Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

Laurence Zitvogel

Institut Gustave Roussy, Université de Paris Saclay, INSERM

Google Scholar profile

Generated 2026-06-08 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

2,748	2,870	30	179
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.

94.8% independent of 2,603 classified citing papers

Citation type	Count
Independent	2,468
Self-citation	41
Co-author	94
Same-institution	0

145 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 the critical link between gut microbiome composition and patient response to anti-PD-1 immunotherapy in melanoma, a finding that has significantly influenced oncology research.

The researcher's core contribution rests on the 2018 paper titled 'Gut microbiome modulates response to anti–PD-1 immunotherapy in melanoma patients.' This work appears to have identified a specific biological mechanism linking microbial ecology to the efficacy of immune checkpoint inhibitors, thereby expanding the understanding of factors influencing cancer treatment outcomes.

This line of work addresses the gap in understanding why immunotherapy responses vary among patients. By focusing on the microbiome, the researcher introduced a novel perspective on host-microbe interactions in oncology. Subsequent publications, such as 'The microbiome and human cancer' (2021) and 'Immunostimulation with chemotherapy in the era of immune checkpoint inhibitors' (2020), suggest the researcher continued to explore and broaden these concepts, integrating microbiome insights into wider discussions on cancer immunology and treatment strategies.

The significance of this contribution is evidenced by the substantial citation counts, with the core paper accumulating 5,397 citations and follow-up works receiving over 1,300 citations each. Furthermore, the high degree of citation independence, with 94.8% of citations originating from independent researchers, indicates that this work has been widely adopted and validated by the broader scientific community, confirming its impact beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 125 · **7 flagged influential by Semantic Scholar**

CORE PAPER

Gut microbiome modulates response to anti–PD-1 immunotherapy in melanoma patients

2018 · 5,397 citations (GS)

Field-normalised: 4,054 Semantic Scholar citations place it in the top 1% of Medicine papers from 2018 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Early detection of cancer	Cancer Research UK, CRUK Lung Cancer Centre of Excellence, Dana-Farber Cancer Institute	United Kingdom, United States	—
2	Fecal microbiota transplantation plus anti-PD-1 immunotherapy in advanced melanoma: a phase I trial	Centre Hospitalier de l'Université de Montréal	Canada	—
3	Ketogenic diet suppresses colorectal cancer through the gut microbiome long chain fatty acid stearate	University of Luxembourg	Luxembourg	—
4	Cancer immune evasion, immunoediting and intratumour heterogeneity	Koch Institute for Integrative Cancer Research at MIT, University Hospital Tübingen	Germany, United States	—
5	Role of the gut microbiota and its metabolites in tumorigenesis or development of colorectal cancer	Peking University, Peking University Third Hospital	China	—
6	Gut microbiota as a new target for anticancer therapy: from mechanism to means of regulation	Liaoning Cancer Hospital and Institute, The First Affiliated Hospital of Dalian Medical University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
7	NF-κB, inflammation, immunity and cancer: coming of age	Keio University School of Medicine	Japan	—
8	Understanding the role of the gut microbiome in gastrointestinal cancer: A review	Gazi University, MERCK S.P.A., The University of Texas MD Anderson Cancer Center	Italy, Turkey, United States	—
9	Machine learning for microbiologists	University of Trento	Italy	—
10	The oral–gut microbiome axis in health and disease	Luxembourg Centre for Systems Biomedicine	Luxembourg	—
11	Interaction between microbiota and immunity in health and disease	Weizmann Institute of Science	Israel	—
12	Gut microbiota in colorectal cancer development and therapy	The Chinese University of Hong Kong	China	—
13	Defining clinically useful biomarkers of immune checkpoint inhibitors in solid tumours	The University of Texas MD Anderson Cancer Center	United States	—
14	Cancer organoids 2.0: modelling the complexity of the tumour immune microenvironment	Stanford University School of Medicine	United States	—
15	Dietary tryptophan metabolite released by intratumoral Lactobacillus reuteri facilitates immune checkpoint inhibitor treatment	Emory University, Kansas State University, National Cancer Institute	United States	—
16	Bacteria in cancer initiation, promotion and progression	Harvard T. H. Chan School of Public Health, Università della Svizzera italiana	Switzerland, United States	—
17	Metabolic reprogramming in the tumor microenvironment of liver cancer	Fudan University, Jinshan Hospital, Fudan University	China	—
18	Role of the microbiota in response to and recovery from cancer therapy	South Australian Health and Medical Research Institute, The University of Adelaide	Australia	—
19	Gut microbiota modulation of efficacy and toxicity of cancer chemotherapy and immunotherapy	Imperial College London	United Kingdom	—
20	Role of the gut microbiota in anticancer therapy: from molecular mechanisms to clinical applications	West China Hospital of Sichuan University	China	—
21	Targeting the gut microbiota for cancer therapy	National Cancer Institute	United States	—
22	Gut microbiota shapes cancer immunotherapy responses	West China Medical Center of Sichuan University	China	**Influential**
23	Design, construction, and in vivo augmentation of a complex gut microbiome	Chan Zuckerberg Initiative (United States), Stanford Medicine, Stanford University	United States	—
24	QIIME 2: Reproducible, interactive, scalable, and extensible microbiome data science	ACT Government, Australian National University, Broad Institute	Australia, Canada, China	—
25	Synthetic and biogenic materials for oral delivery of biologics: from bench to bedside	Columbia University, Indiana University School of Medicine, University of Pennsylvania	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
26	Systemic immunity in cancer	University of California, Irvine Medical Center, University of California, San Francisco	United States	—
27	The evolving landscape of biomarkers for checkpoint inhibitor immunotherapy	Memorial Sloan Kettering Cancer Center	United States	—
28	Toward personalized treatment approaches for non-small-cell lung cancer	Yale Cancer Center	United States	—
29	Development of tumor mutation burden as an immunotherapy biomarker: utility for the oncology clinic	Deutschen Konsortium für Translationale Krebsforschung, Memorial Sloan Kettering Cancer Center, Sidney Kimmel Comprehensive Cancer Center	Germany, Switzerland, United Kingdom	—
30	Turning cold tumors hot: from molecular mechanisms to clinical applications	Sun Yat-sen Memorial Hospital, Sun Yat-sen University	China	—

Showing the 30 most-cited of 125 independent citing papers.

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).

FOLLOW-UP WORK

The microbiome and human cancer

2021 · 1,397 citations (GS)

Field-normalised: 996 Semantic Scholar citations place it in the top 1% of Medicine papers from 2021 indexed by Semantic Scholar, by citation count.

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

FOLLOW-UP WORK

Immunostimulation with chemotherapy in the era of immune checkpoint inhibitors

2020 · 1,393 citations (GS)

Field-normalised: 1,054 Semantic Scholar citations place it in the top 1% of Medicine papers from 2020 indexed by Semantic Scholar, by citation count.

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

Contribution 2

Claim — Contribution 2

The researcher established foundational frameworks for exosome biology and pioneered their clinical application in cancer immunotherapy, as evidenced by highly cited seminal and follow-up works.

The researcher's contribution centers on defining the biological properties of exosomes and translating this knowledge into clinical practice. This line of work is anchored by the 2002 paper 'Exosomes: composition, biogenesis and function,' which appears to have provided a critical conceptual framework for the field. The titles suggest this work addressed a fundamental gap in understanding the structure and origin of these extracellular vesicles, establishing a baseline for subsequent research.

Building on this foundation, the researcher extended the inquiry from basic biology to therapeutic application. The 2005 follow-up paper, titled 'Vaccination of metastatic melanoma patients with autologous dendritic cell (DC) derived-exosomes: results of the first phase I clinical trial,' indicates a significant step toward clinical validation. This progression suggests the researcher not only characterized exosomes but also explored their potential as vehicles for cancer vaccines, bridging the gap between mechanistic insight and patient care.

The significance of this work is reflected in its substantial citation impact. The core 2002 paper has accumulated 6,645 citations, while the 2005 clinical trial report has garnered 1,592 citations. Furthermore, analysis of 2,603 citing papers reveals that 94.8% originate from independent researchers, indicating that this line of work has been widely adopted and validated by the broader scientific community rather than relying on self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 954 · **27 flagged influential by Semantic Scholar**

CORE PAPER

Exosomes: composition, biogenesis and function

2002 · 6,645 citations (GS)

Field-normalised: 5,083 Semantic Scholar citations place it in the top 1% of Biology papers from 2002 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Extracellular vesicle preparation and analysis: a state-of-the-art review	City University of Hong Kong Shenzhen Futian Research Institute, Dalian Municipal Central Hospital	China, P. R. China	—
2	P-glycoprotein (P-gp)-driven cancer drug resistance: biological profile, non-coding RNAs, drugs and nanomodulators	Fudan University, University of Lincoln	China, United Kingdom	—
3	Autophagy inhibition promotes SNCA/alpha-synuclein release and transfer via extracellular vesicles with a hybrid autophagosome-exosome-like phenotype	Institute of Experimental Medicine, Hungarian Academy of Sciences, Semmelweis University, Semmelweis University	Hungary	—
4	Retinal stem cell transplantation: Balancing safety and potential	National Eye Institute, Oxford BioMedica (United Kingdom), RIKEN Center for Biosystems Dynamics Research	Japan, United Kingdom, United States	—
5	Emerging prospects of exosomes for cancer treatment: from conventional therapy to immunotherapy	Korea Institute of Science and Technology	South Korea	—
6	Metastasis organotropism in colorectal cancer: advancing toward innovative therapies	—	—	—
7	Specific anti-glioma targeted-delivery strategy of engineered small extracellular vesicles dual-functionalised by Angiopep-2 and TAT peptides	Nanjing Drum Tower Hospital, Suzhou Institute of Nano-Tech and Nano-Bionics, Suzhou Kowloon Hospital	China	—
8	Inflammatory tumor microenvironment responsive neutrophil exosomes-based drug delivery system for targeted glioma therapy	Chinese Academy of Sciences, Chongqing University	China	—
9	Reactive oxygen species (ROS)-based nanomedicine	State Key Laboratory of High Performance Ceramics and Superfine Microstructure	China	—

No.	Citing paper	Citing institution(s)	Country	S2
10	Synergistic integration of extracellular vesicles and metal-organic frameworks: unlocking new opportunities in disease diagnosis and therapy	Wenzhou University	China	—
11	NONCODEV5: a comprehensive annotation database for long non-coding RNAs	Chinese Academy of Sciences, Tsinghua University	China	—
12	Engineering of magnetic nanoparticles as magnetic particle imaging tracers	Hunan University, Shenzhen Technology University, Stanford University School of Medicine	China, United States	—
13	Advances in therapeutic applications of extracellular vesicles	Harvard University, Karolinska Institutet, Massachusetts General Hospital and Harvard Medical School	Sweden, United States	—
14	Extracellular vesicles: Novel promising delivery systems for therapy of brain diseases	University of Coimbra	Portugal	—
15	A shared, stochastic pathway mediates exosome protein budding along plasma and endosome membranes	Johns Hopkins University	United States	—
16	Role of extracellular vesicles in cell death and inflammation	La Trobe University, Walter and Eliza Hall Institute of Medical Research	Australia	Influential
17	Liquid biopsy: a step closer to transform diagnosis, prognosis and future of cancer treatments	All India Institute of Medical Sciences, Central University of Kashmir, Islamic University of Science and Technology, Kashmir	India, Qatar, United States	—
18	MicroRNA-based diagnosis and therapy	Ho Chi Minh City Open University, University of East Anglia	United Kingdom, Vietnam	—
19	Emerging role of exosomes in cancer progression and tumor microenvironment remodeling	Hospital Universiti Sains Malaysia, Islamic Azad University, Science and Research Branch, Islamic Azad University, Tehran Medical Sciences	Australia, Germany, Iran	—
20	Exosomes	Amsterdam UMC Location Vrije Universiteit Amsterdam, Johns Hopkins University	Netherlands, United States	—
21	A one-pot isothermal Cas12-based assay for the sensitive detection of microRNAs	University of Electronic Science and Technology of China, University of Florida	China, United States	—
22	A comprehensive review of challenges and advances in exosome-based drug delivery systems	Texas A&M University – Kingsville	United States	—
23	Exosome: a review of its classification, isolation techniques, storage, diagnostic and targeted therapy applications	Beijing University of Chinese Medicine	China	—

No.	Citing paper	Citing institution(s)	Country	S2
24	Strategies for delivering therapeutics across the blood–brain barrier	Cambrian Biopharma	United States	—
25	The next-generation DNA vaccine platforms and delivery systems: advances, challenges and prospects	Baylor College of Medicine, Indian Institute of Science Education and Research Thiruvananthapuram, The University of Texas Medical Branch at Galveston	China, India, United States	—
26	Vesiclepedia 2024: an extracellular vesicles and extracellular particles repository	La Trobe University	Australia	—
27	Exosome engineering in cell therapy and drug delivery	Shahid Beheshti University, The University of Queensland	Australia, Iran	—
28	Identification of distinct nanoparticles and subsets of extracellular vesicles by asymmetric flow field-flow fractionation	Weill Cornell Medicine	United States	—
29	CAF secreted miR-522 suppresses ferroptosis and promotes acquired chemo-resistance in gastric cancer	Tianjin Medical University Cancer Institute and Hospital, Tianjin University of Science & Technology	China	—
30	Review of the isolation, characterization, biological function, and multifarious therapeutic approaches of exosomes	Konkuk University	South Korea	—

Showing the 30 most-cited of 954 independent citing papers.

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).

FOLLOW-UP WORK

Vaccination of metastatic melanoma patients with autologous dendritic cell (DC) derived-exosomes: results of thefirst phase I clinical trial

2005 · 1,592 citations (GS)

Field-normalised: 1,191 Semantic Scholar citations place it in the top 1% of Medicine papers from 2005 indexed by Semantic Scholar, by citation count.

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

Contribution 3

Claim — Contribution 3

The researcher established a standardized nomenclature for molecular mechanisms of cell death, providing a critical framework that has been widely adopted by the independent scientific community.

CLAIM: The researcher's primary contribution is the establishment of a standardized nomenclature for the molecular mechanisms of cell death, as detailed in the 2018 paper titled 'Molecular mechanisms of cell death: recommendations of the Nomenclature Committee on Cell Death 2018.' This work serves as the foundational reference for this line of inquiry.

ORIGINALITY: The titles indicate that this work addresses the need for precise terminology in cell death research. By issuing recommendations through a Nomenclature Committee, the researcher appears to have resolved ambiguities in the field, creating a unified language that facilitates clearer communication and comparison across studies. The absence of follow-up papers by the same researcher suggests this contribution stands as a definitive, self-contained standard-setting effort.

SIGNIFICANCE: The impact of this work is evidenced by its high citation count of 7,891. Furthermore, citation analysis reveals that 94.8% of citing papers originate from independent researchers, indicating that the broader scientific community has widely adopted these recommendations. This high degree of independent uptake underscores the work's role as a critical infrastructure for the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 833 · **32 flagged influential by Semantic Scholar**

CORE PAPER

Molecular mechanisms of cell death: recommendations of the Nomenclature Committee on Cell Death 2018

2018 · 7,891 citations (GS)

Field-normalised: 5,509 Semantic Scholar citations place it in the top 1% of Biology papers from 2018 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Ferroptosis: mechanisms, biology and role in disease	Columbia University, Memorial Sloan Kettering Cancer Center	United States	—
2	The arginine methyltransferase PRMT7 promotes extravasation of monocytes resulting in tissue injury in COPD	Helmholtz Munich	Germany	—
3	Machine learning reveals diverse cell death patterns in lung adenocarcinoma prognosis and therapy	Anhui Chest Hospital, Fudan University, Naval Medical University	China	—
4	Mitochondria and brain disease: a comprehensive review of pathological mechanisms and therapeutic opportunities	Aristotle University of Thessaloniki, Universidad Andrés Bello, Universidad Europea de Madrid	Chile, Greece, Spain	—
5	Diverse functions of cytochrome c in cell death and disease	UT Southwestern Medical Center	United States	—
6	Regulated cell death pathways in doxorubicin-induced cardiotoxicity	University of British Columbia	Canada	—
7	Emerging mechanisms of lipid peroxidation in regulated cell death and its physiological implications	The First Affiliated Hospital of Guangzhou Medical University	China	**Influential**
8	GPX4 in cell death, autophagy, and disease	University of Michigan	United States	—
9	Phototherapy in cancer treatment: strategies and challenges	Second Xiangya Hospital of Central South University	China	—
10	Ferroptosis mechanisms involved in neurodegenerative diseases	Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo	Brasil, Brazil	—
11	Autophagy-dependent ferroptosis: machinery and regulation	University of Michigan, UT Southwestern Medical Center	United States	**Influential**
12	Interplay between lipid metabolism and autophagy	UT Southwestern Medical Center	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
13	The neuropathobiology of multiple sclerosis	MRC Weatherall Institute of Molecular Medicine, Universitätsklinikum Hamburg-Eppendorf	Germany, United Kingdom	—
14	The probabilistic model of Alzheimer disease: the amyloid hypothesis revised	KU-Leuven, University of Geneva	Belgium, Switzerland	—
15	Programmed cell death tunes tumor immunity	Jinan University	China	—
16	Organelle-specific regulation of ferroptosis	Guangzhou Medical University, UT Southwestern Medical Center	China, United States	—
17	Autophagy-dependent ferroptosis drives tumor-associated macrophage polarization via release and uptake of oncogenic KRAS protein	China-Japan Union Hospital of Jilin University, Guangzhou Medical University, University of Michigan	China, United States	—
18	TMEM164 is a new determinant of autophagy-dependent ferroptosis	China-Japan Union Hospital of Jilin University, Second Xiangya Hospital of Central South University, University of Michigan	China, United States	—
19	Targeting lysosomes in human disease: from basic research to clinical applications	Tongji Hospital	China	—
20	The STING1 network regulates autophagy and cell death	UT Southwestern Medical Center	United States	—
21	Tumor heterogeneity in autophagy-dependent ferroptosis	Guangzhou Medical University, University of Michigan, University of Pittsburgh	China, United States	—
22	The V-ATPases in cancer and cell death	UT Southwestern Medical Center	United States	**Influential**
23	Interplay between MTOR and GPX4 signaling modulates autophagy-dependent ferroptotic cancer cell death	UT Southwestern Medical Center	United States	—
24	Guidelines for evaluating myocardial cell death	Icahn School of Medicine at Mount Sinai, Jichi Medical University, University of Missouri-Columbia	Japan, United States	—
25	Best practices for data management and sharing in experimental biomedical research	Stanford University	United States	—
26	Regulated cell death and its role in Alzheimer's disease and amyotrophic lateral sclerosis	KU-Leuven	Belgium	**Influential**
27	Autophagy, pyroptosis, and ferroptosis: new regulatory mechanisms for atherosclerosis	Shandong University of Traditional Chinese Medicine	China	—
28	Guidelines and recommendations on yeast cell death nomenclature	Nawi Graz	Austria	—

No.	Citing paper	Citing institution(s)	Country	S2
29	Cannabidiol directly targets mitochondria and disturbs calcium homeostasis in acute lymphoblastic leukemia	National Autonomous University of Mexico, University of Colima	Mexico	—
30	Damage-associated molecular patterns (DAMPs) related to immunogenic cell death are differentially triggered by clinically relevant chemotherapeutics in lung …	Universidade Federal do Rio Grande do Sul	Brazil	—

Showing the 30 most-cited of 833 independent citing papers.

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).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
The University of Texas MD Anderson Cancer Center	United States	—	61
Shanghai Jiao Tong University	China	SCImago #10 · THE 40 · QS =47	50
UT Southwestern Medical Center	United States	—	41
Central South University	People's Republic of China	SCImago #42 · THE 251–300 · QS =491	39
Memorial Sloan Kettering Cancer Center	United States	SCImago #210	39
Guangzhou Medical University	China	SCImago #761 · THE 801–1000	39
University of California, Irvine Medical Center	United States	—	33
Chinese Academy of Sciences	PR China	SCImago #2	33
University of Michigan	United States	SCImago #43 · THE 23 · QS 45	31
Sichuan University	P. R. China	SCImago #32 · THE 201–250 · QS =324	31
Huazhong University of Science and Technology	P. R. China	SCImago #25 · THE =176 · QS 319	29
Chinese Academy of Medical Sciences & Peking Union Medical College	China	SCImago #188	28
Institut Gustave Roussy	France	SCImago #518	28
Weill Cornell Medical College	United States	—	26
Massachusetts General Hospital	United States	SCImago #100	26

Geographic distribution of citing authors

Country	Citing papers
China	1,066
United States	816

Country	Citing papers
Germany	150
Italy	144
United Kingdom	133
France	127
Australia	114
Canada	97
South Korea	84
Japan	82
Spain	62
Netherlands	60

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.

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 microbiome modulates response to anti–PD-1 immunotherapy in melanoma patients	125	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Exosomes: composition, biogenesis and function	954	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Molecular mechanisms of cell death: recommendations of the Nomenclature Committee on Cell Death 2018	833	Dhanasar — Prong 2 (well-positioned)