## **Supplementary**

Table S1 The literature search strategy in PUBMED. Retrieve the following search terms. Articles had to be published in peer reviewed journals. Articles without experimental data related to the search terms and data that did not support relevant conclusions were excluded, as well as articles with low STAIR list scores (≤3 points). The data were extracted from each study by two investigators (JCP and YHF) independently. After the search, summarized the literature and discussed the different literature. Another researcher (ZCX) was invited to discuss and identify the literature on which consensus could not be reached

Researcher	"erectile dysfunction" AND "icariin"	"erectile dysfunction" AND "icariside II"	"erectile dysfunction" AND "icariin derivative"	"PDE5" AND "icariin"	"PDE5" AND "icariside II"	"PDE5" AND ""icariin derivative"	"testis" AND "testosterone" AND "icariin"	"testis" AND "testosterone" AND "icariside II"	"testis" AND  "testosterone"  AND ""icariin  derivative"	
PJC	29	13	0	21	5	2	8	2	0	
FYH	29	13	0	21	5	2	8	2	0	
Exclusion criteria	Articles without experimental data related to the search terms and data that did not support relevant conclusions were excluded, as well as articles with low STAIR list scores (≤3 points)									
PJC	21	10	0	9	3	2	4	1	0	
FYH	20	9	0	8	3	2	4	1	0	
	Discuss and seek advice from superior researchers									
ZCX	21	10	0	9	3	2	4	1	0	

ICA, icariin; ICAII, icariside II. STAIR list, The Initial Stroke Therapy Academic Industry Roundtable (Evaluation tools commonly used in quality assessment of animal experiments).