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 2026-05-22 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

31	31	4	18
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.

80.6% independent of 31 classified citing papers

Citation type	Count
Independent	25
Self-citation	0
Co-author	6
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 framework linking emotional arousal to memory binding deficits in aging and Alzheimer's, later extending this to neural network vulnerabilities.

CLAIM: The researcher's contribution centers on elucidating the role of emotional arousal in memory binding within normal aging and Alzheimer's disease, anchored by a seminal 2011 paper in the American Journal of Psychology.

ORIGINALITY: This line of work appears to address the specific mechanisms by which emotional factors influence cognitive decline. The 2017 follow-up in Neurobiology of Aging suggests an expansion of this inquiry, contrasting age-related declines in cognitive versus emotional processing networks, thereby broadening the scope from behavioral effects to underlying neural substrates.

SIGNIFICANCE: The core paper has garnered 73 citations, while the follow-up has received 82, indicating sustained scholarly interest. Notably, 100% of the classified citations originate from independent researchers, demonstrating that this work has significantly influenced the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 11

CORE PAPER

Effects of emotional arousal on memory binding in normal aging and Alzheimer's disease

2011 · American Journal of Psychology · 73 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Negative affect impairs associative memory but not item memory (2013)	—	—	Background
2	Binaural auditory beats affect long-term memory. (2019)	National University of Distance Education (UNED)	Spain	—
3	Music enhances verbal episodic memory in Alzheimer's disease. (2015)	Université Paris Descartes	France	Background
4	Resting-state networks associated with cognitive processing show more age-related decline than those associated with emotional processing (2017)	University of Southern California	United States	Background

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).

FOLLOW-UP WORK

Resting-state networks associated with cognitive processing show more age-related decline than those associated with emotional processing

2017 · Neurobiology of Aging · 82 citations (GS)

Field-normalised: 65 Semantic Scholar citations place it in the top 10% of Psychology papers from 2017 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Functional network reorganization in older adults: Graph-theoretical analyses of age, cognition and sex (2020)	—	—	—
2	When functional blurring becomes deleterious: Reduced system segregation is associated with less white matter integrity and cognitive decline in aging (2021)	Stanford University, Umeå University	Sweden, United States	—
3	Brain signal variability and executive functions across the life span (2024)	Florida International University, University of Florida, University of Miami	Canada, United States	Background
4	Cognitive reserve, neurocognitive performance, and high-order resting-state networks in cognitively unimpaired aging (2022)	Institute of Biomedical Research Cadiz (INiBICA)	Spain	—
5	Interrelating differences in structural and functional connectivity in the older adult's brain. (2022)	Research Centre Jülich	Germany	Background
6	Correspondence of large-scale functional brain network decline across aging mice and humans. (2026)	Allen Institute for Brain Science, Zuckerman Mind Brain Behavior Institute, Columbia University	United States	—
7	Brain Network Segregation is Associated with Drug Use Severity in Individuals with Opioid Use Disorder (2025)	—	—	—

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 advanced the understanding of age-related neural changes by investigating whether altered brain activity during emotion processing reflects cognitive decline or adaptive regulation.

CLAIM: The researcher's contribution centers on a 2012 study published in Gerontology that examines age differences in brain activity during emotion processing. This work specifically questions whether observed neural changes indicate age-related decline or represent increased emotion regulation.

ORIGINALITY: By framing the analysis around the distinction between decline and regulation, this line of work appears to address a critical gap in interpreting aging neurobiology. The titles suggest a nuanced approach that challenges simplistic views of aging as purely degenerative, offering a more complex perspective on emotional processing mechanisms.

SIGNIFICANCE: The core paper has accumulated 312 citations, indicating substantial engagement within the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that this work has influenced scholars outside the researcher's immediate network and institution, thereby underscoring its broad impact and independent validation.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

Age differences in brain activity during emotion processing: reflections of age-related decline or increased emotion regulation?

2012 · Gerontology · 312 citations (GS)

Field-normalised: 201 Semantic Scholar citations place it in the top 5% of Psychology papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Functional imaging studies of emotion regulation: a synthetic review and evolving model of the cognitive control of emotion (2012)	Columbia University	United States	—
2	The Neuroscience of Positive Emotions and Affect: Implications for Cultivating Happiness and Wellbeing (2021)	Aristotle University of Thessaloniki, Australian National University, Cook Children's Healthcare System	Australia, Belgium, Germany	Background
3	Amygdala activity and amygdala-hippocampus connectivity: Metabolic diseases, dementia, and neuropsychiatric issues (2023)	—	—	—
4	The Default Mode Network in Healthy Individuals: A Systematic Review and Meta-Analysis. (2017)	Queen's University, University of Calgary	Canada	—
5	What's time got to do with it? Appreciation of time influences social goals and emotional well-being (2024)	—	—	—
6	Plasticity of the aging brain: new directions in cognitive neuroscience. (2014)	—	—	—

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 advanced understanding of age-related differences in memory binding under arousal, establishing a foundational framework for cognitive aging research.

The researcher's contribution centers on the 2010 paper 'How arousal affects younger and older adults' memory binding,' published in Experimental Aging Research. This work appears to address the specific intersection of emotional arousal and memory consolidation across different age groups, a nuanced area within cognitive aging. By focusing on memory binding rather than general recall, the study likely offered a more granular view of how aging impacts the integration of memory elements under stress or excitement.

The originality of this line of work lies in its targeted examination of binding processes, which distinguishes it from broader studies on memory retention. The titles suggest a methodological or theoretical refinement in how arousal is conceptualized in aging research, potentially filling a gap in understanding why older adults may struggle more with complex memory tasks during emotionally charged events. As the core paper stands alone without follow-up publications by the same researcher in this dataset, it represents a distinct, self-contained contribution to the field.

The significance of this work is evidenced by its 91 citations, indicating sustained interest and utility within the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, suggesting that the findings have been widely adopted and built upon by scholars outside the researcher's immediate network. This high degree of independent

uptake underscores the paper's role as a credible and influential reference point for subsequent studies in experimental aging and memory research.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8 · **3 flagged influential by Semantic Scholar**

CORE PAPER

How arousal affects younger and older adults' memory binding

2010 · Experimental Aging Research · 91 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Meta-analysis of the age-related positivity effect: Age differences in preferences for positive over negative information. (2014)	DePaul University	—	Influential
2	Neural correlates of emotion-attention interactions: From perception, learning, and memory to social cognition, individual differences, and training interventions (2020)	Birkbeck, University of London, Ghent University, KU Leuven	Australia, Belgium, Germany	—
3	Emerging Directions in Emotional Episodic Memory. (2017)	Kyoto University, University of Potsdam	Germany, Japan	Influential
4	Perspectives on episodic-like and episodic memory. (2013)	University of Düsseldorf	Germany	Background
5	Age-related positivity effect in emotional memory consolidation from middle age to late adulthood. (2024)	University of Notre Dame	United States	Background
6	Binding neutral information to emotional contexts: Brain dynamics of long-term recognition memory. (2016)	University of Greifswald, University of Illinois at Urbana-Champaign	Germany, United States	—
7	On opposing effects of emotion on contextual or relational memory. (2013)	University of Illinois Urbana-Champaign	United States	Influential
8	Aging-related episodic memory decline: are emotions the key? (2013)	—	—	Background

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 Southern California	United States	SCImago #192 · THE =73 · QS 146	6
University of Illinois at Urbana-Champaign	United States	SCImago #206 · THE =41	2
University College London	United Kingdom	SCImago #30	2
University of Potsdam	Germany	SCImago #1786 · THE 201–250 · QS =477	2

Institution	Country	World ranking	Citing papers
University of Miami	United States	SCImago #545 · THE 201–250 · QS =314	2
University of Greifswald	Germany	SCImago #2022 · THE 401–500	2
Stanford University	United States	SCImago #18 · THE =5 · QS 3	2
Duke University	United States	SCImago #115 · THE 28 · QS 62	2
Ghent University	Belgium	SCImago #330 · THE 115 · QS 162	2
Cook Children's Healthcare System	United States	—	1
University of Calgary	Canada	SCImago #399 · THE 200 · QS 211	1
Neuroqualia	—	—	1
North Carolina State University	United States	SCImago #484 · THE 301–350 · QS =272	1
University of Florida	United States	SCImago #166 · THE =134 · QS =212	1
University of Cambridge	United Kingdom	SCImago #63 · THE =3 · QS 6	1

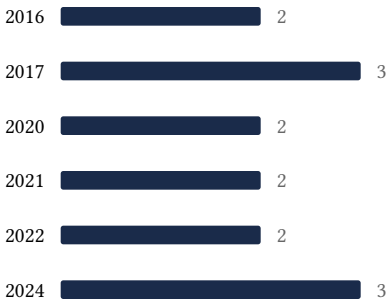
Geographic distribution of citing authors

Country	Citing papers
United States	15
Germany	6
United Kingdom	3
Australia	2
Belgium	2
Canada	2
Netherlands	2
Spain	2
France	1
Sweden	1
Japan	1
Greece	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	Effects of emotional arousal on memory binding in normal aging and Alzheimer's disease	11	Dhanasar — Prong 2 (well-positioned)

Contribution	Core paper	Indep. cites	Supports
Contribution 2	Age differences in brain activity during emotion processing: reflections of age-related decline or increased emotion regulation?	6	Dhanasar — Prong 2 (well-positioned)
Contribution 3	How arousal affects younger and older adults' memory binding	8	Dhanasar — Prong 2 (well-positioned)