

Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

Ching C Lau

Connecticut Children's Medical Center

[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

| | | | |
|----------------------|----------------|--------------------|--------------|
| 11 | 11 | 2 | 72 |
| 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 11 classified citing papers

| Citation type | Count |
|------------------|-------|
| Independent | 11 |
| 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 established a gene expression-based framework for predicting clinical outcomes in central nervous system embryonal tumors, a seminal approach published in Nature.

The researcher's primary contribution is the development of a predictive model for central nervous system embryonal tumor outcomes based on gene expression profiles. This work is anchored by a seminal 2002 paper published in Nature, which stands as the core achievement in this specific line of inquiry without subsequent follow-up publications by the same author.

This line of work appears to address the critical need for molecular biomarkers to forecast patient prognosis in pediatric brain cancers. By leveraging gene expression data, the research suggests a shift toward molecular stratification, offering a novel method to assess tumor behavior and potential clinical trajectories where traditional histological methods may have been insufficient.

The significance of this contribution is evidenced by its substantial citation count of 2,936, indicating widespread recognition and utility within the scientific community. Furthermore, analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, underscoring the work's broad impact and adoption by the wider field beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

[Prediction of central nervous system embryonal tumour outcome based on gene expression](#)

2002 · Nature · 2,936 citations (GS)

Field-normalised: 2,455 Semantic Scholar citations place it in the top 1% of Medicine papers from 2002 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|---|---|---------|----|
| 1 | Identification of a Cancer Stem Cell in Human Brain Tumors (2003) | The Hospital for Sick Children, University of Toronto | Canada | — |

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 2

Claim – Contribution 2

The researcher established a comprehensive somatic genomic landscape of glioblastoma, providing a foundational reference for understanding the molecular complexity of this aggressive brain cancer.

CLAIM: The researcher's primary contribution is the characterization of the somatic genomic landscape of glioblastoma, as detailed in a seminal 2013 paper published in Cell. This work serves as the cornerstone of the provided evidence, standing alone without follow-up publications in this specific dataset.

ORIGINALITY: The title suggests a broad, systematic effort to map the genetic alterations present in glioblastoma cells. By focusing on the 'somatic genomic landscape,' the work appears to address the need for a holistic view of the tumor's genetic architecture, moving beyond isolated mutations to capture the full spectrum of genomic changes driving the disease.

SIGNIFICANCE: The paper has been cited over 6,000 times, indicating it is a highly influential reference in the field. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the work has been widely adopted and utilized by the broader scientific community outside the researcher's immediate circle.

CORE PAPER

The somatic genomic landscape of glioblastoma

2013 · Cell · 6,012 citations (GS)

Field-normalised: 4,517 Semantic Scholar citations place it in the top 1% of Medicine papers from 2013 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|---|--|-------------------------------------|----|
| 1 | PI3K/AKT/mTOR signaling transduction pathway and targeted therapies in cancer (2023) | Dana-Farber Cancer Institute, Dana-Farber Cancer Institute, Harvard Medical School, Gustave Roussy | France, India, Iran | — |
| 2 | Glioblastoma multiforme: insights into pathogenesis, key signaling pathways, and therapeutic strategies (2025) | Baqiyatallah University of Medical Sciences, Iran University of Medical Sciences, Isfahan University of Medical Sciences | Iran, United States | — |
| 3 | Trials and Tribulations of MicroRNA Therapeutics (2024) | Brown University | United States | — |
| 4 | Epidemiology of Glioblastoma Multiforme—Literature Review (2022) | Pomeranian Medical University, Pomeranian Medical University in Szczecin | Poland | — |
| 5 | Glioblastoma at the crossroads: current understanding and future therapeutic horizons (2025) | International Institute of Information Technology, MLM Medical Labs LLC, University of Minnesota | India, United States | — |
| 6 | Immunotherapy for glioblastoma: current state, challenges, and future perspectives (2024) | Cleveland Clinic, Lerner Research Institute, Cleveland Clinic, Northwestern University | United States | — |
| 7 | Towards a general-purpose foundation model for computational pathology (2024) | Brigham and Women's Hospital, Brigham and Women's Hospital, Harvard Medical School, Brigham and Women's Hospital, Harvard Medical School | United States | — |
| 8 | Cell type and gene expression deconvolution with BayesPrism enables Bayesian integrative analysis across bulk and single-cell RNA sequencing in oncology (2022) | Cornell University, Dalian University of Technology, Memorial Sloan Kettering Cancer Center | China, United States | — |
| 9 | Primary brain tumours in adults (2023) | Charité - Universitätsmedizin Berlin, Erasmus MC, Erasmus MC Cancer Institute, University Medical Center Rotterdam | Germany, Netherlands, United States | — |
| 10 | CAR race to cancer immunotherapy: from CAR T, CAR NK to CAR macrophage therapy (2022) | Boston University, Brigham and Women's Hospital, VA Boston Healthcare System | 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 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.

D. Citing-Institution Prestige & Geography

Top citing institutions

| Institution | Country | World ranking | Citing papers |
|--|----------------|--------------------------------|---------------|
| Shahid Beheshti University of Medical Sciences | Iran | THE 601–800 | 2 |
| Brigham and Women's Hospital | United States | SCImago #130 | 2 |
| University of Minnesota | United States | SCImago #165 · THE 88 · QS 210 | 2 |
| Brigham and Women's Hospital, Harvard Medical School | United States | — | 1 |
| University of Cambridge | United Kingdom | SCImago #63 · THE =3 · QS 6 | 1 |
| Erasmus MC | Netherlands | — | 1 |
| Iran University of Medical Sciences | Iran | SCImago #2614 · THE 601–800 | 1 |
| National University of Singapore | Singapore | SCImago #59 · THE 17 · QS 8 | 1 |
| Islamic Azad University | Iran | QS 1201-1400 | 1 |
| Dana-Farber Cancer Institute | United States | SCImago #197 | 1 |
| Tata Memorial Centre | India | SCImago #5137 | 1 |
| University of California San Francisco | United States | SCImago #98 | 1 |
| The Hospital for Sick Children | Canada | SCImago #1449 | 1 |
| Cornell University | United States | SCImago #61 · THE =18 · QS 16 | 1 |
| Zanjan University of Medical Sciences | Iran | SCImago #7373 · THE 801–1000 | 1 |

Geographic distribution of citing authors

| Country | Citing papers |
|----------------|---------------|
| United States | 9 |
| Iran | 2 |
| India | 2 |
| Germany | 1 |
| Canada | 1 |
| Netherlands | 1 |
| Poland | 1 |
| Singapore | 1 |
| United Kingdom | 1 |
| Italy | 1 |
| China | 1 |
| France | 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 | Prediction of central nervous system embryonal tumour outcome based on gene expression | 1 | Dhanasar – Prong 2 (well-positioned) |
| Contribution 2 | The somatic genomic landscape of glioblastoma | 10 | Dhanasar – Prong 2 (well-positioned) |