Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

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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 Criterion 5 (original contributions of major significance). 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

485	516	59	14
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.

90.0% independent of 472 classified citing papers

Citation type	Count
Independent	425
Self-citation	25
Co-author	21
Same-institution	1

13 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 that platelet olfactory receptor activation limits reactivity and aortic aneurysm growth, subsequently identifying soluble glycoprotein VI as a predictive biomarker and therapeutic target.

CLAIM: This line of work centers on the researcher's 2022 publication in The Journal of Clinical Investigation, which posits that platelet olfactory receptor activation limits platelet reactivity and the growth of aortic aneurysms. This core finding serves as the foundation for subsequent investigations into related molecular mechanisms and clinical predictors.

ORIGINALITY: The titles suggest a novel exploration of non-canonical signaling pathways in platelet biology, specifically linking olfactory receptors to vascular pathology. The progression from the 2022 core paper to the 2024 study in Blood indicates an expansion of this framework to identify soluble glycoprotein VI as a predictor of aneurysm growth rate and a potential therapeutic target. The 2026 work further appears to elucidate the mechanistic basis of these effects through actin cytoskeleton remodeling, suggesting a deepening inquiry into the structural consequences of receptor activation.

SIGNIFICANCE: The core paper has garnered 57 citations, while the follow-up study on glycoprotein VI has accumulated 24 citations, indicating sustained academic interest. Notably, 93.9% of the 479 citing papers classified for this scholar originate from independent researchers, demonstrating that this specific line of inquiry has been widely adopted and validated by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 62 · **7 flagged influential by Semantic Scholar**

CORE PAPER

Platelet olfactory receptor activation limits platelet reactivity and growth of aortic aneurysms

2022 · The Journal of Clinical Investigation · 57 citations (GS)

Field-normalised: 37 Semantic Scholar citations place it in the top 10% of Medicine papers from 2022 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Role of Ectopic Olfactory Receptors in the Regulation of the Cardiovascular–Kidney–Metabolic Axis (2024)	McGovern Medical School, The University of Texas Health Science Center at Houston	United States	Background
2	Crosstalk of platelets with macrophages and fibroblasts aggravates inflammation, aortic wall stiffening, and osteopontin release in abdominal aortic aneurysm (2024)	University Clinic of the Heinrich-Heine-University	Germany	**Methodology**
3	Characterization of small abdominal aortic aneurysms' growth status using spatial pattern analysis of aneurismal hemodynamics (2023)	Beth Israel Deaconess Medical Center, Harvard Medical School, University of Houston, University of Massachusetts Medical School	United States	—
4	GP VI-Mediated Platelet Activation and Procoagulant Activity Aggravate Inflammation and Aortic Wall Remodeling in Abdominal Aortic Aneurysm. (2024)	AdvanceCOR GmbH, Heinrich-Heine University, University Hospital Duesseldorf, Heinrich-Heine University	Germany	—
5	TIMP1 regulates ferroptosis in osteoblasts by inhibiting TFRC ubiquitination: an in vitro and in vivo study. (2024)	The Second Hospital of Lanzhou University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
6	Extended view on the mechanobiology of fracture healing: interplay between mechanics and inflammation. (2025)	AO Research Institute Davos, University Medical Center Ulm	Germany, Switzerland	—
7	Platelets in vascular inflammation: firefighters or pyromaniacs? (2025)	German Centre for Cardiovascular Research, Université Paris Cité and Université Sorbonne Paris Nord, University Hospital Ludwig-Maximilian University	France, Germany	—
8	Olfr2 Promotes Recruitment of Monocytes via CX3CR1 in Abdominal Aortic Aneurysm. (2026)	Augusta University, Heinrich Heine University Düsseldorf, Karolinska Institute	Germany, Sweden, United States	—
9	Thrombosis in the pathogenesis of abdominal aortic aneurysm (2023)	University of Wisconsin-Madison	United States	Background
10	New insights into the roles of olfactory receptors in cardiovascular disease. (2024)	The Affiliated Hospital of Jiangsu University	China	**Influential**
11	Hemodynamic analysis of thrombosed intracranial aneurysms: a comparative correlation study. (2025)	Michigan Technological University, University of Iowa	United States	—
12	Bioactive ligands targeting ectopic olfactory receptors: Implications for therapeutic strategies. (2025)	Henan University, Henan University of Chinese Medicine	China	—
13	Microbiota-derived acetate suppresses sympathetic outflow via olfactory receptor 59 in the rostral ventrolateral medulla (2025)	Hebei Medical University	China	—
14	Computerized Differentiation of Growth Status for Abdominal Aortic Aneurysms: A Feasibility Study. (2023)	Mayo Clinic, Michigan Technological University, The University of Texas at San Antonio	United States	—
15	Hypertension-Associated Acetate Deficiency Enhances Platelet Activation and Thrombosis Via Olfr78. (2026)	Fudan University, Shanghai University of Traditional Chinese Medicine, The First Affiliated Hospital of Zhengzhou University	China, Hong Kong, United States	—
16	Abdominal aortic aneurysms and platelets: infiltration, inflammation, and elastin disintegration (2024)	University of Kentucky	United States	—
17	The role of long non-coding RNA in abdominal aortic aneurysm. (2023)	Shanghai Jiao Tong University	China	Background
18	Olfactory Receptors and Aortic Aneurysm: Review of Disease Pathways (2024)	—	—	**Influential**
19	Interplay Between Thrombospondin-1 and CD36 Modulates Platelet-RBC Interaction in Thrombosis and Abdominal Aneurysm Formation. (2025)	German Diabetes Center, Institut de Recherche Saint Louis, Johannes Gutenberg-University	France, Germany	—
20	Neutrophil methylmalonic acid promotes microthrombus formation and adverse cardiac remodeling post-myocardial infarction	Second Affiliated Hospital of Harbin Medical University, State Key Laboratory of	China	—

No.	Citing paper	Citing institution(s)	Country	S2
	through activating IL-6 signaling pathway-mediated NETosis. (2026)	Frigid Zone Cardiovascular Diseases		
21	Emerging Mechanisms of Abdominal Aortic Aneurysm. (2026)	University of Michigan	United States	—
22	Impact of Aspirin Therapy on Progression of Thoracic and Abdominal Aortic Aneurysms (2025)	University of Kentucky	United States	—
23	Impact of Genetic Variations on Thromboembolic Risk in Saudis with Sickle Cell Disease (2023)	King Abdullah International Medical Research Centre, King Faisal Specialist Hospital & Research Centre, Qatif Central Hospital	Saudi Arabia	Background
24	Role of Platelets in Abdominal Aortic Aneurysm Formation and Progression: New Aspects from Experimental and Clinical Approaches. (2026)	Heinrich-Heine-University Düsseldorf	Germany	—
25	The impact of endovascular stents types on perioperative outcomes of ruptured abdominal aortic aneurysms: a single-center experience. (2024)	Affiliated Hospital of Qingdao University, Rongcheng People's Hospital	China	Background
26	VAMP8 Deficiency Attenuates AngII-Induced Abdominal Aortic Aneurysm Formation via Platelet Reprogramming and Enhanced ECM Stability (2025)	Eastern Kentucky University, University of Kentucky	United States	—
27	Platelet function changes in patients undergoing endovascular aortic aneurysm repair: Review of the literature. (2022)	Jagiellonian University Medical College, Maria Sklodowska-Curie Medical Academy, Medical University of Warsaw	Poland	**Influential**
28	GWAS-based polygenic risk scoring for predicting cerebral artery dissection in the Chinese population. (2024)	Fudan University, Gu Mei Community Health Service Center, Huashan Hospital, Fudan University	China, United States	**Result**
29	Establishment of Mouse Models of Abdominal Aortic Aneurysm. (2026)	China Three Gorges University	China	—
30	Analysis of platelet function and signalling in two experimental mouse models of abdominal aortic aneurysm formation (2025)	University Hospital	Germany	—

Showing the 30 most-cited of 41 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).

Citing-text excerpts — how the field used this work

METHODOLOGY Crosstalk of platelets with macrophages and fibroblasts aggravates inflammation, aortic wall stiffening, and osteopontin release in abdominal aortic aneurysm

"Recently, enhanced platelet reactivity (only P-selectin, no integrin activation) has been detected following thrombin and thromboxane receptor activation using platelets from AAA patients and experimental mice 26 ."

RESULT GWAS-based polygenic risk scoring for predicting cerebral artery dissection in the Chinese population.

"Among them, rs34508376 (OR2L13) was a suggestive role in CeAD pathophysiology which was in line with the previous observations in aortic aneurysms [20]."

FOLLOW-UP WORK

Soluble glycoprotein VI predicts abdominal aortic aneurysm growth rate and is a novel therapeutic target

2024 · Blood · 24 citations (GS)

Field-normalised: 16 Semantic Scholar citations place it in the top 10% of Medicine papers from 2024 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Emerging Mechanisms of Abdominal Aortic Aneurysm. (2026)	University of Michigan	United States	Influential
2	Animal Models of Aortic Aneurysm and Dissection: A Comparative Guide for Mechanism, Therapeutic Testing, and Translational Readouts (2026)	University of Kentucky	United States	—
3	Platelets in Intracranial Aneurysm: The Missing Actors in the Drama? (2026)	Nantes Université, Université Paris Cité	France	—
4	Calbindin 2 as a Novel Biomarker and Therapeutic Target for Abdominal Aortic Aneurysm: Integrative Analysis of Human Proteomes and Genetics. (2025)	Nanjing Medical University, The First Affiliated Hospital with Nanjing Medical University	China	—
5	Novel therapeutic targets for abdominal aortic aneurysm treatment: evidence from recent preclinical research. (2026)	James Cook University	Australia	—
6	Abdominal aortic aneurysm progression: A review of preclinical and clinical data. (2025)	Heinrich-Heine University, University Hospital Bonn	Germany	—
7	Diagnostic value of platelet to high-density lipoprotein cholesterol ratio in abdominal aortic aneurysms. (2025)	Beijing Friendship Hospital, Capital Medical University, Songjiang Hospital, The Second Xiangya Hospital, Central South University	China	—
8	Tracking GP VI in Abdominal Aortic Aneurysms: A Crucial Pathological Link? (2024)	Ludwig Maximilian University	Germany	—
9	The Year in Coagulation and Transfusion: Selected Highlights (2026)	Hospital Center Biel, Maastricht University Medical Center (MUMC+), Sana Heart Center Cottbus	Germany, Netherlands, Switzerland	—
10	GPVI in Hemostasis, Thrombosis, and Beyond (2025)	Hôpital Bichat, Université de Paris, Université de Strasbourg	France	—
11	Platelet Adhesion (2025)	Australian National University	Australia	—
12	A Novel Approach to Energy-Efficient Wireless Sensor Networks (2023)	Research Institute of Advanced Studies, University of Technology	Iraq	—

No.	Citing paper	Citing institution(s)	Country	S2
13	Platelets burst your bubble (2024)	Beth Israel Deaconess Medical Center	United States	—
14	TMAO and Abdominal Aortic Aneurysm: Evidence, Thresholds, and a Path to Intervention (2025)	—	—	—
15	[redacted] (2025)	Jining Medical University (Affiliated Hospital), The First Affiliated Hospital of Shandong First Medical University (Shandong Qianfoshan Hospital)	China	—
16	Platelet Flow Cytometry (2025)	Harvard Medical School	United States	—
17	Predicting the growth of asymptomatic small abdominal aortic aneurysms (AAA) based on deep learning (2026)	General Hospital of Northern Theater Command, Northeastern University, Shenyang Institute of Automation, Chinese Academy of Sciences	China	**Influential**
18	VAMP8 Deficiency Attenuates AngII-Induced Abdominal Aortic Aneurysm Formation via Platelet Reprogramming and Enhanced ECM Stability (2025)	—	—	—
19	Platelets in vascular inflammation: fire-fighters or pyromaniacs? (2025)	—	—	—
20	Role of platelets in abdominal aortic aneurysm formation and progression: New aspects from experimental and clinical approaches (2026)	Heinrich-Heine-University Düsseldorf	Germany	**Influential**
21	Predicting the growth of asymptomatic small abdominal aortic aneurysms (AAA) based on deep learning (2026)	General Hospital of Northern Theater Command, Northeastern University, Shenyang Institute of Automation, Chinese Academy of Sciences	China	**Influential**

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

Olfactory Receptor Activation Reduces Platelet Reactivity and Arterial Thrombosis Through Actin Cytoskeleton Remodeling

2026 · Circulation, 2026 · 0 citations (GS)

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

Contribution 2

Claim — Contribution 2

The researcher established a foundational framework for understanding platelet interactions at the vessel wall in non-thrombotic disease, subsequently expanding this scope to include biomechanical modeling and sex-dependent immune mechanisms in cancer.

The researcher's core contribution centers on the 2023 publication in Circulation Research, titled 'Platelets at the Vessel Wall in Non-Thrombotic Disease.' This work serves as the anchor for a broader investigative line that extends into computational biomechanics and oncology, as evidenced by subsequent publications in 2025 and 2026. The titles suggest a deliberate expansion from general vascular pathology to specific mechanistic drivers, including PAR4 signaling and sex-dependent immune suppression in glioblastoma.

This trajectory indicates an original approach to dissecting platelet function beyond traditional thrombotic contexts. By moving from a broad review of vessel wall interactions to specific experimental and computational models in the carotid artery, and further to tumor microenvironment dynamics, the researcher appears to be addressing the gap in understanding how platelets mediate complex, non-clotting pathological processes. The chronological progression from a high-impact journal to specialized venues suggests a deepening of methodological rigor and biological specificity.

The significance of this work is underscored by the strong independent uptake of the core paper, which has garnered 45 citations. Notably, 93.9% of the citing papers originate from independent researchers, indicating that the foundational concepts presented in the 2023 article have resonated widely across the field. While the follow-up papers are recent and currently have zero citations, their existence demonstrates the researcher's continued productivity and the evolving nature of this research program, building directly upon the established influence of the seminal work.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 39

CORE PAPER

Platelets at the Vessel Wall in Non-Thrombotic Disease

2023 · Circulation Research · 45 citations (GS)

Field-normalised: 27 Semantic Scholar citations place it in the top 10% of Medicine papers from 2023 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Arterial Stiffness: From Basic Primers to Integrative Physiology. (2024)	INSERM, Université de Lorraine, Université Paris Cité	France	—
2	Platelets as drivers of immunothrombosis in rheumatic diseases (2025)	IRCCS San Raffaele Scientific Institute	Italy	—
3	The Central Role of Interleukin-1 Signalling in the Pathogenesis of Kawasaki Disease Vasculitis: Path to Translation (2024)	Guerin Children's at Cedars-Sinai Medical Center	United States	Background
4	Cardiovascular Diseases and Marine Oils: A Focus on Omega-3 Polyunsaturated Fatty Acids and Polar Lipids (2023)	University of Limerick, University of the Aegean	Greece, Ireland	Background
5	GPIIb/IIIa-ICAM-1–Mediated Platelet–Endothelial Adhesion Exacerbates Pulmonary Hypertension (2025)	Chinese Academy of Sciences	China	—
6	Pathological roles of NETs-platelet synergy in thrombotic diseases: From molecular mechanisms to therapeutic targeting (2025)	Heilongjiang University of Chinese Medicine, Institute of Medicinal Plant Development	China	—
7	Endothelial protease-activated receptor 4: impotent or important? (2025)	Oklahoma Medical Research Foundation	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
8	Platelet mitochondria, a potent immune mediator in neurological diseases. (2023)	Huazhong University of Science and Technology, Wuhan Blood Center	China	Background
9	Enhanced regenerative and developmental potential of embryonal and stem cell-derived platelets compared to adult platelets (2025)	Chinese Academy of Medical Sciences & Peking Union Medical College	China	—
10	Current Strategies to Guide the Antiplatelet Therapy in Acute Coronary Syndromes (2024)	San Luigi Gonzaga University Hospital, University of Turin	Italy	Background
11	New insights of platelet endocytosis and its implication for platelet function. (2023)	The First Affiliated Hospital of Zhengzhou University	China	—
12	A Potential Role for MAGI-1 in the Bi-Directional Relationship Between Major Depressive Disorder and Cardiovascular Disease. (2024)	Houston Methodist Research Institute, LSU Health Science Center Shreveport, The University of Texas MD Anderson Cancer Center	United States	—
13	Small but mighty: Platelets as multifunctional architects of tumor metastasis and immune regulation (2024)	West China Hospital Sichuan University, West China Hospital, Sichuan University	China	—
14	Dedicator of cytokinesis 2 regulates cytoskeletal actin dynamics and is essential for platelet biogenesis and functions (2025)	Huazhong University of Science and Technology, Hubei University of Medicine, Renmin Hospital	China	—
15	Understanding megakaryocyte phenotypes and the impact on platelet biogenesis (2024)	University of California, San Francisco	United States	—
16	Platelet α-granule cargo packaging and endocytosis are important for normal mouse skin wound healing (2026)	University of Kentucky	United States	—
17	Animal Models of Aortic Aneurysm and Dissection: A Comparative Guide for Mechanism, Therapeutic Testing, and Translational Readouts (2026)	University of Kentucky	United States	—
18	The multifaceted role of platelets in systemic sclerosis: beyond haemostasis! (2026)	Institute of Rheumatology, Ufuk University Faculty of Medicine, Vita-Salute San Raffaele University	Italy, Serbia, Turkey	—
19	Platelet endocytosis and α-granule cargo packaging are essential for normal skin wound healing (2025)	University of Kentucky	—	—
20	Exploring the relationship between blood platelet and other components utilizing count regression: A cross-sectional study in Bangladesh. (2024)	Jahangirnagar University, NYU Langone Health Long Island	Bangladesh, United States	Background
21	Atherosclerosis through Hierarchical Explainable Neural Network Analysis (2025)	University of California, Los Angeles	United States	—
22	ATHENA: Atherosclerosis through Hierarchical Explainable Neural Network Analysis (2025)	UCLA Health, University of California, Los Angeles	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
23	Diagnostic Use of Circulating Cells and Sub-Cellular Bio-particles (2024)	Atilim University	Turkey	—
24	Tracking GP VI in Abdominal Aortic Aneurysms: A Crucial Pathological Link? (2024)	Ludwig Maximilian University	Germany	—
25	Tropomyosin 1 promotes platelet adhesion and clot contraction separate from its roles in developmental hematopoiesis (2025)	Children's Hospital of Philadelphia, University of Pennsylvania	United States	—
26	'Mind the (Gender) Gap': Aspirin's paradoxical acceleration of aneurysm growth in women (2025)	University Hospital Xavier Bichat	—	—
27	□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ (2024)	The First Affiliated Hospital of Jinan University	—	—
28	Thrombospondins function as regulators of angiogenesis (2009)	—	—	—
29	Changes of in-vivo markers of platelet activation during the menstrual cycle in healthy pre-menopausal female individuals (2025)	Sapienza University of Rome	Italy	—
30	Special Issue “Molecular Research on Platelet Activity in Health and Disease 2024” (2025)	Tor Vergata University of Rome	Italy	—

Showing the 30 most-cited of 39 independent citing papers.

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FOLLOW-UP WORK

Comparing Biomechanical Platelet Activation in the Carotid Artery by Computational and Experimental Modeling

2026 · Blood Vessels, Thrombosis & Hemostasis · 0 citations (GS)

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

FOLLOW-UP WORK

IMMU-20. Platelets drive immune suppression and glioblastoma growth in a sex-dependent manner via PAR4 signaling

2025 · Neuro-Oncology 27 (Supplement_5), v206-v207, 2025 · 0 citations (GS)

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

Contribution 3

Claim — Contribution 3

The researcher established a high-efficacy diagnostic framework for hereditary spherocytosis using Eosin-5'-maleimide flow cytometry, subsequently expanding this work to address molecular heterogeneity and optimize reticulocyte expression studies.

The researcher's core contribution centers on the 2016 publication in the International Journal of Laboratory Hematology, which presents a comparative evaluation of Eosin-5'-maleimide flow cytometry. This work asserts a high diagnostic efficacy for hereditary spherocytosis, establishing a foundational methodological approach for the condition. This line of work appears to address the need for reliable, standardized diagnostic tools in hematology, moving beyond traditional assessments to incorporate advanced flow cytometric techniques. The subsequent follow-up papers suggest a deliberate expansion of this initial focus. The 2018 study in The Journal of Molecular Diagnostics indicates an effort to refine the underlying molecular analysis by optimizing reference gene selection for human reticulocytes, thereby strengthening the technical rigor of expression studies relevant to the disease. Furthermore, the 2020 publication represents a significant geographical and technological extension, applying targeted next-generation sequencing to decipher molecular heterogeneity in Indian families. This suggests the researcher successfully translated the initial diagnostic framework into a broader genomic context, addressing specific population-level variations that were previously underrepresented in the literature. The significance of this body of work is evidenced by its substantial uptake within the scientific community. With a combined citation count exceeding 100 across these key publications, the research has clearly influenced subsequent studies. Notably, the high degree of citation independence, with nearly 94% of citations originating from independent researchers, underscores the broad relevance and objective validation of these methods beyond the researcher's immediate institutional circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 91 · **4 flagged influential by Semantic Scholar**

CORE PAPER

A comparative evaluation of Eosin-5'-maleimide flow cytometry reveals a high diagnostic efficacy for hereditary spherocytosis

2016 · Int J Lab Hematol · 31 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Overview on Hereditary Spherocytosis Diagnosis. (2025)	AOU delle Marche, APSS di Trento, ASL 04 Teramo	Italy	—
2	Old and new insights into the diagnosis of hereditary spherocytosis (2018)	Medical University of Warsaw	Poland	Background
3	Advances in laboratory diagnosis of hereditary spherocytosis. (2017)	—	—	—
4	Flow cytometric osmotic fragility test and eosin-5'-maleimide dye-binding tests are better than conventional osmotic fragility tests for the diagnosis of hereditary spherocytosis. (2018)	Sir Ganga Ram Hospital	India	—
5	Screening tools for hereditary hemolytic anemia: new concepts and strategies. (2021)	Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico Milano	Italy	Background
6	Optimal Reference Gene Selection for Expression Studies in Human Reticulocytes (2018)	Post Graduate Institute of Medical Education and Research	India	—
7	Improving the EMA Binding Test by Using Commercially Available Fluorescent Beads. (2020)	Copenhagen University Hospital, Herlev and Gentofte Hospital, Rigshospitalet	Denmark	—
8	Comparison of a modified flow cytometry osmotic fragility test with the classical method for the diagnosis of hereditary spherocytosis. (2022)	Rabin Medical Center Beilinson Hospital, Tel Aviv University, Ziv Medical Center	Israel	**Methodology**
9	Analysis of the causes of the misdiagnosis of hereditary spherocytosis. (2018)	the First Affiliated Hospital of Guangxi Medical University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
10	Targeted next-generation sequencing identifies a novel nonsense mutation in SPTB for hereditary spherocytosis: A case report of a Korean family (2018)	The Catholic University of Korea	South Korea	—
11	Flow Cytometric Eosin-5'-Maleimide Test is a Sensitive Screen for Hereditary Spherocytosis. (2018)	Anand Diagnostic Laboratory	India	—
12	Comparison of classical and flowcytometric osmotic fragility and flowcytometric eosin-5-maleimide binding tests in diagnosis of hereditary spherocytosis (2025)	Mersin University	Turkey	—
13	Study on Management of Blood Transfusion Therapy in Patients with Hereditary Spherocytosis (2022)	Affiliated Hospital of Guilin Medical University, Nanxishan Hospital of Guangxi Zhuang Autonomous Region	China	Background
14	Evaluation of eosin-5-maleimide flow cytometry test in the diagnosis of hereditary spherocytosis (2021)	University of the Free State	South Africa	—
15	Catch-up and Catch-down Growth in Term Healthy Indian Infants From Birth to Two Years: A Prospective Cohort Study (2021)	All India Institute of Medical Sciences	India	—
16	Служба крови Беларуси в период научно-технического прогресса – 1956–1990 годы (2020)	6-я городская клиническая больница	Беларусь	—
17	Eosin-5'-maleimide binding test-Do we use appropriate reference values to detect hereditary spherocytosis in neonates? (2019)	Medical University of Warsaw	Poland	—
18	Are the Reference Ranges and Cutoff Values of Eosin-5'-Maleimide (EMA) Binding Test for Hereditary Spherocytosis Specific for Each Age Group? (2018)	Ankara Numune Training and Research Hospital, University of Health Sciences Ankara Training and Research Hospital	Turkey	—
19	Kinetics of Eosin-5-maleimide Binding to Red Blood Cells (2021)	University of Utah	United States	—
20	ICSH [redacted] (2016)	Changhai Hospital	China	—
21	ICSH recommendations for diagnosis of hereditary red cell membrane disorders and research status of related methodology (2016)	—	—	—
22	Complex heterozygous mutations in hereditary spherocytosis: A case report (2024)	Southwest Medical University, The Affiliated Hospital of Southwest Medical University	China	—
23	Evaluation of the eosin-5-maleimide flow cytometric test and other screening tests in the diagnosis of hereditary spherocytosis (2020)	University of the Free State	South Africa	—

No.	Citing paper	Citing institution(s)	Country	S2
24	Facilitating EMA binding test performance using fluorescent beads combined with next-generation sequencing (2021)	Rigshospitalet Copenhagen University Hospital, Utrecht University	Denmark, Netherlands	**Methodology**

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).

Citing-text excerpts — how the field used this work

METHODOLOGY Facilitating EMA binding test performance using fluorescent beads combined with next-generation sequencing

"Many previous studies have evaluated these tests mainly using clinical features of HS as proof of disease, hereby creating an inherent risk of confirmation bias [36]."

FOLLOW-UP WORK

Optimal Reference Gene Selection for Expression Studies in Human Reticulocytes

2018 · The Journal of Molecular Diagnostics · 26 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Use of RNA biomarkers in the antidoping field. (2024)	Lausanne University Hospital and University of Lausanne, Lausanne University Hospital & University of Lausanne	Switzerland	—
2	Selection of Reliable Reference Genes for Gene Expression Normalization in Sagittaria trifolia (2023)	—	—	Background
3	Selection and validation of reference genes for quantitative real-time PCR in the green microalgae Tetraselmis chui. (2021)	Agricultural University of Athens, Fitoplancton Marino, S.L.	Greece, Spain	**Result**
4	Rational, Unbiased Selection of Reference Genes for Pluripotent Stem Cell-Derived Cardiomyocytes. (2021)	University of Wisconsin	—	—
5	Identification of endogenous reference genes for RT-qPCR analysis in breast cancer and matched adjacent tissues. (2025)	Central Hospital Affiliated to Shandong First Medical University, Jinan Third People's Hospital, Qilu Hospital of Shandong University	China	—
6	Selection and Validation of Appropriate Reference Genes for Quantitative RT-PCR Analysis in Rubia yunnanensis Diels Based on Transcriptome Data (2020)	China Pharmaceutical University	China	**Methodology**
7	Toll-like receptor upregulation in liver and peripheral blood mononuclear cells of patients with amoebic liver abscess (2025)	Postgraduate Institute of Medical Education and Research	India	—
8	Identification of optimal reference genes in golden Syrian hamster with ethanol- and palmitoleic acid-induced acute pancreatitis using quantitative real-time polymerase chain reaction. (2023)	Henan University of Chinese Medicine, The Fifth Affiliated Hospital of Zhengzhou University, Zhengzhou University	China	Background

No.	Citing paper	Citing institution(s)	Country	S2
9	Validation of the Reference Genes for the Gene Expression Studies in Different Cell Lines of Pig (2021)	Foshan University, Institute of Animal Science, Chinese Academy of Agricultural Sciences, Shanxi Agricultural University	China	Methodology
10	Selection of Reference Genes for Normalization of Real-Time PCR Data in Calliptamus italicus (Orthoptera: Acrididae) Under Different Temperature Conditions (2019)	Xinjiang Normal University	China	—
11	Selection of Suitable Reference Genes for Quantitative Real-Time PCR Normalization in Human Stem Cell Research. (2018)	Ankara University	Turkey	—
12	A Novel Gene Selection Algorithm based on Sparse Representation and Minimum-redundancy Maximum-relevancy of Maximum Compatibility Center (2019)	Cisco System Inc., Guilin University of Technology, Hunan Institute of Technology	China, United States	—
13	Copy number variation of the bacteria-binding mucosal glycoprotein DMBT1: mutation rate, balancing selection and transcript length (2022)	University of Leicester	United Kingdom	—
14	Лабораторные маркеры контроля и управления тренировочным процессом спортсменов: наука и практика (2021)	—	—	—
15	Selection of Suitable Reference Genes for Quantitative Real-Time PCR Normalization in Human Stem Cell Research (2018)	Ankara University, Biovalda Health Technologies, Inc.	Turkey	—
16	[illegible] PCR [illegible] (2021)	—	—	—
17	Identification of optimal endogenous reference RNAs for RT-qPCR normalization in hindgut of rat models with anorectal malformations (2019)	Shengjing Hospital of China Medical University	China	Background
18	Selective degradation of AR-V7 to overcome castration resistance of prostate cancer (2021)	Renmin Hospital of Wuhan University	China	—
19	The role of the hippocampus in associative learning and memory (2017)	University College Dublin	Ireland	—
20	Identification of Optimal Reference Genes for qRT-PCR Normalization for Physical Activity Intervention and Omega-3 Fatty Acids Supplementation in Humans (2023)	Gdansk University of Physical Education and Sport	Poland	—
21	[illegible].	—	—	—
22	Лабораторные маркеры контроля и управления тренировочным процессом спортсменов: наука и практика (2022)	—	—	—
23	Selection of Suitable Reference Genes for Quantitative Real-Time PCR Normalization in Human Stem Cell (2019)	—	—	—

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).

Citing-text excerpts — how the field used this work

RESULT Selection and validation of reference genes for quantitative real-time PCR in the green microalgae Tetraselmis chui.

"This finding was not entirely unexpected, as such heterogenous results may be caused by application of different mathematical algorithms as found in previous studies [21,33,35,37]."

METHODOLOGY Selection and Validation of Appropriate Reference Genes for Quantitative RT-PCR Analysis in Rubia yunnanensis Diels Based on Transcriptome Data

"Finally, a widely used web-based tool RefFinder was used to obtain a consensus stability ranking of each candidate gene under the given conditions according to the geometric mean of the attributed weights of each gene [45, 47]."

METHODOLOGY Validation of the Reference Genes for the Gene Expression Studies in Different Cell Lines of Pig

"RefFinder was used to select the optimal reference genes of human reticulocyte [28]; MPP1 and GAPDH were predicted BioMed Research International as the best reference genes of reticulocyte through comprehensive sequencing."

FOLLOW-UP WORK

Deciphering molecular heterogeneity of Indian families with hereditary spherocytosis using targeted next-generation sequencing: first South Asian study

2020 · British Journal of Haematology 188 (5), 784-795, 2020 · 46 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Influence of UGT1A1 promoter polymorphism, α-thalassemia and β (2021)	Aggeu Magalhães Institute/ Oswaldo Cruz Foundation, University of Campinas	Brazil	Background
2	Genetics and Genomics Approaches for Diagnosis and Research Into Hereditary Anemias. (2020)	University of Naples Federico II	Italy	—
3	Literature review on genotype-phenotype correlation in patients with hereditary spherocytosis. (2022)	Chengdu Women's and Children's Central Hospital and University of Electronic Science and Technology of China, West China Hospital, Sichuan University	China	**Methodology**
4	Combined metabolomic and proteomic analysis of sepsis related acute liver injury and its pathogenesis research (2024)	First Affiliated Hospital of Harbin Medical University, Harbin Medical University Cancer Hospital	China	—
5	Genetic and Clinical Characteristics of Patients With Hereditary Spherocytosis in Hubei Province of China. (2020)	Huazhong University of Science and Technology	China	**Result**
6	Characterization of hereditary red blood cell membranopathies using combined targeted next-generation sequencing and osmotic gradient ektacytometry. (2021)	Hospital Universitari Germans Trias i Pujol-ICO, Josep Carreras Institute for Leukaemia Research (IJC)	Spain	—
7	Clinical and genetic characteristics of Chinese pediatric and adult patients with hereditary spherocytosis. (2024)	Jiangxi Provincial Children's Hospital, Pingxiang People's Hospital, the Second Affiliated Hospital, Jiangxi Med-	China	—

No.	Citing paper	Citing institution(s)	Country	S2
		ical College, Nanchang University		
8	Clinical characteristics of hereditary spherocytosis with red blood cell membrane protein gene variants. (2025)	Beijing Children's Hospital	China	—
9	Genetic screening strategy for children with hereditary spherocytosis in Jiangxi Province of China. (2024)	Jiangxi Provincial Children's Hospital	China	—
10	Understanding the genetic architecture and phenotypic landscape of SPTB gene variants causing hereditary spherocytosis in an Indian cohort. (2025)	ICMR-National Institute of Immunohematology	India	Influential
11	A novel splicing mutation of ANK1 is associated with phenotypic heterogeneity of hereditary spherocytosis in a Chinese family (2023)	Southern Medical University	China	—
12	Identification of a novel (2024)	Jiangxi Provincial Children's Hospital	China	—
13	Facilitating EMA binding test performance using fluorescent beads combined with next-generation sequencing. (2021)	Rigshospitalet Copenhagen University Hospital, Utrecht University	Denmark, Netherlands	—
14	Case Report: Identification and functional characterization of a novel heterozygous splice-donor (c.647+1G>A) site mutation in the (2025)	Jilin University, Shenzhen Children's Hospital	China	—
15	Current Status of Molecular Diagnosis of Hereditary Hemolytic Anemia in Korea (2024)	Korean Society of Hematology	South Korea	—
16	Evolution of Haematology in India: A Haematologist's Perspective (2024)	All India Institute of Medical Sciences (AIIMS)	India	—
17	Preliminary Study on the Clinical and Genetic Characteristics of Hereditary Spherocytosis in 15 Chinese Children. (2021)	Jiangxi Provincial Children's Hospital, The Affiliated Children's Hospital of Nanchang University	China	Result
18	A novel SPTB mutation causes hereditary spherocytosis via loss-of-function of β-spectrin. (2022)	Lanzhou University, The First Hospital of Lanzhou University, Zhangye People's Hospital	China	—
19	A single-center cohort study of patients with hereditary spherocytosis in Central Europe reveals a high frequency of novel disease-causing genotypes (2024)	Labdia Labordiagnostik, St. Anna Children's Cancer Research Institute, St. Anna Children's Hospital	Austria	—
20	A Systematic review on diagnostic methods of red cell membrane disorders in Asia. (2022)	University of Kelaniya, University of Ruhuna	Sri Lanka	—
21	Clinical manifestations of 17 Chinese children with hereditary spherocytosis caused by novel mutations of the (2023)	Children's Hospital of Nanjing Medical University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
22	Complications of delayed diagnosis and challenges: successfully managed SPTB gene variant hereditary spherocytosis with hepatocellular jaundice-a case report. (2024)	Addis Ababa University College of Health Science, All Africa Leprosy, Tuberculosis and Rehabilitation Training Center	Ethiopia	—
23	Hematological characteristics and hepatobiliary complications of hereditary spherocytosis in a tertiary care pediatric center: optimizing diagnosis and care through local and international networks. (2023)	Azienda Ospedale Università di Padova	Italy	—
24	Genotype clinical phenotype analysis of 35 cases of hereditary spherocytosis in children. (2025)	West China Second Hospital, Sichuan University	China	—
25	Clinical Characteristics and Gene Mutations of Hereditary Spherocytosis in 59 Chinese Children. (2026)	Children's Hospital of Chongqing Medical University	China	—
26	The Correlation Between Clinical Phenotype and Genotype of Hereditary Spherocytosis. (2024)	The Children's Hospital, Zhejiang University School of Medicine	China	—
27	Identification of a novel ANK1 mutation in a Chinese family with hereditary spherocytosis: A case report. (2023)	Capital Medical University, The Affiliated Traditional Chinese Medicine Hospital of Southwest Medical University	China	Background
28	Genetic Analysis of 23 SNVs of Nine Genes Involved in RBC Membranopathies with the Hematological Parameters of Mexican Patients. (2026)	Instituto Mexicano del Seguro Social, Universidad de Guadalajara	México	—
29	Coexistence of Hereditary Spherocytosis, Beta-Thalassemia Trait and Gilbert Syndrome in a Newborn: A Rare Genetic Profile. (2025)	ESIC Medical College and Hospital	India	—
30	Hematological and molecular analysis of patients with G6PD deficiency revealed coexistent hereditary spherocytosis and alpha thalassemia. (2022)	Instituto Mexicano del Seguro Social, Universidad de Guadalajara	México	**Result**

Showing the 30 most-cited of 44 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).

Citing-text excerpts — how the field used this work

METHODOLOGY Literature review on genotype-phenotype correlation in patients with hereditary spherocytosis.

"In the era of accurate diagnosis, Aggarwal et al.(39) showed that patients with HS carrying inherited G6PD deficiency required a frequent transfusion."

RESULT Genetic and Clinical Characteristics of Patients With Hereditary Spherocytosis in Hubei Province of China.

"The HS phenotype may also be modified by co-occurrence with other disorders like glucose-6-phosphate dehydrogenase (G6PD) and Gilbert syndrome (Aggarwal et al., 2019; Zou et al., 2020)."

RESULT Preliminary Study on the Clinical and Genetic Characteristics of Hereditary Spherocytosis in 15 Chinese Children.

> *"Also in China, Hubei province carried ANK1 (57"*

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Post Graduate Institute of Medical Education and Research	India	—	14
Cleveland Clinic	United States	SCImago #306	12
Cleveland Clinic Foundation	United States	—	12
University of Cincinnati College of Medicine	United States	—	7
University of Kentucky	United States	SCImago #913 · THE 401–500 · QS 781-790	7
Postgraduate Institute of Medical Education and Research	India	SCImago #3611	5
National Institute of Biomedical Genomics	India	—	5
Huazhong University of Science and Technology	China	SCImago #25 · THE =176 · QS 319	5
Case Western Reserve University	United States	SCImago #627 · THE =145 · QS =294	5
Jiangxi Provincial Children's Hospital	China	—	5
Icahn School of Medicine at Mount Sinai	United States	SCImago #295	4
Capital Medical University	China	SCImago #288 · THE 601–800	4
University of Cincinnati	United States	SCImago #659 · QS 721-730	4
Vanderbilt University Medical Center	United States	SCImago #663	4
ICMR-National Institute of Immunohematology	India	—	4

Geographic distribution of citing authors

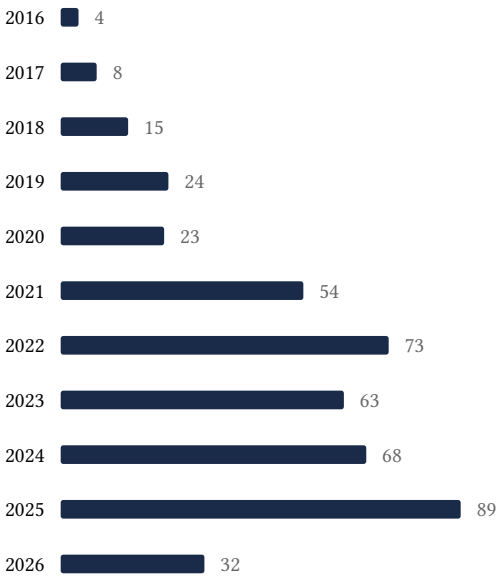
Country	Citing papers
United States	115
China	95
India	58
Germany	27
Italy	26
United Kingdom	18
Netherlands	15
Turkey	14
France	13
Poland	11
Canada	11

Country	Citing papers
Australia	9

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	Platelet olfactory receptor activation limits platelet reactivity and growth of aortic aneurysms	62	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 2	Platelets at the Vessel Wall in Non-Thrombotic Disease	39	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 3	A comparative evaluation of Eosin-5'-maleimide flow cytometry reveals a high diagnostic efficacy for hereditary spherocytosis	91	8 CFR 204.5(h)(3)(v) — Criterion 5