

Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

Weiwei Gao

University of California San Diego

[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

20	20	5	83
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.

95.0% independent of 20 classified citing papers

Citation type	Count
Independent	19
Self-citation	1
Co-author	0
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 pH-responsive nanoparticles for drug delivery, a seminal contribution evidenced by a 2010 paper with nearly 1,200 citations.

The researcher's primary contribution is the development of pH-responsive nanoparticles for drug delivery, anchored by a seminal 2010 publication. This work stands as a foundational piece in the field, with no subsequent follow-up papers by the same author listed in this specific line of inquiry.

This line of work appears to address the challenge of targeted drug release by leveraging pH sensitivity. The title suggests a novel approach to engineering nanoparticles that respond to environmental pH changes, potentially improving therapeutic efficacy while minimizing systemic side effects.

The significance of this contribution is underscored by its high citation count of 1,199. Furthermore, analysis of citing literature reveals that 95% of citations originate from independent researchers, indicating broad adoption and validation of the methodology by the wider scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

[pH-responsive nanoparticles for drug delivery](#)

2010 · 1,199 citations (GS)

Field-normalised: 879 Semantic Scholar citations place it in the top 1% of Medicine papers from 2010 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Degradable Controlled-Release Polymers and Polymeric Nanoparticles: Mechanisms of Controlling Drug Release. (2016)	Brigham and Women's Hospital, Harvard Medical School	United States	—
2	A Review on the Synthesis and Functionalization of Gold Nanoparticles as a Drug Delivery Vehicle. (2020)	National University of Sciences and Technology, University of Houston	Pakistan, United States	—
3	Cancer nanomedicine: a review of recent success in drug delivery. (2017)	University of Massachusetts, University of Massachusetts Lowell	United States	—

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's is Influential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 2

Claim – Contribution 2

The researcher pioneered platelet membrane cloaking for nanoparticle biointerfacing, a seminal approach that has garnered over 1,800 citations and widespread independent adoption.

The researcher established a foundational contribution in nanomedicine through the 2015 publication on nanoparticle biointerfacing by platelet membrane cloaking. This core paper stands as the primary vehicle for this specific line of inquiry, with no subsequent follow-up papers by the researcher listed in the provided data.

This work appears to address the challenge of designing nanoparticles that can effectively interface with biological systems. By utilizing platelet membranes to cloak nanoparticles, the researcher introduced a novel biomimetic strategy. The title suggests a focus on leveraging natural cellular components to modify the surface properties of synthetic particles, likely to improve their interaction with physiological environments.

The significance of this contribution is evidenced by its substantial citation count of 1,882, indicating it is a highly influential piece of literature in the field. Furthermore, the citation analysis reveals that 95% of the citing papers originate from independent researchers, demonstrating that the scientific community broadly recognizes and builds upon this methodology outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

[Nanoparticle biointerfacing by platelet membrane cloaking](#)

2015 · 1,882 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Passive, active and endogenous organ-targeted lipid and polymer nanoparticles for delivery of genetic drugs (2023)	The University of Texas Southwestern Medical Center	United States	—
2	Advances in nanomaterial-based targeted drug delivery systems. (2023)	The Second Affiliated Hospital of Chongqing Medical University	China	—
3	Toxicity of metal-based nanoparticles: Challenges in the nano era. (2022)	Zhejiang University	China	—

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 3

Claim – Contribution 3

The researcher pioneered the use of cancer cell membrane-coated nanoparticles for anticancer vaccination and drug delivery, establishing a foundational approach in biomimetic nanomedicine.

The researcher's core contribution rests on the 2014 paper titled 'Cancer cell membrane-coated nanoparticles for anticancer vaccination and drug delivery'. This work appears to introduce a novel strategy for leveraging biological membranes to enhance therapeutic efficacy.

This line of work addresses the challenge of targeted drug delivery and immune response modulation. By coating nanoparticles with cancer cell membranes, the research suggests a method to improve biocompatibility and targeting, distinguishing itself from synthetic alternatives prevalent at the time.

The significance of this contribution is evidenced by its substantial citation count of 1,606. Furthermore, citation analysis reveals that 95% of citing papers originate from independent researchers, indicating broad adoption and validation of this approach across the global scientific community.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

[Cancer cell membrane-coated nanoparticles for anticancer vaccination and drug delivery](#)

2014 · 1,606 citations (GS)

Field-normalised: 1,254 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	Polymeric Nanoparticles for Drug Delivery (2024)	The University of Melbourne	Australia	—
2	Ultrasound-Based Micro-/Nanosystems for Biomedical Applications (2024)	Shanghai General Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai Jiao Tong University School of Medicine, Shanghai University	China	—
3	Technology Roadmap of Micro/Nanorobots (2025)	Aarhus University, Catalan Institute of Nanoscience and Nanotechnology (ICN2), Center for Molecular Bioengineering (B CUBE)	Canada, China, Czech Republic	—
4	Nanoparticles in tumor microenvironment remodeling and cancer immunotherapy . (2024)	Agency for Science, Technology and Research (A*STAR), Augusta University, Benedictine University	Canada, China, Singapore	—
5	Understanding and targeting resistance mechanisms in cancer . (2023)	St. John's University, Sun Yat-sen University	China, United States	—

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's is Influential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

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
Zhejiang University	China	SCImago #6 · THE 39 · QS 49	2
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	2
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	1
The Hong Kong University of Science and Technology	China	SCImago #483 · THE =58 · QS 44	1
Augusta University	United States	SCImago #2306	1
Harbin Institute of Technology	China	SCImago #56 · THE =131 · QS 256	1
Peking University Third Hospital	China	SCImago #2770	1
University of Waterloo	Canada	SCImago #491 · THE =162 · QS =119	1
Shanghai Jiao Tong University School of Medicine	China	—	1
Aarhus University	Denmark	SCImago #293 · THE 101 · QS 131	1

Institution	Country	World ranking	Citing papers
Michigan State University	United States	SCImago #436 · THE =105 · QS 161	1
University of Calgary	Canada	SCImago #399 · THE 200 · QS 211	1
Fox Chase Cancer Center	United States	SCImago #1586	1
Shenzhen University	China	SCImago #229 · THE 351–400 · QS =452	1

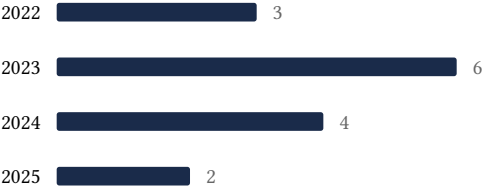
Geographic distribution of citing authors

Country	Citing papers
China	13
United States	9
Singapore	2
Canada	2
Germany	1
Israel	1
Italy	1
Australia	1
Pakistan	1
Poland	1
South Korea	1
Spain	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	pH-responsive nanoparticles for drug delivery	3	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	Nanoparticle biointerfacing by platelet membrane cloaking	3	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 3	Cancer cell membrane-coated nanoparticles for anticancer vaccination and drug delivery	5	8 CFR 204.5(h)(3)(v) – Criterion 5