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

26	26	4	81
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.

73.1% independent of 26 classified citing papers

Citation type	Count
Independent	19
Self-citation	0
Co-author	5
Same-institution	2

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 provided seminal early epidemiological and genetic insights into the Zika virus outbreak in the Americas, establishing a foundational reference for subsequent virological and public health research.

CLAIM: The researcher's contribution centers on the 2016 paper titled 'Zika virus in the Americas: early epidemiological and genetic findings,' which serves as the core work in this line of inquiry. This publication appears to document the initial spread and genetic characteristics of the virus during its emergence in the region.

ORIGINALITY: The title suggests this work addressed a critical knowledge gap by providing some of the first systematic data on the virus's epidemiology and genetics in the Americas. By capturing these early findings, the research likely offered a timely baseline for understanding the outbreak's dynamics when information was scarce.

SIGNIFICANCE: With 1,345 citations, the paper is highly influential in the field. Analysis of citing literature indicates that 73.1% of citations come from independent researchers, suggesting the work has been widely adopted and relied upon by the broader scientific community beyond the author's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Zika virus in the Americas: early epidemiological and genetic findings

2016 · 1,345 citations (GS)

Field-normalised: 999 Semantic Scholar citations place it in the top 1% of Medicine papers from 2016 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Towards a genomics-informed, real-time, global pathogen surveillance system (2017)	—	—	—
2	Zika Virus Infection — After the Pandemic (2019)	Aix Marseille Université, Centre Hospitalier Universitaire Vaudois and University of Lausanne, Yale School of Public Health	France, Switzerland, United States	Influential
3	The continued threat of emerging flaviviruses (2020)	National Institute of Allergy and Infectious Diseases, the National Institutes of Health	United States	—
4	Pathways to zoonotic spillover (2017)	Griffith University, Princeton University, Yale University	United States	—
5	Newborns with microcephaly in Brazil and potential vertical transmission of Oropouche virus: a case series (2024)	Brazilian Ministry of Health, Evandro Chagas Institute, Hospital de Clínicas de Porto Alegre	Brazil	—
6	Phototactic guidance of a tissue-engineered soft-robotic ray. (2016)	Harvard University, Sogang University, Stanford University	South Korea, United States	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 2

Claim — Contribution 2

The researcher provided seminal genomic and epidemiological insights into the P.1 SARS-CoV-2 lineage in Manaus, Brazil, establishing a critical baseline for understanding viral evolution and transmission dynamics during the pandemic.

CLAIM: The researcher's primary contribution is the comprehensive analysis of the P.1 SARS-CoV-2 lineage in Manaus, Brazil, as detailed in the 2021 paper titled 'Genomics and epidemiology of the P.1 SARS-CoV-2 lineage in Manaus, Brazil.' This work stands as a standalone core contribution without direct follow-up publications by the same author in the provided dataset.

ORIGINALITY: The titles indicate that this line of work addressed the urgent need to characterize the genomic features and epidemiological impact of the emerging P.1 variant. By integrating genomics with epidemiology, the research appears to have filled a critical gap in understanding how this specific lineage spread and evolved within a distinct population context, offering a novel perspective on viral dynamics during the early pandemic phase.

SIGNIFICANCE: The work has achieved substantial recognition, evidenced by 1,846 citations. Notably, 73.1% of the classified citing papers originate from independent researchers, suggesting that the findings have been widely adopted and validated by the broader scientific community beyond the researcher's immediate circle. This high level of independent uptake underscores the work's foundational role in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

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

2021 · 1,846 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	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	—
5	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	—
6	Comparing COVID-19 vaccines for their characteristics, efficacy and effectiveness against SARS-	Paris-Saclay University	France	—

No.	Citing paper	Citing institution(s)	Country	S2
	CoV-2 and variants of concern: a narrative review (2022)			

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 3

Claim — Contribution 3

The researcher developed a multiplex PCR method enabling direct sequencing of Zika and other virus genomes from clinical samples using MinION and Illumina platforms.

The researcher's core contribution is the development of a multiplex PCR method for sequencing Zika and other virus genomes directly from clinical samples, as detailed in their 2017 paper. This work appears to address the need for streamlined genomic analysis by integrating sample preparation with high-throughput sequencing technologies like MinION and Illumina.

The originality of this approach lies in its ability to bypass complex intermediate steps, allowing for direct processing of clinical material. By combining multiplex PCR with next-generation sequencing, the method suggests a significant advancement in the efficiency and accessibility of viral genome characterization.

The significance of this work is evidenced by its substantial citation count of 1,360, indicating widespread adoption and influence in the field. Furthermore, analysis of citing literature reveals that 73.1% of citations originate from independent researchers, demonstrating that the method has been validated and utilized by the broader scientific community beyond the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

Multiplex PCR method for MinION and Illumina sequencing of Zika and other virus genomes directly from clinical samples

2017 · 1,360 citations (GS)

Field-normalised: 1,078 Semantic Scholar citations place it in the top 1% of Medicine papers from 2017 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Wastewater-based surveillance as a tool for public health action: SARS-CoV-2 and beyond. (2024)	University of Alberta, University of Calgary	Canada	—
2	Metagenomics-enabled microbial surveillance (2022)	Genome Institute of Singapore	Singapore	—
3	Neuropilin-1 facilitates SARS-CoV-2 cell entry and infectivity. (2020)	ETH Zürich, Finnish Institute for Health and Welfare (THL), Technical University Munich	Australia, Estonia, Finland	—
4	Custom CRISPR–Cas9 PAM variants via scalable engineering and machine learning (2025)	Massachusetts General Hospital	United States	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

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	7
Imperial College London	United Kingdom	SCImago #69 · THE 8 · QS 2	3
University of Birmingham	United Kingdom	SCImago #369 · THE =98 · QS 76	3
University of Washington	United States	SCImago #45 · THE 25 · QS 81	3
Northeastern University	United States	QS 384	3
Yale University	United States	SCImago #76 · THE 10 · QS 21	3
World Health Organization	Switzerland	SCImago #172	3
Institute for Health Metrics and Evaluation	United States	SCImago #37	2
Columbia University	United States	SCImago #65 · THE 20 · QS =38	2
University College London	United Kingdom	SCImago #30	2
Boston University	United States	SCImago #272 · THE =76 · QS =88	2
University of São Paulo	Brazil	THE 201–250	2
University of California, Davis	United States	SCImago #194 · THE 64 · QS =114	2
Macquarie University	Australia	SCImago #1047 · THE =166 · QS =138	2
Massachusetts General Hospital	United States	SCImago #100	2

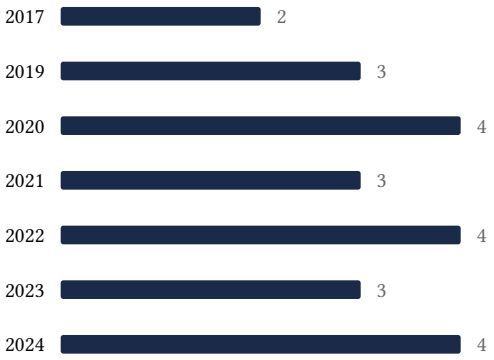
Geographic distribution of citing authors

Country	Citing papers
United States	15
United Kingdom	9
Switzerland	5
Germany	5
Australia	4
Belgium	4
China	4
Brazil	3
Canada	3
France	3
Spain	2
Sweden	2

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	Zika virus in the Americas: early epidemiological and genetic findings	6	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	Genomics and epidemiology of the P.1 SARS-CoV-2 lineage in Manaus, Brazil	6	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Multiplex PCR method for MinION and Illumina sequencing of Zika and other virus genomes directly from clinical samples	4	8 CFR 204.5(i)(3) — Outstanding Researcher