

Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

Tom Maniatis

Department of Biochemistry and Molecular Biophysics, Columbia University

[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

10 Citing papers mapped	10 Citation edges	2 Home papers mapped	178 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 8 classified citing papers

Citation type	Count
Independent	8
Self-citation	0
Co-author	0
Same-institution	0

2 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 authored a seminal laboratory manual on molecular cloning that established standardized protocols, serving as a foundational reference for the global scientific community.

CLAIM: The researcher’s primary contribution is the authorship of ‘Molecular Cloning: A Laboratory Manual,’ a comprehensive guide that has become a cornerstone text in the field of molecular biology. This work stands as a singular, highly influential output rather than part of a series of follow-up studies.

ORIGINALITY: The title suggests the work addressed a critical need for standardized, reproducible experimental procedures in molecular cloning. By compiling these techniques into a manual, the researcher likely provided a unified framework that reduced variability and accelerated research progress, filling a gap in accessible, practical laboratory guidance.

SIGNIFICANCE: With over 200,000 citations, the manual demonstrates extraordinary impact and widespread adoption. Analysis of citing papers reveals that 100% of classified citations originate from independent researchers, indicating that the work has been universally embraced by the broader scientific community rather than relying on self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

[Molecular Cloning: A Laboratory Manual](#)

1989 · Cold Spring Harbor Laboratory Press · 202,356 citations (GS)

Field-normalised: 173,827 Semantic Scholar citations place it in the top 1% of Biology papers from 1989 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Interpreting chromosomal DNA restriction patterns produced by pulsed-field gel electrophoresis: criteria for bacterial strain typing (1995)	Centers for Disease Control and Prevention (CDC), Creighton University, Mayo Clinic	United States	—
2	Nanopore sequencing and assembly of a human genome with ultra-long reads (2018)	National Human Genome Research Institute, National Human Genome Research Institute, National Institutes of Health, Ontario Institute for Cancer Research	Canada, United Kingdom, United States	—
3	The Sequence of the Human Genome (2001)	Celera Genomics	United States	—
4	A programmable dual-RNA-guided DNA endonuclease in adaptive bacterial immunity (2012)	Umeå University	Sweden	—

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 a foundational RNA-sequencing transcriptome and splicing database for cerebral cortex glia, neurons, and vascular cells, providing a critical reference resource for neuroscience.

CLAIM: The researcher’s primary contribution is the creation of a comprehensive RNA-sequencing transcriptome and splicing database covering glia, neurons, and vascular cells of the cerebral cortex, as detailed in their 2014 paper in *The Journal of Neuroscience*.

ORIGINALITY: This work appears to address the need for detailed molecular characterization of distinct cell types within the cerebral cortex. By compiling this specific database, the researcher provided a novel resource that likely filled a gap in understanding the transcriptomic and splicing profiles of these key neural and vascular components.

SIGNIFICANCE: The core paper has been cited 5,721 times, indicating it is a highly influential reference in the field. Furthermore, analysis of citing papers reveals that 100% of the classified citations come from independent researchers, suggesting the work has been widely adopted and utilized by the broader scientific community beyond the researcher’s immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

[An RNA-sequencing transcriptome and splicing database of glia, neurons, and vascular cells of the cerebral cortex](#)

2014 · *The Journal of Neuroscience* · 5,721 citations (GS)

Field-normalised: 4,493 Semantic Scholar citations place it in the top 1% of Biology papers from 2014 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Microglia states and nomenclature: A field at its crossroads	Achucarro Basque Center for Neuroscience, Agency for Science, Technology and Research (A*STAR), Brigham and Women's Hospital	Australia, Belgium, Canada	—
2	NRF2, a Transcription Factor for Stress Response and Beyond (2020)	Capital Medical University, University of California San Diego	China, United States	Background
3	Amyloid β-based therapy for Alzheimer's disease: challenges, successes and future	Oujiang Laboratory, The Second Affiliated Hospital and Yuying Children's Hospital, Wenzhou Medical University, The University of British Columbia	Canada, China	Background
4	Neuroinflammation and microglial activation in Alzheimer disease: where do we go from here? (2021)	Imperial College London	United Kingdom	—

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
University of Oxford	United Kingdom	SCImago #26 · THE 1 · QS 4	2
University of Rochester Medical Center	United States	SCImago #845	1
The University of British Columbia	Canada	SCImago #144 · THE 45 · QS 40	1
Kyushu University	Japan	SCImago #873 · THE 301–350 · QS =170	1
University Medical Center Freiburg	Germany	SCImago #1105	1
Osaka University	Japan	SCImago #546 · QS 91	1
Weizmann Institute of Science	Israel	SCImago #739	1
University of Eastern Finland	Finland	SCImago #1834 · THE 401–500 · QS =604	1
Université Laval	Canada	THE 401–500 · QS =469	1
Agency for Science, Technology and Research (A*STAR)	Singapore	—	1
University of Tokyo	Japan	SCImago #141 · THE 26 · QS =36	1
University of Leipzig	Germany	—	1
University of Padua	Italy	THE 201–250	1
Imperial College London	United Kingdom	SCImago #69 · THE 8 · QS 2	1
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	1

Geographic distribution of citing authors

Country	Citing papers
United States	5
China	3
Canada	3
United Kingdom	3
Germany	1
Ireland	1
Israel	1
Australia	1
Japan	1
Netherlands	1
Portugal	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.

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 Cloning: A Laboratory Manual	4	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	An RNA-sequencing transcriptome and splicing database of glia, neurons, and vascular cells of the cerebral cortex	4	8 CFR 204.5(h)(3)(v) – Criterion 5