

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

14 Citing papers mapped	15 Citation edges	3 Home papers mapped	226 h-index (GS)
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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.

91.7% independent of 12 classified citing papers

Citation type	Count
Independent	11
Self-citation	0
Co-author	1
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 established a foundational framework for mapping human cortical development from childhood through early adulthood, as evidenced by a seminal PNAS publication with extensive independent citation.

CLAIM: The researcher's primary contribution is the development of a dynamic mapping framework for human cortical development spanning childhood to early adulthood, anchored by a seminal 2004 paper published in the Proceedings of the National Academy of Sciences of the United States of America (PNAS). This work stands as a core reference in the field, with no subsequent follow-up papers by the researcher listed in this specific line of inquiry.

ORIGINALITY: The title suggests the work addressed a critical gap in understanding the longitudinal trajectory of brain structure, moving beyond static snapshots to capture dynamic changes over time. By focusing on the period from childhood through early adulthood, the research appears to have provided a comprehensive view of cortical maturation that was previously less defined, establishing a baseline for developmental neuroimaging studies.

SIGNIFICANCE: The impact of this work is demonstrated by its substantial citation record, with the core paper accumulating 7868 citations. Notably, analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, indicating that the findings have been widely adopted and validated by the broader scientific community outside the researcher's immediate circle. This high level of independent uptake underscores the work's role as a standard reference in developmental neuroscience.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

[Dynamic mapping of human cortical development during childhood through early adulthood](#)

2004 · Proceedings of the National Academy of Sciences of the United States of America (PNAS) · 7,868 citations (GS)

Field-normalised: 5,468 Semantic Scholar citations place it in the top 1% of Medicine papers from 2004 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Substance use disorders: a comprehensive update of classification, epidemiology, neurobiology, clinical aspects, treatment and prevention (2023)	National Institute on Drug Abuse, National Institutes of Health, US National Institute on Drug Abuse	United States	—
2	Sleep loss and emotion: A systematic review and meta-analysis of over 50 years of experimental research (2024)	Montana State University, University of Colorado Anschutz Medical Campus, University of East Anglia	United Kingdom, United States	—
3	Conscious processing and the global neuronal workspace hypothesis	Collège de France, Institut Pasteur, Netherlands Institute for Neuroscience	France, Netherlands, United States	—
4	The Transition from Childhood to Adolescence: Between Health and Vulnerability	Clinical Physiology Institute, CNR	Italy	Background
5	The age of adolescence (2018)	Royal Children's Hospital; Murdoch Children's Research Institute; University of Melbourne, World Health Organization	Australia, Switzerland	—

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 framework for mapping cortical change across the human life span, providing a critical reference for longitudinal neurodevelopmental studies.

CLAIM: The researcher's seminal 2003 paper, 'Mapping cortical change across the human life span,' serves as the core contribution of this line of work. This study appears to provide a comprehensive characterization of how cortical structure evolves throughout human development and aging.

ORIGINALITY: By focusing on the entire life span, this work likely addressed a gap in understanding the continuous trajectory of brain development. The titles suggest a shift toward viewing cortical change as a dynamic, lifelong process rather than isolated developmental stages, offering a novel perspective on neurobiological aging and maturation.

SIGNIFICANCE: With over 3,000 citations, this paper is highly influential in the field. Analysis of citing literature indicates that 100% of the classified citations come from independent researchers, demonstrating broad adoption and validation by the wider scientific community beyond the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2

CORE PAPER

[Mapping cortical change across the human life span](#)

2003 · 3,072 citations (GS)

Field-normalised: 2,337 Semantic Scholar citations place it in the top 1% of Biology papers from 2003 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Myelin in the Central Nervous System: Structure, Function, and Pathology (2019)	University Medical Center Göttingen, University Medical Center Leipzig	Germany	Background
2	The age of adolescence (2018)	Royal Children's Hospital; Murdoch Children's Research Institute; University of Melbourne, World Health Organization	Australia, Switzerland	—

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 3

Claim – Contribution 3

The researcher established standardized MRI methodologies for the Alzheimer's Disease Neuroimaging Initiative, creating a foundational framework that has been widely adopted by the independent scientific community.

The researcher’s primary contribution is the development of standardized MRI methods for the Alzheimer’s Disease Neuroimaging Initiative, as detailed in their 2008 publication in the Journal of Magnetic Resonance Imaging. This work serves as the cornerstone of their cited research record, with no subsequent follow-up papers by the same author listed in this specific contribution line.

This line of work appears to address the critical need for consistent imaging protocols in large-scale neurodegenerative disease studies. By defining specific MRI methods for the ADNI, the researcher likely provided the technical infrastructure necessary for reliable data collection and comparison across diverse research sites, a gap that was essential for the initiative’s success.

The significance of this contribution is evidenced by its substantial citation count of 3986, indicating broad uptake within the field. Furthermore, analysis of citing papers reveals that 100% of the classified citations originate from independent researchers, demonstrating that the work has been widely adopted and utilized by the broader scientific community outside the researcher’s immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

[The Alzheimer's Disease Neuroimaging Initiative \(ADNI\): MRI Methods](#)

2008 · Journal of Magnetic Resonance Imaging (JMRI) · 3,986 citations (GS)

Field-normalised: 3,991 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	Domain Adaptation for Medical Image Analysis: A Survey	University of North Carolina at Chapel Hill	United States	—
2	Increased global integration in the brain after psilocybin therapy for depression (2022)	Imperial College London, Invicro London, University of California, San Francisco	United Kingdom, United States	—
3	The future of digital health with federated learning (2020)	German Cancer Research Center (DKFZ), Intel Corporation, King’s College London	France, Germany, United Kingdom	—
4	Federated learning for medical image analysis: A survey (2024)	University of North Carolina at Chapel Hill	United States	—
5	Deep learning based synthesis of MRI, CT and PET: Review and analysis (2024)	Imperial College London, Monash University	Australia, 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
National Institutes of Health	United States	SCImago #44	2
University of North Carolina at Chapel Hill	United States	THE 78 · QS =140	2
Imperial College London	United Kingdom	SCImago #69 · THE 8 · QS 2	2
Technical University of Munich	Germany	SCImago #187 · THE 27 · QS =22	1

Institution	Country	World ranking	Citing papers
University of California, Davis	United States	SCImago #194 · THE 64 · QS =114	1
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	1
World Health Organization	Switzerland	SCImago #172	1
Massachusetts General Hospital/Harvard Medical School	United States	—	1
University of Houston	United States	SCImago #893 · THE 401–500 · QS =556	1
Columbia University Medical Center	United States	—	1
NVIDIA	United States	—	1
University of California, San Francisco	United States	SCImago #98	1
Vanderbilt University Medical Center	United States	SCImago #663	1
Weill Cornell Medical College	United States	—	1
Yale University	United States	SCImago #76 · THE 10 · QS 21	1

Geographic distribution of citing authors

Country	Citing papers
United States	8
United Kingdom	4
Germany	2
Australia	2
France	2
Switzerland	1
Netherlands	1
Italy	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.

2024  3

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	Dynamic mapping of human cortical development during childhood through early adulthood	5	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	Mapping cortical change across the human life span	2	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 3	The Alzheimer's Disease Neuroimaging Initiative (ADNI): MRI Methods	5	8 CFR 204.5(h)(3)(v) – Criterion 5