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

18	18	5	79
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.

100.0% independent of 18 classified citing papers

Citation type	Count
Independent	18
Self-citation	0
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 a copper-catalyzed click chemistry method for labeling live cells, establishing a foundational technique in chemical biology with broad independent adoption.

The researcher's primary contribution is the development of a method for labeling live cells using copper-catalyzed alkyne-azide click chemistry, as detailed in their 2010 paper. This work stands as a seminal core contribution in the field, with no subsequent follow-up papers by the same researcher listed in this specific line of inquiry.

This line of work appears to address the challenge of performing chemical modifications within living systems. The title suggests the introduction of a robust bioorthogonal reaction that enables precise labeling without disrupting cellular viability, representing a significant methodological advance in chemical biology.

The significance of this contribution is evidenced by its high citation count of 598. Furthermore, analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, indicating that the method has been widely adopted and utilized by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

Labeling live cells by copper-catalyzed alkyne– azide click chemistry

2010 · 598 citations (GS)

Field-normalised: 361 Semantic Scholar citations place it in the top 1% of Chemistry papers from 2010 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Cu-Catalyzed Click Reaction in Carbohydrate Chemistry. (2016)	Banaras Hindu University	India	—
2	Cu(I)-Catalyzed Click Chemistry in Glycoscience and Their Diverse Applications. (2021)	Banaras Hindu University, Indian Institute of Science and Engineering Research (IISER), Jorhat Institute of Science and Technology (JIST)	India	—
3	Click chemistry for drug development and diverse chemical-biology applications. (2013)	Medical University of Lublin	Poland	—
4	Cellular incorporation of unnatural amino acids and bioorthogonal labeling of proteins. (2014)	Medical Research Council	United Kingdom	—
5	From mechanism to mouse: a tale of two bioorthogonal reactions. (2011)	University of California, Berkeley	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 proposed a nanomaterial-based pathway for COVID-19 vaccine development, a seminal contribution that has garnered significant independent scholarly attention.

The researcher's core contribution centers on the 2020 paper titled 'COVID-19 vaccine development and a potential nanomaterial path forward.' This work stands as the primary artifact in this specific line of inquiry, with no subsequent follow-up papers by the same author building directly upon it within the provided dataset.

This line of work appears to address the urgent need for novel vaccine delivery mechanisms during the pandemic. By focusing on nanomaterials, the researcher likely sought to identify alternative or enhanced pathways for vaccine efficacy and distribution, distinguishing this approach from traditional methods prevalent at the time.

The significance of this contribution is evidenced by its high citation count of 796. Notably, analysis of 18 citing papers reveals that 100% are from independent researchers, indicating that the work has been widely adopted and validated by the broader scientific community outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

COVID-19 vaccine development and a potential nanomaterial path forward

2020 · 796 citations (GS)

Field-normalised: 541 Semantic Scholar citations place it in the top 1% of Materials Science papers from 2020 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The use of RNA-based treatments in the field of cancer immunotherapy. (2023)	Research and Development Center for Biotechnology	Iran	—

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 pioneered the use of cowpea mosaic virus nanoparticles for in situ vaccination to suppress metastatic cancer, establishing a novel platform for viral vector-based immunotherapy.

The researcher's core contribution rests on the 2016 paper titled 'In situ vaccination with cowpea mosaic virus nanoparticles suppresses metastatic cancer.' This work appears to introduce a specific application of plant-derived virus-like particles as a vehicle for inducing localized immune responses against spreading tumors. By leveraging the structural properties of cowpea mosaic virus, the study suggests a new avenue for cancer immunotherapy that differs from traditional systemic approaches.

This line of work addresses the challenge of effectively targeting metastatic disease through localized immune activation. The title indicates a shift toward using viral nanoparticles not merely as delivery systems but as active components in in situ vaccination strategies. The absence of follow-up papers by the same researcher in the provided data suggests this seminal work stands as a distinct, foundational contribution to the field of viral nanotechnology in oncology.

The significance of this contribution is evidenced by its substantial citation count of 553, indicating broad recognition within the scientific community. Furthermore, analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, underscoring the work's impact beyond the researcher's immediate circle. This high degree of independent uptake suggests the findings have influenced broader research directions in cancer immunology and nanomedicine.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

In situ vaccination with cowpea mosaic virus nanoparticles suppresses metastatic cancer

2016 · 553 citations (GS)

Field-normalised: 423 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	Virus-like particles: preparation, immunogenicity and their roles as nanovaccines and drug nanocarriers. (2021)	Baqiyatallah University of Medical Sciences, National Institute of Genetic Engineering and Biotechnology (NIGEB), Sari Agricultural Sciences and Natural Resources University	Iran, United Kingdom	—
2	Biomimetic and bioinspired nano-platforms for cancer vaccine development. (2023)	Broad Institute of MIT and Harvard, National Center for Nanoscience and Technology	China, United States	—
3	Emerging Concepts and Technologies in Vaccine Development. (2020)	University of Minnesota Twin Cities	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
Banaras Hindu University	India	SCImago #3422 · THE 501–600 · QS 1001-1200	2
University of New South Wales	Australia	SCImago #107 · QS 20	1
The University of Chicago	United States	SCImago #124 · THE 15 · QS 13	1
University of Swat	Pakistan	SCImago #7125	1
Suez Canal University	Egypt	SCImago #5572 · THE 1201–1500 · QS 1401+	1
Al-Azhar University	Egypt	SCImago #4737 · THE 801–1000 · QS 1001-1200	1
Qingdao University	China	SCImago #489 · THE 601–800	1
National Center for Nanoscience and Technology	China	—	1
University of California, Berkeley	United States	SCImago #95 · THE 9 · QS =17	1
Quaid-i-Azam University	Pakistan	SCImago #4124 · THE 401–500 · QS 354	1
Baqiyatallah University of Medical Sciences	Iran	THE 801–1000	1
Medical Research Council	United Kingdom	SCImago #183	1

Institution	Country	World ranking	Citing papers
Broad Institute of MIT and Harvard	United States	SCImago #112	1
Indiana University	United States	THE =198	1
University of Minnesota Twin Cities	United States	SCImago #165	1

Geographic distribution of citing authors

Country	Citing papers
United States	5
India	3
Iran	2
China	2
United Kingdom	2
Saudi Arabia	1
Switzerland	1
Pakistan	1
Austria	1
Egypt	1
Australia	1
Poland	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	Labeling live cells by copper-catalyzed alkyne–azide click chemistry	5	Dhanasar — Prong 2 (well-positioned)
Contribution 2	COVID-19 vaccine development and a potential nanomaterial path forward	1	Dhanasar — Prong 2 (well-positioned)
Contribution 3	In situ vaccination with cowpea mosaic virus nanoparticles suppresses metastatic cancer	3	Dhanasar — Prong 2 (well-positioned)