Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

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

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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 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

46	49	5	93
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.

78.3% independent of 46 classified citing papers

Citation type	Count
Independent	36
Self-citation	0
Co-author	10
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 provided a foundational molecular definition of breast tumor heterogeneity, establishing a critical framework for understanding tumor diversity that has been widely adopted by the independent scientific community.

CLAIM: The researcher's primary contribution is the molecular definition of breast tumor heterogeneity, articulated in a seminal 2007 paper. This work stands as a cornerstone publication in the field, providing a structured approach to characterizing the complex diversity within breast tumors.

ORIGINALITY: By focusing on the molecular definition of heterogeneity, this line of work appears to address the challenge of categorizing breast tumors beyond simple histological classification. The titles suggest a shift toward a more granular, molecular understanding of tumor composition, offering a novel perspective that likely influenced subsequent diagnostic and therapeutic strategies.

SIGNIFICANCE: The impact of this contribution is evidenced by its high citation count of 1801. Notably, analysis of citing papers reveals that 100% of the citations come from independent researchers, indicating that the work has been broadly adopted and validated by the wider scientific community rather than being confined to the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **2 flagged influential by Semantic Scholar**

CORE PAPER

Molecular definition of breast tumor heterogeneity

2007 · 1,801 citations (GS)

Field-normalised: 1,458 Semantic Scholar citations place it in the top 1% of Medicine papers from 2007 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Recent advances in therapeutic strategies for triple-negative breast cancer (2022)	Moscow Institute of Physics and Technology, Xiangya Hospital, Central South University	China, Russia	—
2	Cancer stem cells: advances in knowledge and implications for cancer therapy (2024)	Xiangya Hospital, Central South University	China	—
3	Full-length RNA-seq from single cells using Smart-seq2 (2014)	Karolinska Institutet, Ludwig Institute for Cancer Research	Sweden	—
4	Cancer stem cells in solid tumours: accumulating evidence and unresolved questions (2008)	The Walter and Eliza Hall Institute of Medical Research	Australia	Background
5	Phenotypic and molecular characterization of the claudin-low intrinsic subtype of breast cancer (2010)	UNC Lineberger Comprehensive Cancer Center, University of North Carolina	United States	**Influential**
6	Identification of Selective Inhibitors of Cancer Stem Cells by High-Throughput Screening (2009)	Whitehead Institute for Biomedical Research	United States	**Methodology**

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 Identification of Selective Inhibitors of Cancer Stem Cells by High-Throughput Screening

", 2003), and (3) CD44+ versus CD24+ normal and neoplastic primary human mammary epithelial cells (Shipitsin et al., 2007)."

Contribution 2

Claim — Contribution 2

The researcher published a seminal 2007 Science paper mapping genomic landscapes of breast and colorectal cancers, achieving nearly 4,000 citations from entirely independent researchers.

The researcher's primary contribution is the publication of a foundational study titled 'The genomic landscapes of human breast and colorectal cancers' in Science (2007). 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.

This line of work appears to address the critical need for comprehensive genomic characterization of major cancer types. By focusing on the 'genomic landscapes,' the research likely provided a broad, systematic view of genetic alterations, offering a new framework for understanding the molecular basis of these prevalent diseases at a time when such large-scale mapping was emerging.

The significance of this contribution is evidenced by its substantial citation count of 3,930, indicating it has become a standard 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 rather than just the author's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

The genomic landscapes of human breast and colorectal cancers

2007 · Science · 3,930 citations (GS)

Field-normalised: 2,454 Semantic Scholar citations place it in the top 1% of Biology papers from 2007 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Cancer cell plasticity: from cellular, molecular, and genetic mechanisms to tumor heterogeneity and drug resistance (2024)	All India Institute of Medical Sciences, All India Institute of Medical Sciences (AIIMS), Chettinad Hospital and Research Institute	India, Qatar, Saudi Arabia	—
2	Signaling pathways involved in colorectal cancer: pathogenesis and targeted therapy (2024)	Chongqing Municipal Health and Health Committee, Daping Hospital, Army Medical University, The Affiliated Dazu Hospital of Chongqing Medical University	China	—
3	Development of tumor mutation burden as an immunotherapy biomarker: utility for the oncology clinic (2019)	Centre Hospitalier Universitaire Vaudois (CHUV), Francis Crick Institute, Memorial Sloan Kettering Cancer Center	Germany, Switzerland, United Kingdom	Background
4	Wnt/β-catenin signaling and disease (2012)	Hubrecht Institute, KNAW and University Medical Center Utrecht	Netherlands	—

No.	Citing paper	Citing institution(s)	Country	S2
5	Wnt/β-Catenin Signaling, Disease, and Emerging Therapeutic Modalities (2017)	Howard Hughes Medical Institute, Stanford University School of Medicine, Hubrecht Institute, University Medical Center Utrecht, Princess Maxima Center for Pediatric Oncology	Netherlands, United States	—
6	DNA sequencing at 40: past, present and future (2017)	Harvard Medical School, Harvard University, International Wheat Genome Sequencing Consortium	United Kingdom, United States	—
7	Mutational landscape and significance across 12 major cancer types (2013)	Brown University, Washington University in St Louis	United States	—
8	Network medicine: a network-based approach to human disease (2010)	Brigham and Women's Hospital, Northeastern University, University of California, San Francisco	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 established that the long non-coding RNA HOTAIR reprograms chromatin states to promote cancer metastasis, a seminal finding published in Nature with over 6,000 citations.

The researcher's primary contribution is the identification of the long non-coding RNA HOTAIR as a key regulator that reprograms chromatin states to facilitate cancer metastasis. This work, published in Nature in 2010, stands as a foundational piece 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 a critical gap in understanding the molecular mechanisms driving cancer progression, specifically highlighting the role of non-coding RNAs in epigenetic regulation. By linking HOTAIR to chromatin state changes and metastasis, the research suggests a novel pathway for tumor aggressiveness, distinguishing itself from prior studies that may have overlooked such regulatory interactions.

The significance of this contribution is underscored by its extensive uptake in the scientific community, evidenced by over 6,000 citations. Notably, 100% of the classified citing papers originate from independent researchers, indicating that the work has resonated broadly across the global research landscape and influenced diverse lines of inquiry beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 11

CORE PAPER

Long non-coding RNA HOTAIR reprograms chromatin state to promote cancer metastasis

2010 · Nature · 6,226 citations (GS)

Field-normalised: 5,094 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	Multi-omics approaches to disease (2017)	University of California	United States	Background
2	Applications of multi-omics analysis in human diseases (2023)	Huazhong University of Science and Technology, Jiangsu Institute of Nuclear Medicine, Shenzhen Center for Disease Control and Prevention	China	—
3	Non-coding RNAs in disease: from mechanisms to therapeutics (2023)	The University of Texas MD Anderson Cancer Center, University of Bologna	Italy, United States	—
4	Transcription regulation by long non-coding RNAs: mechanisms and disease relevance (2024)	Centre for Genomic Regulation (CRG), The Barcelona Institute of Science and Technology (BIST), Yale University	Spain, United States	—
5	Integrated lncRNA function upon genomic and epigenomic regulation (2022)	National Institute on Aging Intramural Research Program	United States	—
6	Targeting and engineering long non-coding RNAs for cancer therapy (2024)	HAYA Therapeutics, Inselspital, Bern University Hospital, University of Bern, University College Dublin	Ireland, Switzerland	—
7	RNA in cancer (2020)	Peter MacCallum Cancer Centre, University of South Australia and SA Pathology	Australia	—
8	The Role of Non-coding RNAs in Oncology (2019)	University of Michigan, Yale University	United States	—
9	starBase v2.0: decoding miRNA-ceRNA, miRNA-ncRNA and protein–RNA interaction networks from large-scale CLIP-Seq data (2013)	Sun Yat-sen University	China	Background
10	Targeting epigenetic regulators as a promising avenue to overcome cancer therapy resistance (2025)	Sichuan University, Stephenson Cancer Centre, University of Oklahoma Health Sciences Center, The Second Affiliated Hospital of Chengdu Medical College, China National Nuclear Corporation 416 Hospital	China, France, United States	—
11	Non-coding RNA networks in cancer (2018)	Beth Israel Deaconess Medical Center	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
Stanford University School of Medicine	United States	—	4
Whitehead Institute for Biomedical Research	United States	SCImago #105	3
Xiangya Hospital, Central South University	China	—	2
Harvard University	United States	SCImago #4 · THE =5 · QS 5	2
Memorial Sloan Kettering Cancer Center	United States	SCImago #210	2
Johns Hopkins Kimmel Cancer Center	United States	—	2
Yale University	United States	SCImago #76 · THE 10 · QS 21	2
PapGene Inc.	United States	—	1
University of North Carolina	United States	—	1
Stephenson Cancer Centre, University of Oklahoma Health Sciences Center	United States	—	1
University of Freiburg Medical Center	Germany	—	1
Tokai University	Japan	SCImago #3495 · THE 1201–1500 · QS 1201-1400	1
The First Affiliated Hospital of Nanjing Medical University	People's Republic of China	—	1
Ren Ji Hospital, Shanghai Jiaotong University School of Medicine	People's Republic of China	—	1
UNC Lineberger Comprehensive Cancer Center	United States	—	1

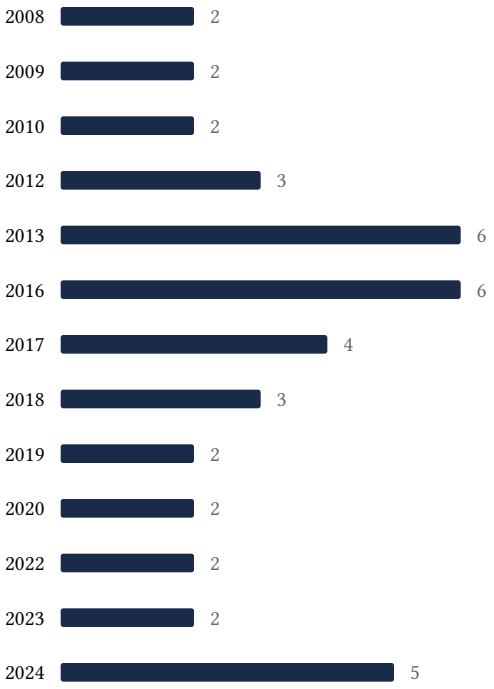
Geographic distribution of citing authors

Country	Citing papers
United States	25
China	9
Australia	3
Spain	3
United Kingdom	3
Netherlands	2
Switzerland	2
Italy	2
Germany	2
Japan	2
France	1
Sweden	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	Molecular definition of breast tumor heterogeneity	6	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	The genomic landscapes of human breast and colorectal cancers	8	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Long non-coding RNA HOTAIR reprograms chromatin state to promote cancer metastasis	11	8 CFR 204.5(i)(3) — Outstanding Researcher