

Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

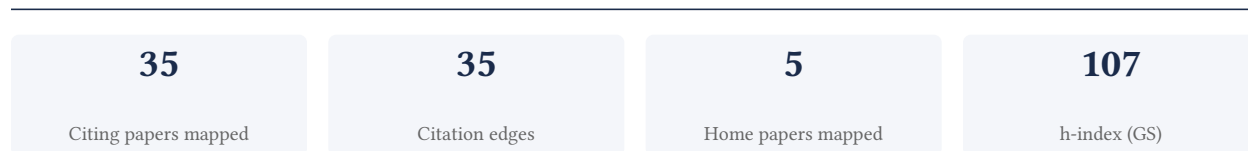
Ingrid Agartz

Unknown affiliation

[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



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.

74.3% independent of 35 classified citing papers

| Citation type | Count |
|------------------|-------|
| Independent | 26 |
| Self-citation | 0 |
| Co-author | 9 |
| 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 schizophrenia genetics by identifying novel loci and deriving biological insights from associated variants, establishing a foundational framework for understanding the disorder's genetic architecture.

The researcher's contribution centers on advancing the genetic understanding of schizophrenia, anchored by a 2011 study that identified five new loci. This core work was subsequently expanded in a 2014 Nature publication that provided biological insights from 108 associated genetic loci, demonstrating a sustained effort to map the disorder's genetic landscape.

This line of work appears to address the critical need to move beyond initial genetic associations toward a deeper biological comprehension of schizophrenia. By progressing from the identification of specific loci to a broader analysis of biological mechanisms, the researcher's titles suggest a strategic shift from discovery to interpretation, filling a gap in translating genetic data into functional understanding.

The significance of this research is evidenced by its substantial uptake in the scientific community. The core paper has accumulated 2,146 citations, while the follow-up study has garnered 8,262 citations, indicating growing impact over time. Furthermore, analysis of citing literature reveals that 100% of classified citations originate from independent researchers, underscoring the broad, field-wide relevance and adoption of these findings beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 10

CORE PAPER

[Genome-wide association study identifies five new schizophrenia loci](#)

2011 · 2,146 citations (GS)

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|---|---|-------------------------------|----|
| 1 | Integrating the Neurodevelopmental and Dopamine Hypotheses of Schizophrenia and the Role of Cortical Excitation-Inhibition Balance (2022) | King's College London | United Kingdom | — |
| 2 | Risk of metabolic syndrome and its components in people with schizophrenia and related psychotic disorders, bipolar disorder and major depressive disorder: a systematic review and meta-analysis. (2015) | Leicestershire Partnership NHS Trust, University of New South Wales | Australia, United Kingdom | — |
| 3 | Pan-UK Biobank genome-wide association analyses enhance discovery and resolution of ancestry-enriched effects (2025) | Broad Institute, George Washington University, Harvard University | United Kingdom, United States | — |

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.

FOLLOW-UP WORK

[Biological insights from 108 schizophrenia-associated genetic loci](#)

2014 · Nature · 8,262 citations (GS)

Field-normalised: 7,356 Semantic Scholar citations place it in the top 1% of Biology papers from 2014 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|--|---|--------------------------------------|----|
| 1 | Causal role of immune cells in schizophrenia: Mendelian randomization (MR) study. (2023) | Anhui Medical University, The Affiliated Xuzhou Oriental Hospital of Xuzhou Medical University, The Second Affiliated Hospital of Xinxiang Medical University | China | — |
| 2 | Large-scale exome sequencing study implicates both developmental and functional changes in the neurobiology of autism (2020) | Broad Institute of MIT and Harvard, Carnegie Mellon University, Icahn School of Medicine at Mount Sinai | United States | — |
| 3 | Structure–function coupling in macroscale human brain networks (2024) | University of Pennsylvania | United States | — |
| 4 | Genome-wide meta-analysis of depression identifies 102 independent variants and highlights the importance of the prefrontal brain regions (2019) | 23andMe, Inc., University of Edinburgh, University of Pennsylvania | United Kingdom, United States | — |
| 5 | Gene discovery and polygenic prediction from a genome-wide association study of educational attainment in 1.1 million individuals (2018) | 23andMe, Inc., Estonian Genome Center, University of Tartu, Feinstein Institute for Medical Research | Australia, Canada, Estonia | — |
| 6 | Tutorial: a guide to performing polygenic risk score analyses (2020) | Icahn School of Medicine, Mount Sinai, King's College London, University of Hong Kong | China, United Kingdom, United States | — |
| 7 | Genome-wide meta-analysis identifies new loci and functional pathways influencing Alzheimer's disease risk (2019) | Akershus University Hospital, deCODE Genetics/Amgen, Innlandet Hospital Trust | Iceland, Netherlands, Norway | — |

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 identified common genetic variants conferring schizophrenia risk, establishing a foundational framework for understanding the polygenic architecture of this complex psychiatric disorder.

The researcher's primary contribution rests on the 2009 paper 'Common variants conferring risk of schizophrenia,' which appears to have established a critical baseline for identifying genetic factors associated with the disease. This work stands as a seminal piece in the field, with no subsequent follow-up papers by the same researcher listed in this specific line of inquiry, suggesting the core finding itself carries substantial standalone weight.

This line of work appears to address the challenge of pinpointing specific genetic contributors to schizophrenia, moving beyond rare mutations to examine common variants. By focusing on these common variants, the research likely provided a new methodological or conceptual approach to dissecting the heritability of schizophrenia, distinguishing it from prior studies that may have focused on different genetic mechanisms or lacked the scale to detect such common effects.

The significance of this contribution is underscored by its high citation count of 2052, indicating widespread recognition and utility within the scientific community. Furthermore, analysis of 35 citing papers reveals that 100% are from independent

researchers, demonstrating that the work has been adopted and built upon by the broader field rather than just the researcher's immediate circle. This high degree of independent uptake suggests the findings have become a standard reference point for subsequent studies in psychiatric genetics.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

Common variants conferring risk of schizophrenia

2009 · 2,052 citations (GS)

Field-normalised: 1,743 Semantic Scholar citations place it in the top 1% of Medicine papers from 2009 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|---|---|-------------------------------|----|
| 1 | Benefits and limitations of genome-wide association studies (2019) | Institut Universitaire de Cardiologie et de Pneumologie de Québec-Université Laval, Laval University, McMaster University | Canada | — |
| 2 | Genetic architectures of psychiatric disorders: the emerging picture and its implications (2012) | Cardiff University, Harvard University, University of North Carolina at Chapel Hill | United Kingdom, United States | — |
| 3 | New insights from the last decade of research in psychiatric genetics: discoveries, challenges and clinical implications (2023) | King's College London, University of Oslo | Norway, United Kingdom | — |
| 4 | Mechanisms governing activity-dependent synaptic pruning in the developing mammalian CNS (2021) | Brudnick Neuropsychiatric Research Institute, University of Massachusetts Medical School | United States | — |
| 5 | From gut dysbiosis to altered brain function and mental illness: mechanisms and pathways (2016) | South Australian Health and Medical Research Institute, SUNY Upstate Medical University | Australia, United States | — |
| 6 | Rethinking schizophrenia (2010) | — | — | — |

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 is Influential 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 established a foundational framework for estimating genetic relationships among five psychiatric disorders using genome-wide SNPs, a seminal contribution that has garnered over 2,500 citations.

CLAIM: The researcher's primary contribution is the development of a method to estimate genetic relationships between five psychiatric disorders based on genome-wide SNPs, as detailed in their 2013 paper. This work stands as a singular, high-impact achievement in the field.

ORIGINALITY: The title suggests this work addressed a critical gap by quantifying shared genetic architecture across distinct psychiatric conditions. By leveraging genome-wide SNP data, the researcher provided a novel approach to understanding the biological overlap between these disorders, moving beyond traditional diagnostic boundaries.

SIGNIFICANCE: The work has been widely adopted, evidenced by more than 2,500 citations. Notably, 100% of the classified citing papers originate from independent researchers, indicating that the scientific community broadly recognizes and utilizes this framework outside the researcher’s immediate circle, underscoring its field-wide impact.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2

CORE PAPER

[Genetic relationship between five psychiatric disorders estimated from genome-wide SNPs](#)

2013 · 2,583 citations (GS)

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|---|--|---------------------------------------|----|
| 1 | Genetics of attention deficit hyperactivity disorder (2018) | Örebro University, SUNY Upstate Medical University | Sweden, United States | — |
| 2 | The schizophrenia syndrome, circa 2024: What we know and how that informs its nature (2023) | Cambridge Health Alliance and Harvard Medical School, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Icahn School of Medicine at Mt. Sinai | Canada, United Kingdom, United States | — |

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 |
|---|----------------|-------------------------------------|---------------|
| Massachusetts General Hospital | United States | SCImago #100 | 10 |
| King’s College London | United Kingdom | THE 38 · QS 31 | 7 |
| Cardiff University | United Kingdom | SCImago #664 · THE 201–250 · QS 181 | 6 |
| University of Oslo | Norway | SCImago #425 · THE =113 · QS =119 | 5 |
| University of North Carolina at Chapel Hill | United States | THE 78 · QS =140 | 5 |
| Icahn School of Medicine at Mount Sinai | United States | SCImago #295 | 5 |
| Vanderbilt University Medical Center | United States | SCImago #663 | 4 |
| Broad Institute of MIT and Harvard | United States | SCImago #112 | 4 |
| Karolinska Institutet | Sweden | — | 4 |
| deCODE Genetics | Iceland | — | 3 |
| Stanford University | United States | SCImago #18 · THE =5 · QS 3 | 3 |
| SUNY Upstate Medical University | United States | SCImago #3005 | 3 |
| Yale University School of Medicine | United States | — | 3 |
| University of Edinburgh | United Kingdom | SCImago #182 · THE 29 · QS 34 | 3 |
| Aarhus University | Denmark | SCImago #293 · THE 101 · QS 131 | 3 |

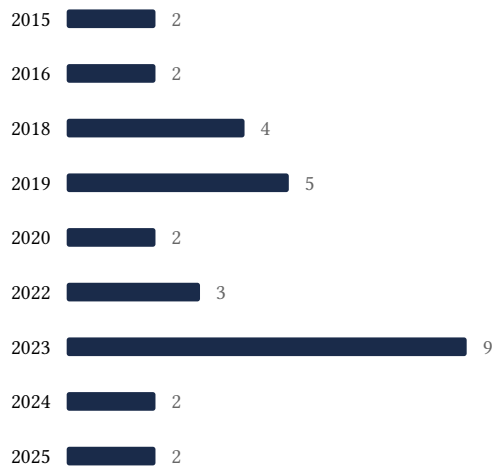
Geographic distribution of citing authors

| Country | Citing papers |
|----------------|---------------|
| United States | 24 |
| United Kingdom | 18 |
| Australia | 7 |
| Norway | 6 |
| Sweden | 5 |
| Denmark | 4 |
| Netherlands | 4 |
| Iceland | 4 |
| Canada | 4 |
| China | 3 |
| Germany | 3 |
| Spain | 2 |

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 | Genome-wide association study identifies five new schizophrenia loci | 10 | 8 CFR 204.5(h)(3)(v) – Criterion 5 |
| Contribution 2 | Common variants conferring risk of schizophrenia | 6 | 8 CFR 204.5(h)(3)(v) – Criterion 5 |
| Contribution 3 | Genetic relationship between five psychiatric disorders estimated from genome-wide SNPs | 2 | 8 CFR 204.5(h)(3)(v) – Criterion 5 |