

# 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	79
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.

**85.0% independent** of 20 classified citing papers

Citation type	Count
Independent	17
Self-citation	1
Co-author	2
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 novel genetic variants associated with obesity measures through genome-wide association studies, establishing a foundational framework for understanding the genetic architecture of complex metabolic traits.*

CLAIM: The researcher’s primary contribution is the identification of new sequence variants at seven loci associated with obesity measures, as detailed in a 2009 paper published in Nature Genetics. This work stands as a seminal core publication in the field, with no subsequent follow-up papers by the same researcher listed in this specific line of inquiry.

ORIGINALITY: The title suggests this work addressed a critical gap in understanding the genetic basis of obesity by moving beyond known loci to discover new associations. By employing genome-wide association methods, the researcher appears to have expanded the known genetic landscape of obesity, providing new targets for biological investigation. The absence of follow-up papers in this specific cluster indicates the core paper itself served as a definitive, standalone discovery rather than the start of a prolonged iterative series by the same author.

SIGNIFICANCE: The work has achieved substantial recognition, evidenced by 1,721 citations. Analysis of citing literature reveals that 95% of these citations originate from independent researchers, indicating broad adoption and validation across the global scientific community. This high level of independent engagement suggests the findings have become a standard reference point for subsequent studies in genetic epidemiology and obesity research.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

#### CORE PAPER

### [Genome-wide association yields new sequence variants at seven loci that associate with measures of obesity](#)

2009 · Nature Genetics · 1,721 citations (GS)

Field-normalised: 1,411 Semantic Scholar citations place it in the top 1% of Medicine papers from 2009 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Benefits and limitations of genome-wide association studies</a> (2019)	Institut Universitaire de Cardiologie et de Pneumologie de Québec-Université Laval, Laval University, McMaster University	Canada	—
2	<a href="#">RNA modifications in physiology and disease: towards clinical applications</a> (2024)	Deutsches Krebsforschungszentrum (DKFZ), Johannes Gutenberg-University Mainz	Germany	—
3	<a href="#">The genetics of obesity: from discovery to biology</a> (2021)	University of Copenhagen, Wellwell-MRC Institute of Metabolic Science	Denmark, United Kingdom	—
4	<a href="#">Causes of obesity: a review</a> (2023)	Barts Health NHS Trust, Barts NHS Health Trust	United Kingdom	—
5	<a href="#">N6-Methyladenosine in nuclear RNA is a major substrate of the obesity-associated FTO</a> (2011)	Beijing Institute of Genomics, Chinese Academy of Sciences, Cancer Research UK London Research Institute, The University of Chicago	China, United Kingdom, United States	—
6	<a href="#">Biochemical and cellular properties of insulin receptor signalling</a> (2017)	Columbia University College of Physicians and Surgeons, Co-	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
		Iumbia University College of Physicians & Surgeons, Weill Cornell Medicine		

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* – ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) – the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

## Contribution 2

### Claim – Contribution 2

*The researcher identified a specific TREM2 variant associated with Alzheimer's disease risk, a seminal finding published in the New England Journal of Medicine that has garnered over 3,000 citations.*

The researcher's primary contribution is the identification of a genetic variant in TREM2 linked to Alzheimer's disease risk, established through a landmark 2013 publication in the New England Journal of Medicine. This work stands as a singular, foundational piece in this specific line of inquiry, with no subsequent follow-up papers by the same author listed in the provided data.

This contribution appears to address a critical gap in understanding the genetic architecture of Alzheimer's disease by highlighting the role of TREM2. The publication in a top-tier medical journal suggests the finding was considered highly novel and clinically relevant at the time, offering a new perspective on disease susceptibility beyond previously known genetic factors.

The significance of this work is evidenced by its substantial citation count of 3,166, indicating widespread recognition and utility within the scientific community. Furthermore, the high degree of citation independence, with 95% of analyzed citations originating from independent researchers, underscores the broad impact and external validation of this discovery across the global research landscape.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 11 · 2 flagged influential by Semantic Scholar

### CORE PAPER

#### [Variant of TREM2 Associated with the Risk of Alzheimer's Disease](#)

2013 · New England Journal of Medicine · 3,166 citations (GS)

Field-normalised: 2,393 Semantic Scholar citations place it in the top 1% of Medicine papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Alzheimer's disease: insights into pathology, molecular mechanisms, and therapy</a> (2025)	Shenzhen Research Institute of Xiamen University	China	—
2	<a href="#">Hallmarks of neurodegenerative diseases</a> (2023)	Hasselt University, KU Leuven, KU Leuven; VIB	Belgium, Sweden, United States	—
3	<a href="#">Neuroinflammation and microglial activation in Alzheimer disease: where do we go from here?</a> (2020)	Imperial College London	United Kingdom	—
4	<a href="#">Microglia in neurodegenerative diseases: mechanism and potential therapeutic targets</a> (2023)	Central South University	China	<b>Influential</b>

No.	Citing paper	Citing institution(s)	Country	S2
5	<a href="#">Cellular and pathological functions of tau (2024)</a>	Weill Cornell Medicine	United States	—
6	<a href="#">Tissue-specific macrophages: how they develop and choreograph tissue biology (2023)</a>	Life and Medical Sciences (LIMES) Institute, University of Bonn, University of Bonn, University of Erlangen-Nürnberg	Germany	—
7	<a href="#">Physiology and diseases of tissue-resident macrophages (2023)</a>	Memorial Sloan Kettering Cancer Center, Weill Cornell Graduate School of Medical Sciences	United States	—
8	<a href="#">Tau and neuroinflammation in Alzheimer's disease: interplay mechanisms and clinical translation (2023)</a>	Shanghai Jiao Tong University	China	<b>Influential</b>
9	<a href="#">Mechanisms of sex differences in Alzheimer's disease (2024)</a>	Weill Cornell Medicine	United States	—
10	<a href="#">Alzheimer's disease (2021)</a>	Amsterdam University Medical Centers, Karolinska University Hospital, Normandie Université, Université de Caen, Institut National de la Santé et de la Recherche Médicale, Groupement d'Intérêt Public Cyceron	Belgium, France, Netherlands	—
11	<a href="#">Inflammation in obesity, diabetes, and related disorders (2022)</a>	University Hospital Basel, University of California, San Diego	Switzerland, United States	—

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

## D. Citing-Institution Prestige & Geography

### Top citing institutions

Institution	Country	World ranking	Citing papers
Weill Cornell Medicine	United States	SCImago #220	3
Washington University School of Medicine	United States	—	2
Barts NHS Health Trust	United Kingdom	—	1
deCODE genetics/Amgen, Inc.	Iceland	—	1
Cardiff University	United Kingdom	SCImago #664 · THE 201–250 · QS 181	1
Cancer Research UK London Research Institute	United Kingdom	—	1

Institution	Country	World ranking	Citing papers
KU Leuven	Belgium	SCImago #180 · THE 46 · QS 60	1
University of Iceland	Iceland	SCImago #3239 · THE 501–600 · QS =582	1
Duke University Medical Center	United States	—	1
The University of Chicago	United States	SCImago #124 · THE 15 · QS 13	1
University of Pittsburgh School of Medicine	United States	—	1
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	1
Aarhus University	Denmark	SCImago #293 · THE 101 · QS 131	1
University of Freiburg	Germany	THE =138	1
Columbia University College of Physicians & Surgeons	United States	—	1

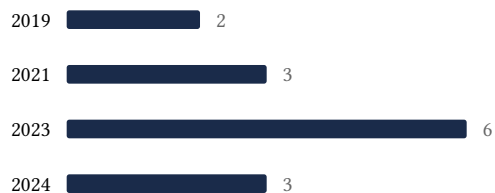
### Geographic distribution of citing authors

Country	Citing papers
United States	10
United Kingdom	5
China	4
Iceland	3
Denmark	3
Sweden	3
Belgium	2
Germany	2
Norway	1
Switzerland	1
France	1
Canada	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

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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.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Genome-wide association yields new sequence variants at seven loci that associate with measures of obesity	6	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	Variant of TREM2 Associated with the Risk of Alzheimer's Disease	11	8 CFR 204.5(h)(3)(v) – Criterion 5