

## Appendix S1: Search strategy

### Database: Medline (Ovid)

Resource: Ovid MEDLINE(R) Epub Ahead of Print, In Process & Other Non-Indexed Citations, Ovid MEDLINE (R) Daily, and Ovid MEDLINE (R) 1946-Present

Date: 7 May 2024

1	microbicid\$.tw.	6869
2	antimicrobial.tw.	222232
3	1 or 2	227865
4	vagin\$.tw.	135996
5	rectal\$.tw.	106015
6	rectum.tw.	42915
7	anal\$.tw.	8478114
8	topical\$.tw.	128509
9	local\$.tw.	1596905
10	anus.tw.	9067
11	4 or 5 or 6 or 7 or 8 or 9 or 10	9826315
12	3 and 11	83267
13	exp Anti-Infective Agents/	1861593
14	anti-infective agents.mp.	87119
15	((anti adj1 infective\$) and topical).tw.	202
16	((anti adj1 infective\$) and local).tw.	296
17	(antiinfective\$ adj5 topical).tw.	13
18	(antivir\$ adj5 topical).tw.	402
19	(antibacteri\$ adj5 topical).tw.	520
20	(antiinfective\$ adj5 local).tw.	4
21	13 or 14 or 15 or 16 or 17 or 18 or 19 or 20	1862546
22	12 or 21	1898152
23	exp HIV/	109072
24	exp Acquired Immunodeficiency Syndrome/	79247
25	(human adj5 immun\$ adj5 virus).tw.	99263
26	hiv.tw.	361165
27	(acquired adj5 immun\$ adj5 deficiency adj5 syndrome).tw.	6500
28	aids.tw.	167036
29	(acquired adj5 immun\$ adj5 syndrome).tw.	23493
30	23 or 24 or 25 or 26 or 27 or 28 or 29	488129
31	randomized controlled trial.pt.	612496
32	controlled clinical trial.pt.	95534
33	randomized.ab.	644504
34	placebo.ab.	248009
35	clinical trials as topic.sh.	202270
36	randomly.ab.	432768
37	trial.ti.	308500
38	31 or 32 or 33 or 34 or 35 or 36 or 37	1597256
39	exp animals/ not humans.sh.	5218802
40	38 not 39	1471214
41	22 and 30 and 40	12300
42	limit 41 to yr="2020 -Current"	1384

### Database: Embase (Ovid)

Resource: Embase 1980 to 2024 Week 18

Date: 7 May 2024

1	microbicid\$.tw.	7970
2	antimicrobial.tw.	278485
3	1 or 2	285030
4	vagin\$.tw.	186518
5	rectal\$.tw.	156416
6	rectum.tw.	61389
7	anal\$.tw.	11013591
8	topical\$.tw.	171741
9	local\$.tw.	1956960
10	anus.tw.	11351
11	4 or 5 or 6 or 7 or 8 or 9 or 10	12594852
12	3 and 11	109889
13	exp Anti-Infective Agents/	4605896
14	anti-infective agents.mp.	1914
15	((anti adj1 infective\$) and topical).tw.	275
16	((anti adj1 infective\$) and local).tw.	375
17	(antiinfective\$ adj5 topical).tw.	23
18	(antivir\$ adj5 topical).tw.	478
19	(antibacteri\$ adj5 topical).tw.	663
20	(antiinfective\$ adj5 local).tw.	11
21	13 or 14 or 15 or 16 or 17 or 18 or 19 or 20	4606407
22	12 or 21	4630592
23	exp HIV/	223799
24	exp Acquired Immunodeficiency Syndrome/	464448
25	(human adj5 immun\$ adj5 virus).tw.	110027
26	hiv.tw.	466626
27	(acquired adj5 immun\$ adj5 deficiency adj5 syndrome).tw.	7088
28	aids.tw.	194668
29	(acquired adj5 immun\$ adj5 syndrome).tw.	25124
30	23 or 24 or 25 or 26 or 27 or 28 or 29	919827
31	randomized controlled trial.pt.	0
32	controlled clinical trial.pt.	0
33	randomized.ab.	931638
34	placebo.ab.	360526
35	clinical trials as topic.sh.	2
36	randomly.ab.	570429
37	trial.ti.	415011
38	31 or 32 or 33 or 34 or 35 or 36 or 37	1739414
39	exp animals/ not humans.sh.	30786161
40	38 not 39	111407
41	22 and 30 and 40	703
42	limit 41 to yr="2020 -Current"	56

Database: Cochrane CENTRAL

Resource: Cochrane Database

Date: 7 May 2024

#1	MeSH descriptor: [HIV] this term only	690
#2	((human NEAR/5 immun* NEAR/5 virus) OR (hiv) OR (acquired NEAR/5 immun* NEAR/5 deficiency NEAR/5 syndrome) OR (aids) OR (acquired NEAR/5 immun* NEAR/5 syndrome))ti,ab,kw	333
#3	#1 OR #2	1023
#4	MeSH descriptor: [Anti-Infective Agents] this term only	3328
#5	((((anti NEXT/1 infective*) AND topical) OR ((anti NEXT/1 infective*) AND local) OR (antiinfective* NEAR/5 topical) OR (antiinfective* NEAR/5 local) OR (antivir* NEAR/5 topical) OR (antibacteri* NEAR/5 topical))ti,ab,kw	48
#6	#4 OR #5	3368
#7	(microbicid* OR antimicrobial)ti,ab,kw	151
#8	(vagin* OR rectal* OR rectum OR anus OR anal* OR topical* OR local*)ti,ab,kw	1831
#9	#7 OR #8	1831
#10	#6 AND #9	49
#11	#3 AND #10 with Publication Year from 2020 to 2024, in Trials	0