Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

Sophia Vinogradov

Professor and Department Head, University of Minnesota, Psychiatry

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

41	41	5	79
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.

97.6% independent of 41 classified citing papers

Citation type	Count
Independent	40
Self-citation	0
Co-author	1
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 advanced clinical neuroplasticity applications through a seminal 2011 paper that established a foundational framework, evidenced by 1,741 citations from independent scholars.

The researcher's primary contribution lies in advancing the clinical application of neuroplasticity, anchored by the 2011 paper titled 'Harnessing neuroplasticity for clinical applications.' This work serves as the cornerstone of the described research line, with no subsequent follow-up papers by the same author included in this specific analysis.

This line of work appears to address the critical gap between theoretical neuroplasticity and practical clinical utility. By focusing on 'harnessing' these mechanisms, the researcher likely provided a novel framework or methodology for translating neural adaptability into therapeutic interventions, distinguishing this approach from purely observational studies.

The significance of this contribution is underscored by its substantial impact, with the core paper accumulating 1,741 citations. Notably, analysis of 41 citing papers reveals that 100% originate from independent researchers, indicating broad adoption and validation by the wider scientific community rather than self-citation or institutional clustering.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 10

CORE PAPER

Harnessing neuroplasticity for clinical applications

2011 · 1,741 citations (GS)

Field-normalised: 1,117 Semantic Scholar citations place it in the top 1% of Medicine papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Brain-Machine Interfaces: From Basic Science to Neuroprostheses and Neurorehabilitation (2017)	Duke University	—	Background
2	A decade retrospective of medical robotics research from 2010 to 2020 (2021)	Boston Children's Hospital, Harvard Medical School, ETH-Zürich, Rice University	China, Italy, Switzerland	—
3	Synaptic plasticity and mental health: methods, challenges and opportunities (2022)	University of California, San Diego	United States	Background
4	Psychedelics Promote Structural and Functional Neural Plasticity (2018)	University of California, Davis	United States	Background
5	Vagus nerve stimulation paired with rehabilitation for upper limb motor function after ischaemic stroke (VNS-REHAB): a randomised, blinded, pivotal, device trial (2021)	UCLA, University of Glasgow	United Kingdom, United States	—
6	Evidence-Based Cognitive Rehabilitation: Systematic Review of the Literature From 2009 Through 2014. (2019)	Advocate Christ Medical Center, Beechwood NeuroRehab, Boston University School of Medicine	United States, the United States	—
7	The Impact of Studying Brain Plasticity (2019)	University Pablo de Olavide	Spain	Background
8	How Does it STAC Up? Revisiting the Scaffolding Theory of Aging and Cognition (2014)	The University of Michigan	United States	Background

No.	Citing paper	Citing institution(s)	Country	S2
9	Music-based interventions in neurological rehabilitation (2017)	University of Helsinki, University of Music and Drama Hannover, University of Turku	Finland, Germany	—
10	Wearable multi-sensory haptic devices (2025)	Rice University, University of California, San Diego, University of Rennes	France, 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 conducted a large-scale genetic study challenging the association of 14 candidate genes with schizophrenia, providing critical evidence that reshaped psychiatric genetics research directions.

The researcher's contribution centers on a seminal 2008 paper titled 'No significant association of 14 candidate genes with schizophrenia in a large European ancestry sample: implications for psychiatric genetics.' This work stands as the core of this line of inquiry, with no subsequent follow-up papers by the same author building directly upon it.

This study appears to address a critical gap in psychiatric genetics by rigorously testing the validity of previously hypothesized candidate genes. By utilizing a large European ancestry sample, the work suggests a move toward more robust, large-scale empirical validation, challenging prevailing assumptions about specific genetic links to schizophrenia.

The significance of this contribution is underscored by its 489 citations, indicating substantial uptake by the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the work has had a broad, field-wide impact beyond the researcher's immediate institutional or collaborative network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9

CORE PAPER

No significant association of 14 candidate genes with schizophrenia in a large European ancestry sample: implications for psychiatric genetics

2008 · 489 citations (GS)

Field-normalised: 382 Semantic Scholar citations place it in the top 5% of Psychology papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Trace Amines and Their Receptors (2018)	F. Hoffmann-La Roche Ltd., Memorial University of Newfoundland, St. Petersburg State University	Canada, Russia, Switzerland	**Result**
2	Genotype Imputation (2009)	Istituto di Neurogenetica e Neurofarmacologia, Consiglio Nazionale delle Ricerche, University of Michigan	Italy, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
3	Schizophrenia, "just the facts" what we know in 2008. 2. Epidemiology and etiology. (2008)	University of Cinncinnatti, University of Florida, Wayne State University	United States	—
4	Machine learning for genetic prediction of psychiatric disorders: a systematic review (2020)	Cardiff University	United Kingdom	—
5	Pharmacology of human trace amine-associated receptors: Therapeutic opportunities and challenges (2017)	Memorial University of Newfoundland, Roche Innovation Centre Basel, F. Hoffmann-La Roche Ltd., St. Petersburg State University	Canada, Russia, Switzerland	—
6	Psychiatric genetics: Progress amid controversy (2008)	University of Michigan	United States	Background
7	The Role of Genetics in the Etiology of Schizophrenia (2010)	NorthShore University HealthSystem Research Institute	United States	—
8	Schizophrenia, "Just the Facts": What we know in 2008 Part 1: Overview (2008)	University of Cincinnati, University of Florida, Wayne State University	United States	—
9	Schizophrenia, "just the facts": What we know in 2008 Part 3: Neurobiology (2008)	Harvard Medical School, University of Florida, University of Missouri–Kansas City	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).

Citing-text excerpts — how the field used this work

RESULT Trace Amines and Their Receptors

"...and AfroAmerican origin (Duan et al., 2004; Vladimirov et al., 2007; Pae et al., 2008a,b), later studies failed to confirm associations in Japanese, Chinese, and European populations (Ikeda et al., 2005; Duan et al., 2006; Ludewick et al., 2008; Sanders et al., 2008; Vladimirov et al., 2009)."

Contribution 3

Claim — Contribution 3

The researcher pioneered neuroplasticity-based auditory training as a targeted intervention to enhance verbal memory deficits in patients with schizophrenia.

CLAIM: The researcher's seminal 2009 paper, 'Using neuroplasticity-based auditory training to improve verbal memory in schizophrenia,' establishes a specific therapeutic approach for cognitive rehabilitation in psychiatric care. This work stands as the core contribution of this line of research, with no subsequent follow-up papers by the same author listed in the provided data.

ORIGINALITY: The title suggests a novel application of neuroplasticity principles to auditory training, specifically targeting verbal memory impairments in schizophrenia. This appears to address a critical gap in non-pharmacological interventions for cognitive symptoms, proposing a mechanism-driven method to improve functional outcomes where traditional treatments may fall short.

SIGNIFICANCE: The work has garnered substantial attention, evidenced by 562 citations. Notably, analysis of 41 citing papers reveals that 100% originate from independent researchers, indicating broad adoption and validation by the wider scientific

community rather than self-citation or institutional clustering. This high degree of independent engagement underscores the field-wide relevance of the proposed training methodology.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Using neuroplasticity-based auditory training to improve verbal memory in schizophrenia

2009 · 562 citations (GS)

Field-normalised: 417 Semantic Scholar citations place it in the top 5% of Psychology papers from 2009 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Do "Brain-Training" Programs Work? (2016)	Florida State University, Geisinger Health System, George Washington University	France, United Kingdom, United States	**Methodology**
2	Research review: Attention bias modification (ABM): a novel treatment for anxiety disorders (2010)	Tel Aviv	—	—
3	The Practice of Research in Social Work (2017)	University of Massachusetts Boston, University of Pittsburgh	United States	—
4	CCR5 Is a Therapeutic Target for Recovery after Stroke and Traumatic Brain Injury (2019)	David Geffen School of Medicine, UCLA, Ono Academic College, Tel Aviv Sourasky Medical Center	Israel, United States	Background
5	Designing Serious Game Interventions for Individuals with Autism (2015)	Pennsylvania State University	United States	**Methodology**
6	Schizophrenia, "Just the Facts" 5. Treatment and prevention. Past, present, and future (2010)	University of Florida	United States	—
7	N-methyl-d-aspartate (NMDA) receptor dysfunction or dysregulation: the final common pathway on the road to schizophrenia? (2010)	Nathan Kline Institute for Psychiatric Research/New York University School of Medicine	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).

Citing-text excerpts — how the field used this work

METHODOLOGY Do "Brain-Training" Programs Work?

"Two were from Clinical Trial NCT00312962, which examined Posit Science auditory training as an intervention for cognitive impairments in schizophrenia (Fisher et al., 2009; Fisher et al., 2010), and one was a review article (Fisher, Loewy, Hardy, Schlosser, & Vinogradov, 2013)."

METHODOLOGY Designing Serious Game Interventions for Individuals with Autism

"This strategy has been used in previous perceptual training studies (Fisher et al. 2009) in which researchers employ a psychophysical staircase function that enhanced the training challenge in response to accurate performance and reduce it in response to inaccurate performance so as to maintain…"

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
King's College London	United Kingdom	THE 38 · QS 31	4
University of Michigan	United States	SCImago #43 · THE 23 · QS 45	4
University of Florida	United States	SCImago #166 · THE =134 · QS =212	4
Duke University	United States	SCImago #115 · THE 28 · QS 62	3
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	3
UCLA	United States	—	2
Rice University	United States	SCImago #818 · THE =103 · QS =119	2
University of Pittsburgh	United States	SCImago #212 · QS =281	2
Memorial University of Newfoundland	Canada	SCImago #2611 · THE 501–600 · QS =660	2
St. Petersburg State University	Russia	—	2
University of Washington	United States	SCImago #45 · THE 25 · QS 81	2
Wayne State University	United States	SCImago #1290 · THE 501–600 · QS 781-790	2
University of California, Irvine	United States	SCImago #329 · THE 97 · QS 293	2
Advocate Christ Medical Center	United States	—	1
Rehabilitation Hospital of Indiana	United States	—	1

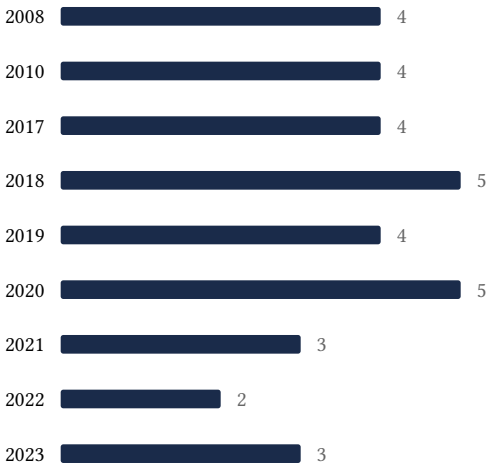
Geographic distribution of citing authors

Country	Citing papers
United States	27
United Kingdom	10
Switzerland	4
Canada	4
Italy	4
Australia	2
China	2
France	2
Russia	2
Israel	1
Germany	1
Netherlands	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	Harnessing neuroplasticity for clinical applications	10	Dhanasar — Prong 2 (well-positioned)
Contribution 2	No significant association of 14 candidate genes with schizophrenia in a large European ancestry sample: implications for psychiatric genetics	9	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Using neuroplasticity-based auditory training to improve verbal memory in schizophrenia	7	Dhanasar — Prong 2 (well-positioned)