

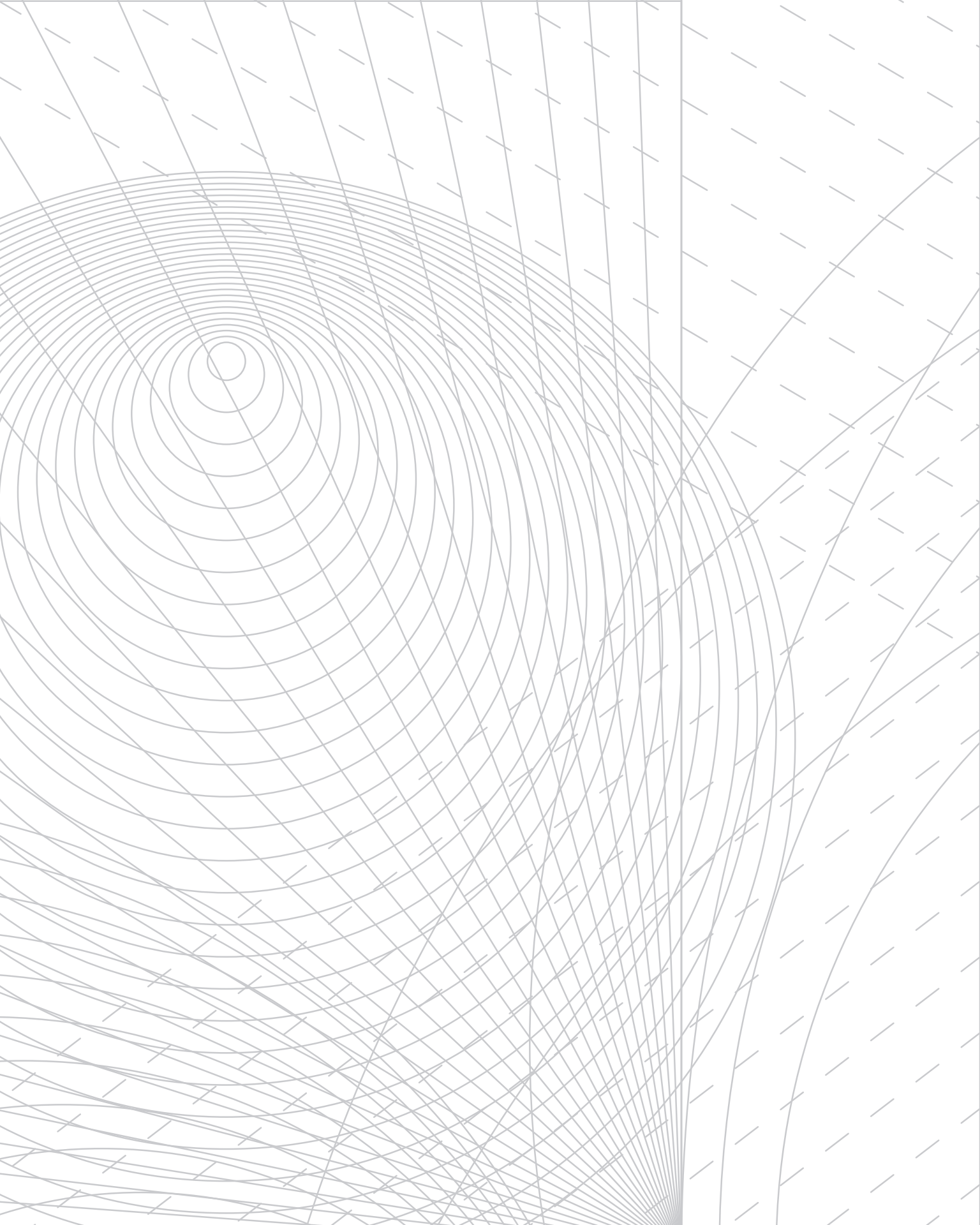


LOCKDOWN

True Story:

How the
novel
coronavirus
escaped
Wuhan, China
and terrorized
the world

MICHAEL TCHONG



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TRUE STORY: HOW THE NOVEL CORONAVIRUS ESCAPED
WUHAN, CHINA AND TERRORIZED THE WORLD

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TO MY FATHER CHONG HONG,
MAY HIS MEMORIES OF CHINA BE CHERISHED.



A WORD FROM THE AUTHOR

Three years ago, an organism 100 nanometers in size, about 1,000 times smaller than a human hair, caused a massive global pandemic that led to trillions in losses. What was the origin of the novel coronavirus? Did it really spill over from an animal? How did COVID-19 infect 705 million people and kill 18.2 million? What made SARS-CoV-2 so virulent? And why did China aggressively rein in virus-related information from the very start?

A search for answers to these nagging questions led to *LOCKDOWN*, a far-reaching and often startling examination of the events leading up to the outbreak. *LOCKDOWN* offers unprecedented scientific detail to help cut through the fog surrounding China's lagging response during the epidemic's early days in Wuhan. You will also get to meet many key figures that played pivotal roles in the 2019 novel coronavirus débâcle, certainly one of the most cataclysmic events the world has ever experienced.

I hope you enjoy this preview chapter of what is likely to be one of the most talked-about books in 2025.

Handwritten signature of Michael.

Wuhan, Hubei, China (武汉)

A view of Wuhan and the Yangtze River from the Wuchang side. Visible at right is one of the city's most famous landmarks, Yellow Crane Tower, built in 223 AD. In the distance, at left, is one of the 11 bridges that span the Yangtze and Han rivers that intersect Wuhan, which literally means "the combined cities of Wuchang and Hankou."

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Note: Information contained in this preview is subject to change.

Chapter 1 Cast of Characters



Behind the boyish good looks of **Xi Jinping**, president of China, lurks a brutal authoritarian who rules China with an iron fist. Briefed on the impending pandemic by his National Health Commission minister, Xi has insisted on an information suppression strategy in Wuhan to avoid marring “the festive vibe.”



IMAGES COURTESY: CHINA CDC (CHINACDC.CN), CHINA NEWS SERVICE, FACEBOOK PHOTO, GNEWS, JOHNS HOPKINS/CENTER FOR HEALTH SECURITY, LI WENLIANG/CNN SCREENSHOT, PEOPLE'S DAILY, SHEN BOHAN/XINHUA, TONGJI HOSPITAL, WUHAN INSTITUTE OF VIROLOGY, XU JIANGUO.

1.

Endless Sirens

The Yangtze, spelled “Zhang Jiang” in Hanyu Pinyin, or just pinyin, the standard way of typing Chinese characters on a Western keyboard, is Asia’s longest river, and third-longest in the world, at 6,300 km (3,915 miles), flowing from high in Tibet’s majestic Tanggula Mountains to the East China Sea.

Along the way, the mighty Yangtze flows through verdant countryside and cleaves cities in two, including Wuhan, the sprawling commercial capital of Central China’s Hubei Province. Straddling the river, Wuhan is a beautiful city boasting many parks and lakes, including picturesque East Lake. Near East Lake is the Hubei Provincial Museum, which features the most extensive collection of artifacts from China’s Warring States era (475–246 B.C.), including the Marquis Yi of Zeng’s coffin and bronze musical bells from his fifth-century B.C. tomb, one of the rare ones discovered intact.

Eleven bridges cross the Yangtze in Wuhan, 10 of which have been built since 1995, a barometer of Wuhan’s explosive growth since the 1990s, a period during which its population more than doubled to 11 million. It’s into this exotic and lively world that I have been parachuted, virtually, of course, to investigate what is unquestionably one of humanity’s most riveting cliffhangers — tracing the origin of the novel coronavirus — a story that continues to unfold.

Many questions linger about the sudden appearance of this mysterious new virus, which tore apart the global economy in mere months after its December 2019 emergence. What was the origin of the virus? How did the disease sicken nearly **700 million people** in less than a year? What made this virus so virulent, killing more than 2.1 million people worldwide?

The disease’s emergence was muddled from day one by a panoply of labels. First described as “pneumonia with an unknown cause,” scientists quickly determined that a previously unknown betacoronavirus triggered the disease caused by the virus. That led to the virus’ first scientific name: 2019-nCoV, an abbreviation of 2019 novel coronavirus.

When it became apparent that patients were suffering from symptoms



IMAGE COURTESY: CHUNGKING/DEPOSITPHOTOS.

Yellow Crane Tower (黄鹤楼)

The first iteration of this iconic Wuhan landmark was built in 223 AD. Several legends involving a yellow crane flying “immortals” away are associated with this tower, the last one completed in 1985. During the 2020 novel coronavirus pandemic, many Wuhan residents wished a yellow crane would whisk them away.

IMAGE COURTESY: CRAIGIEHILL/DEPOSITPHOTOS.

much resembling those of SARS, Severe Acute Respiratory Syndrome, the fast-moving infection that shook the world in early 2003, the virus was renamed SARS-CoV-2, an abbreviation of “Severe Acute Respiratory Syndrome Coronavirus 2.” On Feb. 11, 2020, the World Health Organization (WHO) announced that the disease caused by SARS-CoV-2 would be called COVID-19 (Coronavirus Disease 2019).

So, here’s mystery No. 1. Why was the disease given another name when in two previous coronavirus cases, SARS and MERS (Middle East Respiratory Syndrome), the name of the virus and infection were the same — officially: SARS-CoV and MERS-CoV? WHO officials decided a name change was in order because any association with SARS would create too much “unnecessary fear,” especially in Asia. But the real motivation behind this chaotic naming strategy remains suspect, as you will see in a later chapter. Having set its confusing naming history aside, let’s continue with investigating “the incident.”

“The term ‘wet market’ was coined by the Singapore government in the 1970s to distinguish these traditional markets from supermarkets, which mainly sell ‘dry goods.’”

Wet Market

The 11 river spans in Wuhan symbolically serve to bridge the gap between two different “origin” narratives. On one side of the Yangtze is the Wuhan Huanan Seafood Wholesale Market, which, China suspects, is the probable origin of SARS-CoV-2.

Ministry of Science and Technology Director-General Wu Yuanbin said the coronavirus was probably linked to wild animal consumption — “mostly likely” bats. This theory has the virus originating in bats and passing on to an intermediate host at the Huanan Seafood Market (Huanan means South China), a “wet market” on Xinhua Road in Wuhan’s central Hankou district.

A wet market is a complex of independent vendor stalls separated by narrow and slippery aisles where such items as meat, poultry, seafood, fruits and vegetables are primarily sold. They resemble American farmers’ markets, except for the din of Chinese vendors hawking their wares and customers haggling loudly. And instead of potatoes, they sell noodles. Oh, and there are also many captured wild animals, raising the noise level to what legendary sports broadcaster [Howard Cosell](#) would have termed a “cacophony of cockamamie claptrap.”

The term “wet market” was [coined](#) by the Singapore government in the 1970s to distinguish these traditional markets from supermarkets, mainly selling “dry goods.” Many wet markets also offer commonly consumed live animals, like chickens, which are slaughtered by vendors once sold. As noted, some sell wildlife, running the risk of spreading zoonotic diseases.

Zoonotic – Pertaining to a zoonosis: a disease that can be transmitted from animals to people or, more specifically, a disease that normally exists in animals but that can infect humans. There are multitudes of zoonotic diseases, such as Lyme disease and rabies. ([MedicineNet](#))

Was the Huanan Seafood Market at the epicenter of this pandemic by



Huanan Seafood Market

This image was taken on New Year’s Eve 2019 at the Huanan Seafood Market. Vendors were just notified that the market would shut down the next day. What would you do with all your live inventory? Sacrifice some fish by pulling them out of their bins?

purportedly selling live bats? That’s a question for the ages. As its name implies, the Huanan Seafood Market specialized in fish, shrimp and other seafood. However, the market also sold live wild animals, a practice banned shortly after the 2003 SARS epidemic. That ban was eventually lifted before being quickly reinstated in 2020.

Due to the large variety of wildlife sold at the Huanan Seafood Market, it had acquired quite a reputation and was often called the “zoo.” A price list circulating online for a former business at Huanan Seafood Market shows why. According to *Agence France-Presse*, a vendor named “Wild Game Animal Husbandry for the Masses” offered 112 animals or animal-based products, including live foxes, crocodiles, wolf puppies, giant salamanders, snakes, rats, peacocks, porcupines, camel meat and other game. “Freshly slaughtered, frozen and delivered to your door,” the price list advertised.

The bat-eating theory remained viable until Feb. 3, 2020, when a *Nature* article appeared online, which reported that no bats were sold at the Huanan Seafood Market (emphasis added):

Notably, in addition to fish and shellfish, a variety of live wild animals, including hedgehogs, badgers, snakes and birds (turtledoves), were available for sale in the market before the outbreak began, as well as animal carcasses and animal meat. No bats were available for sale. (Nature– Wu et al. 03-Feb-20)

The study was lead-authored by Wu Fan (Chinese name order: last name followed by first) and also featured the Australian Edward Holmes, a person

of interest whom you will meet again soon. Of course, just because “no bats were available for sale” at the market does not rule out the possibility that a bat-infected intermediate host was sold there, which caused the disease to spread to Wuhan residents. Or that someone couldn’t just “phone in” a bat order and pick it up at a stall. The first hypothesis is likely to fail because the most likely bat suspects that may have sunk their fangs into an intermediate host live in caves in Yunnan or Zhejiang Province, which are more than 900 kilometers (560 miles) away from the seafood market. The second theory requires additional insight from locals, who, by and large, report that no bats were eaten in Wuhan.

But what if there was another explanation for how the novel coronavirus emerged? What if pursuing other leads could suggest a totally different probable cause? Would that change your perspective on the events leading up to the SARS-CoV-2 breakout? Another possible scenario involves the Wuchang and Jiangxia districts on the Yangtze River’s other side. That other-side-of-the-river narrative is supported by a host of anecdotal evidence and reads like an alternative scenario.

Alternative Scenario

The second week of October 2019 offered a welcome relief from the sweltering heat and humidity that clung to Wuhan a week earlier like a damp, hot rag. Temperatures hovered pleasantly in the mid-20s C (mid-70s F) with no rain in the forecast to obscure the view of the beautiful foothills behind the Wuhan Institute of Virology, located just off Jinlong Avenue in Jiangxia District.

Founded in the 1950s, the institute had become China’s first Biosafety Level-4, BSL-4 or P4, laboratory in early 2017, able to handle the world’s most dangerous pathogens. However, from the start, concerns in the global scientific community dogged the lab. In an article announcing the institute’s certification, *Nature* added this cautionary note:

“But worries surround the Chinese lab, too. The SARS virus has escaped from high-level containment facilities in Beijing multiple times.” (Nature 22-Feb-17)

But such thoughts were far from the minds of two scientists sequestered in a top-security section of the lab that glorious October day. Working alongside the institute’s director-general, 39-year-old immunologist Wang Yanyi, is a recent graduate of the Wuhan Institute of Virology, a young female virologist named Huang Yanling. Huang attended Southwest Jiaotong University in Chengdu, Sichuan Province, majoring in microbiology. She was admitted to the Wuhan Institute of Virology in 2012 as a graduate student.

Both scientists are captivated by their latest experiment, an exotic lab-created “chimeric virus,” code-named Wuhan-400:

Chimera (virus) – *A new hybrid microorganism created by joining nucleic acid fragments of two or more different microorganisms, in*



Wuhan Institute of Virology

Initially established in 1954, the Wuhan Institute of Virology did not obtain its BSL-4, or European “P4” level, certification until early 2017. It’s China’s most virologically advanced research facility.

IMAGE COURTESY: HECTOR RETAMAL/AFP VIA GETTY IMAGES.

which each of at least two fragments contain essential genes necessary for replication. (Wikipedia 10-Sep-20)

Wang Yanyi earned her bachelor’s degree at Peking University in 2004 and a master’s degree at the University of Colorado in Denver. She joined the Wuhan Institute of Virology as a researcher and team leader in 2012, the same year as Huang. Just three years later, in 2018, Wang was named deputy director general and rose to the institute’s second in command as director general — a meteoric career rise for the young, bright scientist.

Huang graduated from the institute in 2015 with a master’s degree and showed much promise early on, having lead-authored or co-authored five studies, according to her [ResearchGate profile](#).

Suddenly, the quiet whirl of laboratory equipment is interrupted by a loud siren reverberating through the institute’s halls. There has been a lab security breach, and Wang has accidentally leaked a deadly pathogen. But it’s her young assistant Huang who ends up being dangerously exposed to Wuhan-400, the chimeric virus.

Realizing the direness of the situation, Wang Yanyi consults with the institute’s Director and President of the Chinese Academy of Sciences (CAS), Yuan Zhiming. After a short deliberation, the pair decides to order a shutdown of the lab to implement a top-down scrubbing, sanitizing and disinfecting protocol, which starts a few days later, on October 11.

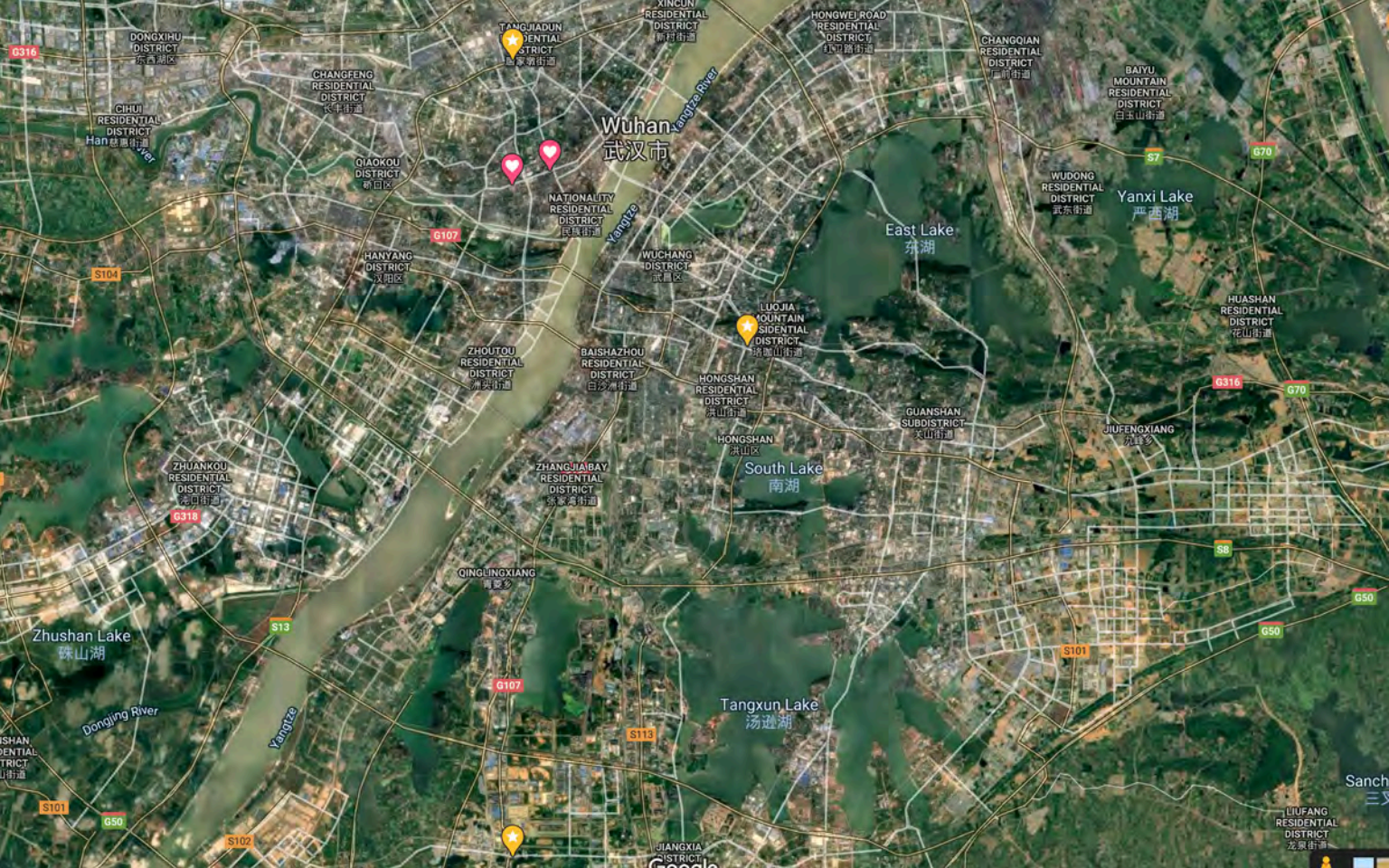
Nature magazine’s fear had become a reality, but there was no time to consider the leak’s implications. Yuan had to act right away. Fearing unwelcome media scrutiny, he orders Huang be taken to the Wuhan General Hospital of Guangzhou Military of PLA (中国人民解放军 广州军区武汉总医院) in Wuchang. The PLA hospital is about 24 km (15 miles) from the institute,

“But worries surround the Chinese lab too. The SARS virus has escaped from high-level containment facilities in Beijing multiple times.”



Wuhan Institute of Virology Director Wang Yanyi

Wang Yanyi, a graduate student of the University of Colorado, is second in command at China’s famed Wuhan Institute of Virology. Reports circulating on WeChat and Weibo on Feb. 15, 2020, directly implicated Wang in the release of the novel coronavirus, alleging she sold lab animals to vendors of the Huanan Seafood Market.



Wuhan Metro Area Map

This map of Wuhan shows the center of this metropolis of 11 million. The yellow marker at the the map's bottom of is the Wuhan Institute of Virology. The yellow marker on the same side of the river is the Wuhan General Hospital of Guangzhou Military of PLA. On the other side of the river, starting at the top, is the Huanan Seafood Market, indicated by a yellow marker. The two red markers show Tongji and Wuhan Union (Xiehe) Hospitals, respectively.

IMAGE COURTESY: GOOGLE MAPS. IMAGERY © 2020 MAXAR TECHNOLOGIES, CNES/AIRBUS, IMAGERY © 2020 TERRAMETRICS MAP DATA.

about 35 minutes by ambulance, much further away than nearby Jiangxia district hospitals. The First People's Hospital on Sixian Road, for example, is only 9 km (6 miles) from the institute, about a 16-minute ride. Still, the military hospital would be better able to handle such a delicate matter.

PLA – *The People's Liberation Army is the regular armed forces of the People's Republic of China (PRC) and the PRC's founding and ruling political party, the Communist Party of China (CPC), also popularly known as the "CCP" (Chinese Communist Party).* ([Wikipedia 28-Sep-20](#))

To ensure no one else is infected, Yuan orders all personnel on the same floor where Huang worked to travel in separate ambulances. Due to heavy traffic in the late afternoon hour, the ambulance drivers decide to take Shipailing Road to the hospital to avoid the traffic jams near Wuchang railway station or on Luoshi Road.

Could such an incredible series of events really have happened? The plot described here, implicating the Wuhan Institute of Virology in the manufacture and release of a highly contagious virus that led to a global pandemic, actually has a high degree of plausibility, given the vast number of clues this incident continues to provide.

An eyewitness [described](#) the part of this scenario involving the wailing of endless sirens as more than 10 ambulances passed by on New Year's Eve 2019. Many ambulances heading to the General Hospital of Guangzhou Military of PLA fits this story to a T, except the date was wrong. Of course,

another Wuhan Institute of Virology emergency can't be ruled out, but evidence suggests the accident happened much earlier, most likely in October. The eyewitness also provided a lot of detail that suggests that another mishap may have occurred on December 31. Not an implausible scenario, considering that this was the early stage of the outbreak.

This investigation would turn up a lot of inexplicable occurrences and questionable transgressions. Consider the strange case of the disappearance of Huang Yanling.

Huang Yanling

On Saturday, February 15, Huang Yanling's name suddenly surfaced as a trending topic on popular Chinese social media, including WeChat and Weibo. Rumors circulating suggested that despite never having visited the Huanan Seafood Market, Huang was the first person to be infected by the novel coronavirus. However, the most explosive allegation was that a funeral worker at the crematorium where Huang's body was disposed of was [infected handling her corpse](#), causing the disease to spread.

Was this young scientist really "patient zero?" As Leroy Gibbs, played by Mark Harmon on the hit TV show *NCIS*, likes to say: "Rule 39: There is no such thing as a coincidence." Remarkably, on February 14, the Friday before rumors begin circulating, China President Xi Jinping suddenly alludes to biosafety legislation while presiding over a meeting of the CCP Central Committee's Deep Reform Commission (emphasis added):

*In response to the shortcomings and deficiencies exposed by the epidemic, we should **pay close attention to the shortcomings and plug loopholes.*** ([Secret China 16-Feb-20](#))

On the very day the Wuhan Institute of Virology rumors go viral, Saturday, February 15, the Ministry of Science and Technology issues "Guiding Opinions on Strengthening the Biosafety Management of New Coronavirus High-Level Virus Microbiology Laboratories," which, unsurprisingly, emphasizes the need to strengthen laboratory management to ensure biosafety. Let's repeat Gibbs' saying for added emphasis, there is no such thing as a coincidence, *especially* on Saturdays. What happens next is a classic case of a bungled cover-up that arouses even more suspicion.

The following day, notably a *Sunday*, the Wuhan Institute of Virology [issues a statement](#) denying the WeChat and Weibo rumors: "Recently there has been fake information about Huang Yanling, a graduate from our institute, claiming that she was patient zero in the novel coronavirus." It then adds that it has verified that the claim is not true. The statement then says that Huang was a graduate student of the institute and "[left the city in 2015 and was in good health](#)," but refuses to release more information about her due to "privacy reasons." Huang has not returned to Wuhan since the institute adds.

First of all, who would respond on a Sunday to dispute a false social media



IMAGE COURTESY: @GUFFIER4.0.

Is this scientist Huang Yanling?

@Guccifer4.0 posted this undated photo of Huang Yanling on Twitter on Apr. 17, 2020. Huang graduated from the Wuhan Institute of Virology in 2015 and was employed by China's only Biosafety Level 4 (BSL-4) laboratory. In a Feb. 16, 2020 statement, the institute claims Huang left Wuhan after graduating in 2015 but refuses to confirm her whereabouts in China due to "privacy reasons."

rumor? People who work on Sundays? Crazy scientists? Guilty people, perhaps? But what's even stranger about this leak of "fake information" is what takes place on Monday, February 17. Presumably, that's when the institute's web development team shows up for work because, as we know all too well, techies don't have to work on Sundays.

What makes the vehement denials seem so comically guilty was the ham-fisted deletion of Huang Yanling's profile photo and bio text from the institute's website, which left a conspicuously empty spot, right above her name and year of admittance. Why bother to hurriedly remove a recent graduate photo unless there was more to the rumors? Remember those five studies Huang had lead-authored or co-authored and published on ResearchGate while affiliated with the Wuhan Institute of Virology? Her [profile](#) on this popular research site has been mysteriously deleted. It's as if China decided to wipe Huang Yanling off the face of the earth. Why do that if she just "left the city?"

To make matters even worse, that same Sunday, February 16, a Weibo user claiming to be institute researcher Chen Quanjiao accuses Wang Yanyi, the institute's director general, of leaking the virus. The institute quickly claims the [allegation was fabricated](#) and that the Weibo user posing as Chen was an impostor. Wuhan police quickly, almost *too quickly*, corroborate the denial by adding that the interloper was based outside China.

A Hastily Edited Profile Page

The Wuhan Institute of Virology removed Huang Yanling's profile photo from its website yet left her name followed by "2012 graduate student." Her image appears to have been hastily deleted sometime after rumors surfaced suggesting that Huang had been infected at the Wuhan Institute of Virology and was "patient zero." She has never been seen since again.



IMAGE COURTESY: WUHAN INSTITUTE OF VIROLOGY.

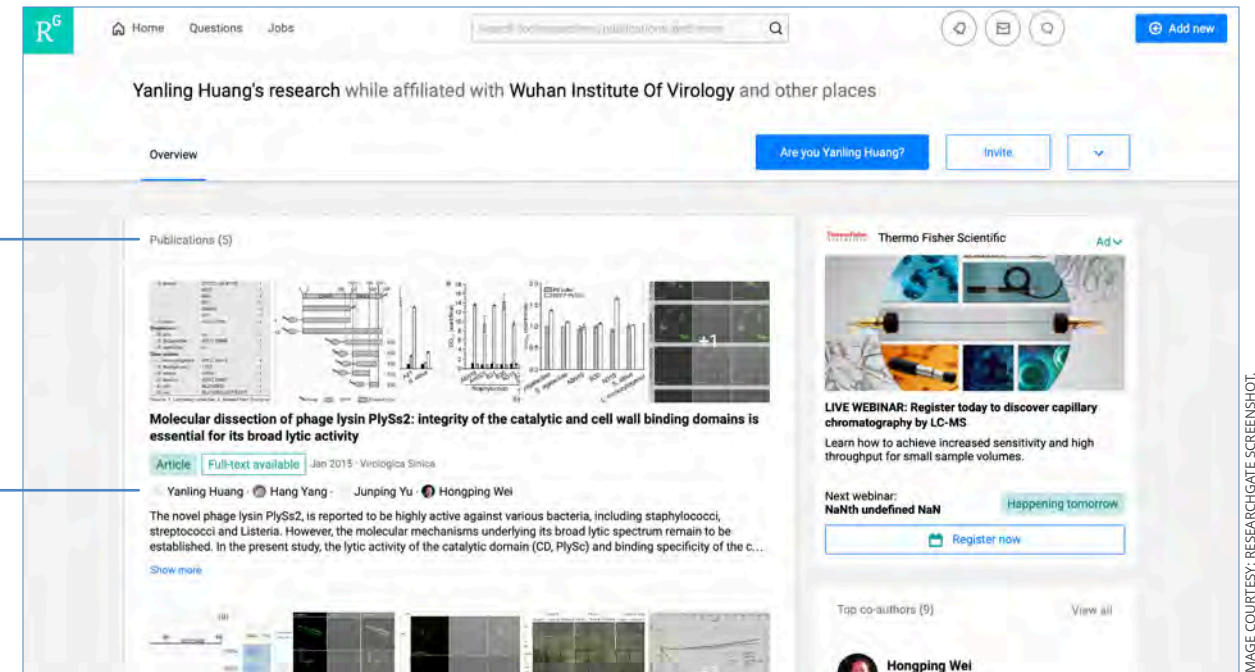


IMAGE COURTESY: RESEARCHGATE SCREENSHOT.

ResearchGate Profile of Huang Yanling Now Missing

ResearchGate is a popular international resource used by scholars, scientists, and researchers to publish papers and share data. It's unusual that a working scientist would remove their profile from such a site, particularly after contributing five studies to the research community.

That Monday, the real Chen Quanjiao issues a statement refuting the tip-off rumor and expresses great indignation over her identity hijacking. The rumor reportedly included Chen's ID number in a "screenshot," according to *China Daily*, which offered no additional information on the remaining contents of said mysterious screenshot.

This rumor raises serious questions. How did "the impostor" know Chen's employee ID number? What else was in the screenshot? Was the impostor an insider with intimate knowledge of the institute's human resources system or just a scorned former lover? And why single out Chen Quanjiao? These questions must have also haunted Wuhan police while investigating the allegedly "fabricated rumors."

When a suspect begins issuing repeated denials, it could suggest that something is actually amiss. As if the institute's strong rebuttal and Chen Quanjiao's denials weren't enough, the institute's most prominent researcher on bat-related viruses, Shi Zhengli (aka Zheng-Li Shi in Western media), posts the following on social media (emphasis added):

"The 2019 novel coronavirus is nature's punishment for the barbaric habits and lifestyle of some people, like eating wild game including bats. I, Shi Zhengli, use my life to guarantee, [the virus] has no relation with the lab." (*Daily Mail* 18-Feb-20)

After backing her denial with her life, Shi then urges Chinese authorities to launch an official investigation into the matter. Adding her own unsolicited advice about Chinese eating habits drew far more attention to her statement than Shi probably bargained for. Still, there is no question that Shi's word carries clout. She is, after all, China's "Bat Woman" — a well-deserved reputation she acquired thanks to her all-consuming interest in the animals that brought us Dracula. Shi is a central figure in the SARS-CoV-

2 mystery cast of characters. Her role in the emergence of the novel coronavirus has raised many questions. Here's one that needs a better explanation. When *Beijing News* asked Shi and Chen Quanjiao about Huang Yanling, both said it was unclear whether there was a Huang Yanling at the institute. Here you have two people denying, *in unison*, knowing someone who graduated from their institute and worked there until at least 2015.

Besides suggesting that Huang Yanling was patient zero and that Wang Yanyi leaked the novel coronavirus, the rumors also serve up potential new clues about the virus' spread. The first rumor suggested that Huang had never visited the Huanan Seafood Market, a compelling insight that would repeatedly appear in other novel coronavirus cases. Of course, if she had been infected accidentally at the lab, there would be no need for her to have visited the wet market.

The second, more important rumor was that Wang often took experimental animals out of the laboratory and sold them at the Huanan Seafood Market. The insinuation that the institute's director general may have been complicit in unleashing a deadly virus by selling lab animals to a Wuhan food market may seem totally ridiculous. It was, however, not the first time that such ill-advised behavior by Chinese lab scientists had surfaced publicly.

Finally, the most insidious rumor was that Huang's body infected a crematorium funeral worker, causing the further spread of the disease. Cremating Huang's body would definitely fit China's oblique attempt to "wipe Huang off the face of the earth." Now, you may wonder why this story pays so much attention to unsubstantiated rumors. The truth is that China and the CCP are waging a brutal war against any person or party that releases unsanctioned, meaning whitewashed, information about the novel coronavirus outbreak, making this investigation much more reliant on crowdsourced information.

What is mystifying is that all these denials would essentially have been unnecessary had local authorities arranged for Huang Yanling to appear in public. The bigger question is, why did Huang not come forward after hearing all these social media rumors? Even if she was unaware of the chatter, highly unlikely given her past affiliation with the Wuhan Institute of Virology, would it really be that difficult for the Chinese government to get in touch with Huang and have her issue an in-person statement to the media? That would only be an issue if her body had already been turned into ashes.

Experienced detectives know that when corroborating parties say something totally unexpected, you drop into crime scene investigation mode. That was certainly the case when Radio France's Hong Kong correspondent Zhen Shuji filed this report on February 17:

When a Beijing News reporter asked the [Wuhan Institute of Virology] about the patient zero rumors, the institute first denied that there was a researcher Huang Yanling, but after learning that the name of the person on the internet did exist, acknowledged that the person had worked at the firm but has now left the office and is unaccounted for. (Radio France 17-Feb-20)

Suspects always squirm when pressed to cough up the truth, especially



IMAGE COURTESY: WEIBO SCREENSHOT.

A rumor that Huang Yanling Is "Patient 0" Surfaces

On Feb. 15, 2020, at 2:39 p.m., the first rumor about Huang Yanling surfaced on Weibo. A user account, "Justice shines on the world," posts this reply, "It is the new crown [corona] pneumonia virus. The first person infected. Huang Yanling of Wuhan Institute of Virology is patient zero."



IMAGE COURTESY: MEMEHK.COM.

Chen Quanjiao Blames Wang Yanyi for Leaking the Virus

On Sunday, Feb. 16, 2020, a screenshot is shared on social media containing a portion of the text purportedly posted by Chen Quanjiao, who, according to Google Translate, says, "Hello everyone, I am Chen Quan[jiao], a researcher at the Wuhan Institute of Virology ID number 422428197404080626, I reported Wuhan with my real name. Wang Yanyi, director of the p4 virus research institute...sells [to] game stalls at Huanan Seafood Market, she is the epidemic."

after vehemently denying that there was such a person as Huang Yanling. This statement raises several troubling questions. So, Huang Yanling *did* work for the Wuhan Institute of Virology? And she left the office...in an ambulance, perhaps? And is now unaccounted for ...because all that remains of her are ashes? You fill in the missing pieces.

The rapid issuance of contradictory statements about the outbreak of the novel coronavirus virus might lead you to conclude that 2019-nCoV did not jump from animal to human at the Huanan Seafood Market as China initially insisted but emerged in a materially different way. As Sir Arthur Conan Doyle's private detective Sherlock Holmes once said, "Before turning to those moral and mental aspects of the matter which present the greatest difficulties, let the inquirer begin by mastering more elementary problems."

Undoubtedly, this outbreak's most elementary challenge is tracing the disease to its origin, which requires tracking down "patient zero" — the first person to be infected.

Hunt for Patient Zero

Whenever a new, unknown contagion appears, scientists, typically epidemiologists, are tasked with tracing the infection to its origin to slow its spread. Under normal circumstances, this type of detective work is challenging. Under the cloak of darkness imposed by the Chinese government, the task could prove to be nearly impossible.

Precisely when and where the novel coronavirus epidemic began remains a mystery, as is the confirmed identity of "patient zero." At the start of the outbreak in December, the assumption was that the virus originated at the Huanan Seafood Market. Then scientists began pointing fingers at a host of animals, ranging from snakes to bats and even a cute, little scaly anteater, called pangolin, as the virus' source.

According to Sarah Borwein, an infectious diseases specialist at Hong Kong's Central Health Medical Practice, knowing who patient zero is helps prevent future outbreaks and explains how to prevent transmission. But as time passes, identifying the "index case" grows increasingly difficult.

"Figuring out who patient zero was wouldn't give us all the answers, but it would help to map the path the virus has taken and how it's traveling," Borwein [told South China Morning Post](#). "It's hard to draw that map without knowing where it starts." That may be true, but it's possible to make a reasonably educated guess by sifting through data supplied by various official sources.

The first tip about a possible transmission path comes from a study, "[Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China](#)", published in *The Lancet* by lead author Professor Huang Chao-Lin, which

Articles

Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China

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Summary
Background A recent cluster of pneumonia cases in Wuhan, China, was caused by a novel betacoronavirus, the 2019 novel coronavirus (2019-nCoV). We report the epidemiological, clinical, laboratory, and radiological characteristics and treatment and clinical outcomes of these patients.

Methods All patients with suspected 2019-nCoV were admitted to a designated hospital in Wuhan. We prospectively collected and analysed data on patients with laboratory-confirmed 2019-nCoV infection by real-time RT-PCR and next-generation sequencing. Data were obtained with standardized data collection forms shared by WHO and the International Severe Acute Respiratory and Emerging Infection Consortium from electronic medical records. Researchers also directly communicated with patients or their families to ascertain epidemiological and symptom data. Outcomes were also compared between patients who had been admitted to the intensive care unit (ICU) and those who had not.

Findings By Jan 2, 2020, 41 admitted hospital patients had been identified as having laboratory-confirmed 2019-nCoV infection. Most of the infected patients were men (50 [73%] of 41); less than half had underlying diseases (13 [32%]), including diabetes (eight [20%]), hypertension (six [15%]), and cardiovascular disease (six [15%]). Median age was 49.0 years (IQR 41.0–58.0). 27 (66%) of 41 patients had been exposed to Huanan seafood market. One family cluster was found. Common symptoms at onset of illness were fever (40 [98%] of 41 patients), cough (31 [76%]), and myalgia or fatigue (15 [44%]); less common symptoms were sputum production (11 [28%] of 39), headache (three [8%] of 39), haemoptysis (two [5%] of 39), and diarrhoea (one [3%] of 38). Dyspnoea developed in 22 (55%) of 40 patients (median time from illness onset to dyspnoea 8.0 days [IQR 5.0–13.0]). 26 (63%) of 41 patients had lymphopenia. All 41 patients had pneumonia with abnormal findings on chest CT. Complications included acute respiratory distress syndrome (12 [29%]), RN leucopenia (six [15%]), acute cardiac injury (five [12%]) and secondary infection (four [10%]). 13 (32%) patients were admitted to an ICU and six (15%) died. Compared with non-ICU patients, ICU patients had higher plasma levels of IL2, IL7, IL10, G-CSF, IP10, MCP1, MIP1A, and TNFα.

Interpretation The 2019-nCoV infection caused clusters of severe respiratory illness similar to severe acute respiratory syndrome coronavirus and was associated with ICU admission and high mortality. Major gaps in our knowledge of the origin, epidemiology, duration of human transmission, and clinical spectrum of disease need fulfilment by future studies.

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Introduction
Coronaviruses are enveloped non-segmented positive-sense RNA viruses belonging to the family Coronaviridae and the order Nidovirales and broadly distributed in humans and other mammals. Although most human coronavirus infections are mild, the epidemics of the two betacoronaviruses, severe acute respiratory syndrome coronavirus (SARS-CoV)¹ and Middle East respiratory syndrome coronavirus (MERS-CoV),² have caused more than 10 000 cumulative cases in the past two decades, with mortality rates of 10% for SARS-CoV and 37% for MERS-CoV.³ The coronaviruses already identified might only be the tip of the iceberg, with

potentially more novel and severe zoonotic events to be revealed. In December, 2019, a series of pneumonia cases of unknown cause emerged in Wuhan, Hubei, China, with clinical presentations greatly resembling viral pneumonia.⁴ Deep sequencing analysis from lower respiratory tract samples indicated a novel coronavirus, which was named 2019 novel coronavirus (2019-nCoV).⁵ Thus far, more than 800 confirmed cases, including in health-care workers, have been identified in Wuhan, and several exported cases have been confirmed in other provinces in China, and in Thailand, Japan, South Korea, and the USA.^{6–8}

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reports that the first COVID-19 patient began noticing symptoms on Dec. 1, 2019. The article notes that “none of his family members developed fever or any respiratory symptoms,” and “no epidemiological link was found between the first patient and later cases.”

Professor Wu Wenjuan, a co-author of the study and director of intensive care units at Wuhan Jin Yin-tan Hospital, where Professor Huang also worked, **told the BBC** that “patient zero” was a pensioner in his 70s who was bed-ridden due to a stroke but who had *no* connection to the Huanan Seafood Market before falling ill. Combining these two separate accounts, we have:

- Patient zero, who was:
- a 70-year-old male, bed-ridden pensioner;
- who starts to feel sick on Dec. 1, 2019
- who had no connection to the Huanan Seafood Market;
- who did not infect any family members or anyone else;
- and who also was not the first patient to die.

Since SARS-CoV-2 is **transmitted by aerosols** (so-called airborne transmission), it seems improbable

that the first patient would not have infected at least one family member. We also know that this 70-year-old male was not the first fatality because the pensioner did not match the description of the deceased:

The first fatal case, who had continuous exposure to the market, was admitted to hospital because of a seven-day history of fever, cough, and dyspnoea. Five days after illness onset, his wife, a 53-year-old woman who had no known history of exposure to the market, also presented with pneumonia and was hospitalised in the isolation ward. (The Lancet 24-Jan-20)

“Dyspnoea,” spelled dyspnea in American English, *The Lancet* is a British medical journal, is a shortness of breath characterized by labored breathing and pronounced “disp•nee•uh.” Dyspnea would be a recurring symptom in patients infected by SARS-CoV-2. *The Lancet* study found that 55% of patients develop dyspnea eight days, on average, after the onset of symptoms, with the most common symptoms being fever (98%), cough (76%), and myalgia or fatigue (44%).

Another study, released on January 27 in the *Chinese Medical Journal*, entitled “**Identification of a novel coronavirus causing severe pneumonia in human: a descriptive study**,” lead-authored by Ren Li-Li (and co-authored by Professor Huang Chao-Lin and Dr. Zhao Jian-Ping), sheds more light on the first fatality. Turns out he was a 61-year-old Huanan Seafood Market vendor who fell ill on December 20, was admitted to Wuhan Jin Yin-tan

Original Article

Identification of a novel coronavirus causing severe pneumonia in human: a descriptive study

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Abstract
Background: Human infections with zoonotic coronaviruses (CoVs), including severe acute respiratory syndrome (SARS-CoV) and Middle East respiratory syndrome (MERS-CoV), have raised great public health concerns globally. Here, we report a novel bat-origin CoV causing severe and fatal pneumonia in humans.
Methods: We collected clinical data and bronchoalveolar lavage (BAL) specimens from five patients with severe pneumonia from Wuhan Jinyintan Hospital, Hubei province, China. Nucleic acids of the BAL were extracted and subjected to next-generation sequencing. Virus isolation was carried out, and maximum-likelihood phylogenetic trees were constructed.
Results: Five patients hospitalized from December 19 to December 29, 2019 presented with fever, cough, and dyspnea accompanied by complications of acute respiratory distress syndrome. Chest radiography revealed diffuse opacities and consolidations. One of these patients died. Sequence results revealed the presence of a previously unknown β-CoV strain in all five patients, with 99.8% to 99.9% nucleotide identities among the isolates. These isolates showed 79.0% nucleotide identity with the sequence of SARS-CoV (GenBank NC_024718) and 51.8% identity with the sequence of MERS-CoV (GenBank NC_019843). The virus is phylogenetically

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Chinese Medical Journal Study

The study, published on Jan. 27, 2020, provides more details on the first 2019-nCoV victims in Wuhan, China. It was co-authored by Huang Chao-Lin and Zhao Jian-Ping, two doctors on the disease's front lines, plus Vision Medicals executives, including CTO Xu Teng.

“27 patients (66%) had direct exposure to the Huanan Seafood Market. Conversely, 34% were not exposed to the wet market.”

wet market.

- **Mortality rate** – Six patients died, a relatively high 15% mortality rate.

Professor Wu Wenjuan **told The Wall Street Journal** that among the earliest cases were four people in the same family, including a 49-year-old Huanan Seafood Market vendor and his father-in-law. The vendor got sick on December 12, while the father-in-law, who had no exposure to the Huanan Seafood Market, fell ill seven days later. *The Lancet* study mentions, “one family cluster was found.”

As co-author of *The Lancet* report, it seems odd that Wu would cite a fact not supported by the study. A “Figure 1” graph on page 499 of the article, “Date of illness onset,” does not show anyone getting sick on December 12. Three people do feel ill on December 10, but only one, a female, has a connection to the Huanan Seafood Market, a person identified later.

It’s possible Wu meant to say December 15. Two people who started feeling unwell on that day were exposed to the seafood market. Assuming Wu was partially correct, the market vendor’s father-in-law, with no exposure to the Huanan Seafood Market, fell ill seven days later, implying December 22. Three people fall ill that day, with two having no connection to the market.

This official report, which features this notice: “This study was approved

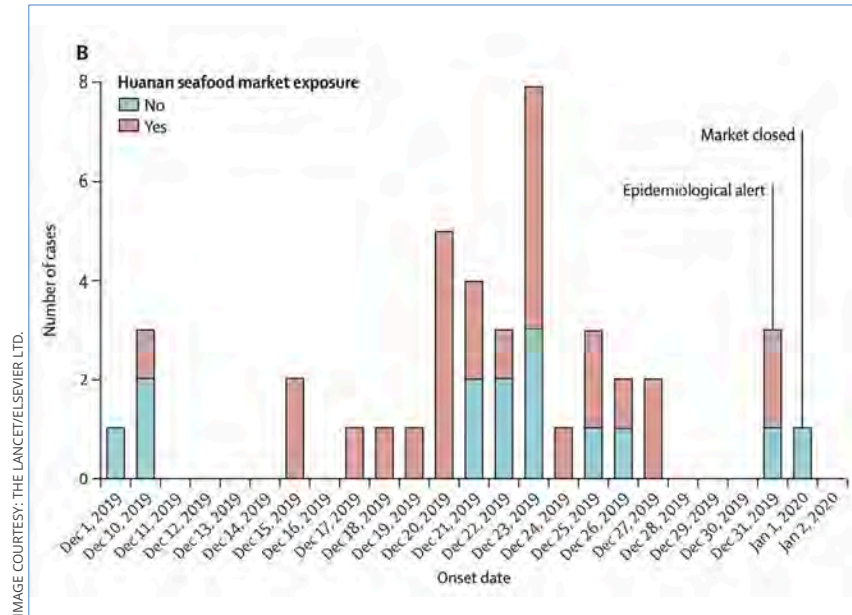


Figure 1 Graph: Infected Patient Onset Date and Market Exposure

The study “Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China” contains a chart that shows the onset date of the novel coronavirus among the first patients to be officially identified. It also shows the number of patients connected to the Huanan Seafood Market, indicated by the dark color.

Seafood Market. Her story provides an insider account of the struggles the average Chinese experiences after being infected by SARS-CoV-2.

On December 10, the 57-year-old starts feeling sick. Wei tells Shanghai-based digital medium *The Paper*, *Pengpai* in Chinese (澎湃), that she thought it was seasonal flu. At a small local clinic, Wei receives an intravenous drip treatment, which is popular among workers because it’s cheap and quick and returns to the market.

Wei’s situation deteriorates significantly on December 12, and she is rushed to Wuhan Red Cross Hospital near the wet market. There, doctors send her home with some antibiotics that prove ineffective. Like most working-class Chinese, Wei can ill afford to pay for chest X-rays or MRIs and declines to be transferred to larger, more costly facilities, such as the Wuhan Jin Yin-tan Hospital or Wuhan Union (Xiehe) Hospital (协和医院), which is 5 km (3 miles) from the market on Jiefang Avenue — facilities better equipped to identify infectious diseases.

On December 16, barely able to speak, she went to the emergency room at Wuhan Union Hospital, where she eventually landed a bed in the respiratory ward two days later. During her time in the hospital, more patients began showing up with symptoms similar to Wei’s. When she regains consciousness on December 21, Wei can barely move but vaguely remembers a doctor telling her that two other workers from Huanan Seafood Market were hospitalized at Tongji Hospital, now part of Huazhong University of Science and Technology.

For infected Huanan Seafood Market workers, Wuhan Union (Xiehe) Hospital is a relatively quick 14-minute ambulance ride via Xinhua Road. Near Wuhan Union, Tongji Hospital is another logical destination — just 12 minutes across 2nd Ring Road and down Qingnian Road. Of course, during the early phase of the breakout in December 2019 and January 2020, traffic congestion may have considerably impacted those times.

by the National Health Commission of China and Ethics Commission of Jin Yin-tan Hospital,” and published on Jan. 24, 2020, in a prestigious medical journal, confirms that three of the first four cases — including the first known case — *did not* have a documented link to the Huanan Seafood Market. And if that Huang Yanling rumor can be substantiated, that would make it four out of the first five.

Confused yet? Hang on; there’s a lot more. Remember that female who fell ill on December 10? *The Wall Street Journal* and *Time* write about Wei Guixian, a female merchant who sells shrimp out of large buckets at the Huanan

“The commission’s belated update added to mounting evidence that the market was not the point of origin: four out of the first five 2019-nCoV patients had no connection to the Huanan Seafood Market.”

Despite major improvements, the Chinese healthcare system often leaves workers with insufficient access to doctors and crippling hospital bills. The scrappy market vendor Wei recovered in early January but could not leave Wuhan Union Hospital until she paid her 70,000 yuan (~US\$10,250) medical bill, an unfathomable sum for someone who sells shrimp for a living.

The head of Wuhan Union’s emergency department, Dr. Zhang Jinnong, tells *The Wall Street Journal* he doesn’t recall treating Wei but remembers the first Huanan Seafood Market patients checking in starting December 10. Notice that Zhang says “patients.” Since there were officially only three infected patients that day, and the only one exposed to the Huanan Seafood Market was Wei, Zhang’s account is either factually incorrect or reflects a starkly different reality.

According to the *China CDC Weekly* issue, published on Jan. 24, 2020, “A cluster of pneumonia cases with an unknown cause occurred in Wuhan starting on Dec. 21, 2019.” So it took 11 days between Zhang noticing “patients” and doctors establishing that a cluster was circulating with a possible Huanan connection.

As if the situation wasn’t murky enough, on February 26, the Wuhan Municipal Health Commission announced in a Weibo post that the first confirmed COVID-19 case was a male named “Chen” who [showed symptoms on December 8](#) but recovered fully and was discharged from the hospital. That person also denied visiting the Huanan Seafood Market.

The commission’s announcement contradicted the Huang Chao-Lin study, published in *The Lancet* one month earlier, which reported that the first patient fell ill on December 1. Why would the Wuhan Municipal Health Commission release information about patient zero on February 26, nearly two months after issuing its initial pandemic alert? Could it be that Chen’s COVID-19 diagnosis was not confirmed until late February? While that certainly is a plausible explanation, it’s still unusual that the health commission would retroactively contradict its scientists with a different patient zero date. What was the point? However, the commission’s belated update added to mounting evidence that the market was not the point of origin: four out of the first five 2019-nCoV patients had no connection to the Huanan Seafood Market.

The virus appears to have been smoldering much longer under the surface than anyone would, or could, publicly admit. On March 13, the *South China Morning Post* [reported](#) that, according to government records it had seen, a 55-year-old Hubei resident might have been the first person to contract SARS-CoV-2 on November 17. That’s far earlier than indicated by any official account. According to *South China Morning Post*, one to five new cases were reported each day from November 17 on. By December 15, the total number of infections stood at 27.

In case you lost track of all the early cases, here’s a brief overview:

- **Nov. 17** – 55-year-old male may have been the first to contract COVID-19, according to *South China Morning Post*. Status and exposure to seafood market: unknown.
- **Dec. 1** – 70-year-old male, bed-ridden pensioner. Status: unknown. No connection to Huanan Seafood Market.

- **Dec. 8** – Wuhan Municipal Health Commission reports male named “Chen” is patient zero. Status: Hospitalized and discharged. No connection to Huanan Seafood Market.
- **Dec. 10** – Three people fall ill. One is Wei Guixian, a 57-year-old female Huanan Seafood Market vendor. The other two have no connection to the market. Wei Guixian Status: Hospitalized on December 16 at Wuhan Union (Xiehe) Hospital and discharged.
- **Dec. 15** – 49-year-old male Huanan Seafood Market vendor experiences symptoms onset. Father-in-law gets infected seven days later. Status: unknown.
- **Dec. 15** – 65-year-old Huanan Seafood Market deliveryman starts having a fever and is admitted to Wuhan Central Hospital on December 18. Status: transferred to Tongji Hospital on December 25. Case to be covered next.
- **Dec. 20** – 61-year-old Huanan Seafood Market vendor starts feeling ill. Admitted to Wuhan Jin Yin-tan Hospital on December 27. Status: died on January 9.

So what did the Wuhan hunt for patient zero produce? Two official patient zeros, plus an unofficial one. According to a study in *The Lancet*, there’s a 70-year-old pensioner who becomes ill on December 1 and who has no connection to the Huanan Seafood Market. The Wuhan Municipal Health Commission claims, belatedly, that the real patient zero was named Chen, who fell ill on December 8 but recovered. Chen also denied visiting the wet market. And the *South China Morning Post* reports the disease actually emerged on November 17 in a 55-year-old male, about whom little is known.

Two conclusions can be drawn from these reports. The first is the clearcut lack of connection to the wet market in four out of the first five patients, suggesting the 2019 novel coronavirus was already airborne and spreading in Wuhan in November and more likely as early as October.

The other evident conclusion is the existence of human-to-human transmission. The first case was the 49-year-old Huanan Seafood Market vendor who fell ill on December 15 and infected his father-in-law seven days later, on December 19, as Professor Wu Wenjuan tells us. The second instance of human-to-human transmission occurred when a 61-year-old patient who later became the first “official” fatality infected his wife on December 25. These cases conclusively established human-to-human transmission of the unknown viral pneumonia by December 25. Yet Chinese authorities continued to spread fake news until the middle of January, thereby enabling the unfettered spread of COVID-19 all over the world.

Despite official pronouncements or the lack thereof, the viral storm raging in Wuhan was already much larger than authorities would, or could, publicly admit. When *South China Morning Post* revealed that the first SARS-CoV-2 patient emerged on November 17, it also reported the discovery of “at least 266 people who were infected [in 2019].” Unfortunately, the confidential data *South China Morning Post* had access to contained no information on Huanan Seafood Market exposure.

Many of these patients were likely diagnosed with COVID-19 long after

they were infected, but it does suggest that the virus was far more prevalent than previously known. An earlier outbreak date would also explain how the novel coronavirus ended up in France in December 2019. On December 27, a 42-year-old fishmonger, Amirouche Hammar, shows up at a hospital in suburban Paris with a fever, coughing, and suffering from dyspnea — trouble breathing.

When medical records of ICU patients admitted for an influenza-like illness between Dec. 2, 2019, and Jan. 16, 2020, were retrospectively analyzed using a PCR test, one was found to have suffered from COVID-19, HamMarch

PCR test – *The Polymerase Chain Reaction (PCR) test is a widely used method to selectively amplify trace amounts of genetic material. When a cell divides, it copies DNA, separating the two strands and creating a new DNA strand by copying the template. PCR mimics what normally happens in cells. A very small sample of DNA is amplified to a large enough amount by rapidly making millions, or as many as billions, of copies, allowing scientists to study the sample in detail. (Mayo Clinic 27-Mar-20 and Wikipedia 27-Sep-20)*

Dr. Yves Cohen, head of intensive care at the Avicenne and Jean Verdier hospitals in the northern suburbs of Paris and one of the authors of a [peer-reviewed study](#) that has been accepted for formal publication in the *International Journal of Antimicrobial Agents*, says the patient’s stored sample had been tested twice to avoid false positives. If the virus was already circulating in Wuhan before November 17, it would have had plenty of time to reach Paris six weeks later.

More evidence trickling in from Italy also points to an earlier outbreak date. When events organizer Silvia Barbagallo [began developing symptoms](#) after returning to Rome from an African holiday before Christmas, she later wondered if she may have had COVID-19. In May, she tested positive for COVID-19 antibodies. Barbagallo could have caught the virus in Italy itself, of course, but she was already symptomatic in December, far before the coronavirus storm deluged Italy.

Travel is also implicated in Hammar’s case. His wife, Fatiha, who works at a supermarket near Charles de Gaulle airport in Paris, tells French television that she serves customers who come directly from the airport “with their suitcases.” Dr. Cohen [told The New York Times](#) that Fatiha also briefly exhibited coronavirus symptoms, mainly coughing. Further confirming a much earlier circulation date, a Nov. 30, 2020 study by U.S. scientists [found](#) that the novel coronavirus also circulated in the U.S. as early as December 2019. U.S. CDC scientists discovered antibodies in 39 samples collected between December 13 and December 16 from California, Oregon, and Washington state.

Could the novel coronavirus have circulated even before that November 17 Wuhan discovery? That question was answered on Jan. 25, 2020, by Scripps Research Professor of Immunology and Microbiology Kristian Andersen, who [posted a study](#) analyzing 27 available genomes of SARS-CoV-2 to a virology site. The study estimated the genomes had a “most recent common ancestor” as early as Oct. 1, 2019.

Doctor vs. Doctor

Back at Wuhan Central Hospital on Nanjing Road, a conflict was brewing between Professor Zhao Su, the chief physician of the Department of Respiratory Medicine, and Dr. Ai Fen, the emergency department director. Their battle was documented in several widely published articles.

An in-depth *Caixin Global* February 26 report, since deleted but still available via a Jennifer Zeng [blog post](#), tells Zhao's side of the story. On December 15, a 65-year-old South China Seafood Market deliveryman became sick and ran a fever. After feeling progressively worse, he checked into Wuhan Central on December 18. There, a doctor suspected he was suffering from community-acquired pneumonia and admitted him to the emergency department ward. There, he was seen by Dr. Ai Fen, but more on that later.

On December 22, the patient becomes gravely ill and is sent to ICU. Wuhan Central doctors use various antibiotics and anti-flu drugs to treat him, to no avail.

As Professor Zhao Su tells it, the deputy chief physician of respiratory medicine takes a bronchoscopy sample from the 65-year-old on December 24 and sends the patient's alveolar lavage fluid sample to a third-party testing facility, Guangzhou Weiyuan Gene Technology Co. Ltd., aka [Vision Medicals Co. Ltd \(微远基因\)](#), a [US\\$43-million-venture-capital-backed firm](#). Vision Medicals had wisely invested its venture capital, acquiring a high-throughput, metagenomic next-generation sequencing technology (mNGS) to detect pathogens. To help understand what's involved, here are a few definitions. A bronchoscopy is usually performed by a pulmonologist, a doctor specializing in lung disorders. It requires inserting a thin tube, called a bronchoscope, through nose or mouth to examine lungs and air passages. "Alveolar lavage" is better known as:

Bronchoalveolar Lavage (BAL) – *A minimally invasive procedure that involves instillation of sterile normal saline into a subsegment of the lung, followed by suction and collection of the instillation for analysis. (StatPearls 27-Aug-20)*

This investigation touches upon many minutiae, but this granularity serves two purposes. One is to educate readers about the most disruptive pandemic the world has ever experienced, certainly from an economic perspective, if not a human toll. Second, this level of detail is critical in helping lift the fog surrounding China's lagging response during the novel coronavirus' early spread. For example, Professor Zhao Su is pivotal in the 2019 novel coronavirus débâcle.

Labs usually return their written analysis within three days of sample submission. This time was different. On December 27, realizing the significance and urgency of their results, top officers from Vision Medicals, including CEO Yongjun Li, Chief Technology Officer Xu Teng, and Chief Operating Officer Wang Xiaorui, plus Li Yuanjun, CEO of Guangzhou Weiyuan Gene Technology, schedule a conference call before noon with Wuhan



IMAGE COURTESY, PEOPLE'S DAILY.

Dr. Ai Fen: The Whistle-giver

Ai Fen, the emergency department director at Wuhan Central, is the Joan of Arc of Wuhan health workers. When asked whether she was a whistleblower, Ai told *Ren Wu* magazine, "I am not a whistleblower. I am the one who provided the whistle." Ai told the truth about the spread of the novel coronavirus among Wuhan's population at a high cost to herself. She has not been seen or heard from since March 29.

Central's Professor Zhao Su to let him know that they had isolated a new coronavirus.

At that point, however, the 65-year-old patient had already been transferred to Tongji Hospital on December 25 after failing to respond to treatment. That very day, Dr. Lü Xiaohong, the director of digestive systems diseases department at Wuhan No. 5 Hospital, becomes alarmed when she hears that medical staff at two other hospitals had been quarantined after being infected with an "unidentified form of viral pneumonia," she [told](#) the *China Youth Daily* newspaper. The terrible news about the disease was already spreading fast.

Realizing the severity of the potential risk, Vision Medicals executives share their findings with the Institute of Pathogens of the Chinese Academy of Medical Sciences and also call the Wuhan Center for Disease Control's Director Li Gang.

Not merely satisfied with calling and emailing, company executives travel to Wuhan on December 29, to personally convey their research conclusions and an analysis done by the Institute of Pathogens with leaders of Wuhan Central Hospital and regional Wuhan CDCs.

Guangzhou Weiyuan Gene Technology/Vision Medicals clearly did not let any grass grow over the discovery of 2019-nCoV. It's also evident that top hospital and local health officials were keenly aware that they were dealing with a new SARS-like coronavirus. One person at the company even went so far as to post an article, "Recording the First Discovery of a New Coronavirus," anonymously under the handle "Little Dog" on WeChat on January 28, confirming many of the details provided here.

In an interview published in the March 10 issue of *People* magazine (*Ren Wu* 人物), entitled "The Whistle-Giver" (发哨子的人), Dr. Ai Fen offers her



Vision Medicals aka Guangzhou Weiyuan Gene Technology

Vision Medicals parlayed the Dec. 27, 2019 identification of the novel coronavirus into a white paper, entitled “Identification of a novel coronavirus causing severe pneumonia in human: a descriptive study.” Three executives from the venture-capital-backed company are listed as co-authors of the white paper.

perspective. When that 65-year-old Huanan Seafood Market deliveryman was admitted to the emergency ward on December 18, Dr. Ai examined him. After analyzing his CT (computed tomography) scan, she determined that the patient had an infection in both lungs and ordered a lab test.

It’s unclear what happens next because it’s Professor Zhao Su who assumes control when he orders his deputy chief to send the 65-year-old’s fluid sample to Guangzhou Weiyuan Gene Technology on December 24 — six days after admitting the deliveryman and the test ordered by Dr. Ai. Why was the Huanan Seafood Market deliveryman transferred to Tongji Hospital on December 25, the day after his sample was submitted to a lab? Presumably, because the 65-year-old might receive better care from Tongji’s Dr. Zhao Jian-Ping, another person of interest?

It’s not clear from Ai’s interview. Still, it appears that she is no longer in charge of this patient, which explains why she’s not part of the conference call between Guangzhou Weiyuan Gene Technology and Professor Zhao Su. How do we know that? Because she would not have been surprised by the test results of a 41-year-old man named Chen who shows up with similar symptoms on December 27.

Chen is an accountant who lives in Wuchang on the other side of the Yangtze River. The Huanan Seafood Market is located west of the river in Hankou, a market he says he has never been to. For no apparent reason, Chen becomes feverish on December 16. His body temperature rises to 39.5° Celsius (103 F), and palpitations, chest tightness, and difficulty breathing torment him. His condition continues to deteriorate after being



Han River Meets Yangtze River

The Qingchuan Bridge, also called the “Rainbow Bridge” due to its red color and shape, was completed in 2000. Most of the buildings surrounding the bridge were constructed around the same time. Across the Yangtze River in the background lies the Wuchang district.

IMAGE COURTESY: HAO WAN/DREAMSTIME.

examined by a doctor at First People’s Hospital in the Jiangxia District on December 22. He does suffer from an underlying condition, hypertension, a worrisome sign. As described earlier, First People’s Hospital is just minutes away by taxi from the Wuhan Institute of Virology.

Once again, it’s Professor Zhao Su who takes center stage. He tells *Caixin* that Chen knows a doctor at Wuhan Central and decides to transfer there. On the evening of December 27, Zhao claims, a bronchoscope sample was obtained from the 41-year-old in the ICU unit of the hospital’s respiratory department. However, his recollection does not align with the January 27 *Chinese Medical Journal* study, which reports that a 41-year-old male, “Patient 4,” is not moved into ICU until December 30. Other dates, including the onset of illness and admission, fit the accountant.

Another report on the *Caixin* story, published in Singapore’s *The Straits Times* on February 28, mentions that swabs from two other patients with the mysterious pneumonia were sent to a Beijing-based lab engaged in next-generation sequencing (NGS), *CapitalBio Medlab Co., Ltd.* The article confirms that “one of the samples came from a 41-year-old man who had no history of contact with the seafood market, who was admitted on December 27.”

It’s not unusual for doctors to order multiple lab tests. Several other genomics companies also received test samples from patients in Wuhan in late December, *Caixin* notes. In fact, industry leader BGI reported receiving 30 samples from Wuhan Central alone in December, including three found to contain the novel coronavirus. One of those samples was received on December 26, with sequencing completed by December 29. The second and third positive samples were received on December 29 and December 30. These last two samples were tested together, and results



IMAGE COURTESY: REN WU.

Ren Wu Cover with Dr. Ai Fen

Here's how the March 2020 issue containing Ai Fen's interview looked like before it was removed from newsstands and online. A digital version was later edited to remove Ai (second from top), leaving an empty space reminiscent of Huang Yanling's Wuhan Institute of Virology website profile.

were reported to the Wuhan Municipal Health Commission as early as January 1.

The evidence that authorities knew that a virulent virus was circulating in Wuhan but did nothing about it was piling up by the day.

On December 30, Ai received the test she had ordered three days earlier from CapitalBio Medlab. The lab diagnosis shocks her, SARS coronavirus, the same type of virus that killed nearly 800 people in 2003-2004 after emerging in southern China. In an about-face, a CapitalBio Medlab gene-sequencing expert told *Caixin* the lab made a "small mistake," resulting in a false positive. The error may have been caused by a "limited gene database or a lack of retesting." Or, too much negative publicity, perhaps?

That Ai was shocked by the results confirms that Professor Zhao Su did not share his Vision Medicals/Guangzhou Weiyuan Gene lab results with Dr. Ai three days earlier.

That may have been due to that company's involvement in the *Chinese Medical Journal* study. CEO Yongjun Li, Chief Technology Officer Xu Teng, and Chief Operating Officer Wang Xiaorui are all listed as co-authors of the paper, making Vision Medicals/Guangzhou Weiyuan Gene Technology the study's designated strategic research partner. That also explains why Professor Zhao and Dr. Ai ordered their own respective lab tests.

Horrified, Dr. Ai immediately notifies her superiors. She also circles the diagnosis with a marker pen and sends a picture of it to a medical-school classmate and a video clip of lung scans from another patient. Ai ended up seeing seven cases of "pneumonia with an unknown cause," four affiliated with the Huanan Seafood Market, including a market vendor's mother.

In her *Ren Wu* interview, Ai recalls informing hospital management of her suspicions beginning on December 29. Upon notifying the Wuhan CDC's district office, she learned that the CDC had received similar alerts from other Wuhan hospitals.

It's odd that Ai had to share her suspicions with hospital management given that Professor Zhao Su was already involved and had been debriefed multiple times by Vision Medicals. Could it be that Zhao fudged the details in his *Caixin* interview to make it look like he was the one who found the virus first?

That theory would gain currency fast.

Cover Up

Whodunit stories share many common elements, including a wily

culprit, inscrutable witnesses, and exotic settings. The curious emergence of SARS-CoV-2 in Wuhan has all those elements and much more. Unique aspects include a control-freak government hellbent on hiding the truth, dutifully conforming and itching-to-break-free doctors, a mysterious and all-too-conveniently located science lab, and the enchanting but smog-choked metropolis of Wuhan as a colorful backdrop.

Then there are also, pardon the pun, killer clues. When all signs point in a particular direction or you uncover a recurring theme, searching for evidence that helps shape a narrative hiding in plain sight begins in earnest. Scripps researcher Kristian Andersen's discovery of a possible October 2019 virus emergence date would turn out to be a significant clue, as would the growing evidence of a cover-up.

Like the Chinese government and the CCP, suspect repeat offenders are ruthless twisters of the facts. The best day to hide your dirty laundry from widespread scrutiny is to do your whitewash on a Friday evening, or, better yet, on New Year's Eve, when the rest of the world is too busy celebrating. And so it is that on Dec. 31, 2019, the Wuhan Municipal Health Commission issues an official alert describing a new "pneumonia epidemic." That same day, the *Hubei Ribao* (Daily) [republishes the alert](#) under the byline of reporter Yu Jinyi ([Google translation](#)), which features these noteworthy statements (emphasis added):

Recently, some medical institutions in Wuhan have received a number of pneumonia patients, all of whom are related to South China Seafood City...Twenty-seven cases of pneumonia have been found, of which seven are in serious condition, and the remaining cases are stable and controllable. So far, the investigation has not found any obvious human-to-human transmission, and no medical staff infection has been detected. (Wuhan Municipal Health Commission 31-Dec-19)

Why did the Wuhan Municipal Health Commission claim that 27 pneumonia cases were found with no mentions of any deaths when a little over three weeks later, Huang Chao-Lin would report in *The Lancet* that "six out of 41 patients died?" More alarming was the outright falsehood that no "obvious human-to-human transmission and no medical staff infection had been detected." These statements deviated significantly from the truth and would continue to be repeated for weeks.

Could it be that the data was somehow misinterpreted? After all, 27 and 41 are not that far apart. However, *The Lancet* study had a patient admission cut-off date of January 2, just two days after the Wuhan Municipal Health Commission released its alert. Of course, as noted before, many early cases were likely backdated after health authorities tested stored specimens from patients suspected of being infected by the novel coronavirus. In either case, the official explanation swept an explosive jump in cases under the rug.

A report from *Beijing News* that same day, Thursday, January 1, suggests a



Wuhan Jin Yin-tan Hospital

Jin Yin-tan Hospital is the designated facility for public health emergencies, including infectious diseases for the province of Hubei. Two of its staff members, Vice President Huang Chao-Lin and ICU Unit Director Wu Wenjuan, respectively, lead and co-authored the “Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China” study, published in *The Lancet* on Jan. 24, 2020.

IMAGE COURTESY: WUHAN JIN YIN-TAN HOSPITAL WEBSITE.

rapidly deteriorating situation at Wuhan Jin Yin-tan Hospital. One doctor [told visitors](#), “The hospital suddenly entered an emergency state yesterday [December 31], which has exceeded the hospital’s conventional reception capacity.” Remember that Jin Yin-tan Hospital is the designated facility for public health emergencies, including infectious diseases, for the *entire* province of Hubei.

The Jin Yin-tan campus consists of three buildings that show their age. One handles outpatients, and two, North and South, are designed for inpatients. Unknown pneumonia patients transferred from other hospitals were accommodated on the fourth floor of the South building, a seven-story, arc-shaped edifice. Floors 2-6 are reserved for influenza patients, while the seventh floor houses ICU units. Two security guards were stationed by a solid steel door to safeguard the fourth-floor infectious diseases ward from the outside world and prevent visitors from accidentally wandering in. The South building’s main level also houses the Wuhan Institute of Infectious Diseases.

It’s certainly not a good sign when the designated facility for public health emergencies was already at receiving capacity on Dec. 31, 2019, despite having five floors reserved for these types of patients. The rapidly deteriorating situation required incisive action.

On Jan. 1, 2020, the *Global Times* [announced](#) that local authorities had shut the Huanan Seafood Market down on Wednesday, December 31, for “environmental and sanitation control.” TV reports showed authorities constructing a sealed enclosure around the market’s entrance and removing evidence. No one has ever been allowed to set foot in the market since, despite a promise that “another notice would indicate when the market will reopen.” Authorities have released scant information about what was discovered at the wet market, but it is [slated for demolition](#).

That same *Global Times* New Year’s Day article also repeated the dubious claim, “The disease was not spread by human-to-human contact and no medical personnel have been infected, Shanghai-based news portal [ThePaper.cn](#) reported on Tuesday.”

To pull off a successful misdeed, you need professional tools, including the ability to create a good smokescreen. Media that help spread misinformation remain one of the most relied-on smokescreen tools available to authoritarians. New-age Chinese digital newspaper, *The Paper*, operated by Shanghai United Media Group, appears to have no qualms regurgitating misinformation, as the above-shown quote proves.

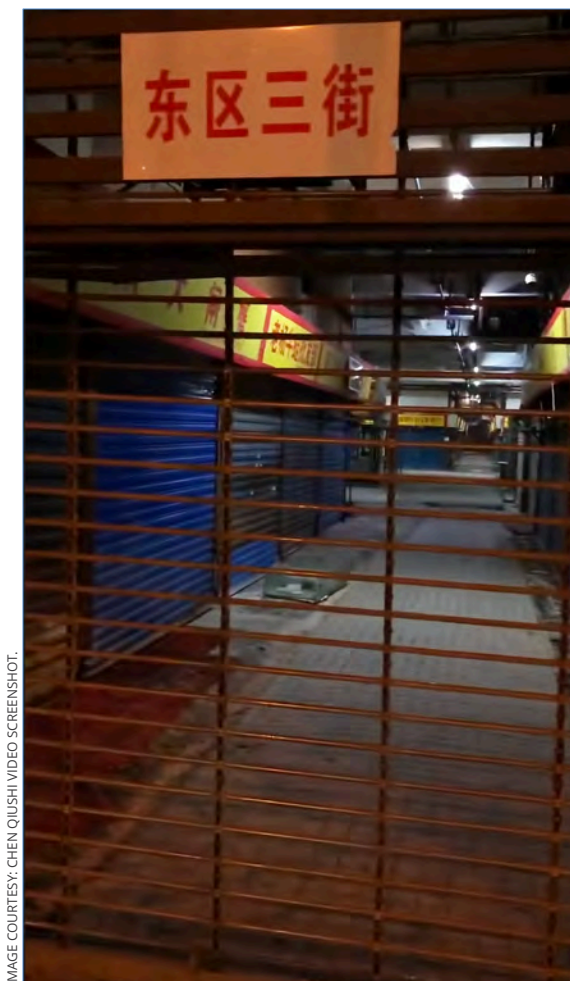


IMAGE COURTESY: CHEN QIUSHI VIDEO SCREENSHOT.

Closed Huanan Seafood Market

The Huanan Seafood Market, which was shuttered on Jan. 1, 2020, is seen here in a January 26 video captured by Chen Qiushi — a Beijing lawyer turned citizen journalist. The market was never reopened despite promises otherwise. The market is now hidden behind artfully painted murals that remove it from sight but not memory.

Another popular tool is the *Global Times* (simplified Chinese: 环球时报; pinyin: Huánqiú Shíbào), published by *People’s Daily*, the official daily tabloid of the Central Committee of the Communist Party of China. Part of the Chinese government’s propaganda apparatus, *People’s Daily* boasts a worldwide circulation of 3 million. It is one of the biggest fog-making machines in the Chinese government’s arsenal, second only to television broadcaster CCTV.

The *Global Times* has spread numerous unfounded conspiracy theories about the COVID-19 pandemic as part of a disinformation campaign by the Chinese government. Contradicting *The Paper* that “no medical personnel have been infected,” *The Lancet* concluded a few weeks later: “Thus far, more than 800 confirmed cases, including in healthcare workers, have been identified in Wuhan...” By minimizing the outbreak, the authorities were actively covering up the extent of the epidemic.

But some of the dense fog surrounding the outbreak was starting to lift. Contrast *The Lancet* study’s finding of “more than 800 confirmed cases” in Wuhan as of January 24 with a study by Wang Dawei et al., published just weeks later, which reported that “as of Jan. 31, 2020, a total of 9,692 NCIP cases in China have been confirmed.” That staggering increase in novel coronavirus infected patients (NCIP) occurred just *one week* later. Those figures show what happened in Wuhan in early 2020, which is the subject of much conjecture.

As expected, China’s “control enthusiast” government couldn’t stand by idly, so on New Year’s Eve, the authorities sent National Health Commission officials to Wuhan, China Central Television (CCTV) reported.

CCTV is officially a Chinese public service broadcaster. In reality, it’s an aggressive defender of the Chinese Communist Party (CCP), and its job is to attack any perceived enemies of the CCP. After antigovernment protests broke out in Hong Kong, CCTV went to great lengths to vilify the protesters, spreading fake news to both Chinese and international audiences about the movement’s nature.

Many of CCTV’s attractive announcers and entertainment personalities are widely thought to be mistresses of married Chinese Communist Party officials, leading many Chinese to refer to Beijing’s state broadcaster as “CCAV” — China Central Adult Video. Glad to see that despite being thoroughly repressed, the Chinese still have some sense of humor left.

The December 31 arrival of National Health Commission representatives was designed to mitigate rumors spreading on social media that the Chinese government was suppressing information about the coronavirus. It would open a new chapter in the fight against the 2019-nCoV, but not one that Wuhan citizens would welcome.

“Many of CCTV’s attractive announcers and entertainment personalities are widely thought to be mistresses of married Chinese Communist Party officials, leading many Chinese to refer to Beijing’s state broadcaster as ‘CCAV’ — China Central Adult Video.”

The Whistleblowers

On December 26, Dr. Zhang Jixian, the 54-year-old director of the Department of Respiratory and Critical Care Medicine of Hubei Provincial Hospital of Integrated Traditional Chinese and Western Medicine, more popularly known as Xinhua Hospital, treated an “old couple” with a cough and fever. CT scans of their chests revealed they suffered from an unusual viral pneumonia.

Upon learning that the couple also has a son, Dr. Zhang asks if she can examine him too. His CT scan also reveals the same affliction but without showing any symptoms. That revelation would turn 2019-nCoV into one of the most challenging viruses. A veteran adviser for a U.S. health agency called asymptomatic spread a “game changer,” [according to CNN](#). Infected persons who remain asymptomatic would play a major role in the rapid spread of COVID-19.

Xinhua Hospital is conveniently located for market vendors, about 2.5 km (1.5 miles) off Lingjiaohu Road in Wuhan’s Jiangnan District. While most vendors would not enjoy the view, Xinhua overlooks Lingjiao Lake, making the stay of upper-floor patients more palatable. Sure enough, later that same day, a merchant from Huanan Seafood Market is admitted with symptoms that resemble those of the couple and their son.

The following day, Dr. Zhang [reported](#) the four cases to Xinhua Hospital Vice President Xia Wenguang, who immediately notified the Jiangnan District Center for Disease Control (CDC).

On December 28 and 29, the outpatient clinic admitted three successive patients connected to the Huanan Seafood Market. A tip from an anonymous poster called “intellectuals” reports that one these patients had infected four family members, while another infected two, further confirming human-to-human transmission.

The Xinhua Hospital staff was now looking after seven patients suffering from the same mysterious disease, the identical number reported by Dr. Ai Fen at Wuhan Central Hospital. We know Ai Fen would never lie, so was the Xinhua patient total real, or did authorities decide to “align the numbers” to make them easier to remember? Remember that in China, eight is a lucky number; seven is not.

Given the sudden emergence of unknown pneumonia, Vice President Xia decides to check Tongji and Wuhan Union (Xiehe) hospitals to see if they have diagnosed similar symptoms. He discovers two other patients infected by the same virus, both connected to the Huanan Seafood Market (we know Wei is one of them at Wuhan Union, however, there were actually three at Tongji). Realizing that nine pneumonia patients with six linked to the seafood market is highly unusual, Xia reports his findings to the Provincial and Municipal Health Commission’s disease control departments.

According to Dr. Zhao Jian-Ping, director of the Department of Respiratory Medicine at Tongji Hospital, those three patients at Tongji would soon receive a lot of company since [12 patients](#) were transferred to Wuhan Jin Yin-tan Hospital by yearend. Dr. Zhao is also said to be “the first to detect



IMAGE COURTESY: SHEN BOHANYINHUA.

Hubei Hospital’s Dr. Zhang Jixian

Zhang, the 54-year-old director of the Department of Respiratory and Critical Care Medicine of Hubei Provincial Hospital of Integrated Traditional Chinese and Western Medicine, better known as Xinhua Hospital, is credited with being the “first person to make the diagnosis and insist on reporting the epidemic.” “Insisting” is usually not a good practice in the eyes of the Chinese government.

the signs of unexplained pneumonia and launch a battle to stop it.”

The December 29 alert sent by Vice President Xia Wenguang resulted in a visit to Xinhua Hospital by officials of the city’s designated hospital for infectious diseases, Wuhan Jin Yin-tan Hospital, including its vice president, Professor Huang Chao-Lin, and its ICU Unit Director, Professor Wu Wenjuan. These two quickly end up collaborating on *The Lancet* study cited earlier. Notably missing from that study is Xinhua Hospital’s Dr. Zhang Jixian, despite having treated seven patients early on, and *The Lancet* report crediting no less than 29 doctors for their contributions. Tongji’s Dr. Zhao Jian-Ping, however, is listed. Could that be a case of Chinese gender bias? But what really raises a red flag is what Dr. Zhang Jixian says happens next (emphasis added):

On New Year’s Day, the number of outpatients in the Department of Respiratory Medicine of Hubei Integrated Traditional Chinese and Western Medicine Hospital begins to surge, going from about 100 people a day to about 230 people. More and more patients are admitted like the first seven patients ([Changjiang Daily](#) 02-Feb-20)

So, in one day, the number of patients more than doubles to 230? And “more and more patients are like the first seven?” There is a significant discrepancy between what frontline healthcare workers report and the official tallies.

As a consolation prize, Dr. Zhang Jixian received an award on February 6 for “championing the fight against the novel coronavirus pneumonia,” Xinhua News Agency, the official state-run press bureau of the People’s Republic of China, reports (emphasis added):

“With extremely acute professional awareness, Zhang was the first person to make the diagnosis and insist on reporting the epidemic. She was the first to sound the alarm for the prevention work of the virus.” ([South China Morning Post](#) 12-Feb-20)

At this point, the pandemic had turned into a Russian novel but with a Chinese twist. A myriad of doctors, hospitals and mystery patients rose like Dragon Phoenixes out of disease-ridden Wuhan. In addition to multiple patient zeros, we now also had multiple “doctor zeros.” As you might expect from China, this mystery required opening many nesting Chinese boxes. And quite often, another doctor or patient would pop up out of nowhere like Dr. Li.

Remember that photo and video Dr. Ai Fen confidentially shared with a med-school classmate? Somehow, Li Wenliang, a young ophthalmologist at Wuhan Central Hospital with a pregnant wife and a young child, gets hold of Dr. Ai’s report and writes about it in a private WeChat group. The post, entitled “7 cases of severe acute respiratory syndrome (SARS) from the Huanan Seafood Wholesale Market,” was shared with more than 100 of his medical-school classmates on Dec. 30, 2019, at 17:48 (5:48 p.m.).

In his post, Dr. Li warns about a likely outbreak at Wuhan Central Hospital and says patients are “quarantined in the emergency department of our hospital.” He asks chat group members to keep the information to

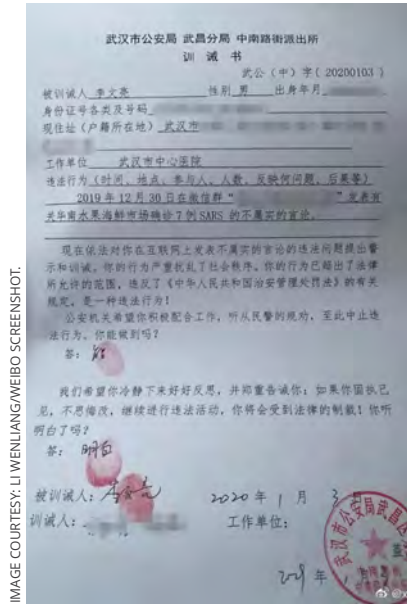


IMAGE COURTESY: LI WENLIANG/WEIBO SCREENSHOT.

Dr. Li Wenliang's Confession

On Jan. 31, 2020, Li posted a photo of his forced police confession to his Weibo social media account. The document says in part, "The law enforcement agency wants you to cooperate, listen to the police, and stop your illegal behavior. Can you do that?" Li wrote "I can" under the question and certifies the answer with a red thumbprint.

themselves and to "remind your family members and loved ones to be on the alert." He also recommends that group members wear protective clothing to avoid infection.

After one member warns that the chat group could be censored, Li responds with an update: "Coronavirus confirmed and type being determined." He then adds, "Don't leak it. Tell your family and relatives to take care." Unfortunately for Li, his private post ends up in the hands of other WeChat and Weibo users, and before you can say *chop suey*, the secret is out and circulates the next day widely.

Two days later, on Jan. 3, 2020, Li was arrested along with seven other doctors, including Red Cross Hospital Neurologist Liu Wen and Union Medical College Doctor Xie Linka, by Wuhan police for rumor-mongering. After being detained for telling the truth, Li was forced to sign a document that he had "told untruthful information online." Li posted the police warning letter to his Weibo account on January 31, which read in part:

"The law enforcement agency wants you to cooperate, listen to the police, and stop your illegal behavior. Can you do that?"

"I can," Li wrote under the question.

"If you insist on your views, refuse to repent and continue the illegal activity, you will be punished by the law. Do you understand?"

"I understand," Li answered. (Inkstone 07-Feb-20)

A red thumbprint in the document accompanies Li's handwritten answers. Unfortunately, Li does not follow his own advice and unwittingly treats a patient infected with the virus on January 11. He develops a fever shortly after and is hospitalized two days later, on January 13. His condition deteriorates quickly and Li is admitted to intensive care and given oxygen support. His photo, shown wearing an oxygen mask and looking sadly panicked, goes around the world, turning Li into the poster child for infected healthcare workers.

On January 30, Li is officially diagnosed with COVID-19. Exactly one week later, on Thursday, February 6, the very day Dr. Zhang received her award for being "the first person to make the diagnosis and insist on reporting the epidemic," Dr. Li is fighting to stay alive at Wuhan Central Hospital. As word about his struggle against SARS-CoV-2 gets out during the evening, his name begins trending on WeChat and Weibo.

At 2:58 a.m. the next morning, February 7, Li's death was confirmed in a Weibo post on Wuhan Central's verified account. The post says, "In the fight against the pneumonia epidemic of the new coronavirus infection, our hospital's ophthalmologist Li Wenliang was unfortunately infected. We deeply mourn his passing."

The announcement came after several chaotic hours, starting at 10:40 p.m. with a *Global Times* report on Weibo that Li had died. It deleted the post after the hospital responded that Li was still alive, albeit in critical condition. Remember how the CCP chooses the best time, like New Year's Eve, to make critical announcements? Several commenters pointed out the timing of the announcement. "I knew you would post this in the middle of the



IMAGE COURTESY: LI WENLIANG/CNN SCREENSHOT.

Dr. Li Wenliang: A Deer in China's Authoritarian Headlights

Li posted many photographs from his Wuhan Central hospital bed. The above photo shows notable fear in Li's eyes about the disease or his predicament. It should be noted that Li had no comorbidities and, at age 33, was not in the age range typical of patients who perished due to COVID-19. Could China be behind this untimely death?

night," wrote one Weibo user, [according to CNN](#).

Li's death at age 33 prompted millions of tributes and expressions of anger throughout China. At Wuhan Central Hospital, bouquets of flowers were left outside the building's entrance on Friday, accompanied by messages wishing him peace and thanking him for his bravery. "I don't think he was rumor-mongering. Hasn't this become reality now?" his father, Li Shuying, [told the BBC](#). "My son was wonderful."

In an outpouring of grief and anger aimed directly at Chinese authorities, social media users demanded that the Wuhan government apologize to Dr. Li for reprimanding him about his virus warnings. Two hashtags, #WeWantFreedomOfSpeech and #WuhanGovernmentOwesDrLiAnApology, garnered more than 1.8 million views on Weibo. China's information control regime quickly censored both hashtags and censors also [scrubbed](#) the Chinese internet of any mention of his passing without explanation, prompting even more public anger.

The explosive rage of the online mob caught Chinese officials off guard. That same Friday, China's National Supervisory Commission, the country's top anticorruption body, announced it would send a "special team" to Wuhan to investigate the circumstances of Dr. Li's death.

Even before Li died, China's highest court, the Supreme People's Court, [praised](#) the eight medical professionals who were arrested and accused of "fabricating, disseminating and spreading rumours." On January 30, it admonished Wuhan officials to learn a "profound lesson" from their mistake, saying, "Rumors stop when information is public."

The special team sent to Wuhan for a "comprehensive investigation" issued its report on March 19, exonerating Li but only recommending that the reprimand against him be withdrawn. While it found that Li had "not disrupted public order" and that he was a "professional who fought bravely and made sacrifices," it also maintained that Li had not verified the information before sending. The information was "not consistent with the actual situation at the time."

Knowing Li shared the unvarnished truth, the special team's report was widely considered horse manure. As some Weibo users opined, "Is that it? They might as well have not said anything." It was another knife in the back of a dead man who once said these memorable words in an interview, "A healthy society should not only have one voice."

You could not ask for a stronger voice than that of Dr. Ai Fen. Remember how Dr. Zhang Jixian at Xinhua (Hubei) Hospital received an award for first alerting authorities about the virus on Dec. 27, 2019? Ai, who sounded the alarm at Wuhan Central Hospital on December 29, was not so lucky. Because her photo and video diagnosis circulated on social media, thanks to colleague Dr. Li Wenliang, she was deemed a "whistleblower."

On January 1, Ai was summoned by the head of the hospital's disciplinary inspection committee and reprimanded for "spreading rumors" and "harming stability." The official told Ai to warn her department staff not to disclose anything about the disease – and to say nothing about it to anyone, not even her husband, according to an interview with Chinese magazine *Ren Wu* (People). In the interview, Ai says "My mind just went blank. He



An Emoji Version of Ai Fen's Ren Wu (People) Magazine Interview

Social media users thought up creative ways of camouflaging Ai Fen's interview with Ren Wu magazine. Besides one version that featured interspersed emojis (above), others used morse code, braille, and even DNA code or elven runes.

wasn't criticizing me for not working hard...he made me feel that I alone had ruined Wuhan's future. I was in despair."

What may have precipitated the tension between Ai and colleague Professor Zhao Su was the disclosure that Hu Ziwei, a nurse at Wuhan Central Hospital, had become infected about a week after her warning. While the hospital's diagnostic report initially noted that Hu was suffering from "viral pneumonia," it later changed that description to "infections." That revelation buttressed Ai's claim that Wuhan Central had banned medics from wearing personal protective equipment (PPE).

"I regret that back then I didn't keep screaming out at the top of my voice," Ai told *Ren Wu*. "I've often thought to myself what would have happened if I could wind back time."

Her frank observations came at a critical time during the Wuhan pandemic and struck a nerve among city residents. Despite the New Year's Eve closure of the Huanan Seafood Market near Wuhan Central Hospital, she noticed a growing stream of pneumonia patients weeks before officials confirmed human-to-human virus transmission. "If there's no people-to-people transmission, why did the patients continue to increase after the Huanan market was closed?" Ai wonders in her *Ren Wu* interview.

Relishing her *Jeanne d'Arc* role, Ai could not leave well enough alone, adding, "If I had known what was to happen, I would not have cared about the reprimand. I would have fucking talked about it to whoever, wherever I could." To no one's surprise, the March 2020 *Ren Wu* issue with the interview was quickly removed from newsstands.

An online version was also deleted, but not before social media users captured screenshots and devised increasingly creative ways to share the article. To evade censors, users created new versions partly written in emojis or entirely in Morse code, braille, elven runes, DNA code, or pinyin, the Mandarin romanization system — clever techniques designed to hide the content.

On March 29, the Australian TV program *60 Minutes* reported that Ai had gone missing. Her family and colleagues feared she had been arrested and "disappeared" as a result of her criticism of the pandemic's response. The authenticity of a video published on Ai's Weibo account on April 13 is in question, knowing Chinese police often force detainees to reveal their online passwords.

The "disappeared" tactic is a devastatingly effective weapon in the CCP's toolbox. It would be used repeatedly during the pandemic to silence the few critics brave enough to speak up. Only kidnapping could have silenced a free-spoken woman like Ai Fen. When *Ren Wu* asked her if she was one of the eight whistleblowers, Ai answered, "I am not a whistleblower. I am the one who provided the whistle."

On Friday evening, February 7, mourners gathered at Wuhan Central Hospital to pay tribute to Li Wenliang. Many in attendance had brought a whistle, which promptly led to a spontaneous whistling concert. It was a rueful farewell for someone who really didn't want to be a whistleblower.

Refrigerating Strategy

The evening of Dec. 30, 2019, is cold in Beijing, with temperatures hovering near -11 degrees Celsius (13 F). Gao Fu is browsing the internet inside his comfortable, warm home as he likes to do before sleep. Gao, known in the West as George Gao, earned a Ph.D. in biochemistry at Oxford University. After stints at Harvard Medical School and a professorship at Oxford, Gao returned to China, where he was named director of the Chinese Center for Disease Control and Prevention in August 2017.

Having also graduated from Beijing Agricultural University with a master's degree in microbiology, Gao Fu is clearly no virology lightweight. That Monday evening, while catching up on work, Gao stumbles upon the Wuhan Municipal Health Commission's "Urgent Notice on the Treatment of Pneumonia of Unknown Cause." Researching further, he is shocked to find rumors circulating on WeChat about "7 cases of SARS," citing a post written by Dr. Li Wenliang.

As head of China's CDC, Gao is annoyed that he was not personally informed of this unknown pneumonia earlier. He should have been aware of it. According to an "Outbreak Report" obtained by "intellectuals" on February 17, the Hubei Provincial Center for Disease Control and Prevention, together with the Wuhan Municipal Center for Disease Control and Prevention, and several district-level CDCs, set out to investigate a case of "unidentified pneumonia" a day earlier, on December 29.

Investigators for the health authorities descended upon the "scene [Huanan Seafood Market] to carry out epidemiological investigations, specimen collection and testing, and nosocomial control." "Nosocomial" refers to infections contracted in a specific location, typically a hospital. The Outbreak Report was completed on December 30 and stated that a "total of 25 cases were searched and 20 epidemiological investigations were completed." Among them were 12 stalls in the west area of South China (Huanan) Seafood Market and one stall in the east, affecting a total of 17 people, including three staff members of "fixed" [permanent] stalls.

In a major embarrassment for Gao Fu, the Wuhan Municipal Health Commission's urgent notice, which was likely precipitated by the Outbreak Report, was distributed worldwide on December 30 via ProMED-mail, an internet-based reporting system maintained by the International Society for Infectious Diseases. That is how WHO learned about the strange pneumonia case.

Despite the late hour, Gao calls the director and chief physician of Wuhan Municipal Center for Disease Control and Prevention, Li Gang, to find out more. After Li confirms the story, Gao asks if the disease has already met the three-case warning threshold, requiring a report to be filed in the Contagious Disease National Direct Reporting System developed by China after SARS. Li, hesitating for a moment, stammers, "no."irate, Gao shouts, "What's the use of the direct reporting system if it's not used?"

Gao had reason to be upset. During a meeting of top politicians in 2019,

"If I had known what was to happen, I would not have cared about the reprimand. I would have fucking talked about it to whoever, wherever I could."



China CDC Director Gao Fu

Known in the west as “George” Gao Fu, Gao was educated at Beijing University, Oxford, and Harvard. His pedigree should have given him enough insight to immediately realize that the novel coronavirus, 2019-nCoV, was a severe epidemiological risk.

Gao boasted to those in attendance that the new direct reporting system would prevent a major new epidemic like SARS. Did Gao speak too soon? After hanging up, Gao notifies the National Health Commission’s leadership, a cabinet-level department of the State Council, the People’s Republic of China’s chief administrative authority. The National Health Commission is headed up by Ma Xiaowei, a physician who has served as the commission’s minister since its inception in March 2018. Round-faced and bespectacled, Ma is a 60-year old who has virtually all-black hair like many Chinese citizens his age. After graduating from China Medical University in 1982, Ma made a strategic career move by joining the Communist Party of China. He was appointed vice-minister of health in October 2001 and added the new National Health Commission’s directorship after an array of intermediate appointments and lateral moves.

Gao and Ma would play critical roles in the looming pandemic but in unanticipated ways. Given Gao’s ivory-tower background, it seems unlikely that he would fail to grasp the severity of Wuhan’s situation. How could Gao, who likes to think of himself as a detective, disregard Dr. Ai Fen’s circling of the word “SARS” on a lab diagnosis? Insiders believe Gao knew he was dealing with a more significant issue than the vague explanation he received from Li Gang. Nevertheless, by all appearances, he certainly did not act that way.

Instead, Gao reportedly requested the assistance of the Wuhan police. Is this how a health administrator would act during a crisis? What did Gao hope to accomplish with police involvement, except intimidate whistleblowers? In the race against the clock, the Wuhan situation would only go from bad to worse.

Spurred by the National Health Commission and its own Outbreak Report, the Wuhan Municipal Health Commission issues an official alert on December 31 at 13:38 (1:38 p.m.), entitled “Wuhan Municipal Health Commission’s briefing on the current pneumonia epidemic situation in our city,” which claims, “Investigations so far have not revealed any apparent human-to-human transmission or infection by medical staff.”

One thing is clear, Wuhan health authorities initially chose not to use the country’s infectious disease reporting system because they feared alarming their superiors in China’s authoritarian government. The disinformation strategy would become readily apparent in subsequent notices published by the Wuhan Municipal Health Commission. To no one’s surprise, the original December 31 commission notice now results in a [404 error](#).

It took three days altogether for the commission to issue its next notice. On Friday that week, it reported that “as of 8:00 on Jan. 3, 2020, a total of 44 patients with an unexplained diagnosis of viral pneumonia were found, of which 11 were critically ill.” The notice mentioned no deaths and once again declared “no clear evidence of human-to-human transmission and no medical staff infections.”

On January 5, the commission reported *59 patients* with viral pneumonia, including seven critically ill patients, a *decline* from 11 on the third.

Between January 5 and 11, the Wuhan Municipal Health Commission went radio silent, as if everything was copacetic. Then on the 11th, it reported

“The prioritization of party over people was a recurring theme of the pandemic.”

that “as of 14:00 [2:00 p.m.] on Jan. 10, 2020...41 cases of pneumonia with a new coronavirus infection were *initially diagnosed*, of which two were discharged. Seven cases were severe, and one died.”

Finally, an admittance that people were actually dying. Furthermore, a new study methodology — “initially diagnosed” instead of total. A smart way to, pardon the pun, bury the growing number of patients crowding emergency rooms at city hospitals. “If you can’t convince them, confuse them,” is the commission’s new mantra.

More startling was this falsehood: “No new cases have been detected since Jan. 3, 2020. At present, no medical staff infections have been found, and no clear evidence of human-to-human transmission has been found.” It is unseemly that the authorities of a city of 11 million would offer up such flagrant evidence of malfeasance in the midst of an exploding pandemic.

A decision was made to resolve the unknown pneumonia outbreak within Hubei province to protect the “Two Sessions” (两会) — [two annual meetings](#) of the people’s congresses and political consultative conferences — which were set to be held in Wuhan from January 6 to 17.

The city was to host 2,369 delegates from both city and provincial parties, with 1,013 delegates jammed in the Wuhan Theater on Jinghan Avenue, while 1,346 delegates were crowded in Hongshan Ceremonial Hall across the river, with zero social distancing. That appalling political maneuver would eventually cost Wuhan’s party secretary, Ma Guoqiang, and Hubei’s provincial party secretary, Jiang Chaoliang, [their jobs](#).

The prioritization of party over people was a recurring theme of the pandemic and explained why, despite hands-on involvement at the highest levels of the National Health Commission and CDC, the Wuhan Municipal Health Commission was able to continue with its dangerous disinformation campaign while the entire world was watching.

The all-clear signal came from the very top. At a Tuesday, January 7 meeting of the Politburo Standing Committee — the country’s top political body, Chinese President Xi Jinping reportedly [personally ordered](#) officials to control the outbreak. *The Wall Street Journal* picked up this story hook, line, and sinker among other news outlets. However, the basis for this grandstanding, a [February 15 report](#), turned out to be fake news spread by Chinese state-run media to deflect criticism of Xi Jinping’s early absence from the coronavirus relief effort.

That Tuesday Politburo meeting did, however, actually take place. As Hong Kong’s *Ming Pao Daily* [reports](#), however, curbing the epidemic’s spread was not at the top of the agenda of the party’s upper echelon. Citing an anonymous source, top leaders opposed any measures “that may mar the festive vibe and make the public panic.”

It is difficult to believe that National Health Commission Minister Ma Xiaowei did not attend an upper-echelon Politburo meeting with a pandemic in full swing in Wuhan. Moreover, if China’s top bureaucrats then decided they did not want to “mar the festive vibe” of the upcoming Lunar New Year celebrations, what do you do? You slow things down by launching a so-called “refrigerating strategy.”

An anonymous doctor at Wuhan Union Hospital confirmed that the Wuhan

government had frozen the information flow, according to [China News Weekly](#), preventing medical staff from speaking publicly about what was taking place or accepting any media interviews. Wuhan authorities also denied the novel coronavirus spread between humans — something frontline workers were keenly aware of since at least late December. Furthermore, more damning evidence of a deliberate information clamp-down was about to surface.

A turning point in China's attention deficit disorder came on January 13, when Thailand Public Health Minister Anutin Charnvirakul announced that a 61-year-old Chinese female tourist was infected with the new coronavirus strain after arriving in Thailand. Anutin said the tourist was recovering at Bamrasnaradura Infectious Diseases Institute in Nonthaburi province. And surprisingly, she also did not frequent the Huanan Seafood Market. The Wuhan virus was now in the hands of Western devils, albeit still yellow ones. That realization prompted quick but deadly silent action.

In April, the [Associated Press](#) obtained an internal memo that documented a secret teleconference held by Minister Ma Xiaowei on January 14. During the call, Ma called the situation “the most severe challenge since SARS in 2003” and predicted that it would “likely to develop into a major public health event.” After the call, the National Health Commission ordered secret pandemic preparations, including patient screening, protective gear, temperature checks, and test kit distribution. All without informing the public.

That same day, [New Tang Dynasty News](#) reported that various Hong Kong news reporters covering Wuhan Jin Yin-tan Hospital found the building heavily guarded by multiple security personnel and the South building's main entrance chained. Reporters from Hong Kong Radio, Commercial Radio, TVB, and NOW News were intercepted during their visit and taken to a police station, where everyone was asked to delete recordings. What was behind all the secrecy? Did China have something to hide?

The National Health Commission's disastrous silence during the most critical phase of the pandemic would last until January 20, when President Xi Jinping finally surfaced, [ordering](#) “resolute efforts to curb the spread of the novel coronavirus (2019-nCoV) that causes cases of pneumonia.” However, Xi also downplayed the virus, reporting just “224 cases of pneumonia” across *all of China*.

That figure did not reflect reality since we already saw that Xinhua Hospital's caseload more than doubled to 230 on just New Year's Day, according to Dr. Zhang Jixian's eyewitness account. Four days later, Huang Chao-Lin's report in *The Lancet* would report 800 confirmed novel coronavirus cases before January 24 in Wuhan alone.

Officially, China maintains it was misled by local health authorities, who, they [claim](#), undermined their direct reporting system. However, reading between the lines of these media reports, one is constantly reminded that nothing escapes the Chinese government. After all, this country has installed [349 million surveillance cameras](#), some right outside people's apartment doors. It would take Western observers months to realize that Wuhan's refrigerating strategy was carefully orchestrated by none other than Ma



IMAGE COURTESY: CHINA NEWS SERVICE.

National Health Commission Minister, Ma Xiaowei

Ma Xiaowei is a career politician who joined the Chinese communist party right after graduating from China Medical University in 1982. That strategic CCP move served him well, ultimately landing him in the nation's first National Health Minister's role in 2018.



IMAGE COURTESY: IAN LAHIFFE/CNN SCREENSHOT.

Surveillance Camera Installed Outside of Apartment Front Door

Ian Lahiffe, a 34-year-old Irish ex-pat who lives in Beijing, told CNN that he found a surveillance camera mounted on the wall outside his apartment door after returning from a trip to southern China. At his residential compound, community workers were charged with making sure he and his family stayed home and didn't receive any visitors during their two-week quarantine.

Xiaowei, the minister of the National Health Commission, and his CDC lieutenant (George) Gao Fu.

Internal bulletins [obtained by the AP](#) confirm that from January 5 through January 17, China's Center for Disease Control did not report any cases from local officials — even though thousands of infected patients were checking into hospitals all across China.

How is it possible that in Wuhan, the number of patients suffering from a virulent coronavirus would incredulously end up *declining* between January 5 and January 11, from 59 to 41?

On January 13, the Wuhan Municipal Health Commission continued its [charade](#), reporting *no new pneumonia cases* in the city. Its fabricated “41 patients” figure would hold steady for *five days* until January 15. It rises slightly to 45 on January 16 and jumps to 198 on January 20. Remember that the “Two Sessions” meetings ended on January 17.

Dr. Huang Chao-Lin, the deputy director and chief physician of Wuhan Jin Yin-tan Hospital and a Hubei Provincial Medical Group expert, [attributed](#) the jump to test kit availability. Still, you do not need a test kit to determine whether a patient has had a severe case of “unknown pneumonia.”

The commission's January 19 notice finally deletes all references to the lack of human-to-human transmission and, for the first time, recommends wearing a mask while omitting the qualifier “if necessary.” The change in stance was a reflection of the reality on the ground. While the commission asserted as late as January 10 that “no medical staff infections have been found,” the opposite was true.

According to [a report](#) by “12 scholars of Shanghai Jiaotong University,” seven medical staff were infected between January 1 and 11, and eight additional healthcare workers caught the virus from January 12 to January 22. Those figures were verified by a [study](#) entitled “Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia,” published online on January 29 and, surprise, co-authored by the CDC's “George” Gao Fu. Notably, a table on page 1203 claims no healthcare workers were infected before January 1, which is incorrect based on witness reports from healthcare workers.

While coronavirus cases were growing exponentially, local medical teams could not raise the alarm, with dire consequences as the explosive patient trend revealed by the successive Huang Chao-Lin and Wang Dawei studies suggests. Furthermore, it was not just Wuhan.

In the southern city of Shenzhen, hundreds of miles away, a team led by microbiologist Yuen Kwok-yung used their own test kits to confirm that six members of a family of seven had the virus on January 12. In an [interview](#) with *Caixin Global*, a well-respected independent business publication, Yuen said he informed CDC branches at all levels, including Beijing. However, internal CDC numbers did not reflect Yuen's report CDC bulletins show.

More nails would soon be driven into Wuhan's coffin, many made of nothing more than paper.

The Paper Chase

BRIEF REPORT

A Novel Coronavirus from Patients with Pneumonia in China, 2019

Na Zhu, Ph.D., Dingyu Zhang, M.D., Wenling Wang, Ph.D., Xingwang Li, M.D., Bo Yang, M.S., Jingdong Song, Ph.D., Xiang Zhao, Ph.D., Baoying Huang, Ph.D., Weifeng Shi, Ph.D., Roujian Lu, M.D., Peihua Niu, Ph.D., Faxian Zhan, Ph.D., Xuejun Ma, Ph.D., Dayan Wang, Ph.D., Wenbo Xu, M.D., Guizhen Wu, M.D., George F. Gao, D.Phil., and Wenjie Tan, M.D., Ph.D., for the China Novel Coronavirus Investigating and Research Team

SUMMARY

In December 2019, a cluster of patients with pneumonia of unknown cause was linked to a seafood wholesale market in Wuhan, China. A previously unknown betacoronavirus was discovered through the use of unbiased sequencing in samples from patients with pneumonia. Human airway epithelial cells were used to isolate a novel coronavirus, named 2019-nCoV, which formed a clade within the subgenus sarbecovirus, Orthocoronavirinae subfamily. Different from both MERS-CoV and SARS-CoV, 2019-nCoV is the seventh member of the family of coronaviruses that infect humans. Enhanced surveillance and further investigation are ongoing. (Funded by the National Key Research and Development Program of China and the National Major Project for Control and Prevention of Infectious Disease in China.)

EMERGING AND REEMERGING PATHOGENS ARE GLOBAL CHALLENGES FOR public health.¹ Coronaviruses are enveloped RNA viruses that are distributed broadly among humans, other mammals, and birds and that cause respiratory, enteric, hepatic, and neurologic diseases.^{2,3} Six coronavirus species are known to cause human disease.⁴ Four viruses — 229E, OC43, NL63, and HKU1 — are prevalent and typically cause common cold symptoms in immunocompetent individuals.⁴ The two other strains — severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) — are zoonotic in origin and have been linked to sometimes fatal illness.⁵ SARS-CoV was the causal agent of the severe acute respiratory syndrome outbreaks in 2002 and 2003 in Guangdong Province, China.^{6,8} MERS-CoV was the pathogen responsible for severe respiratory disease outbreaks in 2012 in the Middle East.⁹ Given the high prevalence and wide distribution of coronaviruses, the large genetic diversity and frequent recombination of their genomes, and increasing human-animal interface activities, novel coronaviruses are likely to emerge periodically in humans owing to frequent cross-species infections and occasional spillover events.^{1,10}

In late December 2019, several local health facilities reported clusters of patients with pneumonia of unknown cause that were epidemiologically linked to a seafood and wet animal wholesale market in Wuhan, Hubei Province, China.¹¹ On December 31, 2019, the Chinese Center for Disease Control and Prevention (China CDC) dispatched a rapid response team to accompany Hubei provincial and Wuhan city health authorities and to conduct an epidemiologic and etiologic investigation. We report the results of this investigation, identifying the source of the pneumonia

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“George” Gao Fu’s First White Paper Published on Jan. 24, 2020

“A Novel Coronavirus from Patients with Pneumonia in China, 2019” unsettled many Chinese people because it proved without a shadow of a doubt that the head of China’s CDC was acutely aware of the implications of 2019-nCoV, namely that it was a “bat SARS-like coronavirus.”

“Pneumonia in China, 2019” (Zhu et al.), studied three adult subjects, all connected to the Huanan Seafood Market, who were admitted to Wuhan Jin Yin-tan Hospital on December 27 (emphasis added):

Three adult patients presented with severe pneumonia and were admitted to a hospital in Wuhan on Dec. 27, 2019. Patient 1 was a 49-year-old woman, Patient 2 was a 61-year-old man, and Patient 3 was a 32-year-old man...Patients 1 and 3 recovered and were discharged from the hospital on Jan. 16, 2020. Patient 2 died on Jan. 9, 2020. Three bronchoalveolar-lavage samples were collected from Wuhan Jin Yin-tan Hospital on Dec. 30, 2019...We report a novel CoV (2019-nCoV) that was identified in hospitalized patients in Wuhan, China, in December 2019 and January 2020...Complete genomes were submitted to GISAID. Phylogenetic analysis revealed that 2019-nCoV falls into the genus betacoronavirus, which includes coronaviruses (SARS-CoV, bat SARS-like CoV, and others) discovered in humans, bats, and other wild animals. (*The New England Journal of Medicine* Published 20-Feb-20; Online: 24-Jan-20)

Patients 1 and 2 match the profiles of Patient 2 and Patient 5 in the January 27 *Chinese Medical Journal* study discussed earlier. Only Patient 3, the 32-year-old man, is new. More importantly, here was black-and-white documentation that Wuhan health authorities knew they were dealing

With just about every professor, scientist, business executive, and government official busy at work on a white paper, a bevy of studies would soon jam the inboxes of journals worldwide. These documents would play a critical role in this rapidly unfolding “poli-sci” thriller.

As used here, “poli-sci” goes well beyond its old-school meaning of political science, instead describing a dark journey into the mysterious world of lab science against a backdrop of political manipulation and intrigue. The white paper pile-up grew out of misplaced priorities egged on by a relentless thirst for ego gratification and political prestige, all mired in a morass of corruptness equal to none. These studies, however, provide documented evidence about the emergence of 2019-nCoV and form the scientific basis for this investigation.

Professors Huang Chao-Lin and Wu Wenjuan were not the only ones to have a paper published on January 24. An astonishing five articles about the novel coronavirus were published that day, *three* co-authored by “George” Gao Fu.

One report, published in *The New England Journal of Medicine*, “A Novel Coronavirus from Patients with

“The mean incubation period was 5.2 days...In its early stages, the epidemic doubled in size every 7.4 days...On the basis of this information, there is evidence that human-to-human transmission has occurred among close contacts since the middle of December 2019.”

with a new SARS-like coronavirus by yearend.

The controversy only grew after the release of a second white paper, published in the *New England Journal of Medicine* on January 29, also listing Gao as a contributor. “[Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia](#)” would provide plenty of fodder for a social media jihad (emphasis added):

We analyzed data on the first 425 confirmed cases in Wuhan to determine the epidemiologic characteristics of NCIP....The mean incubation period was 5.2 days...In its early stages, the epidemic doubled in size every 7.4 days...On the basis of this information, there is evidence that human-to-human transmission has occurred among close contacts since the middle of December 2019. (*The New England Journal of Medicine* 29-Jan-20)

These revelations dealt the Chinese public trust a swift blow. The first Gao paper confirmed the existence of a SARS-like coronavirus. The second verified human-to-human transmission based on 425 confirmed cases. According to the study, “The majority of cases (55%) with onset before January 1, 2020, were linked to the Huanan Seafood Wholesale Market, as compared with 8.6% of the subsequent cases.” Table 1 in the study shows that 30, out of a total of 47 patients who fell ill before January 1, had a connection to the Huanan Seafood Market.

Between January 1 and 11, 248 patients fell ill — far more than the 41 the Wuhan Municipal Health Commission would insist were stricken with the virus until January 15.

A third January 24 article co-authored by Gao, “[A novel coronavirus outbreak of global health concern](#),” published in the online “Comment” section of *The Lancet*, thanks “Prof George F Gao for guidance in study design and interpretation of results.” Gao evidently had plenty of time for research advice but little time for counseling the Chinese people.

Was the head of China’s CDC, the most vital government entity battling the unknown pneumonia, too busy writing papers that not only identified the virus as a virulent bat-derived betacoronavirus but also provided sufficient insight to prevent authorities and expert team members from offering improper guidance?

Here was living proof that human-to-human transmission had occurred in mid-December, yet authorities dragged their feet because allowing the “Two Sessions” political events to take place in Wuhan was clearly more important than people’s lives.

From January 6 to 10, the Wuhan Municipal Health Commission made no announcements about the status of the outbreak, which suspiciously coincided with the early part of the “Two Sessions” convention.

It is abundantly clear that Gao and his expert team of co-authors spent more time polishing their writing skills and practicing bad public relations than focusing on the matter at hand, a severe, looming health crisis.

There is more. Another study, also published in *The Lancet* on January 24, features a title that speaks volumes: “[A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person](#)

transmission: a study of a family cluster” (Chan et al.). This study was co-authored by 15 scientists at The University of Hong Kong, based in China’s “special administrative region” that, unlike the rest of China, did its best to raise the alarm about the emerging novel coronavirus.

The avalanche of white papers exposed the ugly underbelly of China’s purported efforts to fight the new virus. The backlash was fierce. Why did authorities only verify human-to-human transmission in late January, when the first expert team pored over patient data within days of its December 31 arrival? Huang Chao-Lin, whose *The Lancet* study was also published on January 24, likely drew similarly bleak conclusions even earlier, right after his December 29 visit to Xinhua Hospital.

Moreover, Gao and Huang obviously benefited from early access to emerging genomic research data about the novel coronavirus. Their head start must have confirmed early on that Wuhan was dealing with a SARS-like virus.

While Gao, Huang, and many of their colleagues were laser-focused on producing white papers, a parallel drama was unfolding in the world of bioscience, white papers and all.

Sequencing the Genome

After Li Wenliang’s WeChat post alerting colleagues about a new coronavirus went, er, viral on December 30, Wuhan authorities quickly realized they could no longer stem the rumor tide propelled by social media and jumped into action, sort of.

As *Scientific American* initially reported on March 11, Wuhan Institute of Virology Director Yuan Zhiming was the first to receive a call. (This book includes details *Scientific American* left out of its report, including some of the people involved.) On the phone was Director Li Gang of the Wuhan Municipal Center for Disease Control, who informed Yuan that a courier would be delivering a package that same evening.

After receiving the mysterious patient samples around 7:00 p.m. on December 30, Yuan called his most prominent researcher, Shi Zhengli — the Bat Woman — on her cell phone. Shi was attending a medical conference in Shanghai, was told that the Wuhan Municipal Center for Disease Control and Prevention had detected a new virus. They wanted Shi to investigate immediately. She returned to Wuhan that same evening.

While Shi rode a train back to Wuhan, Dr. Ai Fen, the emergency department director at Wuhan Central Hospital, received a message from hospital management warning her that information about the mysterious disease should not be “arbitrarily released” to avoid causing panic. The Wuhan Municipal Health Commission’s “refrigerating strategy” was now in full motion, confirming that authorities were more concerned about maintaining order than stopping the virus.

On Thursday, January 2, Shi and her Wuhan Institute of Virology team members reportedly sequenced the entire genome of the virus and confirmed that it was a new coronavirus.

That very day, an internal email sent by Wang Yanyi, the institute’s director-

general, revealed that the institute had received a call from the National Health Commission instructing its staff to refrain from disclosing any information about the epidemic. The phoned-in order proves beyond a shadow of a doubt that the National Health Commission was directly managing the information suppression campaign in Wuhan. It would not be the only instance of China’s top health commission actively impeding critical knowledge flow.

By Sunday, the Wuhan Institute of Virology classified the virus as a new bat coronavirus, officially identifying it as “BatCoV RaTG13.” Like her healthcare colleagues, Shi was also busy working on a new white paper. She beat both Gao and Huang by a day, publishing a preprint on January 23, followed by a formal article in *Nature* on February 3. A preprint is a study that has yet to be reviewed by industry peers, a required step before acceptance by major science journals. The incredible race to publish these papers sent a loud message: the virus pen is mightier than the sword.

Interestingly, Shi’s paper mentions, “The epidemic, started from December 12, 2019, has caused 198 laboratory confirmed infections with three fatal cases by January 20th, 2020.” Huang Chao-Lin’s study, published on the same date, reports, “800 confirmed cases, including in healthcare workers, have been identified in Wuhan.” While Huang does not include a specific cut-off date for the 800 figure, one can assume that it is close to Shi’s January 20 date.

On Friday, January 3, at 13:30 (1:30 p.m.), a metal box containing a test tube packed in dry ice arrived at the Shanghai Public Health Clinical Center, a complex of drab, beige buildings. Like Yuan Zhiming’s courier delivery, the test tube contained swabs from a patient suffering from an unknown virus. The Shanghai Public Health Clinical Center and School of Public Health is part of Shanghai’s Fudan University, where Professor Zhang Yong-Zhen holds court and leads a consortium of scientists that includes Australian Edward Holmes.

To refresh your memory, Holmes was involved in a study cited earlier entitled “A new coronavirus associated with human respiratory disease in China (Wu Fan, et al.),” which found that no bats were sold at the Huanan Seafood Market. Published in *Nature* on February 3, the study was co-authored by, drumroll, Professor Zhang Yong-Zhen.

Now that you know the end result let’s start at the beginning. Zhang proceeds to analyze the Wuhan patient samples using the latest RNA high-throughput sequencing technology. Laboring two days straight, Zhang’s team maps the second complete genome of the virus on Sunday, January 5, the same day Shi Zhengli and team classify the novel coronavirus as BatCoV RaTG13.

After sequencing the genome, Professor Zhang Yong-Zhen told *Time* he immediately called the Wuhan Central Hospital head of respiratory medicine, Professor Zhao Su, to request clinical data of the patient involved. Zhang dangled a carrot to get Zhao to send the data quickly: An invitation to contribute to Zhang’s next white paper detailing the new coronavirus’ discovery. That is one possible scenario. Another is: Professor Zhao Su told Zhang he had already identified the virus thanks to the analysis received



IMAGE COURTESY: GNEWS.

Shi Zhengli, China’s “Bat Woman”

Shi Zhengli (aka Zheng-Li Shi in western media) joined the Wuhan Institute of Virology in July 1990 as a research intern. Over the years, she acquired a taste, metaphorically speaking, of course, for bats. Her ceaseless quests to discover more about these nocturnal animals led her to earn the moniker of “Bat Woman.”

from Guangzhou Weiyuan Gene Technology on December 27. That is far more plausible because it explains the next series of events.

The next day, Monday, January 6, Zhang and Fudan University colleague Wu Fan begin furiously coordinating the collection of white paper data from 17 collaborating authors, including, notably, Edward Holmes, who, besides being affiliated with the Marie Bashir Institute for Infectious Diseases and Biosecurity at the University of Sydney, is also a consultant at the State Key Laboratory of Infectious Disease Prevention and Control at China's CDC in Beijing.

Believe it or not, on January 7, London-based *Nature* receives a 19-page draft manuscript of that white paper mentioned twice earlier, “A new coronavirus associated with human respiratory disease in China.” Scientific white papers are never trivial to produce, even with a team of 19, especially one with 34 charts, tables, and illustrations, plus appendices and extensive footnotes. It is simply beyond the realm of possibility that work on this paper could only have begun four days earlier, on January 3, when Zhang received the Wuhan patient samples.

As speculated earlier, it is far more likely that Professor Zhao Su began collaborating with Zhang Yong-Zhen much earlier and sent him the 65-year-old deliveryman's Bronchoalveolar Lavage soon after the SARS diagnosis, enabling Zhang to begin work on his paper around the same time that Huang Chao-Lin began writing his. It also explains Zhao's hostility towards Dr. Ai Fen. It was important that data about the virus be kept as close to the vest as possible so as not to steal the thunder of Zhang and Zhao's white paper.

After contacting Professor Zhao, Zhang said he notified China's Ministry of Health, presumably alerting Minister Ma Xiaowei on January 6 that a SARS-like coronavirus was identified in Wuhan. Not that there was any need for that. Vision Medicals had already notified the Chinese Academy of Medical Sciences on December 27, which means Ma was already acutely aware of the novel coronavirus' potential to cause mass infections.

Even if that word had somehow not reached Ma, the discovery of a new bat coronavirus on Thursday, January 2 by the Wuhan Institute of Virology, and its official naming as “BatCoV RaTG13” on Sunday, January 5, most certainly did. And then there was the invisible Gao Fu. Since he was furiously at work on his white paper in Beijing, he must have received daily briefings from Xu Jianguo, his direct report at the CDC's State Key Laboratory, and his man on the ground in Wuhan on December 31.

Professor Zhang's Monday notification came the day before the January 7 Politburo meeting, where the party's upper echelon decided to freeze any information that could “mar the festive vibe and make the public panic.” The Politburo made this decision with *full understanding* that 2019-nCoV was about to claim many victims in Wuhan.

Pleased to have submitted his groundbreaking white paper to *Nature* at breakneck speed, Zhang travels to Wuhan on Wednesday, January 8, where he discusses his findings with top public health officials over what must have been a leisurely dinner. After rushing back to his hotel room, Zhang receives an email from *Nature's* editors notifying him of their receipt of his



IMAGE COURTESY: CHINA/CDC.CN.

Professor Zhang Yong-Zhen

Zhang Yong-Zhen, a researcher at Fudan University's Shanghai Public Health Clinical Center & School of Public Health, may have upstaged the Chinese bioscience community when he released the genomic sequence of 2019-nCoV on Jan 10, 2020, which led to the closing of his lab for “rectification” the following day.

Article

A new coronavirus associated with human respiratory disease in China

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Emerging infectious diseases, such as severe acute respiratory syndrome (SARS) and Zika virus disease, present a major threat to public health¹. Despite intense research efforts, how, when and where new diseases appear are still a source of considerable uncertainty. A severe respiratory disease was recently reported in Wuhan, Hubei province, China. As of 25 January 2020, at least 1,975 cases had been reported since the first patient was hospitalized on 12 December 2019. Epidemiological investigations have suggested that the outbreak was associated with a seafood market in Wuhan. Here we study a single patient who was a worker at the market and who was admitted to the Central Hospital of Wuhan on 26 December 2019 while experiencing a severe respiratory syndrome that included fever, dizziness and a cough. Metagenomic RNA sequencing² of a sample of bronchoalveolar lavage fluid from the patient identified a new RNA virus strain from the family *Coronaviridae*, which is designated here ‘WH-Human 1’ coronavirus (and has also been referred to as ‘2019-nCoV’). Phylogenetic analysis of the complete viral genome (29,903 nucleotides) revealed that the virus was most closely related (89.1% nucleotide similarity) to a group of SARS-like coronaviruses (genus *Betacoronavirus*, subgenus *Sarbecovirus*) that had previously been found in bats in China³. This outbreak highlights the ongoing ability of viral spill-over from animals to cause severe disease in humans.

The patient studied was a 41-year-old man with no history of hepatitis, tuberculosis or diabetes. He was admitted to and hospitalized in the Central Hospital of Wuhan on 26 December 2019, 6 days after the onset of disease. The patient reported fever, chest tightness, unproductive cough, pain and weakness for 1 week on presentation (Table 1). Physical examination of cardiovascular, abdominal and neurological characteristics was that these were normal. Mild lymphopenia (defined as less than 9×10^3 cells per ml) was observed, but white blood cell and blood platelet counts were normal in a complete blood count test. Elevated levels of C-reactive protein (41.4 mg l^{-1} of blood; reference range, $0 - 6 \text{ mg l}^{-1}$) were observed and the levels of aspartate aminotransferase, lactic dehydrogenase and creatine kinase were slightly elevated in blood chemistry tests. The patient had mild hypoxaemia with oxygen levels of 67 mm Hg as determined by an arterial blood gas test. On the first day of admission (day 6 after the onset of disease), chest radiographs were abnormal with air-space shadowing such as ground-glass opacities, focal consolidation and patchy consolidation in both lungs (Extended Data Fig. 1). Computed tomography scans of the chest revealed bilateral focal consolidation, lobar consolidation and patchy consolidation, especially in the lower lung (Extended Data Fig. 1a–d). A chest radiograph revealed a bilateral diffuse patchy and fuzzy shadow on day 5 after admission (day 11 after the onset of disease) (Extended Data Fig. 1e). Preliminary aetiological investigations excluded the presence of influenza virus, *Cytomegalovirus*, *Mycobacterium tuberculosis* and *Mycoplasma pneumoniae* using commercial pathogen antigen-detection kits, and this was confirmed by PCR. Other common respiratory pathogens, including human adenoviruses, also tested negative by quantitative PCR (qPCR) (Extended Data Fig. 2). Although a combination of antibiotic, antiviral and glucocorticoid therapy was administered, the patient exhibited respiratory failure and was given high-flow non-invasive ventilation. The condition of the patient did not improve after 3 days of treatment and he was admitted to the intensive care unit. The patient was transferred to another hospital in Wuhan for further treatment 6 days after admission.

Epidemiological investigations by the Wuhan Center for Disease Control and Prevention revealed that the patient worked at a local indoor seafood market. Notably, in addition to fish and shellfish, a variety of live wild animals—including hedgehogs, badgers, snakes and birds (turtledoves)—were available for sale in the market before the outbreak began, as well as animal carcasses and animal meat. No bats were available for sale. While the patient might have had contact with wild animals at the market, he recalled no exposure to live poultry. To investigate the possible aetiological agents associated with this disease, we collected bronchoalveolar lavage fluid (BALF) and

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IMAGE COURTESY: NATURE/SPRINGER NATURE LIMITED.

An Impossibly Fast White Paper

If Professor Zhang Yong-Zhen is to be believed, this white paper, co-authored by Edward Holmes and 18 others, was produced in just four days, including 34 charts, tables, and illustrations. It's far more likely that Dr. Zhao Su, listed second after lead author Wu Fan, shared genomic sequencing data provided by Guangzhou Weiyuan Gene Technology with Zhang on Dec. 27, 2019.

Disease Control and Prevention, the National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control, and the University of Sydney, Sydney, Australia is releasing a coronavirus genome from a case of a respiratory disease from the Wuhan outbreak. The sequence has also been deposited on GenBank (accession MN908947.24.1k) and will be released as soon as possible. (Virological.org 10-Jan-20)

Notice that Zhang's camp prominently includes Dr. Zhao Su's Central Hospital and Tongji Hospital (Huazhong University of Science and Technology), but not Jin Yin-tan Hospital, which is associated with the Huang Chao-Lin and Gao Fu camp.

Zhang told *Time* that he made a snap decision to release the genome while sitting on a Shanghai runway:

On the morning of January 11, he was on the runway at Shanghai Hongqiao Airport when he received a phone call from a colleague, Professor Edward Holmes at the University of Sydney. A few minutes later, Zhang was strapped in for takeoff and still on the phone — then Holmes asked permission to release the genome publicly. “I asked Eddie to give me one minute to think,” Zhang recalls. “Then I said ok.” (Time 24-Aug-20)

As the 1930s movie detective, Charlie Chan once aptly said, “One small

draft white paper. All is well on the paper front. However, despite now being armed with confirmed knowledge that a new SARS-like virus was running rampant in Wuhan, the city's health officials would not budge from their strategy of disinformation, announcing three days later, on January 11, that the number of infected patients had *declined* from 59 to 41.

Submitting a white paper early does not, of course, guarantee timely publication. Except for his one brief Wuhan visit, Gao Fu was smart to remain in Beijing, which freed him up to get two papers and an article published on January 24. Huang Chao-Lin's early visit to Xinhua Hospital, miraculously, also resulted in a January 24 publication date. So what does a scientist eager to boost his profile do while facing looming competition? You become the first to publish the sequenced genome data.

On Friday afternoon, January 10, at 17:05 (5:05 p.m.) Pacific Time (Saturday, January 11, 10:05 a.m. China time), Zhang's colleague Edward Holmes posts this notice to the open-access Virological.org site:

The Shanghai Public Health Clinical Center & School of Public Health, in collaboration with the Central Hospital of Wuhan, Huazhong University of Science and Technology, the Wuhan Center for



Shanghai Public Health Clinical Center & School of Public Health at Fudan University

This complex houses the Shanghai Public Health Clinical Center and School of Public Health, where Professor Zhang Yong-Zhen's lab was closed for "rectification." Given the yellow "Limit Line" tape, one can only surmise that this image was taken during the government's hygienic cleansing action.

wind can raise much dust." Zhang's snap decision did not sit well with Minister Ma Xiaowei and the National Health Commission. One day after sharing the genome sequence with the world via Holmes' post, his lab in Shanghai was closed by the authorities for "rectification."

Zhang casually dismissed the action, "Maybe they couldn't understand how we obtained the genome sequence so fast. So, I think it's normal for the authorities to check our lab, our protocols." Somehow, having a lab closed for "rectification"

more closely resembles punishment for releasing data without official authorization rather than reviewing "our protocols."

Adding even more intrigue and speculation to the saga, a new character, Deputy Director Guan Wuxiang, revealed in a May 2020 *China Daily* interview that the Wuhan Institute of Virology was one of the institutions authorized by the National Health Commission to release genetic data to the World Health Organization on January 11. What other labs were authorized? Did Zhang and crew unexpectedly upstage the Wuhan Institute of Virology?

And why Saturday, January 11? We have already seen how the Chinese government strategically saves announcements for Friday evenings to draw as little attention as possible. News released in Beijing on Saturday morning still reaches the west coast of North America on Friday afternoon. While the sequenced genome of the novel coronavirus was certainly big news, it would draw much-unwanted attention to China's role in the virus' emergence at a very inopportune time. Releasing the news on Saturday morning would suppress its impact in China but still reach the western world on a work day.

Zhang may have portrayed his approval to release the sequence as a spur-of-the-moment decision, but he made sure not to announce the genomic sequence before the apparently agreed-upon date of January 11, as Guan Wuxiang's comments to *China Daily* suggest. The authority's "rectification" action suggests Zhang's lab was not on the approved list, despite Zhang's assertion that it was merely a protocol check.

On the other hand, was January 11 really an agreed-upon date? It is still quite possible that Zhang forced China's hand and that Guan merely mentioned that date because of what occurred later that Saturday evening. Like much of the Western world, China uses a Monday-to-Friday workweek with weekends off. So, it is highly unusual when official business is scheduled for a Saturday evening. As *China News* reports, on Saturday evening, January 11, the National Health Commission announced that China would share the novel coronavirus genome sequence with the World Health

Organization.

The *China News* report provides no precise time for the Saturday evening announcement, so it was at least eight hours after Zhang's genome release. Was this WHO announcement hastily scheduled the same day to make it look like it was all part of the official genome release plan? It seems highly unlikely that Minister Ma Xiaowei would go out of his way to proofread a press release on Saturday evening unless Zhang forced his hand. That would also explain why Zhang's lab was immediately "rectified" on Sunday, another weekend day.

The National Health Commission's Saturday release provided yet another intriguing clue. According to *China News*, the official time of the "detection" of the novel coronavirus was 21:00 (9:00 p.m.) on Wednesday, January 7. We know Shi sequenced the novel coronavirus on January 2. Zhang claims his team did it on January 5. Why did this latest data diverge from the other accounts? Was the lab work officially concluded on January 7, or was it just another made-up fact, as that nice, round time-of-day provided suggests?

The official January 7 sequencing announcement was picked up worldwide. Not surprisingly, as you will learn later, *Nature* published the story first on January 8. STAT news picked it up on January 9, *Science* on January 11.

Zhang's lab was not the first to trouble authorities. According to *Caixin Global*, Hubei's health commission sent an order to gene-sequencing companies to stop testing and destroy all samples on January 1. The National Health Commission followed up with its own gag order two days later, on January 3, and told the labs that Wuhan pneumonia samples needed to be treated as highly pathogenic microorganisms — and that any samples needed to be moved to "approved testing facilities" or destroyed. The commission did not disclose what facilities were approved.

One virologist told *Caixin* that even the Wuhan Institute of Virology, an arm of the Chinese Academy of Sciences, was not allowed to test and was instructed to destroy its lab samples.

WHO announced the whole genome sequencing on January 12 at 14:43 (2:43 p.m.), precisely 40 minutes after the *China News* WHO story broke. WHO Director-General Tedros Adhanom mentioned that he contacted National Health Commission Minister Ma Xiaowei to praise him for sharing the new coronavirus information with the world.

Was Ma happy to receive that congratulatory call, or was he squirming in his neatly pressed Hong Kong-made suit? The world may never know. What we do know is that expert team members and lab scientists alike were tripping over each other while running for the white paper exits. The deluge of studies brings to mind another Charlie Chan aphorism, "Ancient ancestor once say, 'Words cannot cook rice.'"

The Expert Teams

Perpetrators are not the only ones in need of alibis. Expert witnesses sometimes need them too, but their alibis better be bulletproof. On New Year's Eve, CCTV announced that the government would send

Genomic Sequencing

Media outlets employ staffs with widely varying abilities to communicate scientific nuances. When *China News* used the word “detection” it was actually referring to the sequencing of the novel coronavirus genome. Genomic sequencing helps identify viruses. A genome, an organism’s genetic material, contains all the information needed to identify or reproduce it. Human genomes are made of double-stranded DNA and are expressed using a unique code of four nucleotide base “letters.” A virus genome can either be made of DNA (deoxyribonucleic acid) or its close cousin RNA (ribonucleic acid) and is relatively tiny. Coronaviruses are RNA viruses, and the SARS-CoV-2 has a single, short RNA strand that is just 30,000 letters long, far shorter than the 3 billion base letters of human genomes. These letters can be “read” one by one, using a technique called sequencing.

National Health Commission officials to Wuhan to aid with the investigation. Within hours, the first “expert team” arrived in Wuhan. Media reports suggest that the head of China’s CDC, Gao Fu, visited Wuhan on three occasions while leading National Health Commission expert teams. However, neither *China News Weekly* nor *China Youth Daily* mentions Gao as part of the December 31 team, supposedly consisting of nine members, yet identifying just four, all from Beijing:

Li Xingwang (李兴旺) – Chief expert at the Infectious Disease Diagnosis and Research Center of Beijing Ditan Hospital (and co-author of *The Lancet* study).

Cao Bin (曹彬) – Director of the Department of Respiratory and Critical Care Medicine, China-Japan Friendship Hospital (and co-author of *The Lancet* study).

Xu Jianguo (徐建国) – Director of the State Key Laboratory of Infectious Disease Control and Prevention at CDC.

Li Qun (李群) – Director of the Emergency Center of the Chinese Center for Disease Control and Prevention.

Whether Gao Fu was part of this particular team cannot be ascertained, but reports suggest that Gao only visited Wuhan for one or two days on January 10, 2020. What can be confirmed is that on the morning of January 1, the expert team entered the now-shuttered Huanan Seafood Market and collected 515 environmental samples and 70 specimens from the “wildlife” section of the market. All samples and specimens were immediately couriered to the Viral Disease Institute of China’s CDC for testing. Also, on January 1, the National Health Commission established an “epidemic response and disposal unit” led by Minister Ma Xiaowei.

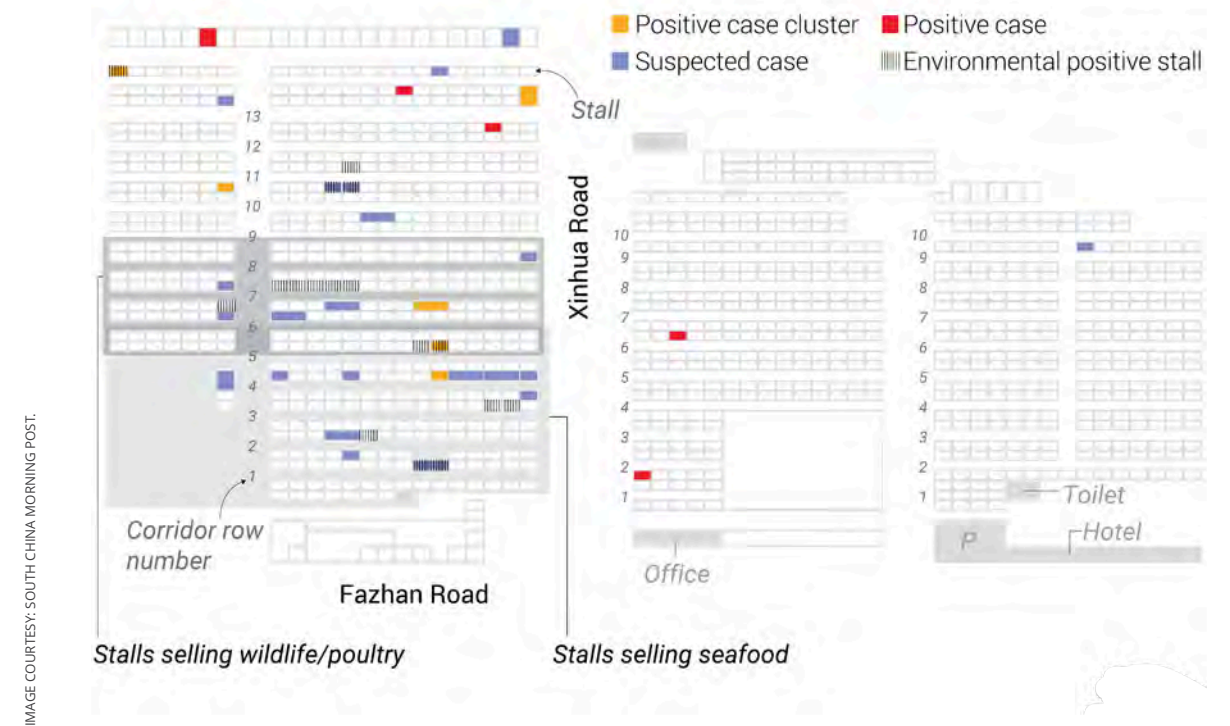
On December 15, 2020, *South China Morning Post* published a never-before-seen floor map of the Huanan Seafood Market, indicating stalls associated with either suspected or positive cases. Because the floor map dates to January, the early days of the CDC investigation, only five stalls show positive cases, while 25 stalls indicate suspected cases, which would have all been confirmed at a later date.

The stalls between corridors five and nine on the western side of Xinhua Road sold wildlife and poultry. Of the 52 stalls with recorded infections, only three, two positive and one suspected, were found on the market’s eastern side. Seventeen stalls, all on the western side, were labeled “environmental positive,” meaning the virus was found on the counters, floors, or walls of these stalls. Eight of these stalls, just less than half, were located in the wildlife area. Seven stalls were associated with positive case clusters, and multiple infections, again all on the western side, with three located in the “wildlife” area and four outside the area.

While the concentration of infections on the western side of the market near the wildlife area suggests most nosocomial infections occurred near that section, only 17 stalls in that section were found to be infected or related to infections, while the other 35 were outside the area. However, knowing that 2019-nCoV was airborne also explains why the infections were limited mainly to the western side of the market, rarely crossing over

Breakout at the Huanan Seafood Wholesale Market

An SCMP reproduction of a leaked floorplan from the Chinese CDC’s investigations into the early spread of the novel coronavirus (Study from January 2020)



Huanan Seafood Market Map

This complex houses the Shanghai Public Health Clinical Center & School of Public Health where Professor Zhang Yong-Zhen’s lab was closed for “rectification.” Given the yellow “Limit Line” tape, one can only surmise that this image was taken during the government’s hygienic cleansing action.

to the eastern side.

Given that the market employed more than 1,100 people working in 653 stalls, 52 stalls with infections suggest a relatively limited spread of less than 10%. Of course, had the Huanan Seafood Market remained open, the situation would have rapidly deteriorated.

Little is known what that first expert team actually accomplished in Wuhan. However, *Caixin* reports that after the first team began its investigation at Huanan Seafood Market, it visited Wuhan Jin Yin-tan Hospital, establishing a set of diagnostic criteria for “viral pneumonia of unknown cause.”

Besides these sporadic media reports and some press releases, no one knows where else the expert team went, what kind of epidemic response measures it shared with Wuhan officials, or any details on the guidance it provided healthcare workers about patient care and personal protection equipment (PPE).

What is certain is that team members had unfettered access to the press. On January 4, Xu Jianguo tells *Ta Kung Pao*, a Hong Kong-based pro-Beijing newspaper, that at this point, “no obvious evidence of human-to-human transmission has been found, no medical staff infection has been found, and no deaths have occurred, indicating that the level of virus threat is limited.” For good measure, Xu adds, “China has many years of disease control. There is absolutely no chance that this will spread widely because

of Spring Festival travel.” He makes even more ill-informed statements, but these should suffice.

As Charlie Chan once remarked, “Tongue often hang man quicker than rope.” You could argue that Xu had yet to be briefed, but he made these statements *five days after* arriving in Wuhan. Xu’s pronouncements would come back to haunt Gao. As director of the CDC’s State Key Laboratory, Xu’s quote somehow becomes associated with Gao. From mid-January on, Gao would be locked in a battle with the media and the subject of intense online debates, always insisting that *he* never said *there is no evidence of human-to-human transmission*.

However, Xu Jianguo was not done offering his “expert” opinions. Another opportunity came with the official announcement that a new coronavirus had been detected in the lab. CCTV chose to add [more perspective](#) using Xu’s profound insights, who, this time, stated the obvious, “more research on the new virus is needed.”

More time-wasting research indeed. And more experts, too, please. Thanks again to *China News Weekly*, we know the second team of experts visited Wuhan between January 8 and 16. Except for Yang Weizhong, this team consisted mostly of busy-bee co-authors:

- **Wang Guangfa** (王广发) – Professor, Department of Pulmonary and Critical Care Medicine, Peking University First Hospital, Beijing, China (*The Lancet* study co-author).
- **Jiang Rongmeng** (蒋荣猛) – Professor, Clinical and Research Center of Infectious Diseases, Beijing Ditan Hospital at Capital Medical University in Beijing (*The Lancet* study co-author).
- **Gao Zhancheng** (高占成) – Professor and Director of the Department of Pulmonary and Critical Care Medicine, Peking University People’s Hospital, Beijing (*The Lancet* study co-author).
- **Feng Zijian** (冯子健) – Deputy Director-General of Chinese CDC (George Gao Fu study co-author).
- **Yang Weizhong** (杨维中) – Former deputy director of China CDC.

On January 11, when the Wuhan Municipal Health Commission announced that the number of confirmed cases had declined to 41, Wang Guangfa’s indispensable expertise was on full display when he [claimed](#) that the situation in Wuhan was “preventable and controllable” (可防可控).

Eleven days later, Wang announced in Beijing that he was infected by the novel coronavirus in Wuhan, blaming himself for not wearing protective eyewear. On March 15, Wang [posted](#) a hindsight-is-perfect observation on Weibo, “I always suspected it was human-to-human transmissible.” Thanks for your timely contribution, Professor Wang.

Yet another expert believed Wang’s “preventable and controllable” statement was just not enough. On January 15, a member of the first team, Li Qun, continued to minimize the novel coronavirus threat telling CCTV, “After careful screening and prudent judgment, we have reached the latest understanding that the risk of human-to-human transmission is low.” Here is the director of China’s CDC Emergency Center telling Chinese television viewers that “careful screening and prudent judgment” led to the conclusion

that people were relatively safe from human-to-human transmission, *one month* after pervasive infectivity was established. Where is CDC boss “George” Gao Fu when you need him? Oh, busy writing papers?

On Friday, January 17, the National Health Commission sent a third team of high-level experts to Wuhan. Gao Fu was ostensibly once again the leader of the gang, which included:

- **Zhong Nanshan** (钟南山) – One of China’s most highly regarded epidemiology experts, popularly known as the “SARS hero.”
- **Yuan Guoyong** – Chair Professor of Infectious Diseases, Department of Microbiology, School of Microbiology, The University of Hong Kong.
- **Li Lanjuan** – Professor, The First Affiliated Hospital, College of Medicine, Zhejiang University; State Key Laboratory for Diagnosis and Treatment of Infectious Diseases. Li co-authored two papers about SARS-CoV-2, including the January 24 *The Lancet* study with Huang Chao-Lin.
- **Zeng Guang** – Chief epidemiologist of China CDC.
- **Du Bin** – ICU director at Peking Union Medical College Hospital.

While Wuhan authorities had a feeble excuse, keeping the Two Sessions meetings alive, the expert teams had no such alibi. Team members seem to have had little influence over the situation brewing in Wuhan but once again had much to say to the press. China CDC Chief Epidemiologist Zeng Guang, who also visited Wuhan for one day on January 9 without interacting with other expert team members, reported that everyone in Wuhan “[sounded very relaxed](#).” He also [casually observed](#), “There was no rapid system response at the start.” Officials in Wuhan could have easily sounded the alarm. But they did not.

Zeng [told](#) the *Global Times* on January 29 that the slow response to the epidemic was partly due to the “process of scientific understanding,” however, hesitation by decision-makers and a lack of confidence also played a role.

In an interview with *China News Weekly*, Zeng compared China’s CDC with the U.S. CDC, which, he said, is a government entity with administrative power. At the same time, China’s CDC can only make recommendations, not decisions. In his view, in China’s health system, the CDC is weak, and it can discuss epidemics only when the government authorizes it to do so. Could this explain why George Gao funneled all his energy into writing white papers and not making recommendations to Wuhan authorities?

China’s most highly regarded epidemiology expert, Zhong Nanshan, identified in the media as “the leader of the National Health Commission’s task force on the epidemic,” reported that officials had [identified a coronavirus by December 31](#) but took too long to confirm human-to-human transmission publicly. If action had been taken earlier, in December or even early January, “the number of sick would have been greatly reduced,” Zhong said.

Zhong, together with Xi Jinping, would publicly disclose the novel coronavirus on January 20. After arriving in Wuhan on January 19, Zhong



IMAGE COURTESY: LITANWEL

Li Lanjuan: Lockdown Lady

A member of the third team of experts, Li Lanjuan, recommended locking down Wuhan and Hubei Province. Chinese authorities adopted her proposal on Jan. 23, 2020, leading to the first shutdown of an entire city in China’s history.

was interviewed by CCTV's "News 1+1" show on January 20. In the interview, he confirmed that the novel coronavirus could indeed spread from person to person and that 14 health workers were infected while giving care to a *single* patient, an eye-opening revelation. It took a SARS hero to tell the truth about the new pandemic. Nevertheless, true heroism would be on full display in Wuhan in the months that followed as SARS-CoV-2 ravaged this beautiful city.

A female member of the third National Health Commission expert team, Professor [Li Lanjuan](#), was the first to recommend a complete shutdown of Wuhan and parts of Hubei to fight the virus. The Chinese government adopted her proposal, and the city of Wuhan was unceremoniously [locked down](#) on Thursday, Jan. 23, 2020, at 14:00 (2:00 p.m.). It was an unprecedented move but one that would prove prescient in light of developments yet to come.

Citizen Journalists

On Lunar New Year's Eve, Friday, January 24, the situation in Wuhan was already getting out of hand. Despite a growing coronavirus trauma, a few brave souls were willing to venture out into Hubei's den of iniquity. One such daring individual was Chen Qiushi (陈秋实), a Beijing human rights lawyer turned citizen journalist, who took it upon himself to travel to Wuhan to investigate China's response to the new virus.

Chen had already acquired a reputation as an activist, having covered the August 2019 Hong Kong protests. That coverage helped him attract 700,000 WeChat and Weibo followers to his social media accounts. Those accounts were deleted by the authorities after his reporting in Hong Kong.

Undeterred, Chen created new Twitter and YouTube accounts in October 2019. His [YouTube channel](#) still has 422,000 subscribers, while 465,700 now follow him on [Twitter](#).

In Wuhan, Qiushi records his first video at 10:00 p.m. on January 24 in front of the Hankou railway station, just blocks away (900 m, 0.5 miles) from the Huanan Seafood Market. In the video, Qiushi says that, as a journalist, he feels obligated to be at the front lines of the disaster. So, he took the last high-speed train to Wuhan and was told by the train conductor that service would be suspended for a month, effectively stranding him in Wuhan. "I will use my camera to document what is really happening. I promise I won't cover up the truth," he adds. His citizen journalist clarion call racks up 1.5 million views on YouTube.

Qiushi's videos provide an unusually close-up glimpse into the chaos reigning at Wuhan hospitals during the early days of the outbreak. He dives right in that very night, visiting Wuhan Central Hospital on Nanjing Road at 2:00 a.m. on January 25 — the first day of the Lunar New Year. His phone immediately captures images that give an inkling of how poorly prepared China is to handle the outbreak. The evidence meets him right at the hospital's emergency entrance, where piles of discarded PPE gear have



Citizen Journalist Chen Qiushi

On Jan. 28, 2020, Chen Qiushi posts his most impassioned YouTube video yet from his Wuhan hotel room: "My parents are also being asked about my whereabouts. I'm afraid, in front of me is the virus, behind me is China's powerful government, but I will stay strong. As long as I'm still living in this city, I will continue to do my reports. I only report what I see and what I hear. I don't even FEAR death; will I fear you DAMN COMMUNISTS?!"

IMAGE COURTESY: CHEN QIUSHI/YOUTUBE SCREENSHOT.

carelessly been tossed on the sidewalk. Acutely aware of the danger he has put himself in, Qiushi wears two masks and a pair of swimming goggles to ward off the airborne transmission.

As Qiushi enters Wuhan Central's reception area, he sees half-dozen people waiting even in the early hour, some of whom are hooked up to IVs. There is vomit on the floor in the seated waiting area that has yet to be cleaned up. Unfortunately, his goggles fog up quickly, so he ends this first video after just a few minutes.

While his goggles may not be optimum, his journalistic instincts are very much intact when later that day, he visits Wuhan Hospital No. 11 on Xianggang Road in the Jiangnan District, which is housed in the same building complex as the Wuhan Red Cross Hospital. There, Qiushi is met by hundreds of people waiting in line for treatment. In one crowded room, he hears constant shouting: "Nurse, please change my IV. Nurse, I'm out of IV!" Nurses dressed in full protective gear run in and out of the IV room, switching out people's fluid bags. Upon entering the emergency room, his video shows two corpses, one elderly patient taken off an ambulance was already dead. Another was lying in the hallways of the waiting area, face covered with a white cloth.

Qiushi strikes up a conversation with one nurse, "There are so many sick people here. You must be feeling insane amounts of pressure right now." Replies the nurse, "This is nothing. The last few days, the hallway was absolutely filled with people, so many you couldn't even squeeze past them. There were *thousands*."

He reports that Hospital 11 is used primarily to handle the sick. Could its proximity to the Huanan Seafood Market, a mere 20-minute walk (2.1 km,

1.3 miles), have anything to do with those thousands showing up at its emergency room?

When Qiushi asks whether treatment methods may have something to do with the increasing number of patients, the nurse responds, "Yeah, in some sense. We, the nurses and doctors here in Wuhan, are truly disappointed with the government, which failed to act. Otherwise, why would we circumvent the government and directly ask the people for help? Our pleas for help actually did solve a lot of problems. Many supplies were donated, and the government finally began to act. Awareness began to spread, too."

Qiushi observes that most of the severe cases seem to be elderly people. And the elderly have very bad hygiene practices, he adds. It wasn't too bad inside the hospital, but outside, used masks and gloves were littered everywhere. Qiushi recounts one scary experience inside the hospital. An elderly person, hooked up to an oxygen tank and an IV, and seated right across from Qiushi, pulled off his mask and spat on the floor in front of him. Yes, elderly Chinese do indeed have poor hygienic habits.

Unprompted, the nurse asks, "Did you see that video on the internet with those three dead bodies parked in the hallway?" Qiushi answers affirmatively. "The authorities already debunked it, but it was real," the nurse says. "What!?!," responds Qiushi feigning disbelief. "The authorities denied it, but it was real," she firmly adds.

Qiushi does not limit his graphic narrative to hospitals. He also records an account of the local food situation and his protective eyewear shopping trip. The darkness of a late-night visit to the Huanan Seafood Market adds to the grisly atmosphere as the lens peers through locked steel gates to reveal abandoned stalls. There are also day trips. He joins three others as they venture out to a construction site of a field, or Fangcang, hospital. Another eye-opener is his February 4 visit to the Wuhan International Conference Center, which had been turned into a temporary hospital boasting some 1,000 beds. He shows rows of portable toilets installed outdoors and even inspects the colorful bedding, which ranges from army blankets to unopened boxes of electric blankets.

Another video vividly displays the pain and suffering of Wuhan Chinese. A woman is seen crouching in a hospital parking lot and screaming to a nurse that she has diarrhea and has been coughing for six days. It's painful to watch.

But it's his 12th report, recorded on January 30, his seventh day in Wuhan, that becomes his most-watched YouTube video, attracting 2.3 million views. In January, China faced a challenge that would eventually dog the rest of the world: a lack of PCR test kits. In the video, Qiushi recounts the challenges facing residents to get tested. There is no public transportation at this point, apparently, and even if you can get to a hospital, you can't get tested, so why bother? All 20,000 Wuhan taxis are off the street, and residents are prohibited from driving their own cars. Only four vehicles per street are allowed to operate, and since many Wuhan residential streets are lined with multiple mega-apartment buildings with tens of thousands of residents, you have to call people responsible for street transportation, which you are unlikely to get. Calling China's emergency number, 120, to

get an ambulance is pretty much useless because hospitals are short-staffed.

Luckily, he manages to visit a hospital because someone lends him a motorcycle. On the way, he sees many people walking to hospitals. He also sees others riding motorcycles to the hospital. For the first time, Qiushi feels fear of approaching a hospital. Outside, there are tons of oxygen tanks and warning signs. Inside, benches are packed with patients. Many others jam the hallways, and some even block the doors to the toilets. About two-thirds of the patients wear oxygen masks, some equipped with high-pressure masks meant for breast cancer patients.

He overhears one doctor angrily telling someone who obtained a test sample at another hospital, "It's not up to you to decide whether you can use a test kit or not. We have to prioritize heavily symptomatic patients." The doctor then cites news reports that there are only 10,000 test kits in Wuhan, a city with a population of 11 million. Distributed to every hospital, that means only 100 or, at most, a few hundred for each hospital. That explains why Wuhan residents must go to 5-6 hospitals to get tested and line up at each one repeatedly.

Even if hospitals had enough test kits, they still need beds. And beds alone are not enough. They still need doctors. Qiushi concludes, "this situation is very dangerous with so many problems yet to be solved." A vivid example of the perils of catching the virus in Wuhan is provided by his visit to Tongji Hospital two days earlier. On Tuesday, January 28, around 4:30 p.m., he sees a dead man in a wheelchair with a woman standing behind him, cradling a phone in one hand and with her other arm trying to hold the dead man's head up. When Qiushi asks, "What happened to him?" the woman answers, "He's already gone. We waited too long for the car."

The emotional ending of this video makes it go viral. Making a fist, Qiushi says he will stay strong, "Multiple government people are already calling me, asking where I am and where I live and, of course, I reluctantly answer them. My parents are also being asked about my whereabouts. I'm afraid, in front of me is the virus, behind me is China's powerful government, but I will stay strong. As long as I'm still living in this city, I will continue to do my reports. I only report what I see and what I hear. I don't even FEAR death; will I fear you DAMN COMMUNISTS?!?" The video ends.

On February 1, he posts a video that shows the arrest of Fang Bin, a local clothing salesman turned activist. He visits Fang in the following video at his apartment, who proceeds to recount the arrest and his release. Three more videos follow, including his visit to the Wuhan International Conference Center and a live stream with a certain Mr. Ming and Fang Bin. Ming offers a sad tale of his father struggling to stay alive at the Wuhan Red Cross Hospital, breathing poor-quality oxygen from his respirator. After his father passed away, Ming took off his respirator and found his father's mouth wide open. He says he believes his father was suffocated.

Chen Qiushi was last seen on February 6, the same day Dr. Li Wenliang died. The following day, Qiushi's father received a visit from two intelligence officers who told him his son was "under control in quarantine." His parents posted a plea asking about his whereabouts on his Twitter profile on



Fang Bin: Salesman Turned Activist

A former clothing salesman, Fang Bin, records a video that instantly caught the attention of the outside world. Outside Wuhan No. 5 Hospital, Fang counts eight body bags in the space of five minutes. The video costs him three years of his life.

February 6, using the hashtag: #FindQiushi.

A human rights lawyer, who requested anonymity, [told](#) the *South China Morning Post* that Qiushi was moved to Qingdao to be with his parents, under strict supervision by the authorities. After nearly 600 days, on Sept. 30, 2021, Chen re-emerged. He posted a letter on Twitter that read:

“Over the past year and eight months, I have experienced a lot of things. Some of it can be talked about, some of it can’t. I believe you understand.”

Like Qiushi, Fang Bin (方斌), a Chinese businessman, was intent on discovering the truth in Wuhan. On February 1, Fang gained instant notoriety among communist party circles for posting a video of his visit to Wuhan Hankou Hospital on Erqi Side Road in the Jiang'an District. Although a large hospital, Hankou was a fringe facility, not among the list of high-profile hospitals, like Hubei Xinhua, Jinyintan, Tongji, Wuhan Union and others, that frequently surfaced in reports about the virus. His visit revealed that the virus was widespread and wreaking havoc among Wuhan’s 100-plus hospitals. There are at least 73 hospitals in Wuhan’s central districts and many more in the metropolitan area. Including the two Fangcang temporary hospitals, Huoshenshan and Leishenshan, a total of 40 hospitals in Wuhan were designated for serious and critical care for COVID-19 patients.

“There are still so many people, so many people,” Fang is heard saying while filming the long lines in the lobby of Hankou Hospital. Inside, he speaks to a woman who is crying while holding the hands of an elderly patient who appears unconscious. Next to them is a woman lying on a gurney. “This one is dead,” a person is heard saying. Fang responds, “Oops, declared dead? Ouch.”

Distraught by the immense suffering he has just witnessed, he records a rant while sitting outside Hankou Hospital in his car, clearly defying orders not to use personal vehicles. In this clip, Fang berates the media, “CCTV, Hubei TV, Wuhan TV, you have a lot of money. Why don’t you do a live report at the hospital front lines? Why not show the real situation? Is it because you have no family members on the list of the deceased? Or is it that the deaths of ordinary people are not worth covering?”

After Hankou, Fang heads to Wuhan No. 5 Hospital. Before entering the building at 12:00 p.m., he passes a small van belonging to the Wuchang Funeral Home. Inside the van, he sees three body bags on the floor. He enters the hospital and records large numbers of patients throughout the hospital. In an emergency ward, he encounters a young man holding a phone who is distraught and has difficulty breathing while moaning in a panicky voice, “He’s dying, oh, no!” Fang asks him who the person is, and the man responds, “Father, my father.” A doctor is overheard saying, “His father is dead...no life signs.” Fang retorts, “Damn it, his son can hardly catch his breath!” While the camera hurriedly scans over a few people at the next bed, Fang remarks, “This one is dead too, already gone. This one is almost gone.” Constant moaning can be heard in the background.

When he gets outside, he notes, “I just showed you three body bags, now there are more.” A larger pile of body bags can be seen while Fang is heard counting bodies, “Now there are eight. In five minutes, it went from three

to eight.” Fang then asks if there are any bodies inside. “A lot more,” answers a Wuchang Funeral Home staffer.

That same evening, Fang hears knocking around 7:00 p.m. He opens a small door window and sees a group of six to seven men in full protective gear who claim to be from the CDC. The officers insist he opens the door because he may have been infected while recording a video in such a “dangerous place,” and they want to isolate him. Fang refuses, telling them to get a search permit because he has rights. A long argument follows, with Fang insisting that his body temperature is normal.

He records the entire interaction with his phone and tries to lock the door from the inside. Just as he touches the lock, the door swings open, and the officers rush in and grab Fang. They search his room and computers, making a mess. While the officers are searching, Fang uploads the video to his WeChat group. When they realize what he’s doing, they seize his phone.

The officers then take him to a distant police station in Yanyang, where they interrogate Fang for hours. Suddenly, around 11:00 p.m., their tone changes. Fang realizes they must have seen the video he uploaded earlier, and they decide to let him go. It takes him hours to walk back home.

After committing the crime of counting too many body bags, Fang apparently perpetrates the ultimate sin. On February 9, he posts a 13-second video with the words “all people revolt — hand the power of the government back to the people.” Like Qiushi, the same fate befalls Fang Bin. He is “disappeared.” Three years after his disappearance, Fang Bin was finally released from jail on Sunday, Apr. 30, 2023, apparently in good health, according to the [BBC](#).

Four days later, on Feb. 13, 2020, the authorities, realizing the impact the videos of Chen and Fang were having on the public, dramatically raised the number of coronavirus cases in China from 2,028 to 15,141. But judging from the number of patients seen in these whistleblower videos, even that figure was likely far below the truth. On the very day, Fang counted eight dead bodies in five minutes at Wuhan No. 5 hospital, the government reported just *46 deaths in all of China*.

Assuming that those eight people died in the past 12 hours, you wouldn’t want bodies lying around much longer, and knowing there were 40 designated COVID-19 hospitals in Wuhan, would suggest that 640 people were dying daily at the peak of the outbreak. A [study](#) published in *The Lancet* by Joseph Wu et al., affiliated with the WHO Collaborating Centre for Infectious Disease Epidemiology at the University of Hong Kong, is also helpful in estimating the number of infected patients on February 1. Wu, and colleagues Kathy Leung and Gabriel Leung, estimated that the basic reproductive number for 2019-nCoV was 2.68 and that 75,815 individuals had been infected in Wuhan as of Jan. 25, 2020. They also estimated that the epidemic was *doubling every 6.4 days*. February 1 was precisely one week later, so at least 150,000 people were infected on the day Fang Bin walked into the emergency room of Wuhan No. 5 Hospital.

There is no reliable infection fatality rate (IFR) data available for China because, as is well established, any data about the prevalence of the novel coronavirus disease provided by the Chinese government is suspect.

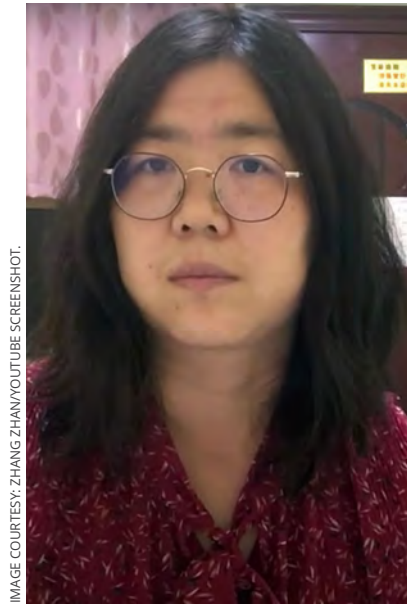


IMAGE COURTESY: ZHANG ZHAN/YOUTUBE SCREENSHOT.

Zhang Zhan: On a Hunger Strike

A 37-year-old former lawyer, Zhang Zhan traveled from Shanghai to Wuhan to live-stream her eyewitness reports on Twitter, YouTube and Chinese social media. She was arrested on June 23 and began a hunger strike in September to protest her forced “confession.” Unfortunately, unlike Chen Qiushi and Fang Bin, Zhang continues to be held in jail to this day.

However, both Italy and New York exhibited a SARS-CoV-2 virulence that came closest to that of Wuhan. The [Italy IFR was 1.3%](#), while [New York’s IFR: 1.4%](#). Applying an IFR of 1.4% to an estimated 150,000 infected people in Wuhan on February 1, puts the number of deaths that day at about 2,100. That means about 50 deaths per designated COVID-19 hospital per day, a figure that matches the observation of the Wuchang Funeral Home staffer who stated that “a lot more” bodies were ready to be loaded into the waiting van.

The devastating evidence provided by whistleblower videos explains why authorities cracked down on these troublemakers in such a severe manner. Besides Chen Qiushi and Fang Bin, Zhang Zhan was also arrested for “picking quarrels and provoking trouble” — the regime’s favorite catchphrase used to charge Chinese dissidents. Zhang, a 37-year-old former lawyer and citizen journalist, traveled from Shanghai to Wuhan to live-stream her eyewitness reports on Twitter, YouTube and Chinese social media platforms. She was arrested on June 23 and began a hunger strike in September to protest her forced “confession.” Unfortunately, unlike Chen Qiushi and Fang Bin, Zhang continues to be held in jail to this day.

Li Zehua, also known as Kcriss Li, re-emerged on social media in late April after he had been missing for nearly two months. After resurfacing, his tone had changed dramatically, praising the repressive regime that detained him in a [video](#) published April 21:

“Throughout the whole process, police officers acted civil and legally, making sure that I was resting and eating well, they really cared for me, I had three meals a day, felt safe with guards, and got to watch the news every day.” ([Business Insider](#) 23-Apr-20)

Li said that he was held at a quarantine center in Wuhan and then sent to an isolation facility in his hometown.

Chen, Fang, Zhang and Li were all considered rats in the eyes of the government — persons who exposed wrongdoings for troublesome reasons. All were striving to expose the truth. And all got caught up in the destructive machinery of the Chinese Communist Party that vilifies any dissent. But, unlike CCTV, Hubei TV and Wuhan TV, their videos did not lie, exposing what the authorities desperately tried to cover up.

Lockdown

While the whistleblower videos helped spread the word about the pandemic, they were not necessary to convince the Wuhanese of the inherent dangers of the novel coronavirus. Evidence was in plain sight. On Thursday morning, Jan. 28, 2020, journalists from the French news agency Agence France-Presse photographed a gray-haired man wearing a face mask lying dead on the pavement.

A woman standing nearby said she believed the man had died from the virus. The man died one block from the Wuhan No. 6 Hospital, near Xianggang and Jinmen Road, one of the designated hospitals for treating

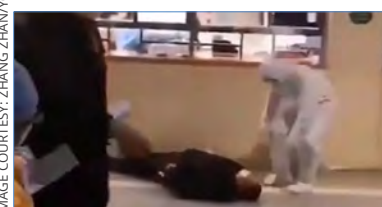


IMAGE COURTESY: ZHANG ZHAN/YOUTUBE SCREENSHOT.

Falling Down Dead in Wuhan

The images captured by city residents are blurry, but the brutality of the COVID-19 pandemic in Wuhan is quite evident. These symptoms suggest the strain of SARS-CoV-2 circulating in Wuhan was extremely virulent. Why did people suddenly drop dead from the novel coronavirus in public Wuhan places, a phenomenon rarely witnessed outside Asia?

those with novel coronavirus symptoms.

Videos uploaded to YouTube frequently showed corpses lying in the street. Some even captured the moment a victim suddenly fell on the concrete pavement, sometimes with disastrous results. In video after video, people can be seen lying dead on sidewalks, in the middle of the street, in train stations, or, more often than not, crumpled up in hospital lobbies. “It’s very worrying that people could collapse without showing any symptoms,” remarks one YouTuber of a video uploaded on Feb. 15, 2020, which shows a person lying in a residential street, surrounded by emergency personnel who quickly realize the victim has already perished.

In one particularly gruesome bystander video, posted on Apr. 17, 2020, by noted YouTuber Jennifer Zeng, a man is seen convulsing near a street corner, his body racked by violent spasms and in the final throes of death. Cars and motorcycles carefully maneuver around the man as he lays dying.

Falling is a [leading cause of death](#) for Chinese ages 65 and above, according to Yang Maowei, an associate professor of the First Affiliated Hospital of China Medical University. Yet, the Chinese often ignore people who have fallen because they fear being sued.

In one highly publicized 2009 case, a certain Mrs. Wang fell in Tianjin and was hurt while illegally climbing over a roadside fence. Xu Yunhe, who happened to be driving by, saw her fall and stopped his car to help the old woman, bandaging her up and calling first aid. Mrs. Wang, however, claimed Xu’s car had bumped into her and sued Xu in court. The court ruled that Xu should pay Mrs. Wang 100,000 yuan (US\$13,994) in compensation.

Given the publicity cases like these generated, it’s not surprising that many people would be left to die in the streets of Wuhan as people passed by and gawked, unable to resist their morbid curiosity but certainly not lending a helping hand. There was, however, another wrinkle in that old face — you could catch the coronavirus when that sufferer, unable to control him/herself, coughed all over you.

Videos of the dead or dying were not limited to Wuhan. A video uploaded on Feb. 20, 2020 shows a dead man lying in the middle of Hong Kong’s Tsuen Wan Plaza, on Tai Pa Street near Hoi Shing Road, while the shopping mall’s background music system blares, “I Want To Be With You” by Winfield Parker. COVID-19 was on a war path in Hong Kong, which was confirmed in a Feb. 22, 2020 video, showing a man exhibiting the identical convulsive body spasms later seen in Jennifer Zeng’s April video, this time in a Hong Kong MTR (Mass Transit Railway) subway car.

Those same uncontrollable body spasm symptoms are also seen in a young man lying on a sidewalk somewhere in Indonesia while bystanders are heard saying, “Corona.”

The evidence is incontrovertible and appears mainly in Asia. There are numerous videos of people seen suddenly collapsing in public all over China, and save for Indonesia and South America, nowhere else.

[Reports from Ecuador](#) suggest that some people may have collapsed on the street, such as a 65-year-old man suspected of contracting COVID-19 in Quito on Tuesday, May 4, 2020. Then there is Valmir Mendes da Silva, a 62-year-old Brazilian, who complained that he could not breathe and

collapsed on a sidewalk in a Rio de Janeiro slum. Bystanders called an ambulance but [da Silva died](#) before it arrived. These incidences are exceedingly rare, however, considering that nearly 7 million people have officially died worldwide due to COVID-19, as of publication time.

My *Ubertrends* book explores the voyeuristic aspect of a society addicted to images produced by high-resolution smartphones. The *Voyeurgasm* Ubertrend posits that one day just about everything will be captured digitally. This massive wave explains why in a country with 1.4 billion people and almost as many smartphones, it's exceedingly difficult for an authoritarian regime to keep video evidence from leaking out.

This digital rubbernecking phenomenon, however, makes it peculiar that there is little video evidence of people randomly dying in public elsewhere. According to Strategy Analytics, there were some [4 billion](#) smartphones in 2020 worldwide. Plenty of hardware to feed the insatiable appetite of nosy citizens outside of China.

That lack of evidence raises a disturbing question: could SARS-CoV-2 be more lethal to Asian populations? And why was this particularly virulent strain of the virus primarily confined to China? In October 2003, a SARS coronavirus study conducted in Singapore observed a "[sudden unexpected death](#)" syndrome that affected two out of eight patients. This peculiarity will be more closely examined in the following chapter.

It's not just videos of people dying that prove to be distressing, however. As Chen Qiushi showed in his video of a woman squatting near a car in a hospital parking lot, the pain and suffering of ordinary Wuhan residents were excruciating. This was particularly true for people in the healthcare profession or those related to healthcare workers.

On January 16, seven days before Qiushi arrived in Wuhan, Dr. Liang Wudong, the director of the Department of Otorhinolaryngology at Wuhan's Hubei Xinhua Hospital, came down with a fever and chills. Because Liang had a history of arrhythmia and persistent atrial fibrillation, he immediately checked himself into his workplace hospital for treatment. There, he received a CT scan that showed his lungs had telltale hazy, white-flecked patterns, dubbed "ground-glass opacities" in medical parlance, which are symptomatic of COVID-19. After being admitted to an isolation ward at Hubei Xinhua, he was transferred to Wuhan Jinyintan Hospital on January 18 to continue treatment.

At 7:00 a.m. on January 25, Liang died at age 60, thereby becoming the first doctor to succumb to the novel coronavirus. Like Dr. Li Wenliang, who was an ophthalmologist, Liang was not deployed at the frontlines of the fight against the novel coronavirus. That suggests that airborne transmission of the disease transpired at Hubei Xinhua Hospital — the very hospital where Dr. Zhang Jixian first reported the "pneumonia with an unknown cause" to authorities on December 27.

The death of Liang came amidst [swirling reports](#) of a large number of unreported cases of medical staff infected by the virus, and accusations that a constricted flow of information, the authorities' infamous "refrigerating strategy," had kept those treating the sick from taking proper precautions.



Ringling in the Year of the Rat

On New Year's Eve in 2019, Wuhan residents gathered around the Yangtze and Han rivers to experience the Yangtze River light show, which features hundreds of lighted buildings, bridges, and city landmarks along both rivers. On Jan. 25, 2020, Chinese would usher in the Year of the Rat, literally and figuratively.

IMAGE COURTESY: PETER APERS/DREAMSTIME.

With doctors dying, the public's perception took a sharp turn for the worse. The shifting tide forced the hand of Wuhan's then-mayor, Zhou Xianwang, who on January 26 admitted that local authorities had [failed to properly regulate](#) the Huanan Seafood Market, which was but one of 400 in the city. He also confessed that [5 million residents](#) had left Wuhan before the lockdown was put in place, confirming that Wuhan was instrumental in spreading the disease throughout China.

A female member of the third National Health Commission expert team, Professor Li Lanjuan, was the first to recommend a complete shutdown of Wuhan and parts of Hubei to fight the virus. The Chinese government reluctantly adopted her proposal, and the city of Wuhan was unceremoniously locked down on Thursday, Jan. 23, 2020, at 14:00 (2:00 p.m.). It was an unprecedented move that would bring much hardship to the millions unable to flee. Those left behind would be locked down for 76 days.

Year of the Rat

Dec. 31, 2019 was an auspicious New Year's Eve. More than 200,000 Wuhan citizens and visitors had gathered on the banks of the Yangtze and Hanjiang rivers to usher in the bold new decade of the 2020s. Everyone in attendance was excited to experience the Yangtze River light show, a spectacle featuring hundreds of lighted buildings, bridges, and tourist attractions along a 13.2-km-long (8.2 miles) stretch of both rivers. The highlight was a 15-minute animated light show that recounted the history of Wuhan, while illuminating city scenery along each river.

A few weeks later, Chinese Lunar New Year celebrations would bring millions of people to Wuhan to celebrate the year of the rat. And what a rat the Chinese calendar year of 4718 would turn out to be. Unbeknownst to celebrants eagerly preparing for the Lunar New Year, the regional governments of Wuhan and Hubei were crawling with dirty rats. A late January letter addressed to the National Health Commission and written by a person claiming to be a Wuhan physician confirmed the government's "refrigerating strategy." Local doctors were instructed not to report "viral pneumonia" in their imaging reports between January 12 and 16, in order to keep the spiraling novel coronavirus seemingly under control.

It was in this festering quagmire that Wuhan officials would let the Baibuting neighborhood in Wuhan celebrate the Lunar New Year on Saturday, January 18 with a home-cooked [pot luck buffet for **40,000 families**. The following evening, **10,000 families would gather** for a sit-down banquet, sharing dishes that included spicy duck necks and braised prawns — a Lunar New Year tradition organized by the city government without fail, and obviously with infectious humor this time around.

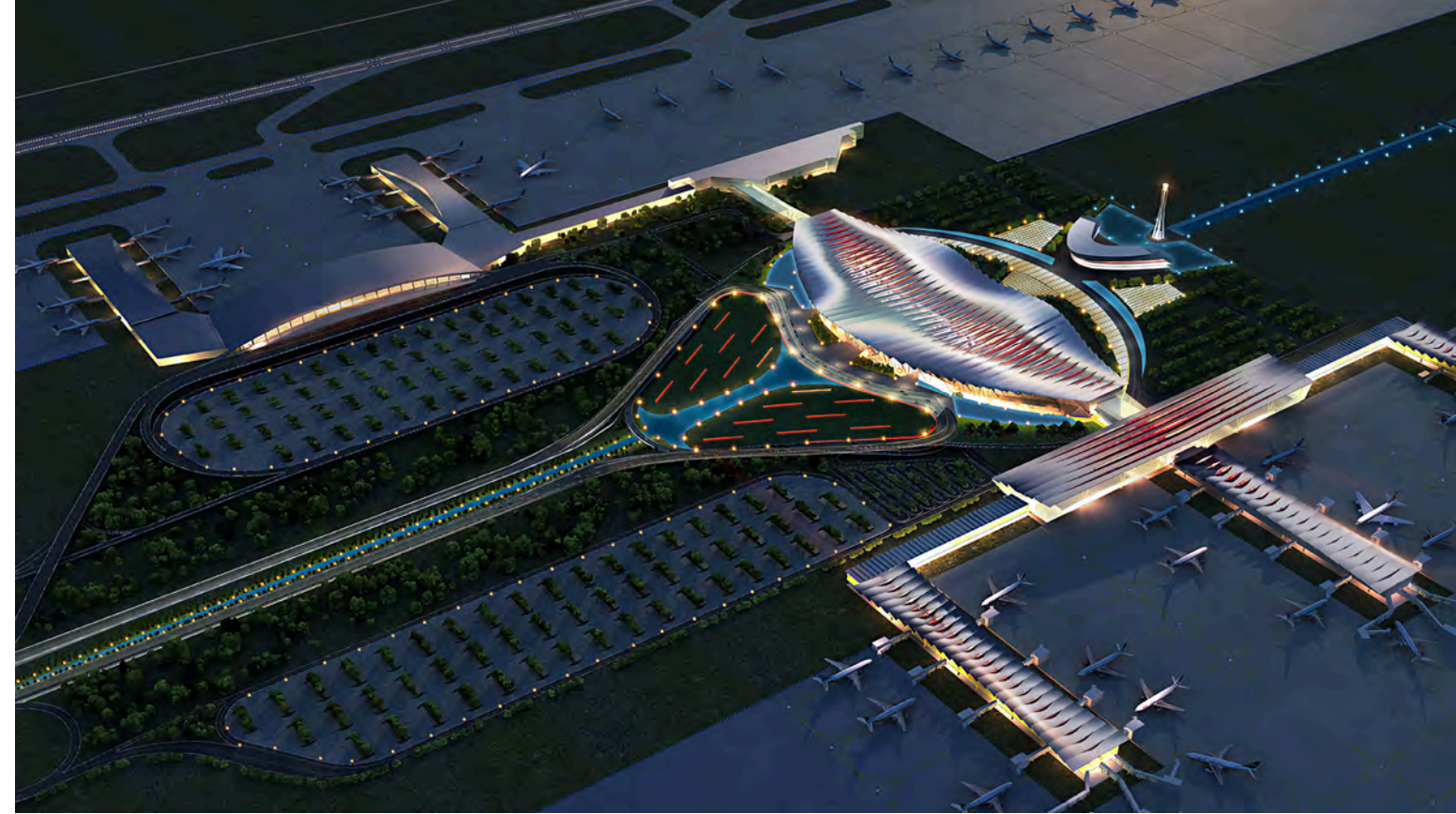
Is it any surprise that in one week between January 24 and 31 the number of patients skyrocketed from 800 to 9,692, a more than tenfold increase in novel coronavirus infections. Please pass the duck! Those numbers surfaced thanks to studies by Huang Chaolin, published in *The Lancet*, and Wang Dawei, published a few weeks later in the *Journal of the American Medical Association* (JAMA). Given the skyrocketing infection rate, it wouldn't be long before the government of China decided to do something that no one had ever attempted before.

When China's most famous pulmonologist, Zhong Nanshan, confirmed human-to-human transmission on January 20 and also announced that 14 medical workers had already been infected, noted Chinese author and Wuhan resident Fang Fang wrote in *Wuhan Diary* that her first reaction was shock that eventually turned into anger. The bombshell announcement must have reverberated through all of Wuhan. How many citizens of this city by the Yangtze River would come to the realization that evening that what authorities had told them all along was, as Fang puts it nicely, "Completely at odds with what we had seen and heard earlier."

She also recites what second expert team member Wang Guangfa had said on January 11, the situation in Wuhan is "preventable and controllable." She even mentions the falsehood the Wuhan Health Commission had repeated on numerous occasions, that the virus was "not contagious between people."

Yet, as Fang confirms, the city was rife with rumors that this was in fact another SARS coronavirus, which was indeed the case. With hospital emergency rooms overflowing with sick patients, it quickly became evident that something had to be done to contain the virus.

One member of the third National Health Commission expert team, Prof. **Li Lanjuan**, a woman of course, was the first to recommend a complete shutdown of Wuhan and parts of Hubei to fight the virus. Her proposal was adopted by the Chinese government and the city of Wuhan was unceremoniously **locked down** on Thursday, Jan. 23, 2020 at 2:00 p.m.



Wuhan Tianhe Airport Terminal 3

A 3D rendering of Wuhan Tianhe Airport Terminal 3 before construction was finalized in 2015.

IMAGE COURTESY: PETER APERS/DREAMSTIME.

The evening before the lockdown, Fang went to pick up her daughter at Wuhan Tianhe International Airport. Tianhe is a reflection of the spectacular growth Wuhan has seen over the past 25 years. The first terminal, which opened in 1995, was replaced just 12 years later by terminal 2, which debuted in 2008. To accommodate a significantly larger facility, the 1995 terminal was completely demolished. Terminal 3 opened on Aug. 31, 2017 and was designed from the ground up to handle 35 million passengers annually. The average lifespan of each terminal was seven years. Now compare that to the U.S. where the average lifespan of airport terminals is **40-45 years**.

When Fang arrives at Tianhe at 10:00 p.m. on January 22, pedestrians were scarce and hardly any cars were on the roads. There was a "heavy feeling in the air" with everyone seemingly stressed, which was difficult to tell because almost everyone was wearing a face mask. The usual buzz of chatter and laughter normally heard at airports was gone.

After dropping off her daughter and getting gas, Fang returned to her home around 1:00 a.m. and immediately fired up her computer. At 2:00 a.m., disturbing news flashed on her screen: Wuhan would be locked down later that day. Starting at 10:00 a.m., most public transportation, including railways, airline flights, and ferry services would be suspended, except for some **bus service**. Major highways leaving Wuhan were shut down at 2:00 p.m. In the intervening 12 hours between the news announcement and the lockdown a lot of Chinese fled the city. According to the Wuhan Railway Bureau, **299,600 people** left Wuhan by train alone before the 10 a.m. stoppage of public transportation. At a January 26 press conference, Wuhan Mayor Zhou Xianwang noted that about **5 million people** had left Wuhan

IMAGE COURTESY: JIHOPE/DREAMTIME.



Wuhan Gas Station

This complex houses the Shanghai Public Health Clinical Center and School of Public Health, where Professor Zhang Yong-Zhen's lab was closed for "rectification." Given the yellow "Limit Line" tape, one can only surmise that this image was taken during the government's hygienic cleansing action.

Jiangxi Province. In other words, Wuhan had become China's super spreader.

Because most fleeing Wuhan resided in Hubei province, the authorities imposed travel restrictions within hours on the nearby cities of Huanggang and Ezhou, and eventually shutdown 18 Hubei cities, affecting some 56 million people. For the first time in history, Wuhan and Hubei were isolated from the rest of China.

The travesty committed by the two health commissions and their white-paper busy beavers would bludgeon the city known as the "Three Towns of Wuhan" — a collective abbreviation of Wuchang, Hankou and Hanyang — into submission. Those who escaped without getting infected were saved from having to witness the frightful calamity that was about to descend upon Wuhan. And what a horror show that would turn out to be. A Faustian three-ring circus with an act in every ring.

before the lockdown and Spring Festival holiday, another label for the Lunar New Year. That's twice as many people as in years before. According to data released by Wuhan Municipal Bureau of Culture and Tourism, about 2.4 million people left Wuhan during the Spring Festival travel rush in 2018.

Baidu Maps revealed that before the lockdown, between 60% and 70% of the people who left Wuhan traveled to other cities in Hubei Province, followed by Henan Province, Hunan Province, Anhui Province, Chongqing Municipality and

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LOCKDOWN

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Wuhan, China and terrorized the world

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