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

13	13	2	31
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.

84.6% independent of 13 classified citing papers

Citation type	Count
Independent	11
Self-citation	0
Co-author	2
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 provided seminal evidence for network evolution in the Arabidopsis interactome, establishing a foundational framework for understanding plant protein interaction dynamics.

CLAIM: The researcher's primary contribution is the publication of a seminal paper in Science (2011) titled 'Evidence for Network Evolution in an Arabidopsis Interactome Map,' which stands as a standalone cornerstone of their work without direct follow-up publications by the same author.

ORIGINALITY: This work appears to address the gap in understanding how protein interaction networks evolve within model organisms. By mapping the Arabidopsis interactome, the researcher likely introduced novel insights into the structural and evolutionary principles governing plant molecular networks, distinguishing this approach from static interaction studies.

SIGNIFICANCE: The paper has garnered over 1,000 citations, indicating substantial influence in the field. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the scientific community widely adopted and built upon these findings without reliance on the original author's subsequent work.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

Evidence for Network Evolution in an Arabidopsis Interactome Map

2011 · Science · 1,009 citations (GS)

Field-normalised: 886 Semantic Scholar citations place it in the top 1% of Biology papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Aquaporins in Plants (2015)	CNRS/INRA/Montpellier SupAgro/Université de Montpellier	France	—
2	Evolution of Gene Duplication in Plants (2016)	Michigan State University	United States	—
3	The advantages and limitations of trait analysis with GWAS: a review (2013)	Gregor Mendel Institute of Molecular Plant Biology	Austria	—
4	The temperature sensor TWA1 is required for thermotolerance in Arabidopsis (2024)	Aix-Marseille University, Commissariat à l'Energie Atomique (CEA), Centre National de la Recherche Scientifique (CNRS), Institut de Biosciences et Biotechnologies Aix-Marseille, Chengdu Newsun Crop Science, Helmholtz Center Munich, German Research Center for Environmental Health	China, France, Germany	—
5	Protein-Protein Interaction Network Exploration Using Cytoscape (2023)	University of Alabama at Birmingham	United States	—

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 established a foundational theoretical framework for modeling human mobility patterns, as evidenced by a highly cited seminal review in Physics Reports.

CLAIM: The researcher's primary contribution is the development of a comprehensive theoretical framework for understanding human mobility, anchored by the 2017 paper 'Human mobility: Models and applications' published in Physics Reports. This work serves as the central pillar of this research line, with no subsequent follow-up papers by the same author listed in the provided data.

ORIGINALITY: The publication in Physics Reports, a venue known for extensive review articles, suggests that this work synthesized and advanced the state of the field. The title indicates a dual focus on theoretical models and their practical applications, implying the researcher addressed the need for a unified perspective on how human movement can be mathematically described and utilized. The absence of follow-up papers by the researcher in this dataset suggests this single publication stands as a definitive, standalone contribution to the field's theoretical foundation.

SIGNIFICANCE: The work has achieved substantial recognition, accumulating 1,425 citations, which classifies it as highly cited within the scientific community. Notably, analysis of 13 citing papers reveals that 100% of these citations originate from independent researchers, excluding the author, co-authors, or colleagues from the same institution. This high degree of independent citation underscores the work's broad impact and acceptance across the wider research community, indicating that it has become a standard reference for scholars outside the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **2 flagged influential by Semantic Scholar**

CORE PAPER

Human mobility: Models and applications

2017 · Physics Reports · 1,425 citations (GS)

Field-normalised: 988 Semantic Scholar citations place it in the top 1% of Geography papers from 2017 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Future directions in human mobility science (2023)	Institute of Information Science and Technologies of the National Research Council of Italy, IT University of Copenhagen, School of Geography	Denmark, Italy	**Influential**
2	Population flow drives spatio-temporal distribution of COVID-19 in China (2020)	Chinese Academy of Sciences, National University of Defense Technology, Peking University	China, United States	—
3	The scales of human mobility (2020)	Technical University of Denmark, University of Copenhagen	Denmark	—
4	COVID-19 lockdown induces disease-mitigating structural changes in mobility networks (2020)	Robert Koch Institute, Technical University of Denmark	Denmark, Germany	Background
5	Unravelling the spatial directionality of urban mobility (2024)	Beijing Jiaotong University, Peking University, Xuchang University	China	Background
6	A Survey on Deep Learning for Human Mobility (2021)	Amazon, Fondazione Bruno Kessler, Institute of Informa-	—	**Influential**

No.	Citing paper	Citing institution(s)	Country	S2
		tion Science and Technologies, National Research Council		

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).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Technical University of Denmark	Denmark	SCImago #404 · THE 121 · QS 107	3
Peking University	China	SCImago #11 · THE 13 · QS 14	2
Scuola Normale Superiore	Italy	THE 137	1
Umeå Universitet	Sweden	SCImago #1412 · THE 401–500 · QS =401	1
Victoria University of Wellington	New Zealand	SCImago #3267 · THE 401–500 · QS =240	1
Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau	Germany	SCImago #2912 · QS 1201-1400	1
Fondazione Bruno Kessler	Italy	SCImago #1952	1
University of Alabama at Birmingham	United States	QS 1001-1200	1
Michigan State University	United States	SCImago #436 · THE =105 · QS 161	1
Chinese Academy of Sciences	China	SCImago #2	1
South China University of Technology	China	SCImago #111 · THE 251–300 · QS 377	1
Massachusetts Institute of Technology	United States	SCImago #41 · THE 2 · QS 1	1
Northeastern University	United States	QS 384	1
Amazon	United States	—	1
University of Pisa	Italy	THE 351–400 · QS =343	1

Geographic distribution of citing authors

Country	Citing papers
United States	4
Italy	3
China	3
Denmark	3
France	3
Germany	3
Austria	2

Country	Citing papers
United Kingdom	2
New Zealand	1
Sweden	1
Chile	1
Greece	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	Evidence for Network Evolution in an Arabidopsis Interactome Map	5	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Human mobility: Models and applications	6	Dhanasar — Prong 2 (well-positioned)