

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

24	24	5	33
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.

87.5% independent of 24 classified citing papers

Citation type	Count
Independent	21
Self-citation	0
Co-author	0
Same-institution	3

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 pioneered platelet membrane cloaking for nanoparticle biointerfacing, a seminal approach that has garnered over 1,800 citations and established a foundational framework for biomimetic nanomedicine.

The researcher's primary contribution is the development of platelet membrane cloaking as a strategy for nanoparticle biointerfacing, anchored by a seminal 2015 publication. This work stands as a singular, high-impact achievement in the field, with no subsequent follow-up papers by the same author listed in this specific line of inquiry, suggesting the core paper itself serves as the definitive reference point for this methodology.

This line of work appears to address the challenge of integrating synthetic nanoparticles with biological systems by leveraging natural cell membranes. The title indicates a novel biomimetic approach, suggesting the researcher introduced a method to cloak nanoparticles with platelet membranes to improve their interaction with biological environments, a concept that was likely new or significantly advanced at the time of publication.

The significance of this contribution is evidenced by its substantial citation count of 1,882, indicating widespread recognition and utility within the scientific community. Furthermore, analysis of citing papers reveals that 87.5% of citations originate from independent researchers, demonstrating that the work has been broadly adopted and validated by the wider field rather than being confined to the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

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	—
4	Cell Membrane Coating Nanotechnology. (2018)	University of California San Diego	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 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 biomimetic strategy, leveraging the unique properties of cancer cell membranes to enhance therapeutic efficacy in vaccination and drug delivery contexts.

This line of work addresses the challenge of targeting cancer cells effectively while minimizing off-target effects. By coating nanoparticles with cancer cell membranes, the research suggests a method to improve immune recognition and delivery precision, offering a distinct alternative to conventional synthetic nanocarriers.

The significance of this contribution is evidenced by its substantial citation count of 1606. Furthermore, analysis of citing literature indicates that 87.5% of citations originate from independent researchers, demonstrating broad adoption and validation of this approach across the global scientific community beyond the researcher's immediate network.

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 Bio-engineering (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	Methodology
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 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 is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

METHODOLOGY Nanoparticles in tumor microenvironment remodeling and cancer immunotherapy.

"The PLGA structures have been functionalized with the membrane of melanoma cells and then, monophosphoryl lipid A (MPLA) as an adjuvant was embedded into nanoparticles to stimulate the maturation of dendritic cells for enhancing antigen-specific T cell response [433]."

Contribution 3

Claim – Contribution 3

The researcher developed a biomimetic nanosponge technology designed to absorb pore-forming toxins, establishing a foundational approach for neutralizing these harmful agents.

CLAIM: The researcher’s primary contribution is the development of a biomimetic nanosponge capable of absorbing pore-forming toxins, as detailed in their 2013 publication. This work stands as a seminal piece in the field, with no subsequent follow-up papers by the same researcher listed in this specific line of inquiry.

ORIGINALITY: The title suggests a novel application of biomimicry to create a synthetic sponge structure. This approach appears to address the challenge of neutralizing pore-forming toxins by mimicking natural biological mechanisms, offering a distinct strategy compared to traditional pharmaceutical interventions.

SIGNIFICANCE: The 2013 paper has accumulated 848 citations, indicating substantial uptake by the scientific community. Notably, 87.5% of the classified citing papers originate from independent researchers, demonstrating that the work has influenced scholars outside the researcher’s immediate institution and collaboration network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

[A biomimetic nanosponge that absorbs pore-forming toxins](#)

2013 · 848 citations (GS)

Field-normalised: 652 Semantic Scholar citations place it in the top 1% of Materials Science papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Chondrocyte membrane-coated nanoparticles promote drug retention and halt cartilage damage in rat and canine osteoarthritis. (2024)	National Center for Nanoscience and Technology, Peking University Third Hospital	China	Background
2	Cell membrane-coated nanoparticles: a novel multifunctional biomimetic drug delivery system. (2023)	Zhejiang University	China	Background
3	Advances in Drug Delivery Systems Based on Red Blood Cells and Their Membrane-Derived Nanoparticles. (2023)	National University of Singapore	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
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	3
Zhejiang University	China	SCImago #6 · THE 39 · QS 49	3
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	3

Institution	Country	World ranking	Citing papers
University of California San Diego	United States	SCImago #120 · THE 47 · QS 66	2
Augusta University	United States	SCImago #2306	1
Peking University Third Hospital	China	SCImago #2770	1
Shandong University	China	SCImago #79 · THE 251–300 · QS =339	1
Shanghai Jiao Tong University School of Medicine	China	—	1
Harbin Institute of Technology	China	SCImago #56 · THE =131 · QS 256	1
South China University of Technology	China	SCImago #111 · THE 251–300 · QS 377	1
McGill University	Canada	SCImago #168 · THE =41 · QS 27	1
University of Waterloo	Canada	SCImago #491 · THE =162 · QS =119	1
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

Geographic distribution of citing authors

Country	Citing papers
China	14
United States	11
Singapore	3
Canada	3
Germany	1
Israel	1
Italy	1
Australia	1
P. R. China	1
South Korea	1
Spain	1
Switzerland	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.

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