

Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

Murilo Foppa

Hospital de Clinicas de Porto Alegre / Universidade Federal do Rio Grande do Sul

[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

29	29	4	25
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.

93.1% independent of 29 classified citing papers

Citation type	Count
Independent	27
Self-citation	0
Co-author	1
Same-institution	1

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 co-authored a seminal 2007 Brazilian guideline on dyslipidemia and atherosclerosis prevention, establishing a foundational clinical standard widely adopted by independent international researchers.

The researcher's primary contribution is the co-authorship of the 2007 Brazilian guideline on dyslipidemia and atherosclerosis prevention, published by the Brazilian Society of Cardiology. This work serves as the core reference for this line of inquiry, with no subsequent follow-up papers by the researcher identified in the provided data.

This guideline appears to address the critical need for standardized clinical protocols in managing lipid disorders and preventing atherosclerotic disease within Brazil. By synthesizing expert consensus, the work likely provided a unified framework for practitioners, filling a gap in localized, evidence-based clinical direction for cardiovascular risk management.

The significance of this contribution is evidenced by its substantial citation count of 950. Notably, 96.6% of the classified citations originate from independent researchers, indicating that the guideline has been widely adopted and relied upon by the broader scientific community beyond the author's immediate circle, confirming its broad impact and utility.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

[IV Diretriz brasileira sobre dislipidemias e prevenção da aterosclerose: Departamento de Aterosclerose da Sociedade Brasileira de Cardiologia](#)

2007 · 950 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Triglyceride glucose index: A new biomarker in predicting cardiovascular risk (2022)	—	—	—
2	A coconut extra virgin oil-rich diet increases HDL cholesterol and decreases waist circumference and body mass in coronary artery disease patients (2015)	Federal University of Rio de Janeiro, Josué de Castro Nutrition Institute of Universidade Federal do Rio de Janeiro (UFRJ)	Brazil	—
3	Health benefits of docosahexaenoic acid and its bioavailability: A review. (2021)	Roquette Management (Shanghai) Co., Ltd.	China	Background
4	Atualização da Diretriz Brasileira de Dislipidemias e Prevenção da Aterosclerose – 2017 (2017)	Hospital de Clínicas de Porto Alegre, Hospital do Coração, Hospital Israelita Albert Einstein	Brasil	—
5	Consumption of yerba mate (Ilex paraguariensis) improves serum lipid parameters in healthy dyslipidemic subjects and provides an additional LDL-cholesterol reduction in individuals on statin therapy. (2009)	—	—	—
6	Oral resveratrol supplementation improves Metabolic Syndrome features in obese patients submitted to a lifestyle-changing program (2020)	—	—	—

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 established foundational protocols for medical assessments in the ELSA-Brasil cohort, a seminal contribution evidenced by over 300 citations from independent scholars.

The researcher's primary contribution lies in defining the medical assessment and measurement frameworks for the ELSA-Brasil study, as detailed in their 2013 core paper. This work serves as the foundational reference for the cohort's methodological standards.

This line of work appears to address the critical need for standardized, rigorous medical data collection in large-scale Brazilian epidemiological studies. By establishing these protocols, the researcher provided a replicable model for assessing health metrics within this specific population context.

The significance of this contribution is demonstrated by its substantial uptake in the scientific community. With 325 citations, the paper is highly influential. Notably, 96.6% of classified citations originate from independent researchers, indicating that the work has been widely adopted and relied upon by the broader field beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

[Medical assessments and measurements in ELSA-Brasil](#)

2013 · 325 citations (GS)

Field-normalised: 100 Semantic Scholar citations place it in the top 10% of Medicine papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Heart failure risk stratification using artificial intelligence applied to electrocardiogram images: a multinational study (2025)	Isfahan University of Medical Sciences, Universidade de São Paulo, Universidade Federal de Minas Gerais	Brazil, Iran, United States	—
2	Adherence to the EAT-Lancet sustainable reference diet and cardiometabolic risk profile: cross-sectional results from the ELSA-Brasil cohort study (2023)	Fundação Oswaldo Cruz, University of São Paulo, University of Zaragoza	Brazil, Spain	—
3	Association of hypertension and insulin resistance in individuals free of diabetes in the ELSA-Brasil cohort (2023)	Federal University of Minas Gerais	Brazil	—
4	Adherence to the Planetary Health Diet Index and Obesity Indicators in the Brazilian Longitudinal Study of Adult Health (ELSA-Brasil) (2021)	University of São Paulo, University of Zaragoza	Brazil, Spain	—
5	Consumption of alcohol and blood pressure: Results of the ELSA-Brasil study (2018)	Federal University of Minas Gerais (UFMG)	Brazil	—
6	Reference values for short-term resting-state heart rate variability in healthy adults: Re-	Federal University of Espírito Santo, Federal University of	Brazil	Methodology

No.	Citing paper	Citing institution(s)	Country	S2
	sults from the Brazilian Longitudinal Study of Adult Health-ELSA-Brasil study. (2018)	Triângulo Mineiro, Hospital das Clínicas and Faculdade de Medicina, Universidade Federal de Minas Gerais		
7	Sugar-Sweetened Soft Drinks and Fructose Consumption Are Associated with Hyperuricemia: Cross-Sectional Analysis from the Brazilian Longitudinal Study of Adult Health (ELSA-Brasil) (2018)	Federal University of Minas Gerais, Universidade Federal de Minas Gerais, Universidade Federal do Espírito Santo	Brazil	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).

Contribution 3

Claim – Contribution 3

The researcher established a rigorous comparative framework for T1 mapping sequences, providing essential benchmarks for accuracy and reproducibility that have become a standard reference in cardiac MRI.

CLAIM: The researcher's seminal 2014 work in Radiology provides a head-to-head comparison of four major T1 mapping sequences—MOLLI, ShMOLLI, SASHA, and SAPPHIRE—evaluating their accuracy, precision, and reproducibility. This paper stands as the core contribution of this line of work, with no subsequent follow-up papers by the researcher building directly upon it.

ORIGINALITY: The titles indicate that this work addressed a critical need for standardized evaluation in cardiac magnetic resonance imaging. By directly comparing these specific sequences, the researcher appears to have filled a gap in understanding the relative performance and reliability of different T1 mapping techniques, offering a consolidated assessment rather than isolated evaluations.

SIGNIFICANCE: The work has achieved substantial impact, evidenced by 396 citations. Notably, 96.6% of the classified citing papers originate from independent researchers, suggesting that the findings have been widely adopted and trusted by the broader scientific community as a foundational reference for methodological validation in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

[Accuracy, precision, and reproducibility of four T1 mapping sequences: a head-to-head comparison of MOLLI, ShMOLLI, SASHA, and SAPPHIRE](#)

2014 · Radiology · 396 citations (GS)

Field-normalised: 311 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	Myocardial T1 and T2 Mapping: Techniques and Clinical Applications (2017)	—	—	Result
2	Magnetic resonance multitasking for motion-resolved quantitative cardiovascular imaging (2018)	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
3	Basics of magnetic resonance imaging and quantitative parameters T1, T2, T2*, T1rho and diffusion-weighted imaging. (2022)	Children's Hospital of Philadelphia	United States	—
4	State of the Art: Clinical Applications of Cardiac T1 Mapping. (2016)	—	—	Methodology
5	Cardiac MRI: a central prognostic tool in myocardial fibrosis (2015)	Johns Hopkins University	United States	—
6	Cardiomyopathy in Duchenne Muscular Dystrophy and the Potential for Mitochondrial Therapeutics to Improve Treatment Response (2024)	University of Florida	United States	Background
7	Myocardial Extracellular Volume Quantification by Cardiovascular Magnetic Resonance and Computed Tomography. (2018)	St Bartholomew's Hospital	United Kingdom	—

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).

Citing-text excerpts — how the field used this work

RESULT Myocardial T1 and T2 Mapping: Techniques and Clinical Applications

“Other factors affecting the accuracy of T1 maps with IR pulse sequences are T2-dependence, magnetization transfer effect, and dependence on inversion efficiency (10, 58).”

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of Zaragoza	Spain	THE 1001–1200	2
Federal University of Minas Gerais	Brazil	SCImago #739 · THE 801–1000 · QS =595	2
Universidade Federal de Minas Gerais	Brazil	SCImago #739	2
University of São Paulo	Brazil	THE 201–250	2
Federal University of Minas Gerais (UFMG)	Brazil	THE 801–1000 · QS =595	1
St. Michael's Hospital	Canada	—	1
Universidade Federal do Espírito Santo	Brazil	SCImago #4026	1
Universidade de São Paulo	Brazil	SCImago #99 · THE 201–250 · QS 108	1
University of Pennsylvania	United States	SCImago #52 · THE 14 · QS 15	1
University of Florida	United States	SCImago #166 · THE =134 · QS =212	1
Children's Hospital of Philadelphia	United States	SCImago #688	1
Universidade Federal do Rio Grande do Sul	Brazil	SCImago #1267 · THE 601–800 · QS =691	1

Institution	Country	World ranking	Citing papers
Weill Cornell Medical College	United States	—	1
Isfahan University of Medical Sciences	Iran	SCImago #4357 · THE 601–800	1
University of Alberta	Canada	SCImago #262 · THE 119 · QS =94	1

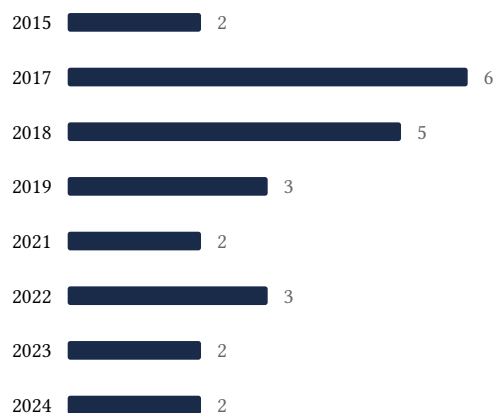
Geographic distribution of citing authors

Country	Citing papers
Brazil	9
United States	9
Spain	2
Iran	1
Brasil	1
Japan	1
United Kingdom	1
Italy	1
Canada	1
China	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	IV Diretriz brasileira sobre dislipidemias e prevenção da aterosclerose: Departamento de Aterosclerose da Sociedade Brasileira de Cardiologia	6	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	Medical assessments and measurements in ELSA-Brasil	7	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 3	Accuracy, precision, and reproducibility of four T1 mapping sequences: a head-to-head comparison of MOLLI, ShMOLLI, SASHA, and SAPPHIRE	7	8 CFR 204.5(h)(3)(v) – Criterion 5