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

20	20	2	301
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 13 classified citing papers

Citation type	Count
Independent	13
Self-citation	0
Co-author	0
Same-institution	0

7 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 high-specific-activity radiolabeling technique for DNA restriction fragments, establishing a foundational method widely adopted in molecular biology.

The researcher's primary contribution is the development of a technique for radiolabeling DNA restriction endonuclease fragments to high specific activity, as detailed in a seminal 1983 paper published in Analytical Biochemistry. This work stands as a core achievement in the field, with no subsequent follow-up papers by the researcher listed in this specific line of inquiry.

This line of work appears to address the need for efficient and sensitive labeling methods in molecular biology. By focusing on achieving high specific activity, the researcher likely provided a solution that enhanced the detection limits or utility of DNA fragments in experimental settings, distinguishing this approach from prior methods.

The significance of this contribution is underscored by its extensive citation record, with the core paper accumulating over 31,000 citations. Furthermore, analysis of citing literature indicates that 100% of the classified citations originate from independent researchers, suggesting that this technique has been broadly adopted and utilized by the wider scientific community rather than being confined to the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

A technique for radiolabeling DNA restriction endonuclease fragments to high specific activity

1983 · Analytical Biochemistry · 31,099 citations (GS)

Field-normalised: 22,719 Semantic Scholar citations place it in the top 1% of Biology papers from 1983 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The Biotin-(Strept)avidin System: Principles and Applications in Biotechnology (1991)	University of Toronto	Canada	**Methodology**
2	GUS fusions: β-glucuronidase as a sensitive and versatile gene fusion marker in higher plants. (1987)	Plant Breeding Institute	United Kingdom	—
3	The C. elegans heterochronic gene lin-4 encodes small RNAs with antisense complementarity to lin-14 (1993)	Harvard University	United States	**Methodology**
4	Cloning of the T gene required in mesoderm formation in the mouse (1990)	European Molecular Biology Laboratory, Imperial Cancer Research Fund, National Institute for Medical Research	Germany, United Kingdom	—
5	Identification of the cystic fibrosis gene: cloning and characterization of complementary DNA (1989)	University of Michigan & Howard Hughes Medical Institute	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 established a foundational genetic model for colorectal tumorigenesis, providing a seminal framework that has been extensively cited by independent researchers worldwide.

The researcher's primary contribution is the development of a genetic model for colorectal tumorigenesis, articulated in a seminal 1990 paper published in Cell. This work stands as a cornerstone in the field, offering a structured understanding of the genetic mechanisms driving cancer development in the colon and rectum.

This line of work appears to address the critical need for a coherent theoretical framework to explain the multistep nature of colorectal cancer. By proposing a specific genetic model, the researcher provided a novel lens through which the progression of tumorigenesis could be understood, distinguishing this approach from prior descriptive studies.

The significance of this contribution is evidenced by its extensive uptake in the scientific community, with over 17,000 citations. Notably, analysis of citing papers reveals that 100% of the classified citations originate from independent researchers, underscoring the work's broad impact and its role as a standard reference for scholars outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

A genetic model for colorectal tumorigenesis

1990 · Cell · 17,513 citations (GS)

Field-normalised: 12,356 Semantic Scholar citations place it in the top 1% of Biology papers from 1990 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Clinical management of metastatic colorectal cancer in the era of precision medicine (2022)	University of Campania Luigi Vanvitelli	Italy	—
2	Colorectal Cancer: A Review of Carcinogenesis, Global Epidemiology, Current Challenges, Risk Factors, Preventive and Treatment Strategies	Dubai Municipality, International Islamic University Malaysia, INTI International University	Bangladesh, Brunei, Malaysia	—
3	NF-κB, inflammation, immunity and cancer: coming of age (2018)	University of California, San Diego	United States	—
4	Cell-cell communication: new insights and clinical implications	Institute of Medical Innovation and Research, Peking University Third Hospital, Peking University Third Hospital, Shenzhen Peking University-the Hong Kong University of Science and Technology Medical Center	China	—
5	Wnt signaling pathways in biology and disease: mechanisms and therapeutic advances (2025)	The First Affiliated Hospital, Zhejiang University School of Medicine, Zhejiang University	China	—
6	Mechanisms of metastatic colorectal cancer (2024)	Institute for Research in Biomedicine (IRB Barcelona), The Barcelona Institute of Science and Technology (BIST), IRB Barcelona, The Barcelona Institute of Science and Technology	Spain	—

No.	Citing paper	Citing institution(s)	Country	S2
7	Mechanistic insights into Wnt–β-catenin pathway activation and signal transduction	University of Toronto	Canada	—
8	Geographic and age variations in mutational processes in colorectal cancer (2025)	International Agency for Research on Cancer, University of California San Diego, Wellcome Sanger Institute	France, United Kingdom, 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
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	2
Peking University Third Hospital	China	SCImago #2770	1
Institute of Medical Innovation and Research, Peking University Third Hospital	China	—	1
Shenzhen Peking University-the Hong Kong University of Science and Technology Medical Center	China	—	1
International Agency for Research on Cancer	France	—	1
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	1
Imperial Cancer Research Fund	United Kingdom	—	1
European Molecular Biology Laboratory	Germany	—	1
International Islamic University Malaysia	Malaysia	SCImago #4293 · QS =613	1
Wellcome Sanger Institute	United Kingdom	SCImago #204	1
National Institute for Medical Research	United Kingdom	SCImago #6968	1
Plant Breeding Institute	United Kingdom	—	1
University of Michigan & Howard Hughes Medical Institute	United States	—	1
University of Campania Luigi Vanvitelli	Italy	THE 1001–1200	1
The First Affiliated Hospital, Zhejiang University School of Medicine	China	—	1

Geographic distribution of citing authors

Country	Citing papers
United States	4
United Kingdom	3
China	2

Country	Citing papers
Canada	2
Bangladesh	1
Malaysia	1
Qatar	1
Spain	1
United Arab Emirates	1
Italy	1
Brunei	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	A technique for radiolabeling DNA restriction endonuclease fragments to high specific activity	5	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 2	A genetic model for colorectal tumorigenesis	8	8 CFR 204.5(h)(3)(v) — Criterion 5