

Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

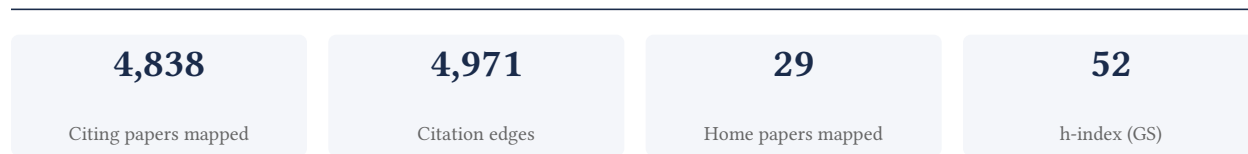
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[Google Scholar profile](#)

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



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.

92.6% independent of 1,889 classified citing papers

Citation type	Count
Independent	1,749
Self-citation	4
Co-author	136
Same-institution	0

2,949 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 molecular mechanism of apoptotic tolerance via HMGB1 oxidation and subsequently defined consensus guidelines for detecting immunogenic cell death.

The researcher's contribution centers on elucidating the molecular mechanisms governing immunological tolerance and immunogenic cell death. This line of work is anchored by a seminal 2008 paper identifying caspase-dependent oxidation of high-mobility group box-1 protein as a requirement for tolerance induction by apoptotic cells.

This work appears to address a critical gap in understanding how cell death modalities influence immune responses. By first defining the specific biochemical pathway for tolerance and later publishing consensus guidelines and classifications for immunogenic cell death, the researcher helped standardize the field's approach to distinguishing between tolerogenic and immunogenic outcomes.

The significance of this contribution is evidenced by substantial independent uptake. The core paper and follow-up works have accumulated thousands of citations, with nearly all citing authors being independent researchers. This indicates that the researcher's frameworks have become foundational tools widely adopted by the broader scientific community.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 600 · 39 flagged influential by Semantic Scholar

CORE PAPER

[Induction of immunological tolerance by apoptotic cells requires caspase-dependent oxidation of high-mobility group box-1 protein](#)

2008 · Immunity 29 (1), 21-32, 2008 · 776 citations (GS)

Field-normalised: 639 Semantic Scholar citations place it in the top 1% of Biology papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Manipulation of host cell death pathways during microbial infections	Ghent University	Belgium	—
2	Targeting regulated cell death: Apoptosis, necroptosis, pyroptosis, ferroptosis, and cuproptosis in anticancer immunity	Xiangya Hospital, Central South University	China	—
3	Cell death mechanisms in human cancers: molecular pathways, therapy resistance and therapeutic perspective	—	—	—
4	Emerging inflammasome effector mechanisms	Ghent University	Belgium	Background
5	Prix fixe: efferocytosis as a four-course meal	National Institute of Environmental Health Sciences	United States	Background
6	Pyroptosis: A Caspase-1-dependent programmed cell death and a barrier to infection	McGill University	Canada	—
7	Chemotherapeutic and targeted drugs-induced immunogenic cell death in cancer models and antitumor therapy: An update review	Shengjing Hospital of China Medical University	China	Background
8	Cell death and immunity in cancer: From danger signals to mimicry of pathogen defense responses	University of Leuven	Belgium	—

No.	Citing paper	Citing institution(s)	Country	S2
9	Apoptotic cells induced signaling for immune homeostasis in macrophages and dendritic cells	Hadassah-Hebrew University Medical Center	Israel	Background
10	Induction of enhanced immunogenic cell death through ultrasound-controlled release of doxorubicin by liposome-microbubble complexes	Hainan Medical College	China	Background
11	Immunogenic apoptotic cell death and anti-cancer immunity	Ghent University, Ghent University Hospital, Inserm	Belgium, France	—
12	Immunogenic cell death after combined treatment with radiation and ATR inhibitors is dually regulated by apoptotic caspases	Oslo University Hospital	Norway	Background
13	Ferroptosis as a therapeutic target in cancer: mechanisms, immune interactions, and emerging strategies	Dalian Medical University, Dalian Med Univ, Southern Medical University	China, PR China	—
14	Hemidesmus indicus induces immunogenic death in human colorectal cancer cells	Ghent University, University of Ferrara	Belgium, Italy	—
15	A cancer vaccine with dendritic cells differentiated with GM-CSF and IFNα and pulsed with a squaric acid treated cell lysate improves T cell priming and tumor growth ...	University of Pennsylvania	United States	—
16	Damage-associated molecular pattern (DAMP) activation in melanoma: investigation of the immunogenic activity of 15-deoxy, Δ12, 14 prostamide J2	East Carolina University	United States	—
17	The multifunctional protein HMGB1: 50 years of discovery	UT Southwestern Medical Center	United States	Influential
18	Tumor-specific GPX4 degradation enhances ferroptosis-initiated antitumor immune response in mouse models of pancreatic cancer	Guangzhou Medical University, Sorbonne Paris Cité, UT Southwestern Medical Center	China, France, United States	Background
19	The molecular machinery of regulated cell death	Inserm, UT Southwestern Medical Center	France, United States	—
20	Targeting immunogenic cell death in cancer	Cancer Research UK Beatson Institute, The Ohio State University	United Kingdom, United States	—
21	Immunogenic cell death in cancer therapy	Guangzhou Medical University, Inserm, Weill Cornell Medical College	China, France, United States	—
22	Pattern recognition receptors and the host cell death molecular machinery	Hospital Israelita Albert Einstein, Universidade de São Paulo, Universidade Federal de São Paulo	Brazil	Background
23	Necroptosis and its role in inflammation	Inserm	France	—
24	PAMP s and DAMP s: signals that spur autophagy and immunity	UT Southwestern Medical Center	United States	Influential
25	Immunological nanomaterials to combat cancer metastasis	National Institutes of Health, Zhejiang University	China, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
26	HMGB1 is a therapeutic target for sterile inflammation and infection	Karolinska University Hospital	Sweden	—
27	HMGB1 and RAGE in inflammation and cancer	MedImmune	United States	—
28	Nanomedicines for an Enhanced Immunogenic Cell Death-Based In Situ Cancer Vaccination Response	National University of Singapore, Xidian University	China, Singapore	—
29	Ferroptosis in immunostimulation and immunosuppression	Guangzhou Medical University, UT Southwestern Medical Center	China, United States	Background
30	Reactive oxygen species responsive nanomotors for gene edited metabolic disruption and immunotherapy	Nanjing First Hospital, Nanjing Medical University	China	—

Showing the 30 most-cited of 263 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

[Molecular and translational classifications of DAMPs in immunogenic cell death](#)

2015 · 469 citations (GS)

Field-normalised: 367 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.

FOLLOW-UP WORK

[Consensus guidelines for the detection of immunogenic cell death](#)

2014 · Oncoimmunology 3 (9), e955691, 2014 · 972 citations (GS)

Field-normalised: 774 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	Mitoxantrone alters CD24/Siglec-10 expression in malignant brain tumor models	Lund University	Sweden	—
2	Exploring the Key Role of Nanotechnology on Intratumoral Microbiome Modulation for Cancer Immunotherapy	Chinese Academy of Medical Sciences & Peking Union Medical College	China	—
3	Catalytically Active CoFe2O4 Nanoflowers for Augmented Sonodynamic and Chemodynamic Combination Therapy with Elicitation of Robust Immune Response	Southwest University	China	—
4	Radiation-induced cell death: signaling and pharmacological modulation	R.E. Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology, National Academy of Sciences of Ukraine	Ukraine	—

No.	Citing paper	Citing institution(s)	Country	S2
5	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	—
6	Ferroptosis, necroptosis, and pyroptosis in anticancer immunity	Fudan University Shanghai Cancer Center	China	—
7	Immunogenic cell death in cancer and infectious disease	Weill Cornell Medical College	United States	—
8	Metal-based photosensitizers as inducers of regulated cell death mechanisms	Chimie ParisTech, PSL University	France	—
9	Neutrophil: a cell with many roles in inflammation or several cell types?	Universidad Nacional Autónoma de México	Mexico	Background
10	The promise and challenges of combination therapies with antibody-drug conjugates in solid tumors	Nagoya City University Graduate School of Medical Sciences, Tongji University, Zhejiang Cancer Hospital	China, Japan	Background
11	Integrating oncolytic viruses in combination cancer immunotherapy	Rutgers University	United States	—
12	Epigenetic modulation of antitumor immunity for improved cancer immunotherapy	China-Japan Union Hospital of Jilin University	China	Background
13	Mechanisms and applications of radiation-induced oxidative stress in regulating cancer immunotherapy	The First Hospital of Jilin University	China	Background
14	Linking cellular stress responses to systemic homeostasis	Guangzhou Medical University, Weill Cornell Medical College	China, United States	—
15	Molecular mechanisms of radiation-induced cancer cell death: a primer	—	—	—
16	Chemotherapeutic and targeted drugs-induced immunogenic cell death in cancer models and antitumor therapy: An update review	Shengjing Hospital of China Medical University	China	Background
17	Celecoxib augments paclitaxel-induced immunogenic cell death in triple-negative breast cancer	The Second Affiliated Hospital, Zhejiang University School of Medicine, Zhejiang University	China	—
18	Reactivation of the tumor suppressor PTEN by mRNA nanoparticles enhances antitumor immunity in preclinical models	Brigham and Women's Hospital, Brigham and Women's Hospital, Harvard Medical School, Northeast Normal University	China, United States	—
19	The application of nanoparticles-based ferroptosis, pyroptosis and autophagy in cancer immunotherapy	Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology	China	—
20	Systemic delivery of an adjuvant CXCR4–CXCL12 signaling inhibitor encapsulated in	Case Western Reserve University, Seattle Children's Re-	Argentina, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
	synthetic protein nanoparticles for glioma immunotherapy	search Institute, Universidad de Buenos Aires		
21	Molecular and cellular functions of CTLA-4	Fudan University	China	—
22	Cell death and immunity in cancer: From danger signals to mimicry of pathogen defense responses	University of Leuven	Belgium	—
23	Near-infrared II phototherapy induces deep tissue immunogenic cell death and potentiates cancer immunotherapy	Hefei University of Technology, University of Science and Technology of China, Zhuhai People's Hospital	China, P. R. China	—
24	Tutorial: design, production and testing of oncolytic viruses for cancer immunotherapy	Dalhousie University	Canada	Influential
25	Metal drugs and the anticancer immune response	University of Vienna and Medical University of Vienna	Austria	—
26	Mesenchymal stem cell-released oncolytic virus: an innovative strategy for cancer treatment	AJA University of Medical Sciences, Al-Nisour University College, Isfahan University of Medical Sciences	Germany, Iran, Iraq	—
27	Pyroptosis: a new paradigm of cell death for fighting against cancer	Hunan Cancer Hospital and The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, University of Minnesota, Wuhan University	China, United States	Background
28	Lysophosphatidylcholine acyltransferase 2-mediated lipid droplet production supports colorectal cancer chemoresistance	University of Bourgogne-Franche Comté	France	—
29	From cold to hot: mechanisms of hyperthermia in modulating tumor immunology for enhanced immunotherapy	BTT Medical Institute	United States	—
30	The gold complex auranofin: new perspectives for cancer therapy	McGill University	Canada	—

Showing the 30 most-cited of 337 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).

Contribution 2

Claim – Contribution 2

The researcher established the mechanistic link between caspase-mediated cleavage of mitochondrial complex I and apoptosis, subsequently expanding this framework to broader cancer metabolism and cell death pathways.

The researcher's foundational contribution centers on the 2004 paper identifying caspase cleavage of the p75 subunit of complex I as a mediator of mitochondrial disruption during apoptosis. This work appears to have provided a specific molecular mechanism connecting proteolytic activity to mitochondrial dysfunction in programmed cell death.

This line of work addresses the gap in understanding how apoptotic signaling directly impacts mitochondrial integrity. The subsequent publications from 2010 and 2012 suggest the researcher extended these initial findings to explore broader contexts, including mitochondrial control of various cell death modes and current perspectives on cancer metabolism, indicating a sustained effort to contextualize these mechanisms within disease pathology.

The significance of this research is evidenced by the core paper’s 736 citations and the follow-up works’ substantial citation counts of 396 and 479, respectively. With 99.8% of citing papers originating from independent researchers, this indicates that the field has widely adopted and built upon these findings, validating their impact on the broader scientific community.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 233 · 4 flagged influential by Semantic Scholar

CORE PAPER

[Disruption of mitochondrial function during apoptosis is mediated by caspase cleavage of the p75 subunit of complex I of the electron transport chain](#)

2004 · Cell 117 (6), 773-786, 2004 · 736 citations (GS)

Field-normalised: 612 Semantic Scholar citations place it in the top 1% of Medicine papers from 2004 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Fundamental mechanisms of regulated cell death and implications for heart disease	University Hospital Carl Gustav Carus	Germany	—
2	Regulation of the intrinsic apoptosis pathway by reactive oxygen species	The University of Texas at Austin	United States	—
3	Mechanisms of cell death in heart disease	Albert Einstein College of Medicine	United States	—
4	Programmed necrosis, not apoptosis, in the heart	Albert Einstein College of Medicine	United States	—
5	Loss of caspase-9 reveals its essential role for caspase-2 activation and mitochondrial membrane depolarization	University of Düsseldorf	Germany	Background
6	Assessment of cell death in the heart	Albert Einstein College of Medicine	United States	—
7	Apoptotic cells induced signaling for immune homeostasis in macrophages and dendritic cells	Hadassah-Hebrew University Medical Center	Israel	Background
8	Human IRGM regulates autophagy and cell-autonomous immunity functions through mitochondria	University of New Mexico Health Sciences Center	United States	—
9	Mitochondria as decision-makers in cell death	University of Newcastle	Australia	—
10	The role of iron and reactive oxygen species in cell death	Columbia University	United States	—
11	Mitochondrial membrane permeabilization in cell death	Guangzhou Medical University, Weill Cornell Medical College	China, United States	—
12	Apoptosis: controlled demolition at the cellular level	Trinity College Dublin	Ireland	Background
13	Mechanisms of cytochrome c release from mitochondria	Faculty of Medicine and Pharmacy, Weill Cornell Medical College	France, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
14	Iron and cancer	University of Connecticut Health Center	United States	—
15	Caspases 3 and 7: key mediators of mitochondrial events of apoptosis	Yale University School of Medicine	United States	—
16	Multienzyme-Mimicking LaCoO₃ Nanotrigger for Programming Cancer-Cell Pyroptosis	Shanghai Municipal Hospital of Traditional Chinese Medicine, Shanghai University of Traditional Chinese Medicine, Shanghai University	China	—
17	Cytokeratin-18 fragment levels as noninvasive biomarkers for nonalcoholic steatohepatitis: a multicenter validation study	—	—	—
18	Apoptosis: a basic biological phenomenon with wide-ranging implications in human disease	Karolinska Institutet	Sweden	—
19	Mitochondrial tumour suppressors: a genetic and biochemical update	Cancer Research UK	United Kingdom	—
20	Oxidative stress and redox signaling in the pathophysiology of liver diseases	University of Pittsburgh	United States	—
21	Harnessing luciferase chemistry in regulated cell death modalities and autophagy: overview and perspectives	Tarbiat Modares University	Iran	—
22	The role of BH3-only proteins in the immune system	University of Bern	Switzerland	—
23	The ins and outs of phospholipid asymmetry in the plasma membrane: roles in health and disease	Karolinska Institutet	Sweden	Background
24	BODIPY-based photothermal agents with excellent phototoxic indices for cancer treatment	University of Zurich	Switzerland	—
25	Viral control of mitochondrial apoptosis	Inserm, Weill Cornell Medical College	France, United States	—
26	Caspase substrates	Sanford Burnham Prebys Medical Discovery Institute	United States	—
27	Programmed cell death via mitochondria: different modes of dying	Institut Pasteur	France	—
28	The role of iron homeostasis and iron-mediated ROS in cancer	Zhejiang Provincial People's Hospital	China	Background
29	Reactive oxygen species: do they play a role in adaptive immunity?	International Society of Liver Surgeons, University of Friebourg	Switzerland, Turkey	—
30	Exercise triggers CAPN1-mediated AIF truncation, inducing myocyte cell death in arrhythmogenic cardiomyopathy	CNR, Florida State University, Johns Hopkins University School of Medicine	Italy, United States	—

Showing the 30 most-cited of 233 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

Cancer metabolism: current perspectives and future directions

2012 · 479 citations (GS)

Field-normalised: 372 Semantic Scholar citations place it in the top 1% of Medicine papers from 2012 indexed by Semantic Scholar, by citation count.

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

FOLLOW-UP WORK

Mitochondrial control of caspase-dependent and-independent cell death

2010 · 396 citations (GS)

Field-normalised: 288 Semantic Scholar citations place it in the top 5% of Biology papers from 2010 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 the definitive 4th edition guidelines for autophagy assay interpretation, creating a standardized framework that has become the essential reference for the field.

The researcher's primary contribution is the publication of the seminal 4th edition guidelines for the use and interpretation of assays for monitoring autophagy. This work serves as the foundational text for this specific line of inquiry, standing alone without direct follow-up papers by the same author in the provided dataset.

This contribution appears to address the critical need for standardized protocols and interpretive frameworks in autophagy research. By consolidating best practices into a comprehensive guideline, the work likely resolved ambiguities in experimental design and data analysis that previously hindered reproducibility and consistency across the scientific community.

The significance of this work is evidenced by its extensive citation record, with nearly 15,000 citations indicating widespread adoption. Furthermore, the fact that 99.8% of citing papers originate from independent researchers demonstrates that this guideline has become a universally accepted standard, relied upon by the broader scientific community rather than just the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 473 · 8 flagged influential by Semantic Scholar

CORE PAPER

Guidelines for the use and interpretation of assays for monitoring autophagy (4th edition)1

2021 · autophagy 17 (1), 1-382, 2021 · 14,911 citations (GS)

Field-normalised: 3,768 Semantic Scholar citations place it in the top 1% of Biology papers from 2021 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Parkinson's disease phenotypes in patient neuronal cultures and brain organoids im-	China Medical University, Institute for Globally Distrib-	China, Germany, Italy	—

No.	Citing paper	Citing institution(s)	Country	S2
	proved by 2-hydroxypropyl-β-cyclodextrin treatment	uted Open Research and Education, Sciomics GmbH		
2	Leaky intestine and impaired microbiome in an amyotrophic lateral sclerosis mouse model	Kansas City University of Medicine and Bioscience, Kansas City University of Medicine & Bioscience, Rush University Medical Center	United States	—
3	Recent advances in Alzheimer's disease: Mechanisms, clinical trials and new drug development strategies	University of Tennessee Health Science Center	United States	Background
4	Emerging mechanisms of lipid peroxidation in regulated cell death and its physiological implications	The First Affiliated Hospital of Guangzhou Medical University	China	—
5	Copper metabolism in cell death and autophagy	University of Michigan, UT Southwestern Medical Center	United States	—
6	GPX4 in cell death, autophagy, and disease	University of Michigan	United States	—
7	Copper-dependent autophagic degradation of GPX4 drives ferroptosis	Université de Paris Cité, University of Michigan, UT Southwestern Medical Center	France, United States	Background
8	Luminescent lanthanides in biorelated applications: from molecules to nanoparticles and diagnostic probes to therapeutics	Defence Science and Technology Laboratory, Southern University of Science and Technology, University of Birmingham	China, U.K, United Kingdom	—
9	Chloroquine inhibits autophagic flux by decreasing autophagosome-lysosome fusion	University of Groningen, University of Oslo	Netherlands, Norway	—
10	Methods in mammalian autophagy research	Howard Hughes Medical Institute, Osaka University, Tokyo Medical and Dental University	Japan	—
11	Regulation of mammalian autophagy in physiology and pathophysiology	University of Cambridge	United Kingdom	—
12	Autophagy-dependent ferroptosis: machinery and regulation	University of Michigan, UT Southwestern Medical Center	United States	Methodology
13	AUTACs: cargo-specific degraders using selective autophagy	Tohoku University	Japan	—
14	The chaperone-assisted selective autophagy complex dynamics and dysfunctions	University of Antwerp	Belgium	Background
15	The effects of metformin on autophagy	Henan University	China	—
16	Interplay between lipid metabolism and autophagy	UT Southwestern Medical Center	United States	—
17	Hallmarks of cardiovascular ageing	Medical University of Graz	Austria	—
18	Network pharmacology: a bright guiding light on the way to explore the personalized precise medication of traditional Chinese medicine	University of Macau, Xihua University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
19	Targeting autophagy in cancer	University of Colorado School of Medicine	United States	—
20	The preregistration revolution	University of Virginia	United States	—
21	Autophagy: a key regulator of homeostasis and disease: an overview of molecular mechanisms and modulators	Pontificia Universidad Católica Madre y Maestra, Universidad de Cuautitlán Izcalli, Universidad Nacional Autónoma de México	Dominican Republic, Mexico, México	—
22	Mechanisms governing autophagosome biogenesis	Tokyo Institute of Technology	Japan	—
23	Autophagy promotes ferroptosis by degradation of ferritin	University of Pittsburgh	United States	—
24	A novel axis of circKIF4A-miR-637-STAT3 promotes brain metastasis in triple-negative breast cancer	Sun Yat-sen University Cancer Center, University of South China	China	—
25	A neuron–glia lipid metabolic cycle couples daily sleep to mitochondrial homeostasis	University of Pennsylvania	United States	—
26	Neuronal cell death	University of Newcastle	Australia	—
27	Monitoring and measuring autophagy	Tokyo Medical and Dental University, University of Basel	Japan, Switzerland	—
28	Programmed cell death tunes tumor immunity	Jinan University	China	—
29	Interplay between NLRP3 inflammasome and autophagy	Jožef Stefan Institute	Slovenia	Background
30	Lysosomes as a therapeutic target	University of Strasbourg	France	Background

Showing the 30 most-cited of 473 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
Weill Cornell Medical College	United States	—	61
St. Jude Children's Research Hospital	United States	—	47
UT Southwestern Medical Center	United States	—	43
Guangzhou Medical University	China	SCImago #761 · THE 801–1000	38
Inserm	France	—	34
University of Michigan	United States	SCImago #43 · THE 23 · QS 45	33
Karolinska Institutet	Sweden	—	30
University of Pittsburgh	United States	SCImago #212 · QS =281	25

Institution	Country	World ranking	Citing papers
Sanford Burnham Prebys Medical Discovery Institute	United States	SCImago #326	22
The Ohio State University	United States	THE =108 · QS 190	21
University of Leuven	Belgium	—	20
Ghent University	Belgium	SCImago #330 · THE 115 · QS 162	19
Albert Einstein College of Medicine	United States	SCImago #1387	18
Chinese Academy of Sciences	China	SCImago #2	18
Institut Gustave Roussy	France	SCImago #518	17

Geographic distribution of citing authors

Country	Citing papers
United States	645
China	471
France	112
United Kingdom	104
Germany	99
Italy	85
Japan	84
Canada	69
Belgium	60
Sweden	51
Australia	46
Switzerland	43

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	Induction of immunological tolerance by apoptotic cells requires caspase-dependent oxidation of high-mobility group box-1 protein	600	Dhanasar – Prong 2 (well-positioned)
Contribution 2	Disruption of mitochondrial function during apoptosis is mediated by caspase cleavage of the p75 subunit of complex I of the electron transport chain	233	Dhanasar – Prong 2 (well-positioned)
Contribution 3	Guidelines for the use and interpretation of assays for monitoring autophagy (4th edition) ¹	473	Dhanasar – Prong 2 (well-positioned)