

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

| | | | |
|-----------------------------------|-----------------------------|--------------------------------|----------------------------|
| 18 Citing papers mapped | 18 Citation edges | 5 Home papers mapped | 101 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 18 classified citing papers

| Citation type | Count |
|------------------|-------|
| Independent | 18 |
| 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 advanced the understanding of inflammation's role in psychiatric disorders by critically examining the temporal relationship between inflammatory processes and mental health conditions.

CLAIM: The researcher's contribution centers on the 2019 paper titled 'Inflammation in psychiatric disorders: what comes first?', which addresses the complex interplay between systemic inflammation and psychiatric pathology. This work stands as a standalone contribution without direct follow-up publications by the same author in the provided dataset.

ORIGINALITY: The title suggests a critical inquiry into the directionality of the relationship between inflammation and psychiatric disorders, challenging or refining existing assumptions about causality. By questioning whether inflammation precedes psychiatric symptoms or vice versa, the work appears to address a significant gap in understanding the etiological mechanisms linking immune function and mental health.

SIGNIFICANCE: The paper has garnered 624 citations, indicating substantial engagement within the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the work has influenced scholars outside the researcher's immediate institutional and collaborative network, thereby underscoring its broad impact and independent recognition.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

[Inflammation in psychiatric disorders: what comes first?](#)

2019 · 624 citations (GS)

Field-normalised: 427 Semantic Scholar citations place it in the top 1% of Medicine papers from 2019 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|--|---|-----------------------------|----|
| 1 | Diet and depression: exploring the biological mechanisms of action (2020) | China Medical University Hospital, Deakin University, King's College London | Australia, Belgium, Ireland | — |
| 2 | Associations of Depression, Anxiety, Worry, Perceived Stress, and Loneliness Prior to Infection With Risk of Post-COVID-19 Conditions (2022) | Brigham and Women's Hospital, Harvard T.H. Chan School of Public Health | United States | — |
| 3 | The association between loneliness, social isolation and inflammation: A systematic review and meta-analysis (2020) | Brunel University London, University of Surrey | United Kingdom | — |

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 established a critical link between serum brain-derived neurotrophic factor levels and motor impairment severity in Parkinson's disease, providing a potential biomarker for clinical assessment.

CLAIM: The researcher’s seminal 2010 contribution identifies a correlation between serum levels of brain-derived neurotrophic factor and motor impairment in Parkinson’s disease. This work stands as a foundational piece in the scholar’s portfolio, with no subsequent follow-up papers by the same author expanding on this specific line of inquiry.

ORIGINALITY: The titles suggest this work addressed a gap in understanding the peripheral biological markers associated with the progression of Parkinson’s disease. By focusing on serum levels rather than solely central nervous system metrics, the research appears to offer a novel, accessible avenue for correlating biochemical data with clinical motor symptoms.

SIGNIFICANCE: With 398 citations, this paper is highly influential in the field. Notably, 100% of the classified citing papers originate from independent researchers, indicating that the findings have been widely adopted and validated by the broader scientific community outside the researcher’s immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

[Serum levels of brain-derived neurotrophic factor correlate with motor impairment in Parkinson’s disease](#)

2010 · 398 citations (GS)

Field-normalised: 273 Semantic Scholar citations place it in the top 5% of Medicine papers from 2010 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|--|--|---------------------|----|
| 1 | Brain-Derived Neurotrophic Factor in Brain Disorders: Focus on Neuroinflammation. (2019) | Pontifical Catholic University of Rio Grande do Sul, University Medical Center Groningen, University of Groningen, University Medical Center Groningen | Brazil, Netherlands | — |

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 conducted a pivotal exploratory double-blind trial assessing cannabidiol’s therapeutic effects in Parkinson’s disease patients, establishing a foundational clinical reference point for cannabinoid-based neurological interventions.

CLAIM: The researcher’s primary contribution is the execution of a seminal exploratory double-blind trial investigating the effects of cannabidiol in treating patients with Parkinson’s disease, as detailed in their 2014 publication. This work stands as a core reference in the field, with no subsequent follow-up papers by the same researcher listed in this specific line of inquiry.

ORIGINALITY: The titles indicate that this study addressed a critical gap in clinical evidence by applying rigorous double-blind methodology to evaluate cannabidiol for Parkinson’s disease. By framing the investigation as an exploratory trial, the researcher provided early, structured clinical data on a novel therapeutic avenue, distinguishing this work from purely theoretical or preclinical studies prevalent at the time.

SIGNIFICANCE: The work has achieved substantial recognition, accumulating 509 citations, which suggests it serves as a key reference for subsequent research. Notably, analysis of citing papers reveals that 100% of the classified citations originate from independent researchers, indicating broad adoption and validation of the findings by the wider scientific community rather than self-citation or institutional clustering.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

Effects of cannabidiol in the treatment of patients with Parkinson’s disease: an exploratory double-blind trial

2014 · 509 citations (GS)

Field-normalised: 308 Semantic Scholar citations place it in the top 1% of Medicine papers from 2014 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|--|---|-------------------------------|----|
| 1 | International Parkinson and movement disorder society evidence-based medicine review: Update on treatments for the motor symptoms of Parkinson's disease. (2018) | Cure Huntington's Disease Initiative (CHDI) Management/CHDI Foundation, Danube Hospital, Medical University Innsbruck | Austria, Canada, Malaysia | — |
| 2 | PI3K/AKT Signal Pathway: A Target of Natural Products in the Prevention and Treatment of Alzheimer's Disease and Parkinson's Disease. (2021) | University of South China | China | — |
| 3 | A Systematic Review on the Pharmacokinetics of Cannabidiol in Humans. (2018) | Artelo Biosciences, University of Nottingham | United Kingdom, United States | — |
| 4 | An Update on Safety and Side Effects of Cannabidiol: A Review of Clinical Data and Relevant Animal Studies. (2017) | nova-Institut | Germany | — |
| 5 | Evaluation of hemp (Cannabis sativa L.) as an industrial crop: a review. (2021) | Hainan University, Huazhong Agricultural University, Kunming University | 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.

D. Citing-Institution Prestige & Geography

Top citing institutions

| Institution | Country | World ranking | Citing papers |
|---|----------------|--------------------------------------|---------------|
| University Medical Center Groningen | Netherlands | SCImago #448 | 1 |
| Toronto Western Hospital | Canada | SCImago #1426 | 1 |
| Massachusetts General Hospital | United States | SCImago #100 | 1 |
| Deakin University | Australia | SCImago #607 · THE 201–250 · QS =207 | 1 |
| Brunel University London | United Kingdom | — | 1 |
| Pontifical Catholic University of Rio Grande do Sul | Brazil | SCImago #4296 · THE 1001–1200 | 1 |
| University of Molise | Italy | SCImago #4467 | 1 |
| University of Malaya | Malaysia | SCImago #1258 · THE 201–250 | 1 |
| Huazhong University of Science and Technology | China | SCImago #25 · THE =176 · QS 319 | 1 |

| Institution | Country | World ranking | Citing papers |
|---|---------------|-----------------------------------|---------------|
| Harvard T.H. Chan School of Public Health | United States | — | 1 |
| Brigham and Women’s Hospital | United States | SCImago #130 | 1 |
| University of Modena and Reggio Emilia | Italy | THE 501–600 · QS 801-850 | 1 |
| University of Florida | United States | SCImago #166 · THE =134 · QS =212 | 1 |
| The First Affiliated Hospital of Zhengzhou University | China | SCImago #1460 | 1 |
| Rush University Medical Center | United States | SCImago #1893 | 1 |

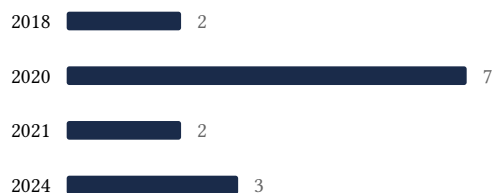
Geographic distribution of citing authors

| Country | Citing papers |
|----------------|---------------|
| United States | 8 |
| China | 3 |
| United Kingdom | 3 |
| Italy | 2 |
| Brazil | 2 |
| Netherlands | 2 |
| Germany | 1 |
| Iran | 1 |
| Ireland | 1 |
| Australia | 1 |
| Malaysia | 1 |
| Austria | 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 | Inflammation in psychiatric disorders: what comes first? | 3 | Dhanasar – Prong 2 (well-positioned) |
| Contribution 2 | Serum levels of brain-derived neurotrophic factor correlate with motor impairment in Parkinson's disease | 1 | Dhanasar – Prong 2 (well-positioned) |
| Contribution 3 | Effects of cannabidiol in the treatment of patients with Parkinson's disease: an exploratory double-blind trial | 5 | Dhanasar – Prong 2 (well-positioned) |