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 2026-06-08 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

685	747	29	19
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.

88.7% independent of 620 classified citing papers

Citation type	Count
Independent	550
Self-citation	15
Co-author	55
Same-institution	0

65 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 role of scavenger receptors in shrimp antiviral immunity, identifying specific receptors that mediate phagocytosis and restrict White Spot Syndrome Virus proliferation.

The researcher's core contribution centers on elucidating the molecular mechanisms of innate immunity in crustaceans, specifically regarding viral defense. This line of work is anchored by a 2016 paper demonstrating that scavenger receptor C mediates the phagocytosis of White Spot Syndrome Virus and restricts its proliferation in shrimp. This foundational study provided critical insight into how shrimp recognize and combat this devastating pathogen.

This research appears to address a significant gap in understanding crustacean pattern recognition receptors. By identifying scavenger receptor C as a key mediator, the work laid the groundwork for subsequent investigations into related immune pathways. Follow-up studies by the same researcher expanded this framework, exploring scavenger receptor B2's role in sensing LPS and activating the IMD pathway, as well as identifying polymeric immunoglobulin receptor-like proteins as receptors for the virus. This chronological progression suggests a systematic effort to map the broader landscape of crustacean immune recognition.

The significance of this contribution is evidenced by substantial independent scholarly uptake. The core 2016 paper has accumulated 106 citations, while the follow-up studies have garnered 61 and 46 citations respectively. Notably, 88.7% of the 620 classified citations for this scholar originate from independent researchers, indicating that this work has been widely adopted and built upon by the broader scientific community rather than just the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 130 · **8 flagged influential by Semantic Scholar**

CORE PAPER

Scavenger receptor C mediates phagocytosis of white spot syndrome virus and restricts virus proliferation in shrimp

2016 · 106 citations (GS)

Field-normalised: 90 Semantic Scholar citations place it in the top 10% of Biology papers from 2016 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The role of pattern recognition receptors in crustacean innate immunity	C. Abdul Hakeem College, Central Institute of Freshwater Aquaculture, Chonnam National University	India, South Korea	—
2	Hemocyte-mediated phagocytosis in crustaceans	Jining University, Lake Superior State University, State Key Laboratory of Marine Environmental Science	China, United States	—
3	Role of cellular receptors in the innate immune system of crustaceans in response to white spot syndrome virus	Shantou University	China	**Influential**
4	Effects of environmental stress on shrimp innate immunity and white spot syndrome virus infection	Sun Yat-sen University	China	—
5	Penaeidins restrict white spot syndrome virus infection by antagonizing the envelope proteins to block viral entry	Beibu Gulf University, Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai)	China	—

No.	Citing paper	Citing institution(s)	Country	S2
6	Phosphorylated Eriocheir sinensis Rab10 regulates apoptosis and phagocytosis to defense Spiroplasma eriocheiris infection	Institute of Quality Standards and Testing Technology for Agro Products, Nanjing Normal University	China	—
7	Cellular entry of white spot syndrome virus and antiviral immunity mediated by cellular receptors in crustaceans	State Key Laboratory of Marine Environmental Science, Xiamen University	China	—
8	Cellular responses in crustaceans under white spot syndrome virus infection	Shantou University	China	—
9	Recognition of arboviruses by the mosquito immune system	University of Nevada, Reno	United States	—
10	IL-17/IL-17 Receptor Pathway–Mediated Inflammatory Response in Apostichopus japonicus Supports the Conserved Functions of Cytokines in Invertebrates	Ningbo University, Qingdao National Laboratory for Marine Science and Technology	China	—
11	Identification and function analysis of Toll–like receptor 4 (TLR4) from Manila clam (Ruditapes philippinarum)	Dalian Ocean University	China	—
12	Gardenia jasminoides Ellis inhibit white spot syndrome virus replication in red swamp crayfish Procambarus clarkii	Northwest A&F University	China	—
13	A unique NLRC4 receptor from echinoderms mediates Vibrio phagocytosis via rearrangement of the cytoskeleton and polymerization of F-actin	Ningbo University	China	**Influential**
14	A review of shrimp cellular receptors for WSSV: Potential targets for antiviral strategies in shrimp aquaculture	Centro de Investigación en Alimentación y Desarrollo, Centro de Investigaciones Biológicas del Noroeste S.C.	Mexico	—
15	A Novel Candidate Gene Associated With Body Weight in the Pacific White Shrimp Litopenaeus vannamei	Hainan Grand Suntop Ocean Breeding Co., Ltd., Institute of Oceanology, Chinese Academy of Sciences	China	—
16	METTL3 activates PERK-eIF2α dependent coelomocyte apoptosis by targeting the endoplasmic reticulum degradation-related protein SEL1L in echinoderms	Ningbo University, Qingdao National Laboratory for Marine Science and Technology	China	—
17	Scavenger receptor C regulates antimicrobial peptide expression by activating toll signaling in silkworm, Bombyx mori	Southwest University, State Key Laboratory of Silkworm Genomic Biology, University of Chinese Academy of Sciences	China	—
18	Single-cell RNA-sequencing reveals Eriocheir sinensis hemocyte subpopulations and their molecular responses to Spiroplasma eriocheiris infection	Henan Normal University, Nanjing Normal University, Southwest Minzu University	China	—
19	Scavenger receptor B promotes bacteria clearance by enhancing phagocytosis and	Shantou University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
	attenuates white spot syndrome virus proliferation in Scylla paramamosian			
20	Sf-FGFR and Sf-SR-C Are Not the Receptors for Vip3Aa to Exert Insecticidal Toxicity in Spodoptera frugiperda	Chinese Academy of Agricultural Sciences	China	—
21	White spot syndrome virus benefits from endosomal trafficking, substantially facilitated by a valosin-containing protein, to escape autophagic elimination and …	National Cheng Kung University, State Key Laboratory of Marine Environmental Science	China, Taiwan	—
22	Comparative transcriptomics reveals the immune dynamics during the molting cycle of swimming crab Portunus trituberculatus	Jiangsu Ocean University, Shanghai Ocean University, Zhejiang Marine Fisheries Research Institute	China	—
23	Single von Willebrand factor C-domain protein confers host defense against white spot syndrome virus by functioning as a pattern recognition receptor in …	Changzhi Medical College, Chinese Academy of Fishery Sciences, Hebei University	China	—
24	The immune system of the freshwater zebra mussel, Dreissena polymorpha, decrypted by proteogenomics of hemocytes and plasma compartments	Laboratoire Innovations Technologiques pour la Détection et le Diagnostic, Stress Environnementaux et Biosurveillance des Milieux Aquatiques, Université Claude Bernard Lyon 1	France	—
25	Transcriptome analysis of Neocaridina denticulate sinensis under copper exposure	Hebei University	China	—
26	ARRDC3, a novel α-arrestin, modulates WSSV replication and AHPND pathogenesis in Litopeneaus vannamei	National Cheng Kung University, National Taiwan University	Taiwan	—
27	A novel double Ig interleukin-1 receptor-related molecule from Apostichopus japonicus alleviates Vibrio splendidus-induced inflammation	Ningbo University	China	—
28	PvMR1, a novel C-type lectin plays a crucial role in the antibacterial immune response of Pacific white shrimp, Penaeus vannamei	Henan Normal University	China	—
29	Lysosome passivation triggered by silver nanoparticles enhances subcellular-targeted drug therapy	Shandong Academy of Pharmaceutical Sciences, Shandong First Medical University	China	—
30	Identification of a shrimp E3 ubiquitin ligase TRIM50-like involved in restricting white spot syndrome virus proliferation by its mediated autophagy and ubiquitination	South China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	China	**Influential**

Showing the 30 most-cited of 59 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

Scavenger receptor B2, a type III membrane pattern recognition receptor, senses LPS and activates the IMD pathway in crustaceans

2023 · 46 citations (GS)

Field-normalised: 41 Semantic Scholar citations place it in the top 5% of Biology papers from 2023 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Phosphorylated Eriocheir sinensis Rab10 regulates apoptosis and phagocytosis to defense Spiroplasma eriocheiris infection	Institute of Quality Standards and Testing Technology for Agro Products, Nanjing Normal University	China	—
2	Advances in anti-WSSV immune mechanisms of penaeid shrimp: decoding "Host–Pathogen Interactions for WSSD Resilience	Benha University, King Faisal University, Mansoura University	Egypt, Saudi Arabia	Influential
3	Class B scavenger receptor resists WSSV replication by recognizing the viral lipid molecule and promoting phagocytosis	Shandong Normal University	China	—
4	A novel C-type lectin (SpccCTL) suppresses MCRV replication by binding viral protein and regulating antiviral peptides in Scylla paramamosain	China Fishery Machinery and Instrument Research Institute, Ministry of Agriculture and Rural Affairs	China	—
5	Invertebrate immunity, natural transplantation immunity, somatic and germ cell parasitism, and transposon defense	Houston Methodist, Institut de génétique et de développement de Rennes, The University of Texas MD Anderson Cancer Center	France, United States	—
6	Rab7 GTPase, a direct target of miR-131-3p, limits intracellular Spiroplasma eriocheiris infection by modulating phagocytosis	Nanjing Normal University, Shandong Freshwater Fisheries Research Institute	China	—
7	Apoptosis and FoxO signaling axis form the core antiviral defense in mud crab (Scylla paramamosain) against MCRV	Ministry of Agriculture and Rural Affairs, Shantou University	China	—
8	White Spot Syndrome Virus: A Detailed Review of Early Infection Events, Structural Protein Trafficking, and Innate Immune Evasion	State Key Laboratory of Marine Environmental Science	China	—
9	Identification of a Mnlrig-1 involved in testis reproductive immunity in the oriental river prawn Macrobrachium nipponense	Hebei University	China	—
10	Pattern recognition receptors in Crustacea: Immunological roles under environmental stress	University of Waterloo	Canada	—
11	Transfer of heavy metals along the food chain: A review on the pest control performance of insect natural enemies under heavy metal stress	Northeast Forestry University	China	—
12	Prophenoloxidase-activating system plays a crucial role in innate immune responses	Chulalongkorn University	Thailand	—

No.	Citing paper	Citing institution(s)	Country	S2
	to Enterocytozoon hepatopenaei infection in shrimp Litopenaeus vannamei			
13	Assessment of fish protein hydrolysate as a substitute for fish meal in white shrimp diets: Impact on growth, immune response, and resistance against Vibrio ...	National Pingtung University of Science and Technology, National Taiwan Ocean University, Universiti Putra Malaysia	Malaysia, Taiwan	—
14	Involvement of nerve cord-expressed SVWC2 in pathogen recognition and defense in Macrobrachium nipponense	Changzhi Medical College, Hebei University	China	—
15	MALT1 promotes the antibacterial immune response by activating NF-κB signaling and enhancing hemocyte phagocytosis in the Chinese mitten crab	East China Normal University, Shanghai Ocean University	China	—
16	Beyond TLR4 and Its Alternative Lipopolysaccharide (LPS) Sensing Pathways in Zebrafish	University of Guelph	Canada	Influential
17	Specific Notch receptor and its ligand Delta interactions control antibacterial immunity by regulating hemocyte proliferation in Eriocheir sinensis	Henan Normal University	China	—
18	Comparative Analysis of PGRP Family in Polymorphic Worker Castes of Solenopsis invicta	South China Agricultural University	China	—
19	The innate immune IMD pathway is a key regulator of gut microbiome and metabolic homeostasis in the black tiger shrimp (Penaeus monodon)	National Center for Genetic Engineering and Biotechnology	Thailand	—
20	Susceptibility and host immune response comparison between Siniperca chuatsi and Siniperca scherzeri infected by Aeromonas veronii	Shandong Freshwater Fisheries Research Institute, Yangzhou University	China	—
21	Pleiotropic immunoregulation by growth-blocking peptide in Ostrinia furnacalis	Yangzhou University	China	—
22	Absence of conserved immune signalling pathways and increased pathogen susceptibility associated to photosymbiosis in acoels	Friedrich Schiller University Jena	Germany	—
23	Effects of oligosaccharides on water quality, flora and growth, immunity, and intestinal flora of Macrobrachium rosenbergii in a biofloc system	Huzhou University	China	—
24	Yorkie negatively regulates the Crustin expression during molting in Chinese mitten crab, Eriocheir sinensis	Dalian Ocean University	China	—
25	An analog of Clarias gariepinus Pituitary Adenylate Cyclase-Activating Polypeptide (PACAP-38) contributes to immune homeostasis and defences against ...	Centro de Ingeniería Genética y Biotecnología, Centro de Investigaciones Biológicas Mar-	Canada, Cuba, Spain	—

No.	Citing paper	Citing institution(s)	Country	S2
		garita Salas, University of Information Science		
26	Rab5 regulates the antimicrobial phagocytosis of hemocytes through class B scavenger receptor in Procambarus clarkii	Henan Normal University	China	—
27	Exploring the pathogenesis of Anophryoides haemophila infection: impacts on immune responses in American lobster (Homarus americanus)	Dalhousie University, University of Prince Edward Island	Canada	—
28	Eriocheir sinensis small GTPase Cdc42 regulates the hemocytes phagocytosis to defense Spiroplasma eriocheiris infection	Henan Normal University, Henan Province Water Conservancy Survey and Design Research	China	—
29	Scavenger receptor B1 modulates antimicrobial peptide expression and cellular immunity against bacterial infection in Ostrinia furnacalis	Yangzhou University	China	—
30	Crayfish IMD responds rapidly to WSSV infection and the activated IMD–Relish–AMPs pathway inhibits viral replication	Nanjing Normal University, Nanjing University of Information Science and Technology, Zhejiang Institute of Freshwater Fisheries	China	—

Showing the 30 most-cited of 35 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 polymeric immunoglobulin receptor-like protein from Marsupenaeus japonicus is a receptor for white spot syndrome virus infection

2019 · 61 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Role of cellular receptors in the innate immune system of crustaceans in response to white spot syndrome virus	Shantou University	China	—
2	Penaeidins restrict white spot syndrome virus infection by antagonizing the envelope proteins to block viral entry	Beibu Gulf University, Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai)	China	**Influential**
3	Cellular entry of white spot syndrome virus and antiviral immunity mediated by cellular receptors in crustaceans	State Key Laboratory of Marine Environmental Science, Xiamen University	China	—
4	Identification of a shrimp E3 ubiquitin ligase TRIM50-like involved in restricting white spot syndrome virus proliferation by its mediated autophagy and ubiquitination	South China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	China	—

No.	Citing paper	Citing institution(s)	Country	S2
5	Advances in anti-WSSV immune mechanisms of penaeid shrimp: decoding “Host–Pathogen Interactions for WSSD Resilience	Benha University, King Faisal University, Mansoura University	Egypt, Saudi Arabia	—
6	A unique echinoderm NLR triggers Vibrio phagocytosis by promoting microtubule severing to facilitate microfilament polymerization	Ningbo University, Qingdao Agricultural University, Qingdao National Laboratory for Marine Science and Technology	China	—
7	Recent insights into anti-WSSV immunity in crayfish	State Key Laboratory of Marine Environmental Science, Xiamen University	China	—
8	Purple bacteria as added-value protein ingredient in shrimp feed: Penaeus vannamei growth performance, and tolerance against Vibrio and ammonia stress	Ghent University, University of Antwerp	Belgium	—
9	The G protein-coupled receptor FFAR2 promotes internalization during influenza A virus entry	State Key Laboratory of Veterinary Biotechnology	China	—
10	Evaluation on the antiviral activity of genipin against white spot syndrome virus in crayfish	Northwest A&F University	China	—
11	Heat Shock Factor regulation of antimicrobial peptides expression suggests a conserved defense mechanism induced by febrile temperature in arthropods	Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai)	China	—
12	Integrated analysis of mRNA-miRNA expression in Tilapia infected with Tilapia lake virus (TiLV) and identifies primarily immune-response genes	Chinese Academy of Fishery Sciences, Foshan University, Friedrich-Loeffler-Institut	China, Germany	—
13	The antibacterial activity and antibacterial mechanism analyses of an LRR-IG protein in the Chinese mitten crab, Eriocheir sinensis	Ningbo University, Qingdao National Laboratory for Marine Science and Technology	China	—
14	The Complete Genome of an Endogenous Nimavirus (Nimav-1_LVa) From the Pacific Whiteleg Shrimp Penaeus (Litopenaeus) Vannamei	Chinese Academy of Fishery Sciences, Genetic Information Research Institute	China, United States	—
15	Natural component geniposide enhances survival rate of crayfish Procambarus clarkii infected with white spot syndrome virus	Guangxi University	China	—
16	Evolution of immune defence responses as incremental layers among Metazoa	Università degli Studi della Tuscia	Italy	—
17	Litopenaeus vannamei peroxiredoxin 2-like is involved in WSSV infection by interaction with wsv089 and VP26	Chinese Academy of Fishery Sciences, Shanghai Ocean University	China	—
18	Functional peroral infectivity complex of white spot syndrome virus of shrimp	Chinese Academy of Sciences, Third Institute of Oceanography, Wageningen University & Research	China, Netherlands	—

No.	Citing paper	Citing institution(s)	Country	S2
19	White Spot Syndrome Virus: A Detailed Review of Early Infection Events, Structural Protein Trafficking, and Innate Immune Evasion	State Key Laboratory of Marine Environmental Science	China	—
20	Virus infection and vesicle trafficking	Chinese Academy of Agricultural Sciences, Guizhou Aerospace Hospital, Zunyi Medical University	China	—
21	Identification of the Fc-alpha/mu receptor in Xenopus provides insight into the emergence of the poly-Ig receptor (pIgR) and mucosal Ig transport	Harvard Medical School, University of Chicago, University of Maryland School of Medicine	United States	—
22	Distinct vitellogenin domains differentially regulate immunological outcomes in invertebrates	East China Normal University	China	**Influential**
23	Oral administration of Saccharomyces cerevisiae displaying VP28-VP24 confers protection against white spot syndrome virus in shrimp	Southwest Jiaotong University	China	—
24	Protein-protein interaction network analysis on the whiteleg shrimp Penaeus vannamei and Vibrio parahaemolyticus host-pathogen relationship reveals …	National University of Malaysia, Universiti Malaysia Terengganu, Universiti Sains Malaysia	Malaysia	—
25	C-type lectins containing an immunoglobulin domain have an anti-WSSV function in Procambarus clarkii	Nanjing Normal University, Nanjing University of Information Science and Technology	China	—
26	AP2: an indispensable host factor in virus infection	Southwest University	China	—
27	Antennal gland of shrimp as an entry for WSSV infection	Qingdao National Laboratory for Marine Science and Technology	China	—
28	Identification of a Mnlrig-1 involved in testis reproductive immunity in the oriental river prawn Macrobrachium nipponense	Hebei University	China	—
29	The MIP-T3 from shrimp Litopenaeus vannamei restricts white spot syndrome virus infection via regulating NF-κB activation	Southern Marine Science and Engineering Guangdong Laboratory (Guangzhou), Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai)	China	—
30	scFv antibody-mediated targeted drug delivery system improves the antiviral activity of geniposidic acid against WSSV	Guangxi University	China	—

Showing the 30 most-cited of 36 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 a framework linking complement proteins and vitamin D-binding protein in cerebrospinal fluid to multiple sclerosis activity and progression.

CLAIM: The researcher's contribution centers on identifying specific protein markers in cerebrospinal fluid associated with multiple sclerosis, anchored by the 2011 paper on differential expression of complement proteins.

ORIGINALITY: This line of work appears to address the need for biomarkers in MS by first examining complement proteins and subsequently expanding the scope to include vitamin D-binding protein and its role in disease progression, as indicated by the chronological sequence of titles.

SIGNIFICANCE: The core paper has received 33 citations, while the 2013 follow-up on vitamin D-binding protein has garnered 68 citations. With 88.7% of citing papers originating from independent researchers, this suggests the work has been widely adopted and validated by the broader scientific community.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 68 · **5 flagged influential by Semantic Scholar**

CORE PAPER

Differential expression of complement proteins in cerebrospinal fluid from active multiple sclerosis patients

2011 · 33 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Combination protein biomarkers predict multiple sclerosis diagnosis and outcomes	Cardiff University, Semmelweis University, UK Dementia Research Institute	Hungary, United Kingdom	—
2	Proteomics in multiple sclerosis: the perspective of the clinician	University of Szeged	Hungary	—
3	The complement system as a biomarker of disease activity and response to treatment in multiple sclerosis	Iuliu Hațieganu University of Medicine and Pharmacy, University of Maryland School of Medicine, University of Maryland, School of Medicine	Romania, United States	—
4	Omics approaches to understanding the efficacy and safety of disease-modifying treatments in multiple sclerosis	Azienda Ospedaliera G. Brotzu, Binaghi Hospital, Institute for Genetic and Biomedical Research, National Research Council	Italy	—
5	Proteomics of multiple sclerosis: inherent issues in defining the pathoetiology and identifying (early) biomarkers	Brock University, Western Sydney University	Australia, Canada	**Influential**
6	Complement component C3 and butyrylcholinesterase activity are associated with neurodegeneration and clinical disability in multiple sclerosis	Karolinska Institutet, Linnæus University, Uppsala University	Sweden	—
7	Sub-chronic neuropathological and biochemical changes in mouse visual system after repetitive mild traumatic brain injury	The Roskamp Institute	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
8	Complement dysregulation in multiple sclerosis: emerging mechanisms and translational therapeutic opportunities	Jamia Hamdard, Khalifa University of Science and Technology, Royal Brisbane and Women's Hospital	Australia, India, United Arab Emirates	—
9	The validity of animal models to explore the pathogenic role of the complement system in multiple sclerosis: a review	Southern Methodist University, University of Texas Southwestern Medical Center	United States	—
10	A higher burden of multiple sclerosis genetic risk confers an earlier onset	Biogen, Brigham Young University, Brigham Young University, Vanderbilt University	United States	—
11	Free complement and complement containing extracellular vesicles as potential biomarkers for neuroinflammatory and neurodegenerative disorders	VIB-UGent Center for Inflammation Research	Belgium	Influential
12	Innate immunity and biomarkers of multiple sclerosis relapse versus remission	Monash Alfred Psychiatry Research centre, Monash University, The Royal Melbourne Hospital	Australia	—
13	Complement Receptor 2 is increased in cerebrospinal fluid of multiple sclerosis patients and regulates C3 function	Karolinska Institutet, Linnaeus University, Uppsala University	Sweden	—
14	Posttranslational modifications of proteins are key features in the identification of CSF biomarkers of multiple sclerosis	Centro de Neurociências e Biologia Celular, Centro Hospitalar e Universitário de Coimbra, I3S - Instituto de Investigação e Inovação em Saúde, Universidade do Porto	Portugal	—
15	Label-free analysis of human cerebrospinal fluid addressing various normalization strategies and revealing protein groups affected by multiple sclerosis	Cliniques Universitaires Saint-Luc, IRCCS, "C. Mondino" National Neurological Institute, University of Bergen	Belgium, Italy, Norway	—
16	Cerebrospinal fluid proteomics in multiple sclerosis	Haukeland University Hospital, University of Bergen	Norway	—
17	Mass spectrometry-based analysis of cerebrospinal fluid from arthritis patients—immune-related candidate proteins affected by TNF blocking treatment	Karolinska Institutet	Sweden	—
18	Altered expression patterns of complement factor H and miR-146a genes in acute-chronic phases in experimental autoimmune encephalomyelitis mouse	Semnan University of Medical Sciences, Shahid Sadoughi University of Medical Sciences and Health Services	Iran	—
19	Complement regulator factor H in multiple sclerosis	Cardiff University	United Kingdom	—
20	Activation of complement: A potent biomarker in multiple sclerosis	Tehran University of Medical Sciences, Universal Scientific Education and Research Network	Iran	—

No.	Citing paper	Citing institution(s)	Country	S2
21	Impact of genetic variability on early immune reactions following nerve injury	—	—	—
22	ΑΡΙΣΤΟΤΕΛΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΟΝΙΚΗΣ	—	—	—

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

Vitamin D-binding protein in cerebrospinal fluid is associated with multiple sclerosis progression

2013 · 68 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Vitamin D and neurological diseases: an endocrine view	IRCCS Istituto Auxologico Italiano, Istituti di Ricovero e Cura a Carattere Scientifico, Università degli Studi del Piemonte Orientale "Amedeo Avogadro"	Italy	—
2	Behind the scenes of vitamin D binding protein: more than vitamin D binding	Ghent University Hospital	Belgium	—
3	Vitamin D and risk of multiple sclerosis: a Mendelian randomization study	Jewish General Hospital, Massachusetts General Hospital, McGill University	Canada, United Kingdom, United States	—
4	Microglia-Derived Vitamin D Binding Protein Mediates Synaptic Damage and Induces Depression by Binding to the Neuronal Receptor Megalin	Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Southeast University, Xinxiang Medical University	China	—
5	Epstein-Barr virus, vitamin D and the immune response: connections with consequences for multiple sclerosis	United Arab Emirates University	United Arab Emirates	—
6	Combination protein biomarkers predict multiple sclerosis diagnosis and outcomes	Cardiff University, Semmelweis University, UK Dementia Research Institute	Hungary, United Kingdom	—
7	Vitamin D binding protein: a multifunctional protein of clinical importance	Ghent University Hospital	Belgium	—
8	Vitamin D-binding protein in plasma microglia-derived extracellular vesicles as a potential biomarker for major depressive disorder	Chinese Academy of Sciences, Shenzhen Institutes of Advanced Technology, Southeast University	China	—
9	Identifying plasma biomarkers with high specificity for major depressive disorder: a multi-level proteomics study	Nanjing Medical University, Nanjing University of Aeronautics and Astronautics, Royal Netherlands Academy of Arts and Sciences	China, Netherlands	—

No.	Citing paper	Citing institution(s)	Country	S2
10	A review on potential roles of vitamins in incidence, progression, and improvement of multiple sclerosis	Iran University of Medical Sciences, University of Tehran	Iran	—
11	Insights into the human brain proteome: Disclosing the biological meaning of protein networks in cerebrospinal fluid	Centro de Neurociências e Biologia Celular, University of Aveiro	Portugal	—
12	Bipolar disorder in youth is associated with increased levels of vitamin D-binding protein	CHRR at The Ohio State University	United States	—
13	The role of vitamin D through SphK1/S1P in the regulation of MS progression	Shandong First Medical University, Shandong University	China	—
14	Increased circulating levels of vitamin D binding protein in MS patients	Azienda Ospedaliera Sant'Andrea, Istituto Superiore di Sanità, Sapienza University of Rome	Italy	—
15	Vitamin D-binding protein and multiple sclerosis: Evidence, controversies, and needs	Istituto Superiore di Sanità	Italy	—
16	Extracellular actin in health and disease	Irkutsk Scientific Center of Surgery and Traumatology	Russia	—
17	Vitamin D binding protein isoforms and apolipoprotein E in cerebrospinal fluid as prognostic biomarkers of multiple sclerosis	ABLE Biosciences, Bioindustry Park Silvano Fumero SpA, San Luigi University Hospital	Italy	—
18	Efforts towards repurposing of antioxidant drugs and active compounds for multiple sclerosis control	Aristotle University of Thessaloniki, Frederick University	Cyprus, Greece	—
19	Vitamin D deficiency and genetic polymorphisms of vitamin D-associated genes in Parkinson's disease	Institute of Neurosciences Kolkata, Surendranath College, University of Calcutta	India	—
20	Reduction in circulating vitamin D binding protein in patients with multiple sclerosis	Tehran University of Medical Sciences	Iran	—
21	Association of blood levels of vitamin D and its binding protein with clinical phenotypes of multiple sclerosis	Kuwait University, Mubarak Al Kabeer Hospital, Qatar University	Kuwait, Qatar, United States	Influential
22	Vitamin D–binding protein levels do not influence the effect of vitamin D repletion on serum PTH and calcium: data from a randomized, controlled trial	Rockefeller University	United States	—
23	Proteomic characterization of pediatric craniopharyngioma intracystic fluid by LC-MS top-down/bottom-up integrated approaches	Agostino Gemelli University Polyclinic, Consiglio Nazionale delle Ricerche, Università Cattolica del Sacro Cuore	Italy	—
24	Total 25-hydroxy vitamin D level in cerebrospinal fluid correlates with serum total, bioavailable, and free 25-hydroxy vitamin D levels in Korean population	Gyeongsang National University Hospital	South Korea	—
25	Genetic, environmental and biomarker considerations delineating the regulatory effects	Curtin University	Australia	—

No.	Citing paper	Citing institution(s)	Country	S2
	of vitamin D on central nervous system function			
26	Multiple Sclerosis Patients Show Lower Bioavailable 25(OH)D and 1,25(OH)2D, but No Difference in Ratio of 25(OH)D/24,25(OH)2D and FGF23 ...	Amsterdam Neuroscience, Amsterdam University Medical Centers, Reinier de Graaf Hospital	Netherlands	—
27	Proteomic analysis of cerebrospinal fluid in canine cervical spondylomyelopathy	Menescalia Centro Veterinario, The Ohio State University	Spain, United States	—
28	Cerebrospinal fluid vitamin D-binding protein as a new biomarker for the diagnosis of meningitis	Gyeongsang National University Hospital	South Korea	—
29	Cerebrospinal fluid biomarkers of Japanese encephalitis	Institute of Life Sciences, King George's Medical University, National Brain Research Centre	India	—
30	Neuroproteomics and microRNAs studies in multiple sclerosis: transforming research and clinical knowledge in biomarker research	American University of Beirut, American University of Beirut Medical Center, Centro Neurolesi Bonino Pulejo	Italy, Lebanon, United Kingdom	—

Showing the 30 most-cited of 46 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

Late-stage MS associated with protein in spinal cord which blocks vitamin D

2013 · 0 citations (GS)

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

Contribution 3

Claim — Contribution 3

The researcher established a pharmacological strategy to activate tissue-specific mitophagy via USP30 inhibition, subsequently validating its therapeutic potential in cardiomyopathy models and human iPSC-derived cells.

The researcher's core contribution rests on the 2021 paper demonstrating that pharmacological inhibition of USP30 activates tissue-specific mitophagy. This work serves as the foundational claim for a broader line of inquiry into mitochondrial quality control mechanisms.

This line of work appears to address the challenge of targeting mitophagy with precision. By moving from the initial discovery of USP30 inhibition to follow-up studies on fatty acid beta-oxidation deficient cardiomyopathy and human iPSC-derived cardiomyocytes, the researcher suggests a progression from mechanistic identification to disease-specific application and human-relevant model validation.

The significance of this contribution is evidenced by substantial independent uptake. With 58 citations for the core paper and additional citations for follow-up works, the research has attracted attention from the broader scientific community. Notably,

88.7% of citing papers originate from independent researchers, indicating that the field recognizes the utility and novelty of this approach beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 59 · **4 flagged influential by Semantic Scholar**

CORE PAPER

Pharmacological inhibition of USP30 activates tissue-specific mitophagy

2021 · 58 citations (GS)

Field-normalised: 43 Semantic Scholar citations place it in the top 10% of Medicine papers from 2021 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The mitophagy pathway and its implications in human diseases	The Sixth Affiliated Hospital of Guangzhou Medical University, Qingyuan City People's Hospital	China	—
2	Cellular mitophagy: mechanism, roles in diseases and small molecule pharmacological regulation	Southwest Jiaotong University	China	**Influential**
3	Mitophagy in neurodegenerative diseases: mechanisms of action and the advances of drug discovery	Sichuan University	China	—
4	Targeting whole body metabolism and mitochondrial bioenergetics in the drug development for Alzheimer's disease	University of Alabama at Birmingham	United States	—
5	Rock inhibitors in Alzheimer's disease	Bedford VA Healthcare System, Centre for Addiction and Mental Health, University of Alabama at Birmingham	Canada, United States	—
6	Deubiquitinating enzymes (DUBs): Regulation, homeostasis, and oxidative stress response	Duke University	United States	—
7	Mitochondrial dysfunction in Parkinson's disease: from mechanistic insights to therapy	Fourth Affiliated Hospital of China Medical University	China	—
8	Chimeric deubiquitinase engineering reveals structural basis for specific inhibition of the mitophagy regulator USP30	Max Planck Institute of Molecular Physiology	Germany	**Influential**
9	Recent advances in small molecule inhibitors of deubiquitinating enzymes	Zhejiang University	China	—
10	Targeting selective autophagy and beyond: from underlying mechanisms to potential therapies	First Hospital of China Medical University, Southwest Jiaotong University	China	—
11	Mitophagy's impacts on cancer and neurodegenerative diseases: implications for future therapies	Mays Cancer Center at UT Health San Antonio, The University of Texas at San Antonio Health Science Center, UT Health San Antonio	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
12	USP30 inhibition induces mitophagy and reduces oxidative stress in parkin-deficient human neurons	University of Southern Denmark	Denmark	—
13	Molecular Symphony of Mitophagy: Ubiquitin-Specific Protease-30 as a Maestro for Precision Management of Neurodegenerative Diseases	National Institute of Pharmaceutical Education and Research - Ahmedabad, National Institutes of Health	India, United States	—
14	Investigation of USP30 inhibition to enhance Parkin-mediated mitophagy: tools and approaches	Eisai (United Kingdom), MRC Laboratory for Molecular Cell Biology	United Kingdom	—
15	miRNA-137-5p improves spatial memory and cognition in Alzheimer's mice by targeting ubiquitin-specific peptidase 30	Fourth Affiliated Hospital of China Medical University, Shenyang First People's Hospital, Shenyang Tenth People's Hospital, Shenyang Chest Hospital	China	—
16	Mitochondrial quality control strategies: potential therapeutic targets for neurodegenerative diseases?	Case Western Reserve University, Case Western Reserve University School of Medicine	United States	—
17	Mitochondrial DNA: a molecular switch driving sterile neuroinflammation	University of Pittsburgh School of Medicine	United States	—
18	Two routes for removing unhealthy mitochondria: degradation and secretion	University of California San Diego, University of California - San Diego School of Medicine	United States	—
19	Mitochondrial dysfunction in neurodegenerative diseases	Jiangsu Institute of Nuclear Medicine, Nanjing Medical University, Nantong University	China	—
20	Redox regulation of DUBs and its therapeutic implications in cancer	Hanyang University	South Korea	—
21	Mitophagy in the pathogenesis and management of disease	École Polytechnique Fédérale de Lausanne, Fudan University	China, Switzerland	—
22	Mitophagy: A double-edged sword in tumor cell death regulation and therapeutic response	Macau University of Science and Technology	China	—
23	The ubiquitin proteasome system as a therapeutic area in Parkinson's disease	Progenra Inc., University of Alabama at Birmingham	United States	Influential
24	Targeted to neuronal organelles for CNS drug development	Soochow University	China	—
25	Ubiquitin-specific protease 20 promotes CCCP-induced mitophagy through deubiquitination and stabilization of serine/threonine protein kinase PINK1	Yonsei University	South Korea	—
26	Chemical N-degrons activate p62-mediated mitophagy to alleviate mitochondrial neuropathies	Columbia University Irving Medical Center, Convergence Research Center for Diagnosis	Ethiopia, Germany, South Korea	—

No.	Citing paper	Citing institution(s)	Country	S2
		Treatment and Care System of Dementia, Goethe University Frankfurt		
27	PINK1-Parkin quality control mitophagy pathway in Parkinson's disease	Montreal Neurological Institute and Hospital	Canada	—
28	Structural basis for specific inhibition of the mitochondrial deubiquitinase USP30 revealed by chimeric protein engineering	Chinese Academy of Medical Sciences & Peking Union Medical College, Drug Discovery Laboratory (Norway), The Francis Crick Institute	China, Norway, United Kingdom	—
29	USP30 inhibition induces mitophagy and reduces oxidative stress in parkin-deficient and CCCP-stressed human iPSC-derived neurons	Lundbeck, University of Copenhagen, University of Southern Denmark	Denmark	—
30	The Roles of Deubiquitination in Age-related Diseases	Nantong University	China	—

Showing the 30 most-cited of 34 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

Mitophagy mitigates mitochondrial fatty acid β-oxidation deficient cardiomyopathy

2025 · 11 citations (GS)

Field-normalised: 7 Semantic Scholar citations place it in the top 10% of Medicine papers from 2025 indexed by Semantic Scholar, by citation count.

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

FOLLOW-UP WORK

Assessment of mitophagy in human iPSC-derived cardiomyocytes

2022 · 30 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	An update of the molecular mechanisms underlying anthracycline induced cardiotoxicity	Changxing People's Hospital, Jiangsu Province Hospital, Nanjing University of Chinese Medicine	China	—
2	Mitochondrial dysfunction in vascular endothelial cells and its role in atherosclerosis	Chengdu Fifth People's Hospital, Chongqing University Three Gorges Hospital, Sichuan Academy of Medical Sciences & Sichuan People's Hospital, School of Medicine, University of Electronic Science and Technology	China	—
3	Blunted cardiac mitophagy in response to metabolic stress contributes to HFpEF	University of Washington	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
4	Autophagy in high-fat diet and streptozotocin-induced metabolic cardiomyopathy: mechanisms and therapeutic implications	Columbia University, Shaanxi Normal University, University of Pennsylvania	China, United States	—
5	Harnessing mitophagy for therapeutic advances in aging and chronic neurodegenerative diseases	Sanjay Gandhi Post Graduate Institute of Medical Sciences, Saraswati Dental College and Hospital	India	—
6	Maturation of pluripotent stem cell-derived cardiomyocytes: limitations and challenges from metabolic aspects	The First Hospital of Jilin University, The Hong Kong Polytechnic University, The Second Affiliated Hospital, Shandong University of Traditional Chinese Medicine	China	Influential
7	Hydrogels in cardiac tissue engineering: application and challenges	Zhengzhou Seventh People's Hospital	China	—
8	DRP1 downregulation impairs mitophagy, driving mitochondrial ROS and SASP production in rheumatoid arthritis CD4+ PD-1+ T cells	Dalian Medical University, Second Affiliated Hospital of Dalian Medical University	China	—
9	Mitophagy and cancer: role of BNIP3/BNIP3L as energetic drivers of stemness features, ATP production, proliferation, and cell migration	University of Salford	United Kingdom	—
10	Mitophagy is induced in human engineered heart tissue after simulated ischemia and reperfusion	Fraunhofer Institute for Toxicology and Experimental Medicine, UiT The Arctic University of Norway, University Hospital of North Norway	Germany, Norway	—
11	Reprogramming iPSCs to study age-related diseases: Models, therapeutics, and clinical trials	Algarve Biomedical Center, Algarve Biomedical Center Research Institute, Champalimaud Foundation	Portugal	—
12	Mitochondria at the heart of aging: structure, function, and failure	Mansoura University	Egypt	—
13	Revisiting the role of autophagy in cardiac differentiation: A comprehensive review of interplay with other signaling pathways	Academic Center for Education, Culture and Research, Iran University of Medical Sciences, Scuola Superiore Meridionale	Iran, Italy	—
14	Metabolic cardiomyopathies: untangling clinical heterogeneity with human stem-cell derived models	Amsterdam UMC, Location University of Amsterdam	Netherlands	—
15	Doxorubicin induces cardiotoxicity by enhancing autophagy via mTOR signaling in hiPSC-and hESC-derived cardiomyocytes	Hangzhou Biaomo Biosciences Co., Ltd., Zhejiang Sci-Tech University	China	—
16	Homoplantaginin ameliorates osteoarthritis by activating Sirt3/PINK1/Parkin signaling to promote mitophagy and attenuate inflammation in chondrocytes	Guangzhou University of Chinese Medicine, Shandong University of Traditional Chinese Medicine	China	—

No.	Citing paper	Citing institution(s)	Country	S2
17	Beauvericin promotes autophagy and mitophagy by activating NIPSNAP2	Children's Hospital of Chongqing Medical University, Chongqing Medical University, Dalian Institute of Chemical Physics	China	—
18	MSC-Derived Exosomes in Preserving Autophagy through Key Signaling Pathways: A Preventive Strategy against Cardiovascular Aging	Maranatha Christian University	Indonesia	—
19	Anthracyclines as diagnostic stressors: mitophagy signaling and hidden cardiac vulnerability	Lower Silesian Specialist Hospital, University Hospital	Poland	—
20	Oleuropein Modulates Mitophagy and Metabolism in Cardiomyocyte Via the PINK1/Parkin Signaling Pathway	The Second Hospital of Jilin University	China	—
21	Development of 3D Bioprinted Vascularized Cardiac Tissues Using Patient-Derived Stem Cells: A Preclinical Study	Al-Furat Al-Awsat Technical University, Al-Mustaqbal University, Applied Science Private University	Iraq, Jordan	—
22	Application of hiPSC as a Drug Tester Via Mimicking a Personalized Mini Heart	Hubei University, West China Hospital of Sichuan University, West China Second University Hospital of Sichuan University	China	—
23	Mitochondria Clearance Enables Macrophage-Driven Maturation of iPSC-Derived Cardiomyocyte Metabolism	University of Notre Dame	United States	—
24	Metabolic cardiomyopathies: untangling clinical heterogeneity with human stem-cell derived models	Amsterdam University Medical Centers, Vrije Universiteit Amsterdam	Netherlands	—
25	Regenerative medicine in space	European Space Research and Technology Centre	Netherlands	—

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
Shandong University	China	SCImago #79 · THE 251–300 · QS =339	38
Ningbo University	China	SCImago #1212	25
Shantou University	China	SCImago #2641 · THE 1001–1200	22

Institution	Country	World ranking	Citing papers
Dalian Ocean University	China	SCImago #7646	20
Qingdao National Laboratory for Marine Science and Technology	China	—	20
Nanjing Normal University	China	SCImago #1679 · THE 801–1000 · QS 951-1000	20
Shanghai Ocean University	China	SCImago #3389	18
Chinese Academy of Fishery Sciences	China	SCImago #4739	18
Guangdong Ocean University	China	SCImago #3569	10
Chinese Academy of Sciences	China	SCImago #2	10
East China Normal University	China	SCImago #769 · THE 251–300 · QS =433	9
Huazhong Agricultural University	China	SCImago #616 · QS 901-950	9
Shandong Agricultural University	China	SCImago #1893	9
Henan Normal University	China	SCImago #3228	8
Southern Marine Science and Engineering Guangdong Laboratory (Guangzhou)	China	—	8

Geographic distribution of citing authors

Country	Citing papers
China	365
United States	67
India	29
South Korea	15
Germany	14
Thailand	14
Italy	13
United Kingdom	12
Australia	11
France	11
Canada	11
Iran	11

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	Scavenger receptor C mediates phagocytosis of white spot syndrome virus and restricts virus proliferation in shrimp	130	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	Differential expression of complement proteins in cerebrospinal fluid from active multiple sclerosis patients	68	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Pharmacological inhibition of USP30 activates tissue-specific mitophagy	59	8 CFR 204.5(i)(3) — Outstanding Researcher