# 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

| 19 | 19 | 2 | 224 |
|---|---|---|---|
| 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.

**77.8% independent** of 18 classified citing papers

| Citation type | Count |
|---|---|
| Independent | 14 |
| Self-citation | 0 |
| Co-author | 2 |
| Same-institution | 2 |

1 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 developed the Sequence Alignment/Map format and SAMtools, establishing a foundational standard for processing high-throughput sequencing data.*

The researcher's primary contribution is the development of the Sequence Alignment/Map format and SAMtools, introduced in a 2009 paper published in Bioinformatics. This work stands as a seminal core contribution, with no follow-up papers by the same researcher listed in this specific line of inquiry, indicating the foundational nature of this initial release.

This line of work appears to address the critical need for standardized data formats and efficient processing tools in the field of bioinformatics. The titles suggest the creation of a unified system for handling sequence alignment data, which likely filled a significant gap in the infrastructure required for analyzing large-scale genomic datasets at the time of publication.

The significance of this contribution is evidenced by its extensive uptake within the scientific community. With tens of thousands of citations, the work has become a standard reference. Furthermore, analysis of citing papers reveals that nearly 89% are from independent researchers, demonstrating that the tool and format have been widely adopted and utilized by the broader field beyond the researcher's immediate circle.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7**

**CORE PAPER**

### The Sequence Alignment/Map format and SAMtools

2009 · Bioinformatics · 64,965 citations (GS)

Field-normalised: 55,926 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2009 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Untitled (2023) | Argonne National Laboratory, J. Craig Venter Institute, J. Craig Venter Institute; University of California San Diego | New Zealand, United States | — |
| 2 | Using SPAdes De Novo Assembler (2020) | Saint Petersburg State University | Russia | — |
| 3 | TBtools-II: A "one for all, all for one" bioinformatics platform for biological big-data mining | Henan University, Hunan Agricultural University, Institute of Tropical Bioscience and Biotechnology, Chinese Academy of Tropical Agricultural Sciences | China | — |
| 4 | Long-read human genome sequencing and its applications | University of Washington, University of Washington School of Medicine | United States | — |
| 5 | A new coronavirus associated with human respiratory disease in China (2020) | Fudan University, Huazhong University of Science and Technology, National Institute for Communicable Disease Control and Prevention, China CDC | Australia, China | — |
| 6 | A novel antibiotic class targeting the lipopolysaccharide transporter (2024) | Aptuit, Aptuit/Evotec, F. Hoffmann-La Roche | Belgium, Italy, Switzerland | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 7 | Persistent complement dysregulation with signs of thromboinflammation in active Long Covid | Charles Bronfman Institute for Personalized Medicine, Icahn School of Medicine at Mount Sinai, ETH Zurich, ETH Zurich & Swiss Institute of Bioinformatics (SIB) | Sweden, Switzerland, 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 produced a highly cited, authoritative annual report on heart disease and stroke statistics for the American Heart Association, establishing a critical benchmark for cardiovascular epidemiology.*

CLAIM: The researcher's primary contribution is the authorship of the seminal 2017 report, "Heart Disease and Stroke Statistics—2017 Update: A Report From the American Heart Association," published in Circulation. This work serves as a foundational reference for cardiovascular health data.

ORIGINALITY: While the titles indicate this is part of an ongoing series, the researcher's role in producing this specific update suggests a critical function in synthesizing and disseminating current epidemiological data. The work addresses the need for timely, authoritative statistical summaries to guide clinical and public health understanding.

SIGNIFICANCE: The paper has accumulated over 30,000 citations, indicating widespread reliance on its data. Analysis of citing literature reveals that 88.9% of citations originate from independent researchers, demonstrating that the work has significantly influenced the broader scientific community beyond the researcher's immediate network.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7**

**CORE PAPER**

### Heart Disease and Stroke Statistics—2017 Update: A Report From the American Heart Association

2017 · Circulation · 30,628 citations (GS)

Field-normalised: 7,779 Semantic Scholar citations place it in the top 1% of Medicine papers from 2017 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | 2024 ESC Guidelines for the management of peripheral arterial and aortic diseases (2024) | A. Cardarelli Hospital, Antonio Cardarelli Hospital, AORN Antonio Cardarelli | Austria, Belgium, Finland | — |
| 2 | 2024 ESC Guidelines for the management of atrial fibrillation (2024) | Aalborg University Hospital, Aarhus University Hospital, Acibadem City Clinic Cardiovascular Center | Australia, Belgium, Bulgaria | — |
| 3 | 2023 ESH Guidelines for the management of arterial hypertension The Task Force for the management of arterial hypertension of the European Society of Hypertension: Endorsed | Alma Mater Studiorum University of Bologna, AP-HP, Hôpital Européen Georges Pompidou, | Austria, Belgium, China | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| | by the International Society of Hypertension (ISH) and the European Renal Association (ERA) (2023) | Université Paris Cité, Aristotle University | | |
| 4 | Atherosclerosis: Recent developments | Icahn School of Medicine at Mount Sinai, University of California, Los Angeles | United States | — |
| 5 | 2021 AHA/ACC/ASE/CHEST/SAEM/SCCT/SCMR Guideline for the Evaluation and Diagnosis of Chest Pain: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines (2021) | American Academy of Physician Assistants, American Heart Association, Baylor College of Medicine | Italy, United Kingdom, United States | — |
| 6 | Global Impacts of Western Diet and Its Effects on Metabolism and Health: A Narrative Review (2023) | European University of Madrid, Nebrija University, Universidad Europea de Madrid | Spain | — |
| 7 | Ferroptosis: mechanisms, biology and role in disease. (2021) | Columbia University, Helmholtz Zentrum München, Memorial Sloan Kettering Cancer Center | Germany, 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 |
|---|---|---|---|
| Icahn School of Medicine at Mount Sinai | United States | SCImago #295 | 4 |
| American Heart Association | United States | SCImago #2251 | 3 |
| Stanford University | United States | SCImago #18 · THE =5 · QS 3 | 3 |
| UT Southwestern Medical Center | United States | — | 3 |
| Baylor College of Medicine | United States | SCImago #560 | 3 |
| George Washington University | United States | SCImago #832 · THE 201–250 · QS =358 | 2 |
| University of Washington | United States | SCImago #45 · THE 25 · QS 81 | 2 |
| University of Alabama at Birmingham | United States | QS 1001-1200 | 2 |
| Complutense University | Spain | — | 2 |
| Cedars-Sinai Medical Center | United States | SCImago #705 | 2 |
| Brigham and Women's Hospital and Harvard Medical School | United States | — | 2 |
| Complutense University of Madrid | Spain | SCImago #379 · THE 501–600 · QS =187 | 2 |
| Cliniques Universitaires Saint-Luc | Belgium | SCImago #2396 | 2 |

| Institution | Country | World ranking | Citing papers |
|---|---|---|---|
| University of Illinois at Urbana-Champaign | United States | SCImago #206 · THE =41 | 2 |
| Université Paris Cité | France | THE =190 · QS 300 | 2 |

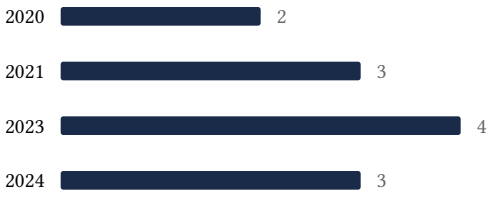
### Geographic distribution of citing authors

| Country | Citing papers |
|---|---|
| United States | 11 |
| United Kingdom | 6 |
| Switzerland | 5 |
| Italy | 5 |
| Germany | 5 |
| Spain | 5 |
| Netherlands | 4 |
| Belgium | 4 |
| Australia | 3 |
| China | 3 |
| France | 3 |
| Norway | 3 |

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).



## 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 | The Sequence Alignment/Map format and SAMtools | 7 | Dhanasar — Prong 2 (well-positioned) |
| Contribution 2 | Heart Disease and Stroke Statistics—2017 Update: A Report From the American Heart Association | 7 | Dhanasar — Prong 2 (well-positioned) |