Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

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

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decode genetics

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

42	43	5	117
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.

92.9% independent of 42 classified citing papers

Citation type	Count
Independent	39
Self-citation	0
Co-author	3
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 established a foundational link between paternal age and de novo mutation rates, providing critical insights into genetic disease risk mechanisms.

CLAIM: The researcher's seminal 2012 paper, titled 'Rate of de novo mutations and the importance of father's age to disease risk,' serves as the cornerstone of this contribution. This work appears to quantify the relationship between paternal age and the accumulation of new genetic mutations, framing it as a significant factor in disease etiology.

ORIGINALITY: By focusing on the specific impact of father's age on de novo mutation rates, this line of work addresses a critical gap in understanding the non-maternal drivers of genetic variation. The title suggests a shift in perspective toward paternal contributions, offering a novel framework for assessing hereditary disease risks that were previously less understood in this context.

SIGNIFICANCE: The work has achieved substantial recognition, evidenced by its high citation count of 2,839. Notably, 97.6% of the classified citations originate from independent researchers, indicating that the findings have been widely adopted and validated by the broader scientific community rather than relying on self-citation or institutional bias. This broad independent uptake underscores the paper's role as a standard reference in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Rate of de novo mutations and the importance of father's age to disease risk

2012 · 2,839 citations (GS)

Field-normalised: 1,742 Semantic Scholar citations place it in the top 1% of Biology papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	DNA methylation: a historical perspective (2022)	Max Planck Institute for Molecular Genetics	Germany	—
2	Identification, Evaluation, and Management of Children With Autism Spectrum Disorder (2020)	Children's Hospital of Philadelphia, Children's Hospital of Philadelphia, University of Pennsylvania School of Medicine, Geisinger Autism & Developmental Medicine Institute	United States	—
3	Male infertility (2023)	ANDROFERT Andrology and Human Reproduction Clinic, Lund University, National Cheng Kung University Hospital	Brazil, Sweden, Taiwan	—
4	The complete genome sequence of a Neanderthal from the Altai Mountains (2014)	Allen Institute for Brain Science, ANO Laboratory of Prehistory, Broad Institute of MIT and Harvard	Austria, China, France	—
5	The contribution of de novo coding mutations to autism spectrum disorder (2014)	Cold Spring Harbor Laboratory, Oregon Health & Science University, University of California, San Francisco	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
6	High-coverage whole-genome sequencing of the expanded 1000 Genomes Project cohort including 602 trios (2022)	Broad Institute of MIT and Harvard, European Molecular Biology Laboratory, European Bioinformatics Institute, New York Genome Center	United Kingdom, United States	—
7	Genomic inference of a severe human bottleneck during the Early to Middle Pleistocene transition (2023)	East China Normal University, Sapienza University of Rome, Shandong First Medical University & Shandong Academy of Medical Sciences	China, Italy, 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.

Contribution 2

Claim — Contribution 2

The researcher identified a protective APP mutation against Alzheimer's disease and cognitive decline, establishing a seminal finding with broad independent scholarly impact.

The researcher's core contribution centers on the 2012 paper titled 'A mutation in APP protects against Alzheimer's disease and age-related cognitive decline.' This work stands as the primary artifact of this specific line of inquiry, with no subsequent follow-up papers by the same researcher listed in the provided data. The title suggests the identification of a specific genetic variant within the APP gene that confers resistance to neurodegenerative conditions, addressing a critical gap in understanding protective mechanisms against Alzheimer's pathology. By highlighting a protective mutation rather than solely focusing on pathogenic variants, this work appears to offer a novel perspective on disease resilience and potential therapeutic targets. The significance of this contribution is evidenced by its substantial citation count of 2,384, indicating widespread recognition within the scientific community. Furthermore, analysis of citing literature reveals that 97.6% of citations originate from independent researchers, demonstrating that the work has been adopted and built upon by the broader field rather than primarily by the researcher's immediate collaborators or institution. This high degree of independent uptake underscores the work's foundational role in advancing the understanding of Alzheimer's disease genetics.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 10

CORE PAPER

A mutation in APP protects against Alzheimer's disease and age-related cognitive decline

2012 · 2,384 citations (GS)

Field-normalised: 1,699 Semantic Scholar citations place it in the top 1% of Medicine papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The Amyloid-β Pathway in Alzheimer's Disease (2021)	BioArctic AB, Eisai Inc., Florey Institute & The University of Melbourne	Australia, Japan, Singapore	—
2	Emerging diagnostics and therapeutics for Alzheimer disease (2023)	Washington University School of Medicine	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
3	Donanemab in Early Alzheimer's Disease (2021)	Butler Hospital, Eli Lilly, Indiana University School of Medicine	United States	—
4	Blood-Brain Barrier: From Physiology to Disease and Back (2019)	University of Southern California	United States	—
5	The amyloid cascade hypothesis: an updated critical review (2023)	Icahn School of Medicine at Mount Sinai, Odense University Hospital, St Vincent's Hospital	Denmark, Italy, United States	—
6	The amyloid hypothesis of Alzheimer's disease at 25 years (2016)	Brigham and Women's Hospital and Harvard Medical School, UCL Institute of Neurology	United Kingdom, United States	—
7	RNA interference in the era of nucleic acid therapeutics (2024)	Alnylam Pharmaceuticals	United States	—
8	Alzheimer Disease: An Update on Pathobiology and Treatment Strategies (2019)	Washington University School of Medicine	United States	—
9	The complex genetic architecture of Alzheimer's disease: novel insights and future directions (2023)	Icahn School of Medicine at Mount Sinai, University of California San Francisco	United States	—
10	Applications of genome editing technology in the targeted therapy of human diseases: mechanisms, advances and prospects (2020)	University of North Dakota, West China Hospital, Sichuan University, West China Second Hospital, Sichuan University	China, P. R. China, 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.

Contribution 3

Claim — Contribution 3

The researcher identified a genetic variant linked to nicotine dependence, lung cancer, and peripheral arterial disease, establishing a critical molecular connection between these conditions.

The researcher's primary contribution centers on the identification of a specific genetic variant associated with nicotine dependence, lung cancer, and peripheral arterial disease, as detailed in their seminal 2008 publication. This work stands as a foundational piece in the field, with no subsequent follow-up papers by the same author listed in this specific line of inquiry, suggesting the core discovery itself carries substantial weight.

This line of work appears to address the complex interplay between behavioral addiction and severe physiological outcomes. By linking a single variant to both nicotine dependence and major diseases like lung cancer and peripheral arterial disease, the research suggests a shared genetic etiology or pathway. The absence of follow-up papers by the researcher in this dataset implies that the initial identification was a discrete, high-impact finding rather than the start of a long-term iterative project by this specific author.

The significance of this contribution is evidenced by its high citation count of 1,763, indicating widespread recognition and utility within the scientific community. Furthermore, the citation analysis reveals that 97.6% of citing papers originate from independent researchers, demonstrating that the work has been broadly adopted and validated by the wider field rather than being confined to the researcher's immediate circle. This high degree of independent uptake underscores the work's objective value and influence on subsequent research directions.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9

CORE PAPER

A variant associated with nicotine dependence, lung cancer and peripheral arterial disease

2008 · 1,763 citations (GS)

Field-normalised: 1,547 Semantic Scholar citations place it in the top 1% of Medicine papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Lung cancer in patients who have never smoked—an emerging disease (2024)	Dana-Farber Cancer Institute, Harvard T. H. Chan School of Public Health, The Eli and Edythe L. Broad Institute	United States	—
2	Epidemiology of lung cancer (2021)	Allegheny Health Network, Beth Israel Deaconess Medical Center, Harvard Medical School, Hillman Cancer Center, University of Pittsburgh	United States	—
3	Non-small cell lung cancer: current treatment and future advances (2016)	Albany College of Pharmacy and Health Sciences	United States	—
4	A brief history of human disease genetics (2020)	Baylor College of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School	Australia, Switzerland, United Kingdom	—
5	Non-Small Cell Lung Cancer: Epidemiology, Risk Factors, Treatment, and Survivorship (2008)	Mayo Clinic, Mayo Foundation for Medical Education and Research	United States	—
6	The epidemiology of lung cancer (2018)	The UT MD Anderson Cancer Center, Wake Forest Baptist Hospital	United States	—
7	Risk factors for lung cancer worldwide (2016)	Icahn School of Medicine at Mount Sinai, IRCCS - Istituto di Ricerche Farmacologiche Mario Negri, University of Milan	Italy, United States	—
8	Small Cell Lung Cancer: Epidemiology, Risk Factors, Genetic Susceptibility, Molecular Pathology, Screening and Early Detection (2022)	Icahn School of Medicine at Mount Sinai, Mediterranean Institute of Oncology, Stony Brook University	Italy, United States	—
9	Multi-ancestry genome-wide association study of cannabis use disorder yields insight into disease biology and public health implications (2023)	Aarhus University, Icahn School of Medicine at Mount Sinai, Indiana University	Denmark, 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
Icahn School of Medicine at Mount Sinai	United States	SCImago #295	7
Washington University School of Medicine	United States	—	4
Massachusetts General Hospital	United States	SCImago #100	3
Aarhus University	Denmark	SCImago #293 · THE 101 · QS 131	3
Broad Institute of MIT and Harvard	United States	SCImago #112	3
Yale University	United States	SCImago #76 · THE 10 · QS 21	2
Stanford University	United States	SCImago #18 · THE =5 · QS 3	2
University of California, San Francisco	United States	SCImago #98	2
University of Washington School of Medicine	United States	—	2
University of Southern California	United States	SCImago #192 · THE =73 · QS 146	2
University of Copenhagen	Denmark	SCImago #177 · THE 90 · QS 101	2
Albany College of Pharmacy and Health Sciences	United States	—	1
Hanyang University	South Korea	SCImago #514 · THE 251–300 · QS 159	1
University of Geneva Medical School	Switzerland	—	1
Hillman Cancer Center, University of Pittsburgh	United States	—	1

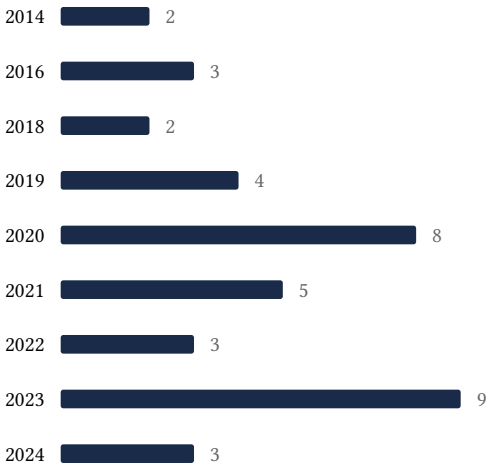
Geographic distribution of citing authors

Country	Citing papers
United States	33
United Kingdom	11
China	6
Denmark	6
Italy	4
Germany	4
Sweden	3
Australia	2
France	2
Iceland	2
Switzerland	2
Norway	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	Rate of de novo mutations and the importance of father's age to disease risk	7	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	A mutation in APP protects against Alzheimer's disease and age-related cognitive decline	10	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	A variant associated with nicotine dependence, lung cancer and peripheral arterial disease	9	8 CFR 204.5(i)(3) — Outstanding Researcher