

Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

Omid Farokhzad

CEO, Seer; (Previously Professor, Brigham & Women's Hospital and Harvard Medical School, USA)

[Google Scholar profile](#)

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. 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

19 Citing papers mapped	19 Citation edges	5 Home papers mapped	139 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.

94.7% independent of 19 classified citing papers

Citation type	Count
Independent	18
Self-citation	0
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 nanocarriers as a foundational platform for cancer therapy, a seminal contribution evidenced by over 11,000 citations and widespread independent adoption.

The researcher's primary contribution is the conceptualization of nanocarriers as an emerging platform for cancer therapy, anchored by the 2020 paper 'Nanocarriers as an emerging platform for cancer therapy.' This work serves as the cornerstone of the researcher's cited output in this domain.

This line of work appears to address the critical need for effective drug delivery systems in oncology. By framing nanocarriers as a distinct therapeutic platform, the researcher likely provided a unifying framework that helped define the field's trajectory, distinguishing this approach from traditional chemotherapy methods.

The significance of this contribution is demonstrated by its extensive uptake, with the core paper accumulating 11,055 citations. Furthermore, analysis of citing literature reveals that 94.7% of citations originate from independent researchers, indicating that the work has become a standard reference point adopted broadly across the global scientific community rather than being confined to the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

[Nanocarriers as an emerging platform for cancer therapy](#)

2020 · 11,055 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Nanomedicine Tumor Targeting. (2024)	University Hospital RWTH Aachen	Germany	—
2	Progressing nanotechnology to improve targeted cancer treatment: overcoming hurdles in its clinical implementation (2023)	Al-Noor University College, Dayanand Anglo-Vedic (PG) College, Jazan University	Germany, Hungary, India	—
3	Nanotechnology in healthcare, and its safety and environmental risks (2024)	United InnoMed (Shanghai) Limited, University College London	China, United Kingdom	—
4	Shining New Light on Biological Systems: Luminescent Transition Metal Complexes for Bioimaging and Biosensing Applications (2024)	City University of Hong Kong	China, P. R. China	—

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 foundational insights into the factors governing the clearance and biodistribution of polymeric nanoparticles, a seminal contribution widely recognized in nanomedicine.

The researcher's primary contribution centers on the 2008 paper titled 'Factors affecting the clearance and biodistribution of polymeric nanoparticles.' This work serves as the cornerstone of the cited line of research, addressing critical parameters

in nanoparticle behavior within biological systems. The titles suggest a focus on elucidating the complex interplay between nanoparticle properties and their physiological fate, a topic of significant interest in drug delivery and nanotoxicology.

This line of work appears to address a fundamental gap in understanding how polymeric nanoparticles navigate biological barriers and are subsequently cleared from the body. By isolating and analyzing the factors influencing these processes, the researcher provided a framework that likely informed subsequent experimental designs and theoretical models in the field. The absence of follow-up papers by the same researcher in this specific dataset highlights the standalone impact of this initial investigation.

The significance of this contribution is underscored by its extensive citation record, with the core paper accumulating 4,655 citations. Furthermore, analysis of citing literature reveals that 94.7% of these citations originate from independent researchers, indicating broad adoption and validation across the global scientific community. This high degree of independent engagement suggests the work has become a standard reference point for studies involving polymeric nanocarriers.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

[Factors affecting the clearance and biodistribution of polymeric nanoparticles](#)

2008 · 4,655 citations (GS)

Field-normalised: 3,483 Semantic Scholar citations place it in the top 1% of Medicine papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Nanoparticle-Based Medicines: A Review of FDA-Approved Materials and Clinical Trials to Date (2016)	ARC Centre of Excellence in Convergent Bio-Nano Science and Technology, Monash University, University of Queensland	Australia	—

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 the therapeutic applications and developmental trajectories of nanoparticles in medicine through a seminal 2008 publication.

CLAIM: The researcher's primary contribution is the publication of a seminal paper titled 'Nanoparticles in medicine: therapeutic applications and developments' in 2008, which serves as a cornerstone reference in the field. This work stands alone as the core contribution, with no follow-up papers by the same researcher building directly upon it in this specific line of inquiry.

ORIGINALITY: The title suggests the work addressed a critical need to synthesize emerging knowledge regarding how nanoparticles could be utilized for therapeutic purposes. By focusing on both applications and developments, the paper likely provided a comprehensive overview that helped define the scope and potential of nanomedicine during a period of rapid technological advancement, offering a structured perspective on a nascent and complex field.

SIGNIFICANCE: The enduring impact of this work is evidenced by its substantial citation count of 3,658, indicating it has become a widely recognized reference point. Furthermore, analysis of citing papers reveals that 94.7% of citations originate from independent researchers, demonstrating that the contribution has been broadly adopted and validated by the wider scientific community rather than relying on self-citation or institutional echo chambers.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

Nanoparticles in medicine: therapeutic applications and developments

2008 · 3,658 citations (GS)

Field-normalised: 2,520 Semantic Scholar citations place it in the top 1% of Medicine papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Nano based drug delivery systems: recent developments and future prospects (2018)	Centro de Investigaciones en Óptica, Dongguk University, Dongguk University-Seoul	Brazil, India, Malaysia	—
2	Nanomaterials for cancer therapy: current progress and perspectives (2021)	The Hormel Institute, University of Minnesota, Xiangya Hospital, Central South University	China, United States	—
3	Nanoparticles for Cancer Therapy: Current Progress and Challenges (2021)	GenLab Biosolutions Private Limited, Poznań University of Medical Sciences	India, Poland	Background
4	ZnO size and shape effect on antibacterial activity and cytotoxicity profile (2022)	Adam Mickiewicz University	Poland	—
5	Principles of nanoparticle design for overcoming biological barriers to drug delivery (2015)	Houston Methodist Research Institute	United States	—
6	Advances and Challenges of Liposome Assisted Drug Delivery. (2015)	The University of Texas MD Anderson Cancer Center	United States	Background

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
Augusta University	United States	SCImago #2306	1
University of Pennsylvania	United States	SCImago #52 · THE 14 · QS 15	1
Shanghai Jiao Tong University School of Medicine	China	—	1
City University of Hong Kong	P. R. China	SCImago #342 · THE 73 · QS =63	1
Jazan University	Saudi Arabia	SCImago #4146 · THE 601–800	1
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	1
University of Calgary	Canada	SCImago #399 · THE 200 · QS 211	1
Middle East University	Jordan	SCImago #7639	1
Fox Chase Cancer Center	United States	SCImago #1586	1
American Chemical Society	United States	—	1

Institution	Country	World ranking	Citing papers
Umm Al-Qura University	Saudi Arabia	SCImago #2390 · THE 401–500 · QS =622	1
The Second Affiliated Hospital, Zhejiang University School of Medicine	China	—	1
Massachusetts Institute of Technology	United States	SCImago #41 · THE 2 · QS 1	1
Agency for Science, Technology and Research (A*STAR)	Singapore	—	1
Northwest University	P. R. China	THE 1001–1200 · QS 1001-1200	1

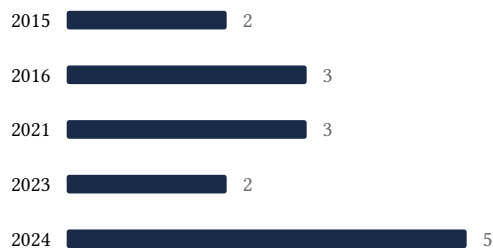
Geographic distribution of citing authors

Country	Citing papers
United States	8
China	6
India	4
Poland	3
United Kingdom	3
Germany	2
P. R. China	2
Australia	1
Mexico	1
Peru	1
Saudi Arabia	1
Singapore	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	Nanocarriers as an emerging platform for cancer therapy	4	8 CFR 204.5(i)(3) – Outstanding Researcher
Contribution 2	Factors affecting the clearance and biodistribution of polymeric nanoparticles	1	8 CFR 204.5(i)(3) – Outstanding Researcher
Contribution 3	Nanoparticles in medicine: therapeutic applications and developments	6	8 CFR 204.5(i)(3) – Outstanding Researcher