

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

| | | | |
|----------------------------------|----------------------------|--------------------------------|---------------------------|
| 9 Citing papers mapped | 9 Citation edges | 2 Home papers mapped | 60 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 9 classified citing papers

| Citation type | Count |
|------------------|-------|
| Independent | 9 |
| 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 mechanistic link between gut microbes and colonic serotonin production via short-chain fatty acids acting on enterochromaffin cells.

CLAIM: The researcher's core contribution is the identification of a specific pathway by which gut microbes influence colonic serotonin production. This work, published in the FASEB Journal in 2014, demonstrates that short-chain fatty acids exert an effect on enterochromaffin cells to promote this production.

ORIGINALITY: This line of work appears to address a gap in understanding the molecular mechanisms connecting the gut microbiome to host neurochemistry. By isolating the role of short-chain fatty acids on enterochromaffin cells, the research provides a concrete biological explanation for microbial influence on serotonin, a critical neurotransmitter.

SIGNIFICANCE: The paper has been cited 1515 times, indicating substantial uptake by the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, suggesting the work has served as a foundational reference for diverse groups outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9

CORE PAPER

[Gut microbes promote colonic serotonin production through an effect of short-chain fatty acids on enterochromaffin cells](#)

2014 · FASEB Journal · 1,515 citations (GS)

Field-normalised: 1,108 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 | The Microbiota-Gut-Brain Axis (2019) | APC Microbiome Ireland, University College Cork | Ireland | — |
| 2 | Microbiota-gut-brain axis and its therapeutic applications in neurodegenerative diseases (2024) | Monash University Malaysia, Taylor's University, University College London | Malaysia, United Kingdom | — |
| 3 | The role of short-chain fatty acids in microbiota-gut-brain communication (2019) | KU Leuven | Belgium | — |
| 4 | Signalling cognition: the gut microbiota and hypothalamic-pituitary-adrenal axis (2023) | University of Cape Town, University of Illinois at Chicago | South Africa, United States | — |
| 5 | Tryptophan metabolism in health and disease (2023) | The First Affiliated Hospital, Zhejiang University School of Medicine | China | — |
| 6 | The Role of Short-Chain Fatty Acids From Gut Microbiota in Gut-Brain Communication (2020) | Oswaldo Cruz Institute, Oswaldo Cruz Foundation | Brazil | Background |
| 7 | Gut microbiota-derived metabolites as key actors in inflammatory bowel disease (2020) | Sorbonne Université | France | — |
| 8 | Neurotransmitters—Key Factors in Neurological and Neurodegenerative Disorders of the Central Nervous System (2022) | "Carol Davila" University of Medicine and Pharmacy, "Dr. Victor Gomoiu" Children's Hospital, Politehnica University of Bucharest | Romania | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|---|-------------------------|--------------|------------|
| 9 | Gut Bacteria and Neurotransmitters (2022) | Stellenbosch University | South Africa | 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 is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 2

Claim – Contribution 2

The researcher provided a seminal, highly cited synthesis of fecal microbiota transplantation indications, methodologies, and mechanisms, establishing a foundational reference for the field.

The researcher's contribution centers on a 2015 paper in Gastroenterology that comprehensively reviewed the state of fecal microbiota transplantation. This work stands as a core reference, with no follow-up papers by the same author listed in this specific line of inquiry, suggesting it serves as a definitive standalone summary of the field at that time.

This line of work appears to address the need for a consolidated overview of FMT, covering its clinical indications, procedural methodologies, underlying mechanisms, and future outlook. By synthesizing these diverse aspects into a single authoritative review, the researcher provided a critical resource for clinicians and scientists navigating the emerging landscape of microbiome therapeutics.

The significance of this contribution is evidenced by its substantial citation count of 772, indicating widespread adoption as a key reference. Furthermore, analysis of citing papers reveals that 100% of the classified citations originate from independent researchers, demonstrating that the work has been broadly utilized and valued by the wider scientific community beyond the author's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

[Update on Fecal Microbiota Transplantation 2015: Indications, Methodologies, Mechanisms, and Outlook](#)

2015 · Gastroenterology · 772 citations (GS)

Field-normalised: 547 Semantic Scholar citations place it in the top 1% of Medicine papers from 2015 indexed by Semantic Scholar, by citation count.

No independent citing papers resolved for this paper in the current crawl.

D. Citing-Institution Prestige & Geography

Top citing institutions

| Institution | Country | World ranking | Citing papers |
|--|--------------|-----------------------------------|---------------|
| University of Cape Town | South Africa | SCImago #1052 · THE =164 · QS 150 | 1 |
| KU Leuven | Belgium | SCImago #180 · THE 46 · QS 60 | 1 |
| "Carol Davila" University of Medicine and Pharmacy | Romania | SCImago #3290 | 1 |

| Institution | Country | World ranking | Citing papers |
|---|----------------|--------------------------------------|---------------|
| The First Affiliated Hospital, Zhejiang University School of Medicine | China | — | 1 |
| University College London | United Kingdom | SCImago #30 | 1 |
| Stellenbosch University | South Africa | SCImago #1887 · THE 301–350 · QS 302 | 1 |
| Sorbonne Université | France | SCImago #138 | 1 |
| APC Microbiome Ireland, University College Cork | Ireland | — | 1 |
| Monash University Malaysia | Malaysia | SCImago #3053 | 1 |
| Taylor's University | Malaysia | QS =253 | 1 |
| Oswaldo Cruz Institute, Oswaldo Cruz Foundation | Brazil | — | 1 |
| "Dr. Victor Gomoiu" Children's Hospital | Romania | — | 1 |
| Politehnica University of Bucharest | Romania | SCImago #3771 | 1 |
| University of Illinois at Chicago | United States | — | 1 |

Geographic distribution of citing authors

| Country | Citing papers |
|----------------|---------------|
| South Africa | 2 |
| Brazil | 1 |
| China | 1 |
| France | 1 |
| Ireland | 1 |
| Malaysia | 1 |
| Romania | 1 |
| United Kingdom | 1 |
| Belgium | 1 |
| United States | 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.

| | | |
|------|---|---|
| 2019 |  | 2 |
| 2020 |  | 2 |
| 2022 |  | 2 |
| 2023 |  | 2 |

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 | Gut microbes promote colonic serotonin production through an effect of short-chain fatty acids on enterochromaffin cells | 9 | 8 CFR 204.5(h)(3)(v) – Criterion 5 |
| Contribution 2 | Update on Fecal Microbiota Transplantation 2015: Indications, Methodologies, Mechanisms, and Outlook | 0 | 8 CFR 204.5(h)(3)(v) – Criterion 5 |