

1 **Title:** Fighting COVID-19: What's in a Name?
2

3 **Author names:** Thomas Kun Pak¹, Aline Sandouk¹, Phuong Le²

4 **Degrees:** Bachelor of Arts, Bachelor of Science, Bachelor of Science

5 **Affiliations:** 1 University of Iowa Carver College of Medicine, Iowa City, Iowa, United States

6 2 University of Mississippi Medical Center, Jackson, Mississippi, United States
7

8 **About the authors:** Thomas Pak is an Asian American medical student in the dual-degree MD/PhD Medical
9 Scientist Training Program (MSTP) at the University of Iowa in Iowa City, Iowa. Thomas has also published in
10 *USA Today*. Phuong Le is a 4th year medical student at the University of Mississippi in Jackson, Mississippi.
11 Phuong was a Rhodes Fellow and a recipient of the 2018 Medical Student Anesthesiology Research Fellowship.
12 Aline Sandouk is also an MSTP student at the University of Iowa and in her final year of graduate training before
13 returning to medical school to finish her undergraduate medical training. Previously, Aline was a 2013-2014
14 Fulbright Fellow to Germany and a 2009-2011 Post-baccalaureate Intramural Research Training Award (IRTA)
15 Fellow at the National Institutes of Health (NIH).
16

17 **Acknowledgment:** Dr. Brittany Bettendorf for review of the article.

18 **Financing:** There is no financial contribution received for this paper.

19 **Conflict of interest statement by authors:** There is no conflict for this Experience paper.

20 **Compliance with ethical standards:** Not applicable.

21 **Authors Contribution Statement:** Writing – Original Draft Preparation: TP, AS. Writing – Review & Editing:
22 TP, AS, PL.

23 **Manuscript word count:** 1,387 words

24 **Number of Figures and Tables:** 0

25 **Personal, Professional, and Institutional Social Network accounts.**

- 26 • **Facebook:** <https://www.facebook.com/thomas.k.pak>, <http://facebook.com/phuongle15>
- 27 • **Institutional:** <https://medicine.uiowa.edu/immunology/students/aline-sandouk> and
28 <https://medicine.uiowa.edu/mstp/student/4431>
- 29 • **Twitter:** @thomaspak1, @phuongle01

30 **Discussion Points:**

- 31 1. The origin story of the so-called “Wuhan virus”.
- 32 2. The persistent and unfair association of SARS-CoV-2 and COVID-19 with Asia and Asian Americans.
- 33 3. The significant and negative impact of this association on Asian Americans.
- 34 4. The responsibility of the profession of medicine is to use the laws of nature that govern health to
35 prevent disease in scientifically-proven ways and to practice evidence-based medicine.
36

37 **Publisher's Disclosure:** *This is a PDF file of an unedited manuscript that has been accepted for publication.*
38 *As a service to our readers and authors we are providing this early version of the manuscript. The manuscript*
39 *will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable*
40 *form. Please note that during the production process errors may be discovered which could affect the content,*
41 *and all legal disclaimers that apply to the journal pertain.*
42

1 THE EXPERIENCE.

2
3 Coronavirus Disease 2019, or COVID-19, first appeared in Wuhan, China, in late December 2019.¹ Since little
4 else was known about the outbreak, the then-unidentified disease became associated with the city where it was
5 first identified by the scientific community, followed by the press and then the public, and became known as the
6 “Wuhan virus”. In the weeks that followed, speedy research efforts and consultations between scientists and
7 clinicians revealed the pathogen responsible to be a Coronavirus, now officially recorded as Severe Acute
8 Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Though the name “Wuhan virus” was initially adopted for
9 ease of reporting and in the absence of any details about the cause, we now know much more about COVID-
10 19 beyond where it began. Yet, the obsolete “Wuhan virus” remains in use, to the detriment of anyone or
11 anything even remotely linked to Asia, and indeed, to all of our detriment. Similar to the current pandemic, the
12 2009 H1N1 Influenza virus led to World Health Organization (WHO)-classified pandemics, spurred national
13 emergency declarations in the United States (US), and led to widespread morbidity and mortality.² However,
14 unlike SARS-CoV-2, the 2009 H1N1 Influenza virus was first detected here in the US. While SARS-CoV-2 has
15 erroneously continued to be referred to as the “Chinese Coronavirus”, the H1N1 Influenza virus has never been
16 referred to as the “American Virus”, even though it was first identified in the American state of California. Instead,
17 it has sometimes been referred to as “Swine Flu”.³ H1N1 benefits from being referred to by its scientific name,
18 even as other closely-related influenza viruses continue to be called the “Asian Flu” (1957) and “Hong Kong
19 Flu” (1968).

20
21 In a world free of racism, these terms would be harmless. But as the US struggles to contain a global pandemic
22 that has left more than 125,000 Americans dead, people are afraid and concerned about their health and that
23 of their family and friends, and unfortunately, also quick to cast blame. The medical and research communities
24 have attempted to avoid perpetuating this naming trend by adhering to the accepted scientific name of the new
25 virus once the strain was identified. We have seen this adherence in the International Journal of Medical
26 Students Covid-19 Hub (<http://ijms.info/IJMS/coronavirus>). In addition, we conducted a brief review of the
27 literature using Google Scholars and Pubmed, and searched for the terms “Wuhan Virus,” “Wuhan
28 Coronavirus,” “Chinese Virus,” and “Chinese Coronavirus.” In the earliest days of the pandemic, when little else
29 was known about the outbreak, scientists resorted to using “Wuhan virus” in reference to the location where the
30 first cases of COVID-19 clustered and came to clinical attention, not necessarily in reference to where the virus
31 may have originated or in an effort to disparage the Asian community. Positively, we found only occasional use
32 of “Wuhan virus,” “Wuhan Coronavirus,” and “Chinese Coronavirus,” but determined that these instances pre-
33 dated discovery of SARS-CoV-2 and employed as a matter of practicality in the absence of more substantive
34 information about the outbreak, not as an indictment of the people of Wuhan or China. Furthermore, we did not
35 find any publications that have continued to use the unscientific names after the term SARS-CoV-2 came into
36 use, except as keywords, which we interpreted as an effort by authors to ensure accessibility of their work to
37 the widest possible audience.⁴⁻⁹ This use of the term is in stark contrast to national leaders and elected officials
38 continuing to use these now-out-of-date and misleading terms in order to sow division and stoke xenophobia.³
39 As during other historical pandemics, there has been a significant exchange of wildly inaccurate health
40 information, from ineffective DIY hand sanitizer to telemarketing calls boasting limited-time offers to a COVID-
41 19 vaccine that does not yet exist. Among the inaccuracies in circulation is the ongoing use of the “Wuhan virus”

1 name, with significant consequences. Referring to SARS-CoV-2 as a “foreign”, “Chinese” virus has reinforced
2 the inaccurate narrative of blaming Asians and Asian Americans for the pandemic, even though by now China
3 is considered to have taken effective steps to contain the epidemic within its borders.¹⁰ An Ipsos poll showed
4 that 32% of Americans witnessed someone blaming Asian people for the Coronavirus pandemic.¹¹
5 Consequently, this has contributed to a significant number of public outbursts of verbal attacks, discrimination,
6 and outright violence against Asian-Americans, exhibiting a similar pattern of abuse against specific ethnic
7 groups seen in past pandemics.¹² Most concerning is the speculation that SARS-CoV-2 was genetically
8 engineered in Wuhan, despite extensive analysis of the virus’ genome concluding that the virus originated
9 naturally from wildlife, as noted by public health experts.¹³ In response, the Asian Pacific Policy and Planning
10 Council (A3PCON) – a US-based coalition of Asian American and Pacific Islander civil rights organizations
11 representing Americans of Asian descent, including Chinese, Japanese, Korean, Cambodian, and Thai
12 Americans – established a resource for reporting anti-Asian incidents, the STOP AAPI Hate Reporting Center;
13 so far, over 2100 reports have been made since March 2020.¹⁴ As the COVID-19 death toll continues to rise,
14 the FBI has warned of an ongoing rise in crime against Asian Americans due to COVID-19.¹⁵

15
16 It is worth noting that other viruses causing outbreaks that, at least in part, stemmed from or progressed by
17 region-specific cultural practices have not been named according to the geographic area from which they
18 originated or were first identified. For example, during the deadly 2014-2015 Ebola virus outbreak in West Africa,
19 WHO officials identified traditional burial and funeral practices as a major mode of transmission, accounting for
20 some 80% of cases in Sierra Leone.¹⁶ These rites involve close, if not direct, contact with the body of a person
21 who died of Ebola virus, such as bathing in water used to wash the deceased or spending several nights
22 sleeping near the deceased.¹⁶ Containment of the virus became critically dependent on modifications of these
23 practices.¹⁷ Similarly, resurgence of the Measles virus in recent years in the US can be attributed almost entirely
24 to vaccine hesitancy fueled by a now-retracted and heavily-discredited 1998 article positing a link between
25 immunization and the development of autism.¹⁸ Yet, neither West Africans nor Americans have been subjected
26 to the indignity of having their association with these outbreaks forever memorialized in the naming of these
27 viruses as the “West African virus” or the “American virus”, and rightly so. Identifying and modifying practices
28 that facilitate the spread of deadly diseases is a responsible way to respond to our current situation; making
29 sweeping generalizations about entire communities, regions, countries, or cultures is not. The basis for the
30 inclusion, or exclusion as it were, of the area of assumed “origin” from names of epidemic pathogens in popular
31 media, appears to be a manifestation of underlying racial prejudices, not scientific data. More important than
32 biology and semantics, however, are the very real economic and social impacts of using non-scientific names
33 for human diseases. The effects are considerable and include jeopardizing trade, travel, tourism, and overall
34 community welfare to such an extent as to have motivated the WHO to develop and publish guidelines in May
35 2015 for the naming of new diseases that exclude geographic location or ethnicity in an important effort to
36 minimize stigma.¹⁹

37
38 As physicians-in-training, we consider it our mission to understand the human body and the natural world that
39 acts on it to the greatest extent possible limited only by the available technology of our times. It is our
40 understanding that race and ethnicity are effectively social constructs. Viruses exist all over the world, originate
41 from all over the world, and spread all over the world, to any available host without discrimination. Identifying

1 and modifying practices that facilitate the spread of deadly diseases is a responsible way to respond to our
2 current situation; making sweeping generalizations about entire communities, regions, countries, or cultures is
3 not. At this point, SARS-CoV-2 has extended its reach far beyond China's borders, with the US now leading in
4 COVID-19 cases and mortality.²⁰ Indeed, our best chance now at stopping the spread are the evidence-
5 supported, universally-accepted measures of good hand hygiene and strict social distancing, not just from those
6 of non-native origins or foreign descent, but from everyone. With lives hanging in the balance, this is not a time
7 to sow division, but promote cooperation against a shared adversary, the COVID-19 virus. It is a time to turn to
8 each other, not against each other, in solidarity. We urge everyone to exercise their most analytical, critical, and
9 ethical judgments. Regardless of where or how COVID-19 began, the undeniable reality is that it is now
10 everywhere. A pandemic is, by definition, a worldwide phenomenon, and as such, demands a worldwide
11 response. Let's give it one.
12
13

Accepted, in-press

1 **REFERENCES**

- 2
- 3 1. Allen-Ebrahimian B. Timeline: The early days of China's coronavirus outbreak and cover-up. Axios
- 4 [Internet]. 2020 Mar 18 [cited 2020 Jul 26; Available from: [https://www.axios.com/timeline-the-early-days-of-](https://www.axios.com/timeline-the-early-days-of-chinas-coronavirus-outbreak-and-cover-up-ee65211a-afb6-4641-97b8-353718a5faab.html)
- 5 [chinas-coronavirus-outbreak-and-cover-up-ee65211a-afb6-4641-97b8-353718a5faab.html](https://www.axios.com/timeline-the-early-days-of-chinas-coronavirus-outbreak-and-cover-up-ee65211a-afb6-4641-97b8-353718a5faab.html).
- 6 2. Dawood FS, Iuliano AD, Reed C, Meltzer MI, Shay DK, Cheng PY, et al. Estimated global mortality
- 7 associated with the first 12 months of 2009 pandemic influenza A H1N1 virus circulation: a modelling study. The
- 8 Lancet Infectious diseases. 2012; 12(9): 687-95. eng
- 9 3. Muwahed J. Democrats demand apology after McCarthy tweets about 'Chinese coronavirus'. ABC
- 10 News [Internet]. 2020 Mar 10 [cited 2020 Jul 26]; Available from: [https://abcnews.go.com/Politics/democrats-](https://abcnews.go.com/Politics/democrats-demand-apology-mccarthy-tweets-chinese-coronavirus/story?id=69513372)
- 11 [demand-apology-mccarthy-tweets-chinese-coronavirus/story?id=69513372](https://abcnews.go.com/Politics/democrats-demand-apology-mccarthy-tweets-chinese-coronavirus/story?id=69513372).
- 12 4. Robyn R, Jocelyne L, Tiansheng Z, Magie F, Bei X, Melissa R, et al. 2019-nCoV (Wuhan virus), a novel
- 13 Coronavirus: human-to-human transmission, travel-related cases, and vaccine readiness. The Journal of
- 14 Infection in Developing Countries. 2020; 14(01).
- 15 5. Phelan AL, Katz R, Gostin LO. The Novel Coronavirus Originating in Wuhan, China: Challenges for
- 16 Global Health Governance. JAMA. 2020; 323(8): 709-10.
- 17 6. Kofi Ayithey F, Dzuvoor C, Kormla Ayithey M, Bennita Chiwero N, Habib A. Updates on Wuhan 2019 novel
- 18 coronavirus epidemic. J Med Virol. 2020; 92(4): 403-7. eng
- 19 7. Wang LF, Anderson DE, Mackenzie JS, Merson MH. From Hendra to Wuhan: what has been learned
- 20 in responding to emerging zoonotic viruses. Lancet (London, England). 2020; 395(10224): e33-e4. eng
- 21 8. Shaikh K, Shrestha C, Dutta D. Treatment options in people with COVID19: Selecting the best
- 22 armamentarium against the novel virus. JPMA The Journal of the Pakistan Medical Association. 2020; 70(Suppl
- 23 3)(5): S69-s73. eng
- 24 9. Chen WH, Strych U, Hotez PJ, Bottazzi ME. The SARS-CoV-2 Vaccine Pipeline: an Overview. Current
- 25 tropical medicine reports. 2020: 1-4. eng
- 26 10. Kai Kupferschmidt JC. China's aggressive measures have slowed the coronavirus. They may not work
- 27 in other countries. Science [Internet]. 2020 Mar 2 [cited 2020 Jul 26; Available from:
- 28 [https://www.sciencemag.org/news/2020/03/china-s-aggressive-measures-have-slowed-coronavirus-they-may-](https://www.sciencemag.org/news/2020/03/china-s-aggressive-measures-have-slowed-coronavirus-they-may-not-work-other-countries)
- 29 [not-work-other-countries](https://www.sciencemag.org/news/2020/03/china-s-aggressive-measures-have-slowed-coronavirus-they-may-not-work-other-countries).
- 30 11. Chris Jackson JB, Jinhee Yi. New Center for Public Integrity/Ipsos Poll finds most Americans say the
- 31 Coronavirus Pandemic is a Natural Disaster. Ipsos [Internet]. 2020 Apr 28 [cited 2020 Jul 26]; Available from:
- 32 <https://www.ipsos.com/en-us/news-polls/center-for-public-integrity-poll-2020>.
- 33 12. Shoichet CE. What historians hear when Trump calls coronavirus 'Chinese' and 'foreign'. CNN
- 34 [Internet]. . 2020 Mar 17 [cited 2020 Jul 26; Available from: [https://www.cnn.com/2020/03/12/us/disease-](https://www.cnn.com/2020/03/12/us/disease-outbreaks-xenophobia-history/index.html)
- 35 [outbreaks-xenophobia-history/index.html](https://www.cnn.com/2020/03/12/us/disease-outbreaks-xenophobia-history/index.html).
- 36 13. Calisher C, Carroll D, Colwell R, Corley RB, Daszak P, Drosten C, et al. Statement in support of the
- 37 scientists, public health professionals, and medical professionals of China combatting COVID-19. Lancet
- 38 (London, England). 2020; 395(10226): e42-e3. eng
- 39 14. Farivar M. US Watchdog Tracks Over 2,100 Anti-Asian Incidents. Voice of America [Internet]. 2020 Jun
- 40 27 [cited 2020 Jul 26; Available from: [https://www.voanews.com/usa/race-america/us-watchdog-tracks-over-](https://www.voanews.com/usa/race-america/us-watchdog-tracks-over-2100-anti-asian-incidents)
- 41 [2100-anti-asian-incidents](https://www.voanews.com/usa/race-america/us-watchdog-tracks-over-2100-anti-asian-incidents).

- 1 15. Margolin J. FBI warns of potential surge in hate crimes against Asian Americans amid coronavirus. ABC
2 News [Internet]. 2020 Mar 27 [cited 2020 Jul 26; Available from: [https://abcnews.go.com/US/fbi-warns-](https://abcnews.go.com/US/fbi-warns-potential-surge-hate-crimes-asian-americans/story?id=69831920)
3 [potential-surge-hate-crimes-asian-americans/story?id=69831920](https://abcnews.go.com/US/fbi-warns-potential-surge-hate-crimes-asian-americans/story?id=69831920)
- 4 16. (WHO) WHO. Factors that contributed to undetected spread of the Ebola virus and impeded rapid
5 containment. WHO [Internet]. 2015 Jan [cited 2020 Jul 26; Available from:
6 <https://www.who.int/csr/disease/ebola/one-year-report/factors/en/>.
- 7 17. Baseler L, Chertow DS, Johnson KM, Feldmann H, Morens DM. The Pathogenesis of Ebola Virus
8 Disease. Annual review of pathology. 2017; 12: 387-418. eng
- 9 18. Rao TSS, Andrade C. The MMR vaccine and autism: Sensation, refutation, retraction, and fraud. Indian
10 J Psychiatry. 2011; 53(2): 95-6. eng
- 11 19. Fukuda K, Wang R, Vallat B. Naming diseases: First do no harm. Science. 2015; 348(6235): 643.
- 12 20. Finnegan C. Despite world's highest COVID-19 death toll, US is 'the world leader in the pandemic'
13 response: Pompeo. ABC News [Internet]. 2020 Jul 8 [cited 2020 Jul 26; Available from:
14 <https://abcnews.go.com/Politics/worlds-highest-covid-19-death-toll-us-world/story?id=71670169>.
15

Accepted, in-press