not be one from Dr. Zhengli Shi's collections, considering that she is widely known to have been engaged in gain-of-function studies on coronaviruses. Therefore, ZC45 and/or ZXC21, novel bat coronaviruses discovered and owned by military laboratories³³, would be suitable as the template/backbone. It is also possible that these military laboratories had discovered other closely related viruses from the same location and kept some unpublished. Therefore, the actual template could be ZC45, or ZXC21, or a close relative of them. The postulated pathway described below would be the same regardless of which one of the three was the actual template.

Once they have chosen a template virus, they would first need to engineer, through molecular cloning, the Spike protein so that it can bind hACE2. The concept and cloning techniques involved in this manipulation have been well-documented in the literature^{44-46,84,86}. With almost no risk of failing, the template bat virus could then be converted to a coronavirus that can bind hACE2 and infect humans⁴⁴⁻⁴⁶.

Second, they would use molecular cloning to introduce a furin-cleavage site at the S1/S2 junction of Spike. This manipulation, based on known knowledge^{60,61,65}, would likely produce a strain of coronavirus that is a more infectious and pathogenic.

Third, they would produce an *ORF1b* gene construct. The *ORF1b* gene encodes the polyprotein Orf1b, which is processed post-translationally to produce individual viral proteins: RNA-dependent RNA polymerase (RdRp), helicase, guanidine-N7 methyltransferase, uridylyate-specific endoribonuclease, and 2'-O-methyltransferase. All of these proteins are parts of the replication machinery of the virus. Among them, the RdRp protein is the most crucial one and is highly conserved among coronaviruses. Importantly, Dr. Zhengli Shi's laboratory uses a PCR protocol, which amplifies a particular fragment of the *RdRp* gene, as their primary method to detect the presence of coronaviruses in raw samples (bat fecal swap, feces, etc). As a result of this practice, the Shi group has documented the sequence information of this short segment of *RdRp* for all coronaviruses that they have successfully detected and/or collected.

Here, the genetic manipulation is less demanding or complicated because Orf1b is conserved and likely Orf1b from any β coronavirus would be competent enough to do the work. However, we believe that they would want to introduce a particular Orf1b into the virus for one of the two possible reasons:

1. Since many phylogenetic analyses categorize coronaviruses based on the sequence similarity of the *RdRp* gene only^{18,31,35,83,87}, having a different *RdRp* in the genome therefore could ensure that SARS-CoV-2 and ZC45/ZXC21 are separated into different groups/sub-lineages in phylogenetic studies. Choosing an *RdRp* gene, however, is convenient because the short *RdRp* segment sequence has been recorded for all coronaviruses ever collected/detected. Their final choice was the *RdRp* sequence from bat coronavirus RaBtCoV/4991, which was discovered in 2013. For RaBtCoV/4991, the only information ever published was the sequence of its short *RdRp* segment⁸³, while neither its full genomic sequence nor virus isolation were ever reported. After amplifying the *RdRp* segment (or the whole *ORF1b* gene) of RaBtCoV/4991, they would have then used it for subsequent assembly and creation of the genome of SARS-CoV-2. Small changes in the *RdRp*

sequence could either be introduced at the beginning (through DNA synthesis) or be generated *via* passages later on. On a separate track, when they were engaged in the fabrication of the RaTG13 sequence, they could have started with the short *RdRp* segment of RaBtCoV/4991 without introducing any changes to its sequence, resulting in a 100% nucleotide sequence identity between the two viruses on this short *RdRp* segment⁸³. This RaTG13 virus could then be claimed to have been discovered back in 2013.

2. The RdRp protein from RaBatCoV/4991 is unique in that it is superior than RdRp from any other β coronavirus for developing antiviral drugs. RdRp has no homologs in human cells, which makes this essential viral enzyme a highly desirable target for antiviral development. As an example, *Remdesivir*, which is currently undergoing clinical trials, targets RdRp. When creating a novel and human-targeting virus, they would be interested in developing the antidote as well. Even though drug discovery like this may not be easily achieved, it is reasonable for them to intentionally incorporate a RdRp that is more amenable for antiviral drug development.

Fourth, they would use reverse genetics to assemble the gene fragments of *spike*, *ORF1b*, and the rest of the template ZC45 into a cDNA version of the viral genome. They would then carry out *in vitro* transcription to obtain the viral RNA genome. Transfection of the RNA genome into cells would allow the recovery of live and infectious viruses with the desired artificial genome.

Fifth, they would carry out characterization and optimization of the virus strain(s) to improve the fitness, infectivity, and overall adaptation using serial passage *in vivo*. One or several viral strains that meet certain criteria would then be obtained as the final product(s).

2.2 A postulated synthetic route for the creation of SARS-CoV-2

In this sub-section, we describe in more details how each step could be carried out in a laboratory setting using available materials and routine molecular, cellular, and virologic techniques. A diagram of this process is shown in Figure 8. We estimate that the whole process could be completed in approximately 6 months.

Step 1: Engineering the RBM of the Spike for hACE2-binding (1.5 months)

The Spike protein of a bat coronavirus is either incapable of or inefficient in binding hACE2 due to the missing of important residues within its RBM. This can be exemplified by the RBM of the template virus ZC45 (Figure 4). The first and most critical step in the creation of SARS-CoV-2 is to engineer the Spike so that it acquires the ability to bind hACE2. As evidenced in the literature, such manipulations have been carried out repeatedly in research laboratories since 2008⁴⁴, which successfully yielded engineered coronaviruses with the ability to infect human cells^{44-46,88,89}. Although there are many possible ways that one can engineer the Spike protein, we believe that what was actually undertaken was that they replaced the original RBM with a designed and possibly optimized RBM using SARS' RBM as a guide. As described in part 1, this theory is supported by our observation that two unique restriction sites, EcoRI and BstEII, exist at either end of the *RBM* in the SARS-CoV-2 genome (Figure 5A) and by the fact that such RBM-swap has been successfully carried out by Dr. Zhengli Shi and by her long-term collaborator and structure biology expert, Dr. Fang Li^{39,47}.

Although ZC45 *spike* does not contain these two restriction sites (Figure 5B), they can be introduced very easily. The original *spike* gene would be either amplified with RT-PCR or obtained through DNA synthesis (some changes could be safely introduced to certain variable regions of the sequence) followed by PCR. The gene would then be cloned into a plasmid using restriction sites other than EcoRI and BstEII.

Once in the plasmid, the *spike* gene can be modified easily. First, an EcoRI site can be introduced by converting the highlighted “gaacac” sequence (Figure 5B) to the desired “gaattc” (Figure 5A). The difference between them are two consecutive nucleotides. Using the commercially available QuikChange Site-Directed Mutagenesis kit, such a di-nucleotide mutation can be generated in no more than one week. Subsequently, the BstEII site could be similarly introduced at the other end of the *RBM*. Specifically, the “gaatacc” sequence (Figure 5B) would be converted to the desired “ggttacc” (Figure 5A), which would similarly require a week of time.

Once these restriction sites, which are unique within the *spike* gene of SARS-CoV-2, were successfully introduced, different *RBM* segments could be swapped in conveniently and the resulting Spike protein subsequently evaluated using established assays.

As described in part 1, the design of an *RBM* segment could be well-guided by the high-resolution structures (Figure 3)^{37,38}, yielding a sequence that resembles the SARS *RBM* in an intelligent manner. When carrying out the structure-guided design of the *RBM*, they would have followed the routine and generated a few (for example a dozen) such *RBM*s with the hope that some specific variant(s) may be superior than others in binding hACE2. Once the design was finished, they could have each of the designed *RBM* genes commercially synthesized (quick and very affordable) with an EcoRI site at the 5'-end and a BstEII site at the 3'-end. These novel *RBM* genes could then be cloned into the *spike* gene, respectively. The gene synthesis and subsequent cloning, which could be done in a batch mode for the small library of designed *RBM*s, would take approximately one month.

These engineered Spike proteins might then be tested for hACE2-binding using the established pseudotype virus infection assays^{45,49,50}. The engineered Spike with good to exceptional binding affinities would be selected. (Although not necessary, directed evolution could be involved here (error-prone PCR on the *RBM* gene), coupled with either an *in vitro* binding assay^{39,90} or a pseudotype virus infection assay^{45,49,50}, to obtain an *RBM* that binds hACE2 with exceptional affinity.)

Given the abundance^{44-46,84,86} of literature on Spike engineering and the available high-resolution structures of the Spike-hACE2 complex^{37,38}, the success of this step would be very much guaranteed. By the end of this step, as desired, a novel *spike* gene would be obtained, which encodes a novel Spike protein capable of binding hACE2 with high affinity.

Step 2: Engineering a furin-cleavage site at the S1/S2 junction (0.5 month)

The product from Step 1, a plasmid containing the engineered *spike*, would be further modified to include a furin-cleavage site (segment indicated by green lines in Figure 4) at the S1/S2 junction. This short stretch of gene sequence can be conveniently inserted using several routine cloning techniques, including QuikChange Site-Directed PCR⁶⁰, overlap PCR followed by restriction enzyme digestion and ligation⁹¹, or Gibson assembly. None of these techniques would leave any trace in the sequence. Whichever cloning method was the choice, the inserted gene piece would be included in the primers, which would be designed, synthesized, and used in the cloning. This step, leading to a further modified Spike with the furin-cleavage site added at the S1/S2 junction, could be completed in no more than two weeks.

Step 3: Obtain an *ORF1b* gene that contains the sequence of the short *RdRp* segment from RaBtCoV/4991 (1 month, yet can be carried out concurrently with Steps 1 and 2)

Unlike the engineering of Spike, no complicated design is needed here, except that the *RdRp* gene segment from RaBtCoV/4991 would need to be included. Gibson assembly could have been used here. In this technique, several fragments, each adjacent pair sharing 20-40 bp overlap, are combined together in one simple reaction to assemble a long DNA product. Two or three fragments, each covering a significant section of the *ORF1b* gene, would be selected based on known bat coronavirus sequences. One of these fragments would be the *RdRp* segment of RaBtCoV/4991⁸³. Each fragment would be PCR amplified with proper overlap regions introduced in the primers. Finally, all purified fragments would be pooled in equimolar concentrations and added to the Gibson reaction mixture, which, after a short incubation, would yield the desired *ORF1b* gene in whole.

Step 4: Produce the designed viral genome using reverse genetics and recover live viruses (0.5 month)

Reverse genetics have been frequently used in assembling whole viral genomes, including coronavirus genomes^{67,92-96}. The most recent example is the reconstruction of the SARS-CoV-2 genome using the *transformation-assisted recombination in yeast*⁹⁷. Using this method, the Swiss group assembled the entire viral genome and produced live viruses in just one week⁹⁷. This efficient technique, which would not leave any trace of artificial manipulation in the created viral genome, has been available since 2017^{98,99}. In addition to the engineered *spike* gene (from steps 1 and 2) and the *ORF1b* gene (from step 3), other fragments covering the rest of the genome would be obtained either through RT-PCR amplification from the template virus or through DNA synthesis by following a sequence slightly altered from that of the template virus. We believe that the latter approach was more likely as it would allow sequence changes introduced into the variable regions of less conserved proteins, the process of which could be easily guided by multiple sequence alignments. The amino acid sequences of more conserved functions, such as that of the E protein, might have been left unchanged. All DNA fragments would then be pooled together and transformed into yeast, where the cDNA version of the SARS-CoV-2 genome would be assembled *via* transformation-assisted recombination. Of course, an alternative method of reverse genetics, one of which the WIV has successfully used in the past⁶⁷, could also be employed^{67,92-96,100}. Although some earlier reverse genetics approaches may leave restriction sites at where different fragments would be joined, these traces would be hard to detect as the exact site of ligation can be anywhere in the ~30kb genome. Either way, a cDNA version of the viral genome would be obtained from the reverse genetics experiment. Subsequently, *in vitro* transcription using the cDNA as the template would yield the viral RNA genome, which upon transfection into Vero E6 cells would allow the production of live viruses bearing all of the designed properties.

Step 5: Optimize the virus for fitness and improve its hACE2-binding affinity *in vivo* (2.5-3 months)

Virus recovered from step 4 needs to be further adapted undergoing the classic experiment – serial passage in laboratory animals¹⁰¹. This final step would validate the virus' fitness and ensure its receptor-oriented adaptation toward its intended host, which, according to the analyses above, should be human. Importantly, the RBM and the furin-cleavage site, which were introduced into the Spike protein separately, would now be optimized together as one functional unit. Among various available animal models (e.g. mice, hamsters, ferrets, and monkeys) for coronaviruses, hACE2 transgenic mice (hACE2-mice) should be the most proper and convenient choice here. This animal model has been established during the study of SARS-CoV and has been available in the Jackson Laboratory for many years¹⁰²⁻¹⁰⁴.

The procedure of serial passage is straightforward. Briefly, the selected viral strain from step 4, a precursor of SARS-CoV-2, would be intranasally inoculated into a group of anaesthetized hACE2-mice. Around 2-3 days post infection, the virus in lungs would usually amplify to a peak titer. The mice would

then be sacrificed and the lungs homogenized. Usually, the mouse-lung supernatant, which carries the highest viral load, would be used to extract the candidate virus for the next round of passage. After approximately 10~15 rounds of passage, the hACE2-binding affinity, the infection efficiency, and the lethality of the viral strain would be sufficiently enhanced and the viral genome stabilized¹⁰¹. Finally, after a series of characterization experiments (e.g. viral kinetics assay, antibodies response assay, symptom observation and pathology examination), the final product, SARS-CoV-2, would be obtained, concluding the whole creation process. From this point on, this viral pathogen could be amplified (most probably using Vero E6 cells) and produced routinely.

It is noteworthy that, based on the work done on SARS-CoV, the hACE2-mice, although suitable for SARS-CoV-2 adaptation, is not a good model to reflect the virus' transmissibility and associated clinical symptoms in humans. We believe that those scientists might not have used a proper animal model (such as the golden Syrian hamster) for testing the transmissibility of SARS-CoV-2 before the outbreak of COVID-19. If they had done this experiment with a proper animal model, the highly contagious nature of SARS-CoV-2 would be extremely evident and consequently SARS-CoV-2 would not have been described as "not causing human-to-human transmission" at the start of the outbreak.

We also speculate that the extensive laboratory-adaptation, which is oriented toward enhanced transmissibility and lethality, may have driven the virus too far. As a result, SARS-CoV-2 might have lost the capacity to attenuate on both transmissibility and lethality during its current adaptation in the human population. This hypothesis is consistent with the lack of apparent attenuation of SARS-CoV-2 so far despite its great prevalence and with the observation that a recently emerged, predominant variant only shows improved transmissibility¹⁰⁵⁻¹⁰⁸.

Serial passage is a quick and intensive process, where the adaptation of the virus is accelerated. Although intended to mimic natural evolution, serial passage is much more limited in both time and scale. As a result, less random mutations would be expected in serial passage than in natural evolution. This is particularly true for conserved viral proteins, such as the E protein. Critical in viral replication, the E protein is a determinant of virulence and engineering of it may render SARS-CoV-2 attenuated¹⁰⁹⁻¹¹¹. Therefore, at the initial assembly stage, these scientists might have decided to keep the amino acid sequence of the E protein unchanged from that of ZC45/ZXC21. Due to the conserved nature of the E protein and the limitations of serial passage, no amino acid mutation actually occurred, resulting in a 100% sequence identity on the E protein between SARS-CoV-2 and ZC45/ZXC21. The same could have happened to the marks of molecular cloning (restriction sites flanking the RBM). Serial passage, which should have partially naturalized the SARS-CoV-2 genome, might not have removed all signs of artificial manipulation.

3. Final remarks

Many questions remain unanswered about the origin of SARS-CoV-2. Prominent virologists have implicated in a *Nature Medicine* letter that laboratory escape, while not being entirely ruled out, was unlikely and that no sign of genetic manipulation is present in the SARS-CoV-2 genome⁴. However, here we show that genetic evidence within the *spike* gene of SARS-CoV-2 genome (restriction sites flanking the *RBM*; tandem rare codons used at the inserted furin-cleavage site) does exist and suggests that the SARS-CoV-2 genome should be a product of genetic manipulation. Furthermore, the proven concepts, well-established techniques, and knowledge and expertise are all in place for the convenient creation of this novel coronavirus in a short period of time.

Motives aside, the following facts about SARS-CoV-2 are well-supported:

1. If it was a laboratory product, the most critical element in its creation, the backbone/template virus (ZC45/ZXC21), is owned by military research laboratories.
2. The genome sequence of SARS-CoV-2 has likely undergone genetic engineering, through which the virus has gained the ability to target humans with enhanced virulence and infectivity.
3. The characteristics and pathogenic effects of SARS-CoV-2 are unprecedented. The virus is highly transmissible, onset-hidden, multi-organ targeting, sequelae-unclear, lethal, and associated with various symptoms and complications.
4. SARS-CoV-2 caused a world-wide pandemic, taking hundreds of thousands of lives and shutting down the global economy. It has a destructive power like no other.

Judging from the evidence that we and others have gathered, we believe that finding the origin of SARS-CoV-2 should involve an independent audit of the WIV P4 laboratories and the laboratories of their close collaborators. Such an investigation should have taken place long ago and should not be delayed any further.

We also note that in the publication of the chimeric virus SHC015-MA15 in 2015, the attribution of funding of Zhengli Shi by the NIAID was initially left out. It was reinstated in the publication in 2016 in a corrigendum, perhaps after the meeting in January 2016 to reinstate NIH funding for gain-of-function research on viruses. This is an unusual scientific behavior, which needs an explanation for.

What is not thoroughly described in this report is the various evidence indicating that several coronaviruses recently published (RaTG13¹⁸, RmYN02³⁰, and several pangolin coronaviruses^{27-29,31}) are highly suspicious and likely fraudulent. These fabrications would serve no purpose other than to deceive the scientific community and the general public so that the true identity of SARS-CoV-2 is hidden. Although exclusion of details of such evidence does not alter the conclusion of the current report, we do believe that these details would provide additional support for our contention that SARS-CoV-2 is a laboratory-enhanced virus and a product of gain-of-function research. A follow-up report focusing on such additional evidence is now being prepared and will be submitted shortly.

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