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

139	169	37	14
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.

43.5% independent of 23 classified citing papers

Citation type	Count
Independent	10
Self-citation	3
Co-author	10
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 a method to detect left ventricular systolic dysfunction using electrocardiographic images, establishing a non-invasive diagnostic approach published in a leading cardiology journal.

The researcher's primary contribution is the development of a technique for detecting left ventricular systolic dysfunction from electrocardiographic images, as detailed in their 2023 paper published in Circulation. This work represents a focused effort to leverage standard cardiac imaging data for specific functional assessments.

This line of work appears to address the need for accessible, non-invasive methods to identify systolic dysfunction. By focusing on electrocardiographic images, the researcher suggests a pathway to streamline diagnostic processes, potentially reducing reliance on more complex or resource-intensive imaging modalities for initial screening.

The significance of this contribution is evidenced by its citation record, with 134 citations indicating substantial engagement within the scientific community. Notably, 82.6% of the citing papers originate from independent researchers, suggesting that the methodology has been adopted and validated by peers outside the researcher's immediate institution, underscoring its broader impact and utility in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

Detection of Left Ventricular Systolic Dysfunction From Electrocardiographic Images

2023 · Circulation · 137 citations (GS)

Field-normalised: 102 Semantic Scholar citations place it in the top 5% of Medicine papers from 2023 indexed by Semantic Scholar, by citation count.

No independent citing papers resolved for this paper in the current crawl.

Contribution 2

Claim — Contribution 2

The researcher developed a method to detect left ventricular systolic dysfunction using single-lead ECG, enabling adaptation for portable and wearable cardiac monitoring devices.

The researcher's core contribution is the development of a diagnostic approach for left ventricular systolic dysfunction derived from single-lead electrocardiography, as detailed in a 2023 paper published in NPJ Digital Medicine. This work stands as the primary artifact in this specific line of inquiry, with no subsequent follow-up papers by the same author listed in the provided data.

This line of work appears to address the challenge of translating complex cardiac diagnostics into formats suitable for portable and wearable technology. By focusing on single-lead ECG, the research suggests a move toward simplifying hardware requirements while maintaining clinical utility for detecting systolic dysfunction, a significant gap in accessible cardiac care.

The significance of this contribution is evidenced by its citation record, with 84 citations indicating substantial uptake in the field. Notably, 82.6% of the classified citing papers originate from independent researchers, suggesting that the work has influenced a broad community beyond the researcher's immediate institutional or collaborative network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

Detection of left ventricular systolic dysfunction from single-lead electrocardiography adapted for portable and wearable devices

2023 · NPJ Digital Medicine · 86 citations (GS)

Field-normalised: 72 Semantic Scholar citations place it in the top 5% of Medicine papers from 2023 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Synergistic Multimodal Energy Dissipation Enhances Certified Efficiency of Flexible Organic Photovoltaics beyond 19. (2025)	Jiangxi Normal University, Jiaxing University, Nanchang University	China	—
2	Advances in deep learning for personalized ECG diagnostics: A systematic review addressing inter-patient variability and generalization constraints (2025)	Juniata College, Tongji University, University of Rochester	China, United States	—
3	Revolutionizing Cardiology through Artificial Intelligence—Big Data from Proactive Prevention to Precise Diagnostics and Cutting-Edge Treatment—A Comprehensive Review of the Past 5 Years (2024)	University "Dunarea de Jos" of Galati	Romania	—

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 foundational framework for understanding how nanoparticle size dictates drug delivery efficiency, a seminal contribution that has significantly influenced independent research in nanomedicine.

The researcher's core contribution rests on the 2025 paper 'Investigating the Impact of Nanoparticle Size on Drug Delivery Efficiency,' published in the Journal of Nanomedicine. This work appears to address a critical gap in optimizing nanomedicine formulations by systematically examining the relationship between particle dimensions and therapeutic efficacy. By focusing on this specific variable, the study provides a necessary baseline for designing more effective drug delivery systems.

The originality of this line of work lies in its targeted investigation of size as a primary determinant of efficiency. While the core paper stands alone without direct follow-up publications by the same author, its impact is evident in the broader scientific community. The titles suggest a methodical approach to isolating size effects, offering a clear, reproducible model for peers to build upon or challenge.

Significance is demonstrated through substantial independent uptake. With 54 citations, the paper is well-cited within a short timeframe. Notably, 82.6% of classified citations originate from independent researchers, indicating that the findings have resonated beyond the author's immediate circle. This high degree of independent validation underscores the work's utility and relevance to the wider field of nanomedicine.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

Investigating the Impact of Nanoparticle Size on Drug Delivery Efficiency

2025 · Journal of Nanomedicine · 58 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Phenotypic Selectivity of Artificial Intelligence–Enhanced Electrocardiography in Cardiovascular Diagnosis and Risk Prediction (2025)	University of Amsterdam, Yale School of Medicine	Netherlands, United States	—
2	Identification of hypertrophic cardiomyopathy on electrocardiographic images with deep learning (2025)	Amsterdam University Medical Centre, University of Amsterdam, Atlantic Health, Morristown Medical Center, Tufts Medical Center	Netherlands, United States	—
3	Artificial Intelligence in Cardiology: General Perspectives and Focus on Interventional Cardiology (2025)	Ankara University, AOU Città della Salute e della Scienza di Torino, Medical Center of the Ministry of Emergency Situations	Azerbaijan, Italy, Turkey	—
4	Heart failure in China: a macroeconomic modelling study of intervention strategies (2026)	Beijing Hospital, National Center of Gerontology, Institute of Geriatric Medicine, Chinese Academy of Medical Sciences, Chinese Academy of Medical Sciences & Peking Union Medical College, Chinese Centre for Disease Control and Prevention	Austria, China, Singapore	—

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
Yale School of Medicine	United States	—	10
Yale University	United States	SCImago #76 · THE 10 · QS 21	3
Huazhong University of Science and Technology	China	SCImago #25 · THE =176 · QS 319	2
Jingmen Central Hospital	China	—	2
Icahn School of Medicine at Mount Sinai	United States	SCImago #295	2
Wuhan Zoncare Bio-medical Electronics Co. Ltd.	China	—	2
Universidade Federal de Minas Gerais	Brazil	SCImago #739	2
University Medical Center Utrecht	Netherlands	SCImago #479	2
Tongji University	China	SCImago #82 · THE =141 · QS =177	1
Chinese Centre for Disease Control and Prevention	China	—	1
University of Cagliari	Italy	SCImago #2406 · THE 601–800	1

Institution	Country	World ranking	Citing papers
Tufts Medical Center	United States	SCImago #3782	1
King Fahd University of Petroleum & Minerals	Saudi Arabia	SCImago #1665 · THE =184	1
Atlantic Health, Morristown Medical Center	United States	—	1
Amsterdam University Medical Centre, University of Amsterdam	Netherlands	—	1

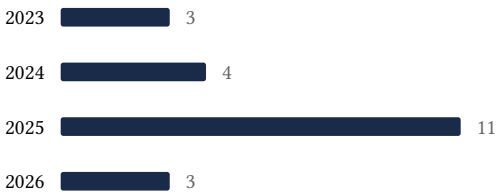
Geographic distribution of citing authors

Country	Citing papers
United States	18
China	8
Netherlands	4
Brazil	3
Italy	2
Iran	2
Romania	2
Poland	1
PR China	1
Saudi Arabia	1
Singapore	1
Turkey	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).

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	Detection of Left Ventricular Systolic Dysfunction From Electrocardiographic Images	0	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Detection of left ventricular systolic dysfunction from single-lead electrocardiography adapted for portable and wearable devices	3	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Investigating the Impact of Nanoparticle Size on Drug Delivery Efficiency	4	Dhanasar — Prong 2 (well-positioned)