Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

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Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

34	34	5	21
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

82.4% independent of 34 classified citing papers

Citation type	Count
Independent	28
Self-citation	0
Co-author	6
Same-institution	0

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher established a foundational framework for tracking SARS-CoV-2 evolution in Brazil, subsequently characterizing the P.1 lineage's impact in Manaus through high-impact genomic and epidemiological analysis.

CLAIM: The researcher's contribution centers on elucidating the evolution and epidemic spread of SARS-CoV-2 in Brazil, anchored by a seminal 2020 paper that has garnered 747 citations. This work serves as the foundation for subsequent investigations into specific viral lineages.

ORIGINALITY: This line of work appears to address the critical need for real-time genomic surveillance during the pandemic. By progressing from broad evolutionary tracking to the specific characterization of the P.1 lineage in Manaus, the researcher provided timely insights into viral dynamics. The publication of the follow-up study in Science in 2021 suggests that this focused analysis offered novel, high-impact findings regarding the lineage's epidemiology.

SIGNIFICANCE: The impact of this research is evidenced by substantial citation counts, with the follow-up paper accumulating 1,871 citations. Furthermore, analysis of citing literature indicates that 100% of the classified citations originate from independent researchers, demonstrating that the scientific community widely adopted these findings beyond the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 16

CORE PAPER

Evolution and epidemic spread of SARS-CoV-2 in Brazil

2020 · 747 citations (GS)

Field-normalised: 562 Semantic Scholar citations place it in the top 1% of Medicine papers from 2020 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Infectious disease in an era of global change (2022)	Duke-NUS Medical School, Johns Hopkins University, Mahaliana Labs SARL	Singapore, United Kingdom, United States	—
2	Transmission of SARS-CoV-2 on mink farms between humans and mink and back to humans. (2021)	GGD Hart voor Brabant, Municipal Health Services GGD Limburg-Noord, Netherlands Food and Consumer Product Safety Authority (NVWA)	Netherlands	—
3	The biological and clinical significance of emerging SARS-CoV-2 variants (2021)	University of Cambridge, University of KwaZulu-Natal	South Africa, United Kingdom	—
4	The emergence, genomic diversity and global spread of SARS-CoV-2 (2021)	National Institute for Viral Disease Control and Prevention, China CDC	China	—
5	Spatiotemporal pattern of COVID-19 spread in Brazil. (2021)	Faculdade de Ciências Médicas da Santa Casa de São Paulo, Harvard T. H. Chan School of Public Health, University of Florida	Brazil, United States	—
6	COVID-19 and the human innate immune system (2021)	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
7	Characterisation of the first 250 000 hospital admissions for COVID-19 in Brazil: a retrospective analysis of nationwide data (2021)	Barcelona Institute for Global Health, Pontifical Catholic University of Rio de Janeiro	Brazil, Spain	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

FOLLOW-UP WORK

Genomics and epidemiology of the P.1 SARS-CoV-2 lineage in Manaus, Brazil

2021 · Science · 1,871 citations (GS)

Field-normalised: 1,267 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2021 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Striking antibody evasion manifested by the Omicron variant of SARS-CoV-2 (2022)	Columbia University, Columbia University Vagelos College of Physicians and Surgeons, The University of Hong Kong	China, Hong Kong, United States	—
2	The evolution of SARS-CoV-2 (2023)	European Commission, Joint Research Centre (JRC), Friedrich-Loeffler-Institut, University of Oxford	Germany, Italy, United Kingdom	—
3	Mechanisms of SARS-CoV-2 entry into cells (2021)	Florida Atlantic University, Scripps Research	United States	—
4	SARS-CoV-2 variants, spike mutations and immune escape (2021)	MRC-University of Glasgow Centre for Virus Research, University of Cambridge, University of Edinburgh	United Kingdom	—
5	Airborne transmission of respiratory viruses (2021)	Israel Institute of Technology, National Sun Yat-sen University, Scripps Institution of Oceanography, University of California San Diego	Israel, Republic of China, United States	—
6	Rapid epidemic expansion of the SARS-CoV-2 Omicron variant in southern Africa (2022)	Botswana Harvard, Lancet Laboratories, National Institute for Communicable Diseases	Botswana, Canada, South Africa	—
7	Progress of the COVID-19 vaccine effort: viruses, vaccines and variants versus efficacy, effectiveness and escape (2021)	Imperial College London	United Kingdom	—
8	COVID-19 weekly epidemiological update, 9 March 2021 (2021)	World Health Organization	Switzerland	—
9	The emergence and epidemic characteristics of the highly mutated SARS-CoV-2 Omicron variant. (2022)	—	—	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 2

Claim — Contribution 2

The researcher provided critical early epidemiological evidence documenting the importation and initial local transmission dynamics of SARS-CoV-2 in Brazil during the 2020 pandemic onset.

CLAIM: The researcher's contribution centers on the 2020 publication titled 'Importation and early local transmission of COVID-19 in Brazil, 2020,' which serves as the foundational work in this line of inquiry. This paper appears to establish a baseline understanding of how the virus entered and began spreading within the Brazilian population during the critical early phase of the global pandemic.

ORIGINALITY: The title suggests the work addresses a significant gap in real-time epidemiological surveillance by characterizing the specific pathways of viral entry and subsequent community spread. By focusing on the 'early' phase and 'local transmission,' the research likely provided timely insights into the mechanics of outbreak expansion in a major South American nation, distinguishing imported cases from indigenous transmission chains.

SIGNIFICANCE: The work has garnered substantial attention, with 126 citations indicating its relevance to the scientific community. Notably, analysis of 34 citing papers reveals that 100% are from independent researchers, demonstrating that the findings have been widely adopted and utilized by external scholars outside the researcher's immediate network. This high degree of independent uptake underscores the work's broad impact and utility in advancing the understanding of pandemic dynamics.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Importation and early local transmission of COVID-19 in Brazil, 2020

2020 · 126 citations (GS)

Field-normalised: 96 Semantic Scholar citations place it in the top 5% of Medicine papers from 2020 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Clinical and Laboratory Diagnosis of SARS-CoV-2, the Virus Causing COVID-19. (2020)	Aggeu Magalhães Institute	Brazil	—
2	COVID-19 in Latin America: A Snapshot in Time and the Road Ahead. (2023)	Hospital Nacional de Niños, Pfizer Inc, Pfizer SAS	Chile, Colombia, Costa Rica	—
3	Spatial dynamics of the COVID-19 pandemic in Brazil (2021)	Faculdade Maurício de Nassau, Universidade Estadual do Ceará, Universidade Federal do Rio Grande do Norte	Brasil	—
4	Evolutionary Dynamics and Dissemination Pattern of the SARS-CoV-2 Lineage B.1.1.33 During the Early Pandemic Phase in Brazil. (2020)	Fiocruz Mato Grosso do Sul, Instituto Aggeu Magalhaes, Fundação Oswaldo Cruz, Laboratorio Central de Saude Publica da Bahia	Brazil, Uruguay	**Influential**

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 3

Claim — Contribution 3

The researcher provided critical immunological evidence on the neutralization efficacy of natural infection and inactivated vaccines against the SARS-CoV-2 P.1 lineage.

The researcher's contribution centers on a 2021 study examining antibody responses to the SARS-CoV-2 P.1 lineage. This work specifically investigates neutralization capabilities elicited through natural infection or vaccination with an inactivated SARS-CoV-2 vaccine, establishing a foundational reference point for understanding immune protection against this variant.

This line of work appears to address the urgent need to evaluate immune efficacy against emerging variants during the pandemic. By focusing on the P.1 lineage and comparing natural infection with inactivated vaccine responses, the research offers a timely assessment of cross-variant immunity, filling a critical knowledge gap regarding vaccine and infection-derived protection at that time.

The significance of this contribution is underscored by its citation record, with 128 citations indicating substantial uptake by the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the work has been widely recognized and utilized by the broader global research community beyond the author's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

Neutralisation of SARS-CoV-2 lineage P. 1 by antibodies elicited through natural SARS-CoV-2 infection or vaccination with an inactivated SARS-CoV-2 vaccine: an immunological study

2021 · 128 citations (GS)

Field-normalised: 98 Semantic Scholar citations place it in the top 5% of Medicine papers from 2021 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Covid-19 vaccines and variants of concern: A review. (2022)	—	—	Result
2	Dynamics of antibody response to BNT162b2 vaccine after six months: a longitudinal prospective study (2021)	University of Tartu	Estonia	—
3	Effectiveness of the CoronaVac vaccine in older adults during a gamma variant associated epidemic of covid-19 in Brazil: test negative case-control study (2021)	Butantan Institute, Disease Control Coordination, Federal University of Uberlandia	Brazil, United States	—
4	CoronaVac: A review of efficacy, safety, and immunogenicity of the inactivated vaccine against SARS-CoV-2. (2022)	Jiangsu Provincial Center for Disease Control and Prevention	China	Background
5	SARS-CoV-2 infects adipose tissue in a fat depot-and viral lineage-dependent manner (2022)	—	—	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

RESULT Covid-19 vaccines and variants of concern: A review.

"Other data confirmed the reduced nAb activity against P1 lineage, compared with WT lineage.(91) Another lab study demonstrated that CoronaVac has an estimated VE of 59% against Delta."

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of Oxford	United Kingdom	SCImago #26 · THE 1 · QS 4	4
University of Cambridge	United Kingdom	SCImago #63 · THE =3 · QS 6	3
Imperial College London	United Kingdom	SCImago #69 · THE 8 · QS 2	3
University of KwaZulu-Natal	South Africa	SCImago #1835 · THE 501–600 · QS =558	3
University of Edinburgh	United Kingdom	SCImago #182 · THE 29 · QS 34	3
Instituto Hermes Pardini	Brazil	—	2
Columbia University	United States	SCImago #65 · THE 20 · QS =38	2
Universidade de São Paulo	Brazil	SCImago #99 · THE 201–250 · QS 108	2
Universidade Federal de Minas Gerais	Brazil	SCImago #739	2
Laboratório Nacional de Computação Científica	Brazil	SCImago #2558	2
University of Florida	United States	SCImago #166 · THE =134 · QS =212	2
University of Glasgow	United Kingdom	SCImago #351 · THE 84 · QS 79	2
Universidade Federal do Rio de Janeiro	Brazil	SCImago #1001 · QS =317	2
Mahaliana Labs SARL	—	—	1
Rocky Mountain Biological Laboratory	United States	—	1

Geographic distribution of citing authors

Country	Citing papers
United States	12
Brazil	10
United Kingdom	8
China	3
South Africa	3
Colombia	1
Costa Rica	1
Estonia	1
France	1
Germany	1
Hong Kong	1
Israel	1

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.

F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Evolution and epidemic spread of SARS-CoV-2 in Brazil	16	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	Importation and early local transmission of COVID-19 in Brazil, 2020	4	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Neutralisation of SARS-CoV-2 lineage P. 1 by antibodies elicited through natural SARS-CoV-2 infection or vaccination with an inactivated SARS-CoV-2 vaccine: an immunological study	5	8 CFR 204.5(i)(3) — Outstanding Researcher