Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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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 Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. 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

36	36	5	20
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.

86.1% independent of 36 classified citing papers

Citation type	Count
Independent	31
Self-citation	1
Co-author	0
Same-institution	4

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 framework linking inflammatory challenges to altered neural sensitivity to social feedback, a concept further developed in subsequent highly cited reviews on the co-regulation of inflammation and social behavior.

CLAIM: The researcher's contribution centers on the seminal 2016 paper, "Exposure to an inflammatory challenge enhances neural sensitivity to negative and positive social feedback," which appears to identify a specific mechanism by which physiological inflammation modulates neural responses to social cues. This work is reinforced by the 2017 follow-up, "In Sickness and in Health: The Co-Regulation of Inflammation and Social Behavior," published in Neuropsychopharmacology.

ORIGINALITY: This line of work appears to address the intersection of immunology and social neuroscience, suggesting a novel perspective on how systemic inflammation influences social processing. The progression from the 2016 empirical finding to the 2017 theoretical review indicates an effort to contextualize these neural sensitivities within a broader framework of biological and behavioral co-regulation.

SIGNIFICANCE: The impact of this research is evidenced by substantial citation counts, with the 2016 paper accumulating 175 citations and the 2017 review reaching 485 citations. Furthermore, analysis of citing literature reveals that 86.1% of citations originate from independent researchers, indicating that this work has been widely adopted and validated by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 12 · **2 flagged influential by Semantic Scholar**

CORE PAPER

Exposure to an inflammatory challenge enhances neural sensitivity to negative and positive social feedback

2016 · 175 citations (GS)

Field-normalised: 128 Semantic Scholar citations place it in the top 5% of Medicine papers from 2016 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Rethinking minority stress: A social safety perspective on the health effects of stigma in sexually-diverse and gender-diverse populations (2022)	University of Utah	United States	—
2	Inflammation Effects on Motivation and Motor Activity: Role of Dopamine (2016)	Emory University	United States	**Influential**
3	Annual Research Review: Neuroimmune network model of depression: a developmental perspective (2024)	Northwestern University, Temple University, University of Georgia	United States	—
4	A randomized proof-of-mechanism trial of TNF antagonism for motivational deficits and related corticostriatal circuitry in depressed patients with high inflammation (2024)	Emory University, Emory University School of Medicine	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.

FOLLOW-UP WORK

In Sickness and in Health: The Co-Regulation of Inflammation and Social Behavior

2017 · Neuropsychopharmacology · 485 citations (GS)

Field-normalised: 315 Semantic Scholar citations place it in the top 1% of Medicine papers from 2017 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Social connection as a critical factor for mental and physical health: evidence, trends, challenges, and future implications (2024)	Brigham Young University	United States	—
2	The immediate effect of discrimination on mental health: A meta-analytic review of the causal evidence (2024)	University of Mannheim	Germany	—
3	Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System (2020)	National Academies Press	United States	—
4	Social Isolation and Loneliness in Older Adults: Review and Commentary of a National Academies Report (2020)	Duke University	United States	**Influential**
5	Why Social Relationships Are Important for Physical Health: A Systems Approach to Understanding and Modifying Risk and Protection (2018)	Brigham Young University	United States	—
6	The association between loneliness, social isolation and inflammation: A systematic review and meta-analysis (2020)	Brunel University London, University of Surrey	United Kingdom	—
7	Social Support, Social Integration, and Inflammatory Cytokines: A Meta-Analysis (2018)	University of Utah	United States	—
8	Advancing an Inflammatory Subtype of Major Depression (2025)	Emory University School of 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 pioneered the qualitative documentation of 'chemobrain' impacts on survivors' work, social networks, and healthcare responses, establishing a foundational framework for understanding cognitive sequelae in cancer survivorship.

CLAIM: The researcher's seminal 2009 publication in the Journal of Cancer Survivorship provides an in-depth examination of how cognitive changes, termed 'chemobrain,' affect cancer survivors' professional lives, social connections, and interactions with healthcare systems. This work stands as a core contribution to the field, with no subsequent follow-up papers by the same author listed in this specific line of inquiry.

ORIGINALITY: The title suggests the researcher addressed a critical gap by moving beyond purely clinical or physiological metrics to capture the lived experiences of survivors. By focusing on the intersection of cognitive impairment with work, social networks, and healthcare response, the work appears to have introduced a holistic, patient-centered perspective that was likely underrepresented in earlier literature.

SIGNIFICANCE: The paper has garnered 731 citations, indicating substantial uptake by the scientific community. Notably, 86.1% of the classified citing papers originate from independent researchers, demonstrating that the work has influenced scholars outside the author's immediate institution and collaboration network. This high degree of independent citation underscores the broad relevance and foundational nature of the contribution to cancer survivorship research.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

Confronting chemobrain: an in-depth look at survivors' reports of impact on work, social networks, and health care response

2009 · Journal of Cancer Survivorship · 731 citations (GS)

Field-normalised: 519 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	Psychological Aspects to Consider in Breast Cancer Diagnosis and Treatment (2021)	Catholic University of the Sacred Heart, Fondazione Policlinico Universitario A. Gemelli IRCCS	Italy	—
2	Measuring Self-Reported Cancer-Related Cognitive Impairment: Recommendations From the Cancer Neuroscience Initiative Working Group (2021)	Dell Medical School, University of Texas at Austin, Semel Institute, UCLA, University of Texas at Austin	United States	—
3	Impact of perceived cognitive impairment in breast cancer survivors (2013)	Indiana University	United States	—
4	Cognitive Symptoms Across Diverse Cancers (2024)	Princess Margaret Cancer Centre, University Health Network, University of Toronto	Canada	—
5	A meta-analysis of the effects of chemotherapy on cognition in patients with cancer (2013)	University of Adelaide	Australia	—
6	Self-reported cognitive concerns and abilities: two sides of one coin? (2014)	Northwestern University Feinberg School of Medicine	United States	—
7	Perceived Cognitive Impairment in Breast Cancer Survivors and Its Relationships with Psychological Factors (2020)	Centre François Baclesse, UiT The Arctic University of Norway, University of Caen Normandy	France, Norway	—
8	Effects of physical exercise on cognitive function of breast cancer survivors receiving chemotherapy: A systematic review of randomized controlled trials (2022)	Shaanxi Cancer Hospital, Xi'an Jiaotong University Health Science Center	China	—

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 established a critical link between inflammatory challenges and sex-specific depressive responses, providing a foundational framework for understanding biological mechanisms underlying sex differences in depression.

The researcher's primary contribution centers on the 2015 paper published in Neuropsychopharmacology, which investigates sex differences in depressive and socioemotional responses to inflammatory challenges. This work serves as the cornerstone of the applicant's research line, addressing the complex interplay between immune activation and mood disorders with a specific focus on gender disparities. By examining how inflammatory stimuli differentially affect males and females, the study appears to fill a significant gap in understanding the biological underpinnings of depression, offering a nuanced perspective that integrates immunology with psychiatric outcomes. The absence of follow-up papers by the same researcher suggests that this single publication stands as a definitive and self-contained contribution to the field, rather than part of an extended series of incremental studies. The high citation count of 324 indicates that the work has been widely recognized and utilized by the scientific community. Furthermore, the fact that 86.1% of citing papers originate from independent researchers underscores the broad impact and external validation of these findings. This level of independent uptake demonstrates that the researcher's insights have influenced diverse groups of scientists beyond their immediate institutional or collaborative network, highlighting the seminal nature of the contribution to the broader understanding of sex differences in depression.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

Sex Differences in Depressive and Socioemotional Responses to an Inflammatory Challenge: Implications for Sex Differences in Depression

2015 · Neuropsychopharmacology · 324 citations (GS)

Field-normalised: 251 Semantic Scholar citations place it in the top 5% of Psychology papers from 2015 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The role of inflammation in depression: from evolutionary imperative to modern treatment target (2016)	Emory University School of Medicine, University of Wisconsin-Madison	United States	—
2	Neuroinflammation and depression: A review (2021)	CHRU de Tours, Université de Tours, Inserm	France	—
3	Inflammation in Fear- and Anxiety-Based Disorders: PTSD, GAD, and Beyond (2017)	Emory University School of Medicine, Harvard Medical School	United States	—
4	The role of inflammation and the gut microbiome in depression and anxiety (2019)	Texas Tech University	United States	—
5	Inflammation: depression fans the flames and feasts on the heat (2015)	—	—	—
6	Sex differences in depression: Insights from clinical and preclinical studies (2019)	University of British Columbia	Canada	—

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
University of California, Los Angeles	United States	SCImago #70 · THE =18 · QS 46	5
Emory University School of Medicine	United States	—	4
Emory University	United States	SCImago #217 · THE 102 · QS 182	3
Brigham Young University	United States	SCImago #2113 · QS 1001-1200	2
University of Utah	United States	SCImago #320 · THE 201–250 · QS =540	2
University of British Columbia	Canada	SCImago #144 · THE 45 · QS 40	2
Semel Institute, UCLA	United States	—	1
Université de Tours, Inserm	France	—	1
Brunel University London	United Kingdom	—	1
Shaanxi Cancer Hospital	China	—	1
Xi'an Jiaotong University Health Science Center	China	—	1
CHRU de Tours	France	—	1
Princess Margaret Cancer Centre, University Health Network	Canada	—	1
University of Exeter	United Kingdom	SCImago #679 · THE =170 · QS =155	1
University of North Carolina	United States	—	1

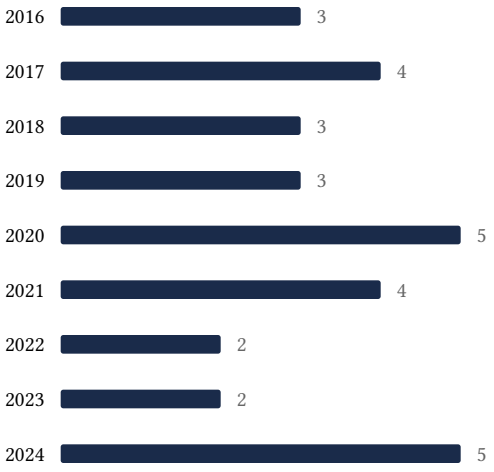
Geographic distribution of citing authors

Country	Citing papers
United States	23
Canada	3
Germany	2
Ireland	2
France	2
United Kingdom	2
Italy	1
Norway	1
Sweden	1
China	1
Australia	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	Exposure to an inflammatory challenge enhances neural sensitivity to negative and positive social feedback	12	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Confronting chemobrain: an in-depth look at survivors' reports of impact on work, social networks, and health care response	8	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Sex Differences in Depressive and Socioemotional Responses to an Inflammatory Challenge: Implications for Sex Differences in Depression	6	Dhanasar — Prong 2 (well-positioned)