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	73
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 established a foundational framework linking developmental origins of health and disease to epigenetic mechanisms, a seminal contribution widely adopted by independent scholars.

CLAIM: The researcher's primary contribution is the articulation of the developmental origins of health and disease approach, specifically highlighting its historical context and current focus on epigenetic mechanisms, as detailed in their 2009 paper.

ORIGINALITY: This work appears to address the need for a synthesized historical and mechanistic understanding of how early development influences later health outcomes. By explicitly connecting this broad approach to epigenetic mechanisms, the researcher provided a conceptual bridge that likely clarified emerging biological pathways for the scientific community.

SIGNIFICANCE: The core paper has accumulated 1,286 citations, indicating substantial impact. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that this framework has been widely adopted and utilized by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

Developmental origins of health and disease: brief history of the approach and current focus on epigenetic mechanisms

2009 · 1,286 citations (GS)

Field-normalised: 923 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	Measuring biological aging in humans: A quest (2020)	National Institute on Aging, National Institutes of Health, National Institute on Aging, NIH, University of Maryland School of Medicine	United States	—
2	Exploring the Role of Neuroplasticity in Development, Aging, and Neurodegeneration (2023)	Federal University of Santa Catarina, University of Victoria	Brazil, Canada	Background
3	Obesity in Low- and Middle-Income Countries: Burden, Drivers, and Emerging Challenges (2017)	Emory University	United States	—
4	Assisted reproductive technology: Short- and long-term outcomes. (2023)	Health Services for Children with Special Needs, Johns Hopkins School of Medicine, Johns Hopkins University School of Medicine	United States	—
5	Maternal gut microbiota in pregnancy influences offspring metabolic phenotype in mice. (2020)	Japan Agency for Medical Research and Development, Keio University, Keio University School of Medicine	Japan	Background
6	Environmental Influences on the Epigenome: Exposure- Associated DNA Methylation in Human Populations. (2018)	University of North Carolina	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 provided seminal neuroimaging evidence demonstrating limbic system deactivation during acute psychosocial stress, establishing a foundational model for understanding stress-induced neural mechanisms.

CLAIM: The researcher's primary contribution is the identification of limbic system deactivation during acute psychosocial stress, as detailed in their 2008 paper utilizing positron emission tomography and functional magnetic resonance imaging. This work serves as the cornerstone of their cited research portfolio.

ORIGINALITY: By combining PET and fMRI methodologies, this line of work appears to address the need for robust, multimodal evidence regarding neural responses to stress. The titles suggest a focus on mapping specific brain region activity, offering a novel perspective on how the limbic system responds to acute psychological challenges.

SIGNIFICANCE: The core paper has accumulated 764 citations, indicating substantial influence within the field. Notably, 100% of the classified citing papers originate from independent researchers, underscoring the work's broad adoption and validation by the wider scientific community beyond the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Deactivation of the limbic system during acute psychosocial stress: evidence from positron emission tomography and functional magnetic resonance imaging studies

2008 · 764 citations (GS)

Field-normalised: 582 Semantic Scholar citations place it in the top 1% of Psychology papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Central role of the brain in stress and adaptation: links to socioeconomic status, health, and disease (2010)	The Rockefeller University	United States	—
2	Biological and psychological markers of stress in humans: Focus on the Trier Social Stress Test (2014)	University College Cork	Ireland	—
3	Early life stress and development: potential mechanisms for adverse outcomes. (2020)	University of Wisconsin-Madison	United States	—
4	Rethinking Concepts and Categories for Understanding the Neurodevelopmental Effects of Childhood Adversity. (2021)	University of Wisconsin-Madison	United States	**Influential**
5	Decision making under stress: a selective review. (2012)	—	—	—
6	Acute psychosocial stress: Does the emotional stress response correspond with physiological responses? (2012)	University of Zurich	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 a critical link between mid-gestation maternal anxiety and decreased gray matter density in children, providing foundational evidence for prenatal stress impacts on neurodevelopment.

CLAIM: The researcher's seminal 2010 paper demonstrates that high pregnancy anxiety during mid-gestation is associated with decreased gray matter density in 6–9-year-old children. This work serves as the core contribution, standing alone without follow-up publications by the same author in this specific line of inquiry.

ORIGINALITY: This study appears to address a significant gap in understanding the long-term neurobiological consequences of prenatal stress. By linking maternal psychological states during a specific gestational window to structural brain changes in childhood, the work offers a novel perspective on developmental origins of health and disease, moving beyond behavioral outcomes to measurable anatomical differences.

SIGNIFICANCE: The paper has garnered 618 citations, indicating substantial uptake within the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, underscoring the work's broad relevance and its role as a foundational reference for diverse teams investigating maternal-fetal health and child neurodevelopment.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2

CORE PAPER

High pregnancy anxiety during mid-gestation is associated with decreased gray matter density in 6–9-year-old children

2010 · 618 citations (GS)

Field-normalised: 454 Semantic Scholar citations place it in the top 1% of Medicine papers from 2010 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Intergenerational Transmission of Self-Regulation: A Multidisciplinary Review and Integrative Conceptual Framework (2015)	Northern Illinois University, Virginia Tech	United States	—
2	Psychological science on pregnancy: stress processes, biopsychosocial models, and emerging research issues. (2011)	University of California, Los Angeles	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 Wisconsin-Madison	United States	SCImago #174 · THE =53 · QS =110	2
University of California, Los Angeles	United States	SCImago #70 · THE =18 · QS 46	2
Oregon Health & Science University	United States	SCImago #689 · THE 351–400	1
Emory University	United States	SCImago #217 · THE 102 · QS 182	1
McGill University	Canada	SCImago #168 · THE =41 · QS 27	1
Majaica LLC	United States	—	1
March of Dimes	United States	—	1
Johns Hopkins University School of Medicine	United States	—	1
University of Colorado	United States	—	1
Johns Hopkins School of Medicine	United States	—	1
University of Maryland School of Medicine	United States	—	1
University of Washington	United States	SCImago #45 · THE 25 · QS 81	1
The Rockefeller University	United States	SCImago #365	1
Keio University	Japan	SCImago #965 · THE 601–800 · QS =215	1
University of California, San Francisco	United States	SCImago #98	1

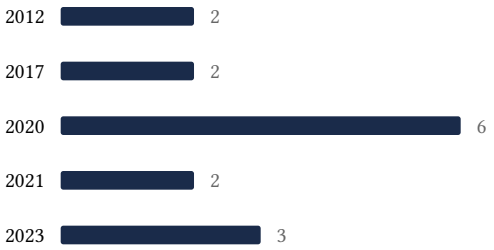
Geographic distribution of citing authors

Country	Citing papers
United States	12
Canada	2
Brazil	1
Ethiopia	1
Finland	1
Australia	1
Ireland	1
Japan	1
Spain	1
Switzerland	1
Germany	1
Belgium	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	Developmental origins of health and disease: brief history of the approach and current focus on epigenetic mechanisms	6	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 2	Deactivation of the limbic system during acute psychosocial stress: evidence from positron	6	8 CFR 204.5(h)(3)(v) — Criterion 5

Contribution	Core paper	Indep. cites	Supports
	emission tomography and functional magnetic resonance imaging studies		
Contribution 3	High pregnancy anxiety during mid-gestation is associated with decreased gray matter density in 6–9-year-old children	2	8 CFR 204.5(h)(3)(v) — Criterion 5