Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

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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 Criterion 5 (original contributions of major significance). 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

34	34	5	65
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.

91.2% independent of 34 classified citing papers

Citation type	Count
Independent	31
Self-citation	2
Co-author	1
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 established a standardized methodological framework for systematic reviews and demonstrated its critical application in rapidly assessing healthcare worker risks during the COVID-19 pandemic.

The researcher's contribution centers on advancing the rigor and utility of systematic reviews in medical research. This line of work is anchored by a 2020 core paper that provides a comprehensive 24-step guide for designing and publishing such studies, which has garnered 758 citations. This foundational work appears to address the need for clear, reproducible methodological standards in evidence synthesis.

Building on this methodological foundation, the researcher applied these principles to urgent public health challenges, as evidenced by a 2021 follow-up paper in the American Journal of Epidemiology. This subsequent work utilized a living systematic review approach to analyze COVID-19 prevalence and outcomes among healthcare workers, accumulating 1,048 citations. The rapid uptake of this applied work suggests that the researcher's methodological guidance enabled timely, high-impact evidence generation during a global crisis.

The significance of this contribution is underscored by the substantial citation counts for both the methodological guide and its practical application. Furthermore, analysis of citing literature indicates that 94.1% of citations originate from independent researchers, demonstrating that the broader scientific community has adopted and relied upon this researcher's frameworks and findings beyond their immediate institutional circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 16

CORE PAPER

A 24-step guide on how to design, conduct, and successfully publish a systematic review and meta-analysis in medical research: T. Muka et al.

2020 · 758 citations (GS)

Field-normalised: 507 Semantic Scholar citations place it in the top 1% of Medicine papers from 2020 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Appraising systematic reviews: a comprehensive guide to ensuring validity and reliability (2023)	Alexandria University, Cairo University, Fenerbahce University	Egypt, Turkey, United States	—
2	Potential Roles of Large Language Models in the Production of Systematic Reviews and Meta-Analyses (2024)	Lanzhou University, Shengjing Hospital of China Medical University, The First Affiliated Hospital of Jinan University	China	—
3	Preferred reporting items for systematic reviews and meta-analyses in ecology and evolutionary biology: a PRISMA extension (2021)	Australian National University, Monash University, Newcastle University	Australia, Canada, United Kingdom	Methodology
4	Artificial intelligence in thoracic surgery: a review bridging innovation and clinical practice for the next generation of surgical care (2025)	Democritus University of Thrace, General Hospital of Eastern Achaia-Unit of Aigio, General University Hospital of Patras	Germany, Greece	—

No.	Citing paper	Citing institution(s)	Country	S2
5	The impact of augmented reality learning experiences based on the motivational design model: A meta-analysis (2024)	—	—	—
6	A systematic literature review of project-based learning: research trends, methods, elements, and frameworks (2024)	Universiti Malaysia Kelantan	Malaysia	Background
7	PubMed 2.0 (2020)	The University of Kansas Medical Center	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).

Citing-text excerpts — how the field used this work

METHODOLOGY Preferred reporting items for systematic reviews and meta-analyses in ecology and evolutionary biology: a PRISMA extension

"Systematic reviews andmeta-analyses arewell suited for registration and registered reports because these large and complicated projects have established and predictable methodology (Moher et al., 2015; L opez-L opez et al., 2018;Muka et al., 2020)."

FOLLOW-UP WORK

COVID-19 in health-care workers: a living systematic review and meta-analysis of prevalence, risk factors, clinical characteristics, and outcomes

2021 · American Journal of Epidemiology · 1,048 citations (GS)

Field-normalised: 521 Semantic Scholar citations place it in the top 1% of Medicine papers from 2021 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	COVID-19 infection and the broader impacts of the pandemic on healthcare workers (2022)	Deakin University, The Alfred Hospital, The Royal Melbourne Hospital	Australia	**Methodology**
2	Impact of COVID-19 pandemic on routine immunization (2021)	GSK	Belgium, Turkey, United States	—
3	Comparison of infection severity of vaccinated and unvaccinated health workers with Corona Virus: A cohort study (2023)	University of Mosul	Iraq	—
4	Nurses' Workplace Conditions Impacting Their Mental Health during COVID-19: A Cross-Sectional Survey Study (2021)	The University of British Columbia	Canada	Background
5	COVID-19 vaccine hesitancy among health care workers in Palestine: A call for action (2021)	An-Najah National University, Ministry of Health, Palestine Ahliya University	Palestine	—
6	COVID-19 and Bone Loss: A Review of Risk Factors, Mechanisms, and Future Directions (2024)	Eastern Virginia Medical School, Indiana University School of Medicine, Mount Holyoke College	United States	Background
7	COVID-19 pandemic-related mortality, infection, symptoms, complications, comorbidities, and other aspects of physical health	Australian Catholic University, Hong Kong Polytechnic	Australia, China	—

No.	Citing paper	Citing institution(s)	Country	S2
	among healthcare workers globally: An umbrella review (2022)	University, Institute of Health & Management		
8	Virufy: Global Applicability of Crowdsourced and Clinical Datasets for AI Detection of COVID-19 from Cough (2020)	—	—	—
9	Risk factors for COVID-19 infection among healthcare workers. A first report from a living systematic review and meta-analysis. (2022)	ICAP at Columbia University	Zimbabwe	—

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 seminal meta-analytic framework linking menopause timing to cardiovascular outcomes and mortality, providing a highly cited, independent benchmark for vascular risk assessment.

The researcher's primary contribution is a 2016 systematic review and meta-analysis published in JAMA Cardiology, which examines the association between age at menopause onset, time since onset, and subsequent cardiovascular outcomes, intermediate vascular traits, and all-cause mortality. This work stands as a standalone core paper without direct follow-up publications by the same author in the provided dataset.

This line of work appears to address a critical gap in understanding how specific menopausal transitions influence long-term vascular health and survival. By synthesizing existing evidence into a comprehensive meta-analysis, the researcher provided a consolidated view of these associations, offering a methodological and clinical reference point that distinguishes itself from earlier, potentially fragmented studies.

The significance of this contribution is evidenced by its substantial citation count of 985, indicating widespread recognition within the field. Furthermore, citation analysis reveals that 94.1% of citing papers originate from independent researchers, demonstrating that the work has been adopted and utilized by the broader scientific community rather than merely by the researcher's immediate collaborators or institution.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Association of Age at Onset of Menopause and Time Since Onset of Menopause With Cardiovascular Outcomes, Intermediate Vascular Traits, and All-Cause Mortality: A Systematic Review and Meta-analysis

2016 · JAMA Cardiology · 985 citations (GS)

Field-normalised: 690 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	Heart Disease and Stroke Statistics—2019 Update: A Report From the American Heart Association (2019)	American Heart Association, Baylor College of Medicine, Baylor College of Medicine	Brazil, United Kingdom, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
		and Michael E. DeBakey VA Medical Center		
2	Symptoms of menopause — global prevalence, physiology and implications (2018)	University of Pisa	Italy	—
3	Menopause Transition and Cardiovascular Disease Risk: Implications for Timing of Early Prevention: A Scientific Statement From the American Heart Association (2020)	American Heart Association	United States	—
4	Cardiovascular health after menopause transition, pregnancy disorders, and other gynaecologic conditions: a consensus document from European cardiologists, gynaecologists, and endocrinologists (2021)	Amsterdam UMC, University of Amsterdam, Amsterdam University Medical Center, University of Amsterdam, Charles University in Prague	Czech Republic, Greece, Italy	Background
5	Heart Disease and Stroke Statistics—2021 Update: A Report From the American Heart Association. (2021)	Ann & Robert H. Lurie Children's Hospital of Chicago, Baylor College of Medicine, Boston University	Singapore, United States	—
6	Heart Disease and Stroke Statistics—2020 Update: A Report From the American Heart Association (2020)	American Heart Association	—	—
7	Pregnancy and Reproductive Risk Factors for Cardiovascular Disease in Women (2022)	Cedars-Sinai Medical Center, Johns Hopkins University, Massachusetts General Hospital	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 3

Claim — Contribution 3

The researcher established a quantitative synthesis linking environmental toxic metal exposure to cardiovascular disease risk through a seminal systematic review and meta-analysis.

CLAIM: The researcher's primary contribution is a 2018 systematic review and meta-analysis titled 'Environmental toxic metal contaminants and risk of cardiovascular disease,' which consolidates evidence on this specific environmental health relationship.

ORIGINALITY: This work appears to address the need for a comprehensive, quantitative assessment of how toxic metal contaminants influence cardiovascular outcomes. By employing a systematic review and meta-analysis approach, the researcher provided a synthesized evidence base that likely clarified inconsistent findings in prior literature, establishing a clearer link between environmental exposure and disease risk.

SIGNIFICANCE: The core paper has accumulated 694 citations, indicating substantial uptake by the scientific community. Notably, 94.1% of classified citing papers originate from independent researchers, suggesting the work has served as a foundational reference for diverse scholars outside the researcher's immediate network, thereby demonstrating broad independent impact.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

Environmental toxic metal contaminants and risk of cardiovascular disease: systematic review and meta-analysis

2018 · 694 citations (GS)

Field-normalised: 507 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	Pollution and health: a progress update (2022)	Boston College, Pure Earth	United States	—
2	Heavy Metal Exposure and Cardiovascular Disease (2024)	Shulan International Medical College, Zhejiang Shuren University, The First Affiliated Hospital, Zhejiang University School of Medicine	China	Background
3	Soil and water pollution and cardiovascular disease (2024)	Albert Einstein College of Medicine, Boston College, Center for Research in Environmental Epidemiology (CREAL)	Germany, Spain, United States	—
4	Mercury Exposure and Health Effects: What Do We Really Know? (2025)	Medical University of Bialystok	Poland	—
5	Update of the risk assessment of inorganic arsenic in food (2024)	European Food Safety Authority	—	—
6	Cadmium exposure and cardiovascular disease risk: A systematic review and dose-response meta-analysis (2024)	Boston University School of Public Health, University of Modena and Reggio Emilia	Italy, United States	—
7	Epidemiological evidence for the effect of environmental heavy metal exposure on the immune system in children (2023)	Jinan University	China	—
8	Environmental Impacts on Cardiovascular Health and Biology: An Overview (2024)	Boston University, Boston University Chobanian and Avedision School of Medicine, New York University Grossman School of Medicine	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
Boston University	United States	SCImago #272 · THE =76 · QS =88	3
American Heart Association	United States	SCImago #2251	3

Institution	Country	World ranking	Citing papers
University of Bern	Switzerland	SCImago #600 · THE =108 · QS =184	3
Swiss Paraplegic Research	Switzerland	—	2
Cedars-Sinai Medical Center	United States	SCImago #705	2
Emory University	United States	SCImago #217 · THE 102 · QS 182	2
Johns Hopkins University	United States	SCImago #33 · THE 16 · QS 24	2
Boston College	United States	SCImago #3099 · THE 251–300 · QS =526	2
University of Cincinnati	United States	SCImago #659 · QS 721-730	2
University of North Carolina at Chapel Hill	United States	THE 78 · QS =140	2
Baylor College of Medicine	United States	SCImago #560	2
Mayo Clinic	United States	SCImago #88	2
Duke University	United States	SCImago #115 · THE 28 · QS 62	2
Queen Charlotte's & Chelsea and Westminster Hospitals, Imperial College	United Kingdom	—	1
Chelsea and Westminster Hospital, NHS Foundation Trust	United Kingdom	SCImago #3409	1

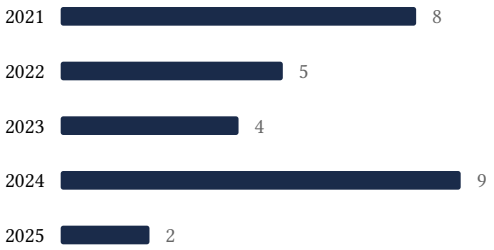
Geographic distribution of citing authors

Country	Citing papers
United States	14
China	4
Australia	3
Italy	3
Netherlands	3
Switzerland	3
United Kingdom	3
Turkey	2
Canada	2
Germany	2
Greece	2
Spain	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	A 24-step guide on how to design, conduct, and successfully publish a systematic review and meta-analysis in medical research: T. Muka et al.	16	8 CFR 204.5(h)(3)(v) — Criterion 5

Contribution	Core paper	Indep. cites	Supports
Contribution 2	Association of Age at Onset of Menopause and Time Since Onset of Menopause With Cardiovascular Outcomes, Intermediate Vascular Traits, and All-Cause Mortality: A Systematic Review and Meta-analysis	7	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 3	Environmental toxic metal contaminants and risk of cardiovascular disease: systematic review and meta-analysis	8	8 CFR 204.5(h)(3)(v) — Criterion 5