

Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

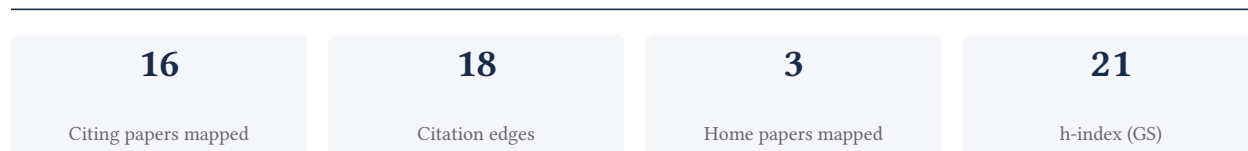
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[Google Scholar profile](#)

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. 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



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.

75.0% independent of 16 classified citing papers

Citation type	Count
Independent	12
Self-citation	0
Co-author	4
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 demonstrated that US immigration significantly alters the human gut microbiome, providing foundational evidence on how environmental shifts impact microbial diversity.

CLAIM: The researcher’s primary contribution is the identification of a distinct shift in the human gut microbiome associated with immigration to the United States, as established in their 2018 paper titled ‘US immigration westernizes the human gut microbiome.’

ORIGINALITY: This work appears to address a critical gap in understanding how rapid environmental and dietary changes, specifically those accompanying migration to Western societies, reshape human microbial ecosystems. The title suggests a novel linkage between sociological events and biological adaptation.

SIGNIFICANCE: The paper has garnered 907 citations, indicating substantial influence within the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, underscoring the broad, cross-institutional impact and validation of these findings by the wider field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

[US immigration westernizes the human gut microbiome](#)

2018 · 907 citations (GS)

Field-normalised: 638 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2018 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Gut-microbiota-targeted diets modulate human immune status (2021)	Chan Zuckerberg Biohub, Stanford School of Medicine, Stanford University	United States	—
2	Carbohydrate-active enzymes (CAZymes) in the gut microbiome (2022)	University of British Columbia	Canada	—
3	The Role of the Gut Microbiota in the Relationship Between Diet and Human Health (2023)	University of Pennsylvania	United States	—
4	Gut microbial metabolites as multi-kingdom intermediates (2020)	Morgridge Institute for Research; University of Wisconsin-Madison, University of Gothenburg, University of Wisconsin-Madison	Sweden, 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 developed QIIME 2, a highly cited framework enabling reproducible, interactive, scalable, and extensible microbiome data science, establishing a standard for computational analysis in the field.

The researcher's primary contribution is the development of QIIME 2, a comprehensive software framework for microbiome data science. This work is anchored by the seminal 2019 paper titled 'Reproducible, interactive, scalable and extensible microbiome data science using QIIME 2,' which has accumulated over 25,000 citations. The titles indicate a focus on creating a robust infrastructure that addresses critical needs for reproducibility and scalability in complex biological data analysis. By emphasizing interactivity and extensibility, this line of work appears to address the fragmentation and opacity often found in earlier bioinformatics pipelines, offering a unified solution for researchers. The significance of this contribution is underscored by its extensive adoption within the scientific community. With more than 25,000 citations, the work has clearly become a foundational tool in the field. Furthermore, analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, demonstrating broad, cross-institutional impact and confirming that the framework has been widely embraced by the global scientific community as a standard for microbiome analysis.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7 · 1 flagged influential by Semantic Scholar

CORE PAPER

[Reproducible, interactive, scalable and extensible microbiome data science using QIIME 2](#)

2019 · 25,340 citations (GS)

Field-normalised: 18,157 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2019 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	IQ-TREE 2: New Models and Efficient Methods for Phylogenetic Inference in the Genomic Era (2020)	Australian National University, Eötvös Lóránd University, University of Tasmania	Australia, Austria, Hungary	—
2	MicrobiomeAnalyst 2.0: comprehensive statistical, functional and integrative analysis of microbiome data (2023)	McGill University	Canada	—
3	The UNITE database for molecular identification and taxonomic communication of fungi and other eukaryotes: sequences, taxa and classifications reconsidered (2024)	Swedish University of Agricultural Sciences, University of Gothenburg, University of Tartu	Estonia, Sweden	—
4	Wekemo Bioincloud: A user-friendly platform for meta-omics data analyses (2024)	Agricultural Genomics Institute at Shenzhen Chinese Academy of Agricultural Sciences, Shenzhen Wekemo Technology Group Co., Ltd.	China	—
5	DS-1000: A Natural and Reliable Benchmark for Data Science Code Generation (2023)	Carnegie Mellon University, Meta AI, Stanford University	Hong Kong, United States	—
6	Next-generation sequencing: insights to advance clinical investigations of the microbiome (2022)	Johns Hopkins University	United States	Influential
7	Engineering natural microbiomes toward enhanced bioremediation by microbiome modeling (2024)	Nanjing Agricultural University, Nanjing Tech University, Newe Ya'ar Research Center, Agricultural Research Organization (ARO)	China, Israel	—

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 established a framework for identifying personalized diet-microbiome associations through daily sampling, as demonstrated in a highly cited 2019 Cell Host and Microbe paper.

The researcher’s primary contribution lies in elucidating personalized diet-microbiome associations in humans through daily sampling, a finding anchored in their 2019 publication in Cell Host and Microbe. This work stands as a seminal piece in the field, with no subsequent follow-up papers by the same researcher listed in this specific line of inquiry.

This line of work appears to address the complexity of individualized microbial responses to dietary inputs. By focusing on daily sampling, the research suggests a move toward high-resolution temporal analysis, offering a novel perspective on how personal microbiomes interact with diet over time, distinct from broader, less granular studies.

The significance of this contribution is underscored by its substantial citation count of 767, indicating widespread recognition and utility within the scientific community. Furthermore, analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, demonstrating that the work has been adopted and built upon by the broader field rather than just the researcher’s immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

[Daily Sampling Reveals Personalized Diet-Microbiome Associations in Humans](#)

2019 · Cell Host and Microbe · 767 citations (GS)

Field-normalised: 595 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2019 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Gut-microbiota-targeted diets modulate human immune status (2021)	Chan Zuckerberg Biohub, Stanford School of Medicine, Stanford University	United States	—
2	The interplay between diet and the gut microbiome: implications for health and disease (2024)	University College Cork	Ireland	—
3	The Role of the Gut Microbiota in the Relationship Between Diet and Human Health (2023)	University of Pennsylvania	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 Gothenburg	Sweden	SCImago #573 · THE 201–250 · QS 202	2
University of California San Diego	United States	SCImago #120 · THE 47 · QS 66	2
University College Cork	Ireland	SCImago #1176 · THE 351–400 · QS 246	2

Institution	Country	World ranking	Citing papers
University of Turku	Finland	SCImago #1389 · THE 301–350 · QS 366	2
University of Vienna	Austria	THE =95 · QS 152	2
National Institutes of Health	United States	SCImago #44	2
University of Trento	Italy	SCImago #1460 · THE 351–400 · QS =485	2
Stanford University	United States	SCImago #18 · THE =5 · QS 3	2
Charité – Universitätsmedizin Berlin	Germany	SCImago #284 · THE 91	1
University of Cambridge	United Kingdom	SCImago #63 · THE =3 · QS 6	1
Technical University of Denmark	Denmark	SCImago #404 · THE 121 · QS 107	1
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	1
Utrecht University	Netherlands	SCImago #162 · QS =103	1
The University of Queensland	Australia	SCImago #126 · THE =80 · QS =42	1
Tongji University	China	SCImago #82 · THE =141 · QS =177	1




Geographic distribution of citing authors

Country	Citing papers
United States	8
China	4
Australia	3
United Kingdom	3
Canada	2
Germany	2
Finland	2
Sweden	2
Austria	2
Denmark	2
Ireland	2
Italy	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.

2020		2
2022		2
2023		6

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	US immigration westernizes the human gut microbiome	4	Dhanasar – Prong 2 (well-positioned)
Contribution 2	Reproducible, interactive, scalable and extensible microbiome data science using QIIME 2	7	Dhanasar – Prong 2 (well-positioned)
Contribution 3	Daily Sampling Reveals Personalized Diet-Microbiome Associations in Humans	3	Dhanasar – Prong 2 (well-positioned)