INPLASY

INPLASY202680081

doi: 10.37766/inplasy2026.8.0081

Received: 21 August 2026

Published: 21 August 2026

Corresponding author:
Chuanbing Huang

chuanbingh@ahtcm.edu.cn

Author Affiliation:
Department of Rheumatology, The First Affiliated Hospital of Anhui University of Chinese Medicine, Hefei, Anhui, China.

Protocol for a scoping evidence map: clinical development and regulatory translation of FcRn inhibitors across IgG-mediated diseases

Pang, L; Zhang, C; Li, Y; Zhu, Z; Huang, C.

ADMINISTRATIVE INFORMATION

Support - National Natural Science Foundation of China General Program (82574970); Major and Difficult Diseases Clinical Research Project on Collaboration between Traditional Chinese and Western Medicine (ZDYN-2024-A-146); Evidence-Based Research System for Traditional Chinese Medicine project and Traditional Chinese Medicine Standards Research and Promotion Base Construction project (Anhui Finance and Society [2025] No. 1382); Institute of Xin'an Medicine and Modernization of Traditional Chinese Medicine, Great Health Research Institute Special Projects (2023CXMMTCM004).

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202680081

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 August 2026 and was last updated on 21 August 2026.

INTRODUCTION

Review question / Objective What is the clinical-development and regulatory-translation landscape of therapeutic FcRn inhibitors across prespecified IgG-mediated diseases, and where does publication attention materially under- or over-represent current development maturity? The objective is to characterize the clinical-development portfolio of FcRn inhibitors, identify approved and late-stage trajectories, and map translation maturity across 44 prespecified drug-indication pairs.

Rationale Pharmacological FcRn blockade accelerates IgG catabolism and has generated a therapeutic class spanning multiple IgG-mediated diseases. Publication volume alone cannot distinguish unique trial registrations, related extensions, current trial activity, independent development programs, and verified regulatory authorization. A cross-disease evidence map is therefore needed to separate bibliographic attention from clinical-development and regulatory maturity.

Condition being studied IgG-mediated diseases represented in prespecified FcRn inhibitor drug-indication pairs, including neuromuscular, hematologic, dermatologic, rheumatologic, ophthalmic, neuroimmune, and maternal-fetal antibody-mediated disorders. Healthy-volunteer studies are excluded from development-stage classification.

METHODS

Search strategy The primary bibliographic source was Web of Science Core Collection, searched on 28 June 2026. The search used a two-route topic strategy combining FcRn concept terms and named FcRn inhibitor terms. The concept route included terms such as "FcRn inhibition", "FcRn inhibitor*", "FcRn blockade", "FcRn antagonist*", "anti-FcRn", "neonatal Fc receptor inhibition", "neonatal Fc receptor inhibitor*", "therapeutic IgG lowering", and related variants. The named-drug route included efgartigimod, ARGX-113, rozanolixizumab, UCB7665, nipocalimab, M281, batoclimab, HBM9161, HL161, IMVT-1402, orilanolimab, ALXN1830, and relevant aliases. Filters were Article or Review, English language, and complete analysis years through 31 December 2025. ClinicalTrials.gov was searched through its data API using standardized drug names and aliases and was rechecked on 12 July 2026. Regulatory sources included FDA, EMA/European Commission, and NMPA sources, verified through 12 July 2026.

Participant or population Patients or disease populations represented in IgG-mediated conditions for which therapeutic FcRn inhibitors have been investigated or discussed. Healthy volunteers may appear in source trial records but are excluded from disease-focused development-stage classification.

Intervention Therapeutic FcRn inhibition with efgartigimod, rozanolixizumab, nipocalimab, batoclimab and aliases, IMVT-1402, and orilanolimab/ALXN1830 aliases.

Comparator Not required. This scoping evidence map does not synthesize comparative treatment effects.

Study designs to be included Peer-reviewed Article and Review records for bibliographic context; disease-focused ClinicalTrials.gov registrations meeting prespecified inclusion rules; and formal regulatory authorization evidence from FDA, EMA/European Commission, and NMPA sources.

Eligibility criteria Eligible records address therapeutic FcRn inhibition, FcRn blockade, anti-FcRn therapy, or therapeutic IgG lowering in relation to pharmacology, disease treatment, clinical use, safety, efficacy, or translation. General FcRn biology, Fc engineering or half-life extension, placental transfer physiology alone, albumin homeostasis alone, delivery/vaccine/nanomaterial applications, and peripheral drug mentions are excluded. Bibliographic records are limited to Article or Review, English language, and complete analysis years through 31 December 2025.

Information sources Web of Science Core Collection was used as the primary bibliographic source. ClinicalTrials.gov was used for trial-registration evidence. FDA, EMA/European Commission, and NMPA sources were used for regulatory evidence. PubMed and Scopus were used only for recoverability and coverage-gap assessment, not as parallel eligibility-generating databases.

Main outcome(s) The main outcomes are pair-level translation maturity across 44 drug-indication pairs, including approved status, active Phase 3 status, registered or completed late-stage development, earlier clinical development, stopped or withdrawn programs, and absence of retained independent interventional evidence.

Additional outcome(s) Additional outcomes include pair-level publication counts, ClinicalTrials.gov record counts, independent development-program counts, jurisdiction-level regulatory approval evidence, publication-translation discordance, cross-database recoverability, and sensitivity analyses.

Data management Records were managed through preserved raw exports, cleaned analytical tables, coding dictionaries, and record-level provenance files. Two reviewers screened titles and abstracts, disagreements were adjudicated, and drug-indication pair assignments were manually harmonized. ClinicalTrials.gov records were retained with traceable NCT identifiers, and regulatory evidence was recorded with source hierarchy and verification notes.

Quality assessment / Risk of bias analysis No conventional study-level risk-of-bias instrument is applied because the review does not pool comparative treatment effects. Reliability is addressed through dual screening, manual pair- and trial-level adjudication, record-level provenance, an explicit regulatory source hierarchy, cross-database recovery checks, and sensitivity analyses.

Strategy of data synthesis Data will be synthesized descriptively at the drug-indication level. Bibliographic records, ClinicalTrials.gov registrations, and regulatory evidence will be analyzed as separate evidence layers and then integrated into an ordinal translation-maturity

hierarchy. Pair-level publication counts and translation tiers will be converted to percentile ranks, and publication-translation discordance will be calculated as translation percentile minus publication percentile. Spearman correlation, permutation testing, bootstrap confidence intervals, and sensitivity scenarios will be used for exploratory assessment.

Subgroup analysis Subgroup analyses will describe differences by drug, indication, disease domain, development stage, and regulatory status. The analysis will also distinguish approved pairs, active Phase 3 pairs, earlier-stage programs, stopped or withdrawn programs, and pairs with no retained independent interventional evidence.

Sensitivity analysis Sensitivity analyses include article-only publication counts, downgrading not-yet-recruiting Phase 3 programs, additional downweighting of stopped programs, and restriction of trial and regulatory evidence to information available before 1 January 2026 as a time-aligned sensitivity analysis.

Language restriction English-language bibliographic records only.

Country(ies) involved China.

Other relevant information This is a retrospective registration of a completed but unpublished scoping evidence map. The project was time-stamped on the Open Science Framework before final analysis: https://osf.io/2d5s3/. Data and code are available through Zenodo: https://doi.org/10.5281/zenodo.21203792. This registration does not replace or alter the earlier OSF record.

Keywords neonatal Fc receptor; FcRn inhibition; IgG-mediated diseases; drug development; clinical trials; evidence mapping.

Dissemination plans The completed review will be submitted to a peer-reviewed medical journal. Cleaned analytical tables, coding dictionaries, figure source tables, adjudication outputs, and analysis scripts will be made available through Zenodo.

Contributions of each author

Author 1 - Lijun Pang - Conceptualization, validation, investigation, and manuscript review.
Email: qiaomaiheplj@stu.ahtcm.edu.cn
Author 2 - Chuanwei Zhang - Methodology, formal analysis, data curation, original draft preparation, and manuscript revision.
Email: ahzyydxzcw@stu.ahtcm.edu.cn
Author 3 - Yunfei Li - Validation, investigation, and manuscript review.
Email: chuanwzh@163.com
Author 4 - Ziheng Zhu - Validation, investigation, data curation, and manuscript review.
Email: 3107772952@qq.com
Author 5 - Chuanbing Huang - Supervision, funding acquisition, project administration, and manuscript review.
Email: chuanbingh@ahtcm.edu.cn