Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

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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 the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. 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

41	41	5	127
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.

90.2% independent of 41 classified citing papers

Citation type	Count
Independent	37
Self-citation	3
Co-author	1
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 established foundational theoretical frameworks for doubly labelled water methodology and extended this work to elucidate the relationships between body size, energy metabolism, and lifespan.

CLAIM: The researcher's contribution centers on advancing the theoretical and practical understanding of doubly labelled water techniques, as demonstrated by the seminal 1997 paper, and subsequently applying these insights to broader physiological questions regarding body size, energy metabolism, and lifespan in a 2005 follow-up study.

ORIGINALITY: This line of work appears to address the need for robust theoretical grounding in metabolic measurement techniques. By first consolidating the theory and practice of doubly labelled water, the researcher created a methodological foundation that enabled subsequent investigations into complex biological trade-offs, such as the interplay between metabolic rates and longevity, suggesting a progression from methodological refinement to broader physiological application.

SIGNIFICANCE: The impact of this research is evidenced by the substantial citation counts for both the core 1997 paper and the 2005 follow-up, indicating sustained interest and utility in the field. Furthermore, the high proportion of independent citations suggests that the work has been widely adopted and validated by researchers outside the applicant's immediate circle, underscoring its broad relevance and influence on the scientific community.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 12

CORE PAPER

Doubly labelled water: theory and practice

1997 · 1,099 citations (GS)

Field-normalised: 410 Semantic Scholar citations place it in the top 1% of Chemistry papers from 1997 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Biology of Marine Birds (2001)	Los Angeles County Museum of Natural History, Rutgers University	United States	—
2	Energetics of free-ranging mammals, reptiles, and birds (1999)	University of California, Los Angeles	United States	—
3	Estimates for energy expenditure in free-living animals using acceleration proxies: A reappraisal (2020)	Swansea University	United Kingdom	—
4	Observing the unwatchable through acceleration logging of animal behavior (2013)	Max Planck Institute for Ornithology, Middle Tennessee State University, North Carolina State University	Germany, United Kingdom, United States	—
5	Physical activity and physical activity induced energy expenditure in humans: measurement, determinants, and effects (2013)	Maastricht University Medical Centre	Netherlands	—

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

Body size, energy metabolism and lifespan

2005 · Journal of Experimental Biology · 1,214 citations (GS)

Field-normalised: 861 Semantic Scholar citations place it in the top 1% of Biology papers from 2005 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Toxic Effects of Cadmium on Fish (2022)	Wenzhou University	China	—
2	Cellular stress responses, hormetic phytochemicals and vitagenes in aging and longevity (2012)	Catholic University of Sacred Heart, Interuniversity Consortium INBB, Johns Hopkins University School of Medicine	Italy, United States	—
3	No evidence for Peto's paradox in terrestrial vertebrates (2025)	University of Reading	United Kingdom	—
4	The megabiota are disproportionately important for biosphere functioning (2020)	Northern Arizona University, UN Environment Programme World Conservation Monitoring Centre, University of Arizona	United Kingdom, United States	—
5	Cellular allostatic load is linked to increased energy expenditure and accelerated biological aging (2023)	Columbia University	United States	—
6	The Naked Mole-Rat as a Model for Healthy Aging (2023)	Kumamoto University, Sokendai (The Graduate University for Advanced Studies)	Japan	—
7	Understanding variation in metabolic rate (2018)	Monash University	Australia	—

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 established a foundational framework for understanding the physiological costs of reproduction in small mammals, significantly advancing the field through highly cited seminal and follow-up work.

The researcher's contribution centers on elucidating the physiological costs of reproduction in small mammals, anchored by a seminal 2008 paper published in Philosophical Transactions of the Royal Society B. This core work serves as the foundation for a sustained line of inquiry into mammalian life-history trade-offs.

This line of work appears to address critical gaps in understanding how reproductive effort impacts physiological states. The progression from the 2008 core paper to a 2011 follow-up on caloric restriction suggests an original exploration of the metabolic and energetic mechanisms underlying these biological costs, linking reproduction to broader physiological constraints.

The significance of this research is evidenced by substantial citation counts, with the core paper accumulating 949 citations and the follow-up reaching 1,084. Furthermore, analysis of citing literature indicates that 92.7% of citations originate from independent researchers, demonstrating broad adoption and impact across the scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 15

CORE PAPER

The physiological costs of reproduction in small mammals

2008 · Philosophical Transactions of the Royal Society B: Biological Sciences · 949 citations (GS)

Field-normalised: 755 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	Oxidative stress as a mediator of life history trade-offs: mechanisms, measurements and interpretation (2009)	University of Glasgow	United Kingdom	—
2	Trade-Offs (and Constraints) in Organismal Biology (2021)	College of Environmental Science and Forestry, State University of New York, University of California, Riverside, University of Wisconsin	United States	—
3	Pregnancy is linked to faster epigenetic aging in young women (2024)	BC Children's Hospital Research Institute, Columbia University, Columbia University Mailman School of Public Health	Canada, Philippines, United States	—
4	Metabolic loads and the costs of metazoan reproduction (2024)	Monash University, The University of Melbourne	Australia	—
5	Early-late life trade-offs and the evolution of ageing in the wild (2015)	Université de Lyon	France	—
6	Oxidative stress as a life-history constraint: the role of reactive oxygen species in shaping phenotypes from conception to death (2010)	MNCN-CSIC	Spain	—
7	The World Goes Bats: Living Longer and Tolerating Viruses (2020)	University of Rochester, Yong Loo Lin School of Medicine, National University of Singapore	Singapore, United States	—
8	Seasonal changes in vertebrate immune activity: mediation by physiological trade-offs (2008)	The Ohio State University	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

Caloric restriction

2011 · 1,084 citations (GS)

Field-normalised: 773 Semantic Scholar citations place it in the top 1% of Medicine papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Molecular mechanisms of dietary restriction promoting health and longevity (2021)	University of Sydney, University of Wisconsin-Madison	Australia, United States	—
2	Mitochondrial dysfunction in aging (2023)	Hebei North University, University of Manitoba	Canada, China	—
3	Effects of Intermittent Fasting on Health, Aging, and Disease. (2019)	National Institutes of Health, National Institutes of Health and Johns Hopkins University	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
4	Dietary restriction impacts health and lifespan of genetically diverse mice (2024)	Calico Life Sciences LLC, The Jackson Laboratory, University of Pennsylvania	United States	—
5	Impact of intermittent fasting on health and disease processes (2017)	National Institute on Aging, University Hospital South Manchester, University of Southern California	United Kingdom, United States	—
6	Metabolic interplays between the tumour and the host shape the tumour macroenvironment (2025)	Andalusian Molecular Biology and Regenerative Medicine Centre-CSIC, Cold Spring Harbor Laboratory, Weizmann Institute of Science	Israel, Spain, United States	—
7	Caloric restriction in humans reveals immunometabolic regulators of health span (2022)	Michigan Medicine, University of Michigan, Pennington Biomedical Research Center, LSU, Translational Research Institute for Metabolism and Diabetes, AdventHealth	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.

Contribution 3

Claim — Contribution 3

The researcher established a foundational framework for understanding energy balance components and their implications for body weight regulation, as evidenced by a seminal 2012 publication.

CLAIM: The researcher's primary contribution is the development of a conceptual framework linking energy balance components to body weight regulation, anchored by the 2012 paper 'Energy balance and its components: implications for body weight regulation' published in the American Journal of Clinical Nutrition.

ORIGINALITY: This work appears to address the complex mechanisms underlying weight management by systematically analyzing the components of energy balance. The titles suggest a focus on clarifying how these specific components interact to influence body weight, offering a structured approach to a multifaceted physiological problem.

SIGNIFICANCE: The core paper has garnered 1,111 citations, indicating substantial uptake within the scientific community. Furthermore, citation analysis reveals that 92.7% of citing papers originate from independent researchers, demonstrating that this framework has been widely adopted and utilized by scholars outside the researcher's immediate network to advance related inquiries.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 10

CORE PAPER

Energy balance and its components: implications for body weight regulation

2012 · American Journal of Clinical Nutrition · 1,111 citations (GS)

Field-normalised: 663 Semantic Scholar citations place it in the top 1% of Medicine papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Cancer-associated cachexia (2018)	Indiana University School of Medicine, The Ohio State University, University of Alberta	Canada, United Kingdom, United States	—
2	Impact of weight bias and stigma on quality of care and outcomes for patients with obesity (2015)	Mayo Clinic	United States	—
3	AMP-activated protein kinase: the current landscape for drug development (2019)	Imperial College London, McMaster University	United Kingdom	—
4	Joint international consensus statement for ending stigma of obesity (2020)	Indiana University School of Medicine, King's College London, Pennington Biomedical Research Centre	United Kingdom, United States	—
5	Lifestyle Medicine: The Health Promoting Power of Daily Habits and Practices (2018)	Rippe Lifestyle Institute	United States	—
6	International society of sports nutrition position stand: diets and body composition (2017)	Baylor University, California State University, Northridge, Dymatize Nutrition	United Kingdom, United States	—
7	Food Timing, Circadian Rhythm and Chrononutrition: A Systematic Review of Time-Restricted Eating's Effects on Human Health (2020)	Université de Lille	France	—
8	Dietary intake of people with severe mental illness: systematic review and meta-analysis (2019)	South Eastern Sydney Local Health District, St Vincent's Hospital Sydney, University of New South Wales	Australia	—
9	Environmental Obesogens: Mechanisms and Controversies (2019)	Commonweal, University of California, Irvine	United States	—
10	Brain control of energy homeostasis: Implications for anti-obesity pharmacotherapy (2025)	Max Planck Institute for Metabolism Research, Novo Nordisk Foundation Center for Basic Metabolic Research, University of Copenhagen	Denmark, Germany	—

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
The Ohio State University	United States	THE =108 · QS 190	2
Rutgers University	United States	—	2
University of Edinburgh	United Kingdom	SCImago #182 · THE 29 · QS 34	2
Monash University	Australia	THE =58 · QS =36	2
Indiana University School of Medicine	United States	—	2

Institution	Country	World ranking	Citing papers
University of Aberdeen	United Kingdom	SCImago #1812 · THE 201–250 · QS =262	2
Columbia University	United States	SCImago #65 · THE 20 · QS =38	2
University of Glasgow	United Kingdom	SCImago #351 · THE 84 · QS 79	2
Swansea University	United Kingdom	SCImago #1529 · THE 301–350 · QS 292	2
Pennington Biomedical Research Centre	United States	—	1
Skidmore College	United States	SCImago #8379	1
University of Mary Hardin-Baylor	United States	—	1
QPS	United States	—	1
Guru Performance Institute	United Kingdom	—	1
University of Alberta, Cross Cancer Institute	Canada	—	1

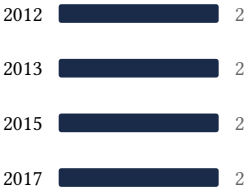
Geographic distribution of citing authors

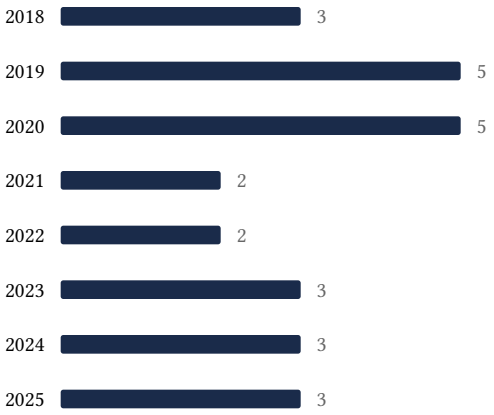
Country	Citing papers
United States	23
United Kingdom	13
Australia	4
Canada	3
Germany	2
France	2
Singapore	2
Spain	2
China	2
Netherlands	1
Israel	1
Italy	1

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.





F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Doubly labelled water: theory and practice	12	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	The physiological costs of reproduction in small mammals	15	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Energy balance and its components: implications for body weight regulation	10	8 CFR 204.5(i)(3) — Outstanding Researcher