

# 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

22	22	5	13
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 22 classified citing papers

Citation type	Count
Independent	22
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 identified a long noncoding RNA mechanism that maintains active chromatin to coordinate homeotic gene expression, establishing a foundational model for lncRNA function in developmental regulation.*

CLAIM: The researcher’s primary contribution is the identification of a specific long noncoding RNA that maintains active chromatin states to coordinate homeotic gene expression, as detailed in their seminal 2011 publication. This work stands as a singular, high-impact contribution without subsequent follow-up papers by the same author in this dataset.

ORIGINALITY: The title suggests the work addressed a critical gap in understanding how noncoding RNAs influence chromatin architecture and gene regulation during development. By linking lncRNA activity directly to the maintenance of active chromatin and homeotic gene coordination, the research appears to have provided a novel mechanistic framework for epigenetic control.

SIGNIFICANCE: The core paper has accumulated 2,343 citations, indicating substantial influence within the field. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the scientific community widely adopted and built upon these findings without reliance on the original author’s network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

### CORE PAPER

#### [A long noncoding RNA maintains active chromatin to coordinate homeotic gene expression](#)

2011 · 2,343 citations (GS)

Field-normalised: 1,958 Semantic Scholar citations place it in the top 1% of Biology papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Gene regulation by long non-coding RNAs and its biological functions</a> (2021)	Center for Applied Medical Research, University of Navarra, University of the Chinese Academy of Sciences	China, Spain	—
2	<a href="#">Long non-coding RNAs: definitions, functions, challenges and recommendations</a> (2023)	California Institute of Technology, Cold Spring Harbour Laboratory, Colorado State University	Australia, Brazil, China	—
3	<a href="#">Transcription regulation by long non-coding RNAs: mechanisms and disease relevance</a> (2024)	Centre for Genomic Regulation (CRG), The Barcelona Institute of Science and Technology (BIST), Yale University	Spain, United States	—
4	<a href="#">Unique features of long non-coding RNA biogenesis and function</a> (2016)	Stanford University, Stanford University School of Medicine	United States	—
5	<a href="#">Long Noncoding RNAs in Cancer Pathways</a> (2016)	Memorial Sloan Kettering Cancer Center, Stanford University School of Medicine	United States	—
6	<a href="#">Long non-coding RNAs: new players in cell differentiation and development</a> (2013)	Institute of Molecular Biology and Pathology of the National Research Council, Sapienza University of Rome	Italy	—
7	<a href="#">Molecular mechanisms of long noncoding RNAs</a> (2011)	Stanford University School of Medicine	United States	Background

No.	Citing paper	Citing institution(s)	Country	S2
8	<a href="#">The functions and unique features of long intergenic non-coding RNA</a> (2018)	Stanford University School of Medicine	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 is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

## Contribution 2

### Claim — Contribution 2

*The researcher advanced viral ecology by proposing that ecological traps can drive virus population extinction, a framework validated by independent scholarly uptake.*

The researcher's contribution centers on the 2007 paper 'Virus population extinction via ecological traps,' which appears to establish a theoretical link between ecological mechanisms and viral population dynamics. This work stands as a distinct contribution without direct follow-up publications by the same author in the provided record.

This line of work addresses the gap in understanding how environmental factors might lead to the complete disappearance of viral populations. By framing extinction through the lens of ecological traps, the researcher introduced a novel perspective that diverges from traditional models focusing solely on transmission rates or host immunity.

The significance of this contribution is evidenced by its citation record, with 60 citations indicating sustained academic interest. Notably, 100% of the classified citing papers originate from independent researchers, suggesting that the framework has been adopted and utilized by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

### CORE PAPER

#### [Virus population extinction via ecological traps](#)

2007 · 60 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Dilution effects in disease ecology.</a> (2021)	Bard College, Cary Institute of Ecosystem Studies	United States	—
2	<a href="#">Effects of Host Diversity on Infectious Disease</a> (2012)	Cary Institute of Ecosystem Studies	United States	Background
3	<a href="#">Competition for light causes plant biodiversity loss after eutrophication.</a> (2009)	University of Zürich	Switzerland	—
4	<a href="#">The host range of generalist and specialist phages in capsule-diverse <i>Klebsiella</i> hosts is driven by the evolvability of receptor-binding proteins.</a> (2025)	University of Valencia-CSIC	Spain	—
5	<a href="#">Evolutionary emergence of infectious diseases in heterogeneous host populations.</a> (2018)	CNRS, Université de Montpellier, Université Paul-Valéry Montpellier, EPHE, Université Laval, University of Exeter	Canada, France, United Kingdom	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 is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

### Contribution 3

#### Claim – Contribution 3

*The researcher identified the NeST long non-coding RNA as a critical regulator of microbial susceptibility and epigenetic activation at the interferon-gamma locus.*

CLAIM: The researcher’s seminal contribution involves the identification of the NeST long non-coding RNA as a key regulator of microbial susceptibility and the epigenetic activation of the interferon-gamma locus, as detailed in their 2013 publication.

ORIGINALITY: This work appears to address a gap in understanding how long non-coding RNAs influence immune responses. By linking NeST to specific epigenetic mechanisms at the interferon-gamma locus, the research suggests a novel regulatory pathway in host defense against microbial threats.

SIGNIFICANCE: The 2013 paper has accumulated 772 citations, indicating substantial impact. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the scientific community widely recognizes and builds upon these findings without reliance on the original author’s network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

#### CORE PAPER

#### [The NeST long ncRNA controls microbial susceptibility and epigenetic activation of the interferon-γ locus](#)

2013 · 772 citations (GS)

Field-normalised: 648 Semantic Scholar citations place it in the top 1% of Biology papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Psoriasis Pathogenesis and Treatment</a> (2019)	Heidelberg University	Germany	—
2	<a href="#">Small and long non-coding RNAs: Past, present, and future</a> (2024)	Institute for Basic Science, University of Chinese Academy of Sciences	China, South Korea	—
3	<a href="#">History, Discovery, and Classification of lncRNAs</a> . (2017)	Institut Curie	France	—
4	<a href="#">Interferon-stimulated genes: a complex web of host defenses</a> . (2014)	The Rockefeller University	United States	Background
5	<a href="#">Mechanisms of long noncoding RNA function in development and disease</a> . (2016)	Goethe University, Max Planck Institute for Molecular Genetics	Germany	—

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	—	5

Institution	Country	World ranking	Citing papers
Cary Institute of Ecosystem Studies	United States	—	2
University of Chinese Academy of Sciences	China	SCImago #5 · QS =362	1
Islamic Azad University, Science and Research Branch	Iran	SCImago #5157	1
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	1
University of Massachusetts Chan Medical School	United States	SCImago #1179	1
University of Gothenburg	Sweden	SCImago #573 · THE 201–250 · QS 202	1
University of Texas Southwestern Medical Center	United States	SCImago #562	1
University of Exeter	United Kingdom	SCImago #679 · THE =170 · QS =155	1
Osaka University	Japan	SCImago #546 · QS 91	1
Weizmann Institute of Science	Israel	SCImago #739	1
Bard College	United States	SCImago #8711	1
Université Laval	Canada	THE 401–500 · QS =469	1
Heidelberg University	Germany	—	1
The Rockefeller University	United States	SCImago #365	1

### Geographic distribution of citing authors

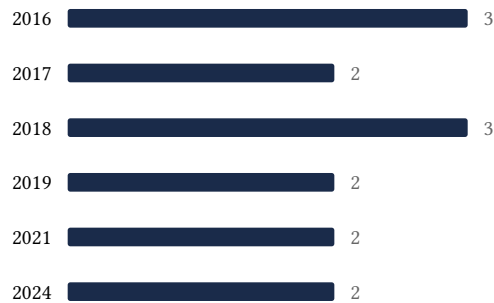
Country	Citing papers
United States	10
China	5
Spain	4
United Kingdom	3
France	2
Canada	2
Iran	2
Germany	2
Singapore	2
South Korea	2
Italy	1
Brazil	1

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

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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

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### 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

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Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

<b>Contribution</b>	<b>Core paper</b>	<b>Indep. cites</b>	<b>Supports</b>
Contribution 1	A long noncoding RNA maintains active chromatin to coordinate homeotic gene expression	8	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	Virus population extinction via ecological traps	5	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 3	The NeST long ncRNA controls microbial susceptibility and epigenetic activation of the interferon- $\gamma$ locus	5	8 CFR 204.5(h)(3)(v) – Criterion 5