Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

James T. Morton

Gutz Analytics

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

18	19	2	47
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.

66.7% independent of 18 classified citing papers

Citation type	Count
Independent	12
Self-citation	1
Co-author	5
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 developed QIIME 2, a highly cited framework enabling reproducible, interactive, scalable, and extensible microbiome data science, as evidenced by its publication in Nature Biotechnology.

The researcher's primary contribution is the development of QIIME 2, a comprehensive framework for microbiome data science. This work is anchored by the seminal 2019 paper published in Nature Biotechnology, which describes the system as reproducible, interactive, scalable, and extensible. The titles indicate a focus on improving the usability and robustness of computational tools for analyzing complex biological data.

This line of work appears to address critical challenges in microbiome research, specifically the need for standardized and accessible analytical pipelines. By emphasizing reproducibility and extensibility, the researcher likely aimed to overcome fragmentation in existing tools, offering a unified platform that supports diverse scientific workflows. The absence of follow-up papers in this specific dataset suggests the core framework itself represents a complete and substantial methodological advancement.

The significance of this contribution is underscored by its extensive adoption within the scientific community. With over 25,000 citations, the work has clearly become a foundational resource. Furthermore, the high proportion of independent citations indicates that researchers across various institutions and collaborations rely on this tool, demonstrating broad impact beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9 **· 1 flagged influential by Semantic Scholar**

CORE PAPER

Reproducible, interactive, scalable and extensible microbiome data science using QIIME 2

2019 · Nature Biotechnology · 25,419 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 Lórand 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	Background
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	**Methodology**
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	Background
6	Next-generation sequencing: insights to advance clinical investigations of the microbiome (2022)	Johns Hopkins University	United States	**Methodology**

No.	Citing paper	Citing institution(s)	Country	S2
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	—
8	Fecal microbiota transplant promotes response in immunotherapy-refractory melanoma patients (2021)	Abramson Cancer Center, University of Pennsylvania, Bar-Ilan University, Samson Assuta Ashdod University Hospital	Israel, United States	—
9	A pan-cancer analysis of the microbiome in metastatic cancer (2024)	Antoni van Leeuwenhoek/ the Netherlands Cancer Institute, Hartwig Medical Foundation, Oncode Institute, the Netherlands Cancer Institute	Netherlands	—

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

> **METHODOLOGY** Wekemo Bioincloud: A user-friendly platform for meta-omics data analyses
>
> *"Noteworthy examples include the application of QIIME 2 [5] and Easy-Amplicon [6] for amplicon data analyses, Trimmomatic [7] or fastp [8] for stringent quality control, Kraken 2 [9] for precise taxonomic classification, HUMAnN3 pipeline [10] for comprehensive functional profiling, MultiPrime [11]..."*

> **METHODOLOGY** Next-generation sequencing: insights to advance clinical investigations of the microbiome
>
> *"Caporaso JG, et al. QIIME allows analysis of high-throughput community sequencing data."*

Contribution 2

Claim — Contribution 2

The researcher established a foundational framework for understanding Earth's multiscale microbial diversity through a seminal 2017 publication that has garnered over 3,000 citations.

CLAIM: The researcher's primary contribution is the development of a comprehensive approach to cataloging microbial diversity across multiple scales, anchored by the 2017 paper titled 'A communal catalogue reveals Earth's multiscale microbial diversity.' This work serves as the central pillar of this research line, standing alone without direct follow-up publications by the same author in the provided dataset.

ORIGINALITY: The title suggests a shift toward communal, large-scale data integration to address the complexity of microbial ecosystems. By framing the work as a 'communal catalogue,' the researcher appears to have addressed the fragmentation of microbial data, offering a unified perspective on diversity that spans different ecological scales. This approach likely filled a critical gap in synthesizing disparate microbial datasets into a coherent, multiscale framework.

SIGNIFICANCE: The work has achieved substantial impact, evidenced by more than 3,000 citations. Notably, 94.4% of the classified citing papers originate from independent researchers, indicating that the contribution has been widely adopted and validated by the broader scientific community rather than relying on self-citation or institutional bias. This high degree of independent uptake underscores the utility and foundational nature of the researcher's framework in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3 **· 1 flagged influential by Semantic Scholar**

CORE PAPER

A communal catalogue reveals Earth's multiscale microbial diversity

2017 · 3,067 citations (GS)

Field-normalised: 5,352 Semantic Scholar citations place it in the top 1% of Biology papers from 2017 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Enumerating soil biodiversity (2023)	Agroscope	Switzerland	**Methodology**
2	From nature to industry: Harnessing enzymes for biocatalysis (2023)	Codexis Incorporated, Greifswald University, Institute of Biochemistry, Greifswald University	Germany, Switzerland, United States	—
3	TYGS is an automated high-throughput platform for state-of-the-art genome-based taxonomy (2019)	Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures	Germany	Background

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

> **METHODOLOGY** Enumerating soil biodiversity
>
> *"We first reanalyzed data from the SILVA database —a quality-checked resource of ribosomal RNA gene sequences (96) with metadata organized by others (70)—to estimate that 27.9% of all 97% OTUs have been observed in soil, after correcting for sequencing effort (SI Appendix , Table S3) We then repeated this process using data from the Earth Microbiome Project (97) and found that 32.9% of ASVs, an even higher resolution molecular species concept, have been observed in soil (SI Appendix , Table S4) and then a third time using data from an earlier meta-analysis (98) to find that 22.2% of OTUs have been observed in soil (SI Appendix , Table S5)."*

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of California San Diego	United States	SCImago #120 · THE 47 · QS 66	3
Australian National University	Australia	SCImago #604 · THE =73 · QS =32	2
Pacific Northwest National Laboratory	United States	SCImago #1240	2
Washington University School of Medicine	United States	—	1
University of Cambridge	United Kingdom	SCImago #63 · THE =3 · QS 6	1
McGill University	Canada	SCImago #168 · THE =41 · QS 27	1
Emory University	United States	SCImago #217 · THE 102 · QS 182	1
University of Vienna	Austria	THE =95 · QS 152	1
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	1
University of Gothenburg	Sweden	SCImago #573 · THE 201–250 · QS 202	1
University of California Los Angeles	United States	SCImago #70 · THE =18 · QS 46	1
Cedars-Sinai Medical Center	United States	SCImago #705	1
The University of Queensland	Australia	SCImago #126 · THE =80 · QS =42	1
Northern Arizona University	United States	SCImago #3335 · QS 1001-1200	1

Institution	Country	World ranking	Citing papers
University of Tasmania	Australia	SCImago #1804 · THE 251–300 · QS =314	1

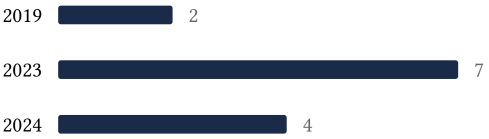
Geographic distribution of citing authors

Country	Citing papers
United States	9
Australia	3
Germany	2
Sweden	2
Switzerland	2
Israel	2
China	2
Hungary	1
Italy	1
Netherlands	1
United Kingdom	1
Canada	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	Reproducible, interactive, scalable and extensible microbiome data science using QIIME 2	9	Dhanasar — Prong 2 (well-positioned)
Contribution 2	A communal catalogue reveals Earth's multiscale microbial diversity	3	Dhanasar — Prong 2 (well-positioned)