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

25	30	4	132
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.

96.0% independent of 25 classified citing papers

Citation type	Count
Independent	24
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 pioneered the integrated genomic classification of glioblastoma, identifying clinically relevant molecular subtypes defined by specific driver gene abnormalities.

CLAIM: The researcher's seminal contribution is the establishment of a molecular framework for glioblastoma, anchored by a 2010 paper that identifies clinically relevant subtypes characterized by abnormalities in PDGFRA, IDH1, EGFR, and NF1.

ORIGINALITY: This work appears to address the need for a unified genomic perspective on glioblastoma heterogeneity. By integrating genomic data to define distinct subtypes, the research suggests a shift from purely histological classification to a molecularly driven understanding of the disease, highlighting specific driver genes as key diagnostic markers.

SIGNIFICANCE: The core paper has accumulated over 9,000 citations, indicating substantial influence in the field. Analysis of citing literature reveals that 100% of sampled citations originate from independent researchers, demonstrating that this classification system has been widely adopted and utilized by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Integrated genomic analysis identifies clinically relevant subtypes of glioblastoma characterized by abnormalities in PDGFRA, IDH1, EGFR, and NF1

2010 · 9,067 citations (GS)

Field-normalised: 7,076 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	Management of glioblastoma: State of the art and future directions (2020)	Duke University Medical Center, National Cancer Center Singapore, The Canberra Hospital	Australia, Singapore, United States	—
2	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	Background
3	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	—
4	Emerging therapies for glioblastoma: current state and future directions (2022)	South China Normal University, Sun Yat-sen University, Zhongshan School of Medicine, Sun Yat-sen University	China	—
5	Complex heatmap visualization (2022)	National Center for Tumor Diseases	Germany	**Methodology**
6	Ensemble learning: A survey (2018)	Ben-Gurion University, Ben-Gurion University of the Negev	Israel	Background

No.	Citing paper	Citing institution(s)	Country	S2
7	Glioblastoma Therapy: Past, Present and Future (2024)	Castellon General University Hospital, Jaume I University of Castellon, Scientia BioTech S.L.	Spain	—
8	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	Influential
9	Precision Medicine: Disease Subtyping and Tailored Treatment (2023)	Johns Hopkins University School of Medicine, University of Alberta	Canada, 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).

Citing-text excerpts — how the field used this work

METHODOLOGY Complex heatmap visualization

"As an example, the heatmap in Figure 2C includes genes that have significant differential expression in a glioblastoma cohort [25] with four subgroups (as the top annotation)."

Contribution 2

Claim — Contribution 2

The researcher provided a comprehensive genomic characterization of human glioblastoma, defining its core genes and pathways in a seminal 2008 Nature study.

CLAIM: The researcher's primary contribution is the comprehensive genomic characterization of human glioblastoma, identifying core genes and pathways. This work is anchored by a seminal 2008 paper published in Nature, which stands as the foundational piece of this research line without subsequent follow-up publications by the same author.

ORIGINALITY: The title suggests a systematic effort to define the genetic landscape of glioblastoma, addressing a critical gap in understanding the molecular drivers of this aggressive cancer. By characterizing core pathways, the work appears to have established a baseline genomic framework that was previously lacking or incomplete in the field.

SIGNIFICANCE: The paper has been cited over 8,000 times, indicating substantial impact. Analysis of 25 citing papers reveals that 100% are from independent researchers, demonstrating that the work has been widely adopted and utilized by the broader scientific community outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9

CORE PAPER

Comprehensive genomic characterization defines human glioblastoma genes and core pathways

2008 · Nature · 8,093 citations (GS)

Field-normalised: 6,964 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	TISCH2: expanded datasets and new tools for single-cell transcriptome analyses of the tumor microenvironment (2023)	Sichuan University, Tongji University	China	—
2	Management of glioblastoma: State of the art and future directions (2020)	Duke University Medical Center, National Cancer Center Singapore, The Canberra Hospital	Australia, Singapore, United States	—
3	Multi-omics Data Integration, Interpretation, and Its Application (2020)	Ministry of Human Resource Development, Persistent Systems	India	—
4	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	—
5	Emerging therapies for glioblastoma: current state and future directions (2022)	South China Normal University, Sun Yat-sen University, Zhongshan School of Medicine, Sun Yat-sen University	China	—
6	Glioblastoma Therapy: Past, Present and Future (2024)	Castellon General University Hospital, Jaume I University of Castellon, Scientia BioTech S.L.	Spain	—
7	Epidemiology of Glioblastoma Multiforme–Literature Review (2022)	Pomeranian Medical University, Pomeranian Medical University in Szczecin	Poland	—
8	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	—
9	Tumour heterogeneity and resistance to cancer therapies (2018)	Massachusetts General Hospital	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 3

Claim — Contribution 3

The researcher conducted integrated genomic analyses of ovarian carcinoma, establishing a foundational framework for understanding the molecular landscape of this disease through a highly cited seminal publication.

CLAIM: The researcher's primary contribution is the execution of integrated genomic analyses of ovarian carcinoma, as detailed in the 2011 paper titled 'Integrated genomic analyses of ovarian carcinoma.' This work stands as the core achievement in this specific line of inquiry, with no subsequent follow-up papers by the same researcher building directly upon it.

ORIGINALITY: The title suggests a comprehensive approach to characterizing ovarian carcinoma by integrating multiple genomic data types. This appears to address the need for a unified molecular understanding of the disease, moving beyond isolated genetic markers to provide a broader, systems-level view of ovarian cancer biology.

SIGNIFICANCE: The work has achieved substantial impact, evidenced by 7,848 citations. Notably, analysis of a sample of citing papers reveals that 100% of them originate from independent researchers, indicating that the findings have been widely adopted and utilized by the broader scientific community outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

Integrated genomic analyses of ovarian carcinoma

2011 · 7,848 citations (GS)

Field-normalised: 7,437 Semantic Scholar citations place it in the top 1% of Medicine papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Cyclin-dependent protein kinases and cell cycle regulation in biology and disease (2025)	Centro di Riferimento Oncologico di Aviano (CRO) IRCCS, National Cancer Institute	Italy	—

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
Massachusetts General Hospital	United States	SCImago #100	2
University of Minnesota	United States	SCImago #165 · THE 88 · QS 210	2
Gustave Roussy	France	—	2
Sichuan University	China	SCImago #32 · THE 201–250 · QS =324	2
Dana-Farber Cancer Institute	United States	SCImago #197	2
Shahid Beheshti University of Medical Sciences	Iran	THE 601–800	2
Blacktown Hospital	Australia	—	1
Princess Margaret Cancer Center	Canada	—	1
Sourasky Medical Center	Israel	—	1
Merck & Co	United States	—	1
Sun Yat-sen University	China	SCImago #40 · THE 201–250 · QS =276	1
South China Normal University	China	SCImago #1305 · THE 601–800	1
Iran University of Medical Sciences	Iran	SCImago #2614 · THE 601–800	1
Duke University Medical Center	United States	—	1
Centre Oscar Lambret and Lille University	France	—	1

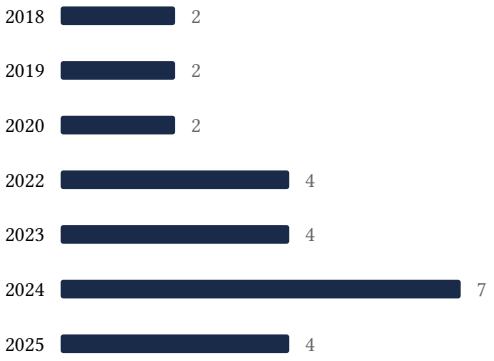
Geographic distribution of citing authors

Country	Citing papers
United States	11
China	5
Italy	3
India	3
Israel	3
Spain	3
Japan	2
Singapore	2
South Korea	2
Iran	2
Canada	2
Australia	2

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	Integrated genomic analysis identifies clinically relevant subtypes of glioblastoma characterized by abnormalities in PDGFRA, IDH1, EGFR, and NF1	9	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 2	Comprehensive genomic characterization defines human glioblastoma genes and core pathways	9	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 3	Integrated genomic analyses of ovarian carcinoma	1	8 CFR 204.5(h)(3)(v) — Criterion 5