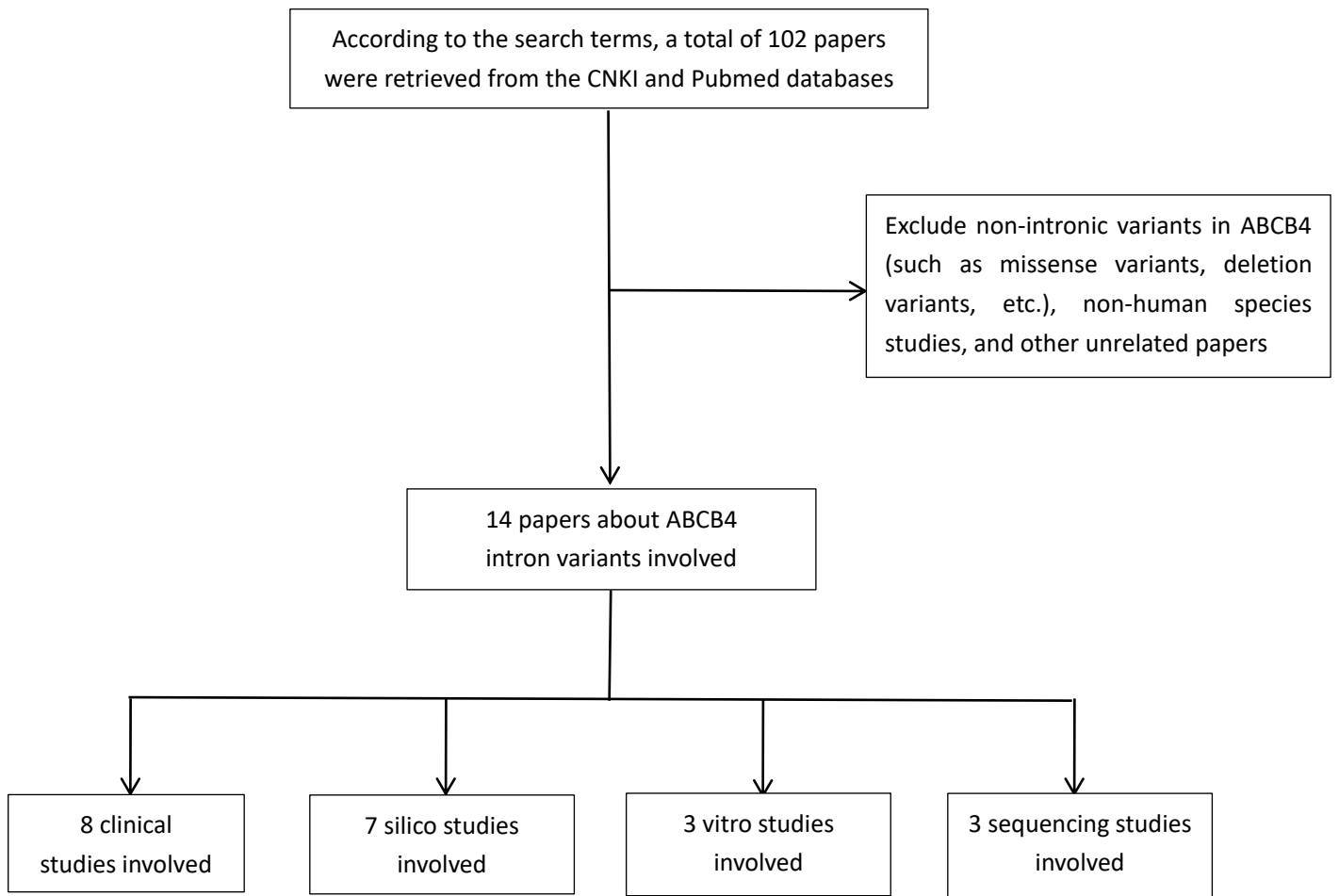


Supplementary Figure 1 Construction of plasmid vectors. A and B: Construction strategy of minigene plasmid expression vectors. (C-D) Sequencing map of minigene plasmid expression vector. (E-F) Sequencing map of intron mutants plasmid expression vectors containing complete cDNA of ABCB4.



Supplementary Figure 2 Flow chart of literature review.

Supplementary Table1 A literature review of ABCB4 intron variants

No	Researchers	Databas e	PMID/ DOI	Year	Research type	Variants
1	Ye Xiaolin et al.	CNKI	DOI:10.3760/cma.j.cn112140-20240319-00190	2024	clinic+in silico+in vitro	c.2065-8T>G
2	Cao Lil et al.	CNKI	DOI:10.3760/cma.j.cn112140-20231010-00270	2023	clinic+in silico	c.1230+1G>A
3	Senyan Wang et al.	Pubmed	DOI:10.1038/s41598-024-79123-6	2024	clinic+in silico	c.1230+1G> A
4	Cao Lili et al.	CNKI	DOI:10.3760/cma.j.cn501113-20231207-00270	2024	clinic+in silico	c.2394+82C>T
5	Jingjing Jiao et al.	Pubmed	DOI:10.1093/ajcp/aqae123	2025	clinic	c.2784-12T>C
6	Christiane Pauli-Magnus et al.	Pubmed	DOI:10.1097/01.fpc.0000054155.92680.24	2004	sequencing	Intron 21, G(+1)A; intron 25, G(+5)C and C(-3)G; intron 26, T(+2)A

7	Gudrun Schneider et al.	Pubmed	DOI:10.1002/hep.21500	2007	clinic+in vitro	silico+in vitro	c.3486+5G>A
8	Susanne N. Weber et al.	Pubmed	DOI:10.1007/s11739-024-03854-7	2025	clinic+in vitro	silico	c.2211+16C>T c.3508-16T>C
9	Susumu Saito et al.	Pubmed	DOI:10.1007/s10038-002-8653-6	2002	sequencing		Refer to literature
10	Boudour Khabou et al.	Pubmed	DOI:10.1016/j.compbiolchem.2016.10.008	2016	in vitro	silico	c.3487-16T>C
11	Robert Hegarty et al.	Pubmed	DOI:10.1002/jpn3.12080	2023	clinic		c.80+1G>Ac.344+2T>C c.1231-6T>G c.2064+3A>T C.3508-1G>T
12	Elvire Mbongo-Kama et al.	Pubmed	PMID: 17786139	2007	review		Refer to literature
13	Gillian M. Belbin et al.	Pubmed	DOI: 10.1016/j.ajhg.2021.09.016	2021	in vitro		c.2784-12T>C
14	Daniel F Gudbjartsson et al.	Pubmed	doi:10.1038/ng.3247	2015	sequencing		Refer to literature

al.

literature
