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	14	2	146
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.

76.9% independent of 13 classified citing papers

Citation type	Count
Independent	10
Self-citation	1
Co-author	1
Same-institution	1

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 standardized guidelines for autophagy assays, creating a foundational reference that significantly advanced the reliability and interpretation of monitoring techniques in the field.

The researcher's primary contribution is the development of comprehensive guidelines for the use and interpretation of assays for monitoring autophagy, published in 2012. This seminal work serves as the cornerstone of this line of research, providing a critical framework for experimental consistency in the study of cellular degradation processes.

This work appears to address a significant gap in methodological standardization within the field. By establishing clear protocols and interpretive criteria, the researcher provided a necessary resource for scientists seeking to ensure the accuracy and reproducibility of their autophagy-related experiments, thereby reducing ambiguity in data interpretation.

The significance of this contribution is evidenced by its substantial citation count of over 15,000, indicating widespread adoption and reliance on these guidelines. Furthermore, the high proportion of independent citations suggests that the work has been embraced by the broader scientific community as an essential reference, validating its impact beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

Guidelines for the use and interpretation of assays for monitoring autophagy

2012 · 15,073 citations (GS)

Field-normalised: 4,392 Semantic Scholar citations place it in the top 1% of Biology papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Luminescent Lanthanides in Biorelated Applications: From Molecules to Nanoparticles and Diagnostic Probes to Therapeutics (2025)	Defence Science and Technology Laboratory (DSTL), Hong Kong Baptist University, Southern University of Science and Technology	China, United Kingdom	—
2	AMPK: guardian of metabolism and mitochondrial homeostasis (2018)	The Salk Institute for Biological Studies	United States	—
3	Recent advances in Alzheimer's disease: Mechanisms, clinical trials and new drug development strategies (2024)	University of Tennessee Health Science Center, West China Hospital, Sichuan University	China, United States	—
4	Emerging mechanisms of lipid peroxidation in regulated cell death and its physiological implications (2024)	Guangzhou Medical University, The First Affiliated Hospital of Guangzhou Medical University	China	—
5	Chloroquine inhibits autophagic flux by decreasing autophagosome-lysosome fusion (2018)	Northeast Agricultural University, University Medical Center Utrecht, University of Groningen, University Medical Center Groningen	China, Netherlands, Norway	—
6	Copper-dependent autophagic degradation of GPX4 drives ferroptosis (2023)	Affiliated Cancer Hospital & Institute of Guangzhou Medical University, Centre de Recherche	China, France, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
		des Cordeliers, Guangzhou Medical University		
7	Copper metabolism in cell death and autophagy (2023)	Guangzhou Medical University, University of Michigan, UT Southwestern Medical Center	China, United States	—
8	GPX4 in cell death, autophagy, and disease (2023)	Central South University, Second Xiangya Hospital, Central South University, The Second Xiangya Hospital, Central South University	China, 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 framework linking aging mechanisms to chronic disease, as evidenced by a highly cited 2014 Cell paper that appears to define the geroscience field.

CLAIM: The researcher's primary contribution is the conceptual integration of aging and chronic disease, anchored by the 2014 Cell publication titled 'Geroscience: linking aging to chronic disease.' This work stands as a seminal piece in the field, with no follow-up papers by the same researcher provided in this context, suggesting the core paper itself carries the full weight of the contribution.

ORIGINALITY: The title suggests a novel interdisciplinary approach, bridging the study of biological aging with the pathology of chronic conditions. By framing aging not merely as a risk factor but as a central driver of disease, this line of work appears to address a critical gap in understanding the shared mechanisms underlying multiple age-related disorders, offering a unified theoretical perspective.

SIGNIFICANCE: The impact of this contribution is substantial, with the core paper accumulating over 3,000 citations. Furthermore, citation analysis reveals that 84.6% of citing papers originate from independent researchers, indicating broad adoption and validation of the framework across the global scientific community rather than reliance on self-citation or institutional clustering.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2

CORE PAPER

Geroscience: linking aging to chronic disease

2014 · Cell · 3,022 citations (GS)

Field-normalised: 2,212 Semantic Scholar citations place it in the top 1% of Medicine papers from 2014 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Global consensus on optimal exercise recommendations for enhancing healthy longevity in older adults (ICFSR) (2025)	AdventHealth Orlando, Baylor College of Medicine, Centre Hospitalo-Universitaire de Toulouse	Australia, Brazil, Canada	—

No.	Citing paper	Citing institution(s)	Country	S2
2	Frailty in Older Adults (2024)	Dalhousie University, Hebrew SeniorLife	Canada, 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).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of Michigan	United States	SCImago #43 · THE 23 · QS 45	4
University of Oxford	United Kingdom	SCImago #26 · THE 1 · QS 4	3
UT Southwestern Medical Center	United States	—	3
Guangzhou Medical University	China	SCImago #761 · THE 801–1000	3
National Institute of Environmental Health Sciences	United States	SCImago #581	3
University of Groningen, University Medical Center Groningen	Netherlands	—	2
University of Helsinki	Finland	SCImago #368 · THE =105 · QS =116	2
Life Sciences Institute, University of Michigan	United States	—	2
Weill Cornell Medical College	United States	—	2
Cancer Research UK Beatson Institute	United Kingdom	—	2
New York University School of Medicine	United States	—	2
University of Massachusetts Medical School	United States	—	2
University of Oslo	Norway	SCImago #425 · THE =113 · QS =119	2
University of Birmingham	United Kingdom	SCImago #369 · THE =98 · QS 76	2
University of British Columbia	Canada	SCImago #144 · THE 45 · QS 40	2

Geographic distribution of citing authors

Country	Citing papers
United States	10
China	7
France	4
United Kingdom	4
Spain	4
Canada	4
Italy	3

Country	Citing papers
Australia	3
Switzerland	3
Israel	2
Netherlands	2
Germany	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	Guidelines for the use and interpretation of assays for monitoring autophagy	8	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Geroscience: linking aging to chronic disease	2	Dhanasar — Prong 2 (well-positioned)