**Appendix 2. Search strategy.**

*Search date: 19-03-2018*

**PubMed**

#1 “N-Methylaspartate” [mh] OR “ketamine” [mh] OR "memantine" [mh] OR "phencyclidine" [mh] OR "dextromethorphan" [mh] OR "Amantadine" [mh] OR "2-(3-methoxyphenyl)-2-(ethylamino)cyclohexanone" [Supplementary Concept]

#2 n-methylaspartate [tiab] OR NMDA [tiab] OR ketamine [tiab] OR memantine [tiab] OR amantadine [tiab] OR dextromethorphan [tiab] OR phencyclidine [tiab] ORMethoxetamine [tiab]

#3 pain[mh] OR analgesia[mh] OR pain[tiab] OR analgesi\*[tiab]

#4 “Pain Threshold” [mh] OR threshold [tiab] OR tolerance [tiab] OR cold [tiab] OR heat [tiab] OR thermal [tiab] OR ischemic [tiab] OR ischaemic [tiab] OR ischemia [tiab] OR ischaemia [tiab] OR chemical [tiab] OR pressure [tiab] OR mechanical [tiab] OR electric [tiab] OR electrical [tiab] OR chemical [tiab] OR capsaicin [tiab] OR reflex [tiab] OR “experimental pain” [tiab] OR bladder [tiab] OR dental [tiab] OR “von frey” [tiab] OR thermal [tiab] OR exercise [tiab] OR tourniquet [tiab] OR needle [tiab]

#5 #1 OR #2

#6 animals [mh] NOT humans [mh]

#7 Editorial[pt] OR Letter[pt] OR Case Reports[pt] OR Comment[pt]

#8 #3 AND #4 AND #5 NOT #6 NOT #7

**CENTRAL**

#1 [mh “N-Methylaspartate”] OR [mh “ketamine”] OR [mh "memantine”] OR [mh “phencyclidine"] OR [mh "dextromethorphan"] OR [mh "Amantadine"]

#2 n-methylaspartate:ti,ab,kw OR NMDA:ti,ab,kw OR ketamine:ti,ab,kw OR memantine:ti,ab,kw OR amantadine:ti,ab,kw OR dextromethorphan:ti,ab,kw OR phencyclidine:ti,ab,kw ORMethoxetamine:ti,ab,kw

#3 pain[mh] OR analgesia[mh] OR pain:ti,ab,kw OR analgesi\*:ti,ab,kw

#4 [mh “Pain Threshold”] OR [mh “Cold Temperature”] OR [mh “Hot Temperature”] OR [mh “Pressure”] OR [mh “Capsaicin”]

#5 threshold:ti,ab,kw OR tolerance:ti,ab,kw OR cold:ti,ab,kw OR heat:ti,ab,kw OR thermal:ti,ab,kw OR ischemic:ti,ab,kw OR ischaemic:ti,ab,kw OR ischemia:ti,ab,kw OR ischaemia:ti,ab,kw OR chemical:ti,ab,kw OR pressure:ti,ab,kw OR mechanical:ti,ab,kw OR electric:ti,ab,kw OR electrical:ti,ab,kw OR chemical:ti,ab,kw OR capsaicin:ti,ab,kw OR reflex :ti,ab,kw OR “experimental pain”:ti,ab,kw OR bladder:ti,ab,kw OR dental:ti,ab,kw OR “von frey”:ti,ab,kw OR thermal:ti,ab,kw OR exercise:ti,ab,kw OR tourniquet:ti,ab,kw OR needle:ti,ab,kw

#6 ([mh animals] NOT [mh humans])

#7 (#1 OR #2) AND #3 AND (#4 OR #5) NOT #6

**PsycINFO (EBSCO)**

S1 DE “N-Methyl-D-Aspartate” OR DE “ketamine” OR DE “phencyclidine" OR DE "Amantadine"

S2 n-methylaspartate OR NMDA OR ketamine OR memantine OR amantadine OR dextromethorphan phencyclidine ORmethoxetamine

(can modify to use TI OR AB OR KW if needed)

S3 DE "Pain" OR DE “Analgesia” OR Pain OR Analgesi\*

S4 DE “Pain Thresholds” OR threshold OR tolerance OR cold OR heat OR thermal OR ischemic OR ischaemic OR ischemia OR ischaemia OR chemical OR pressure OR mechanical OR electric OR electrical OR chemical OR capsaicin OR reflex OR “experimental pain” OR bladder OR dental OR “von frey” OR thermal OR exercise OR tourniquet OR needle

S5 (#1 OR #2)

S6 PT Book OR PT Encyclopedia

S7 (PO Animal NOT PO Human)

S8 S3 AND S4 AND S5

S9 S8 NOT S6 NOT S7

**CINAHL Plus with Full text (EBSCO)**

#1 MH “Amantadine+” OR MH “Dextromethorphan” OR MH “Phencyclidine” OR MH “Ketamine”

#2 n-methylaspartate OR NMDA OR ketamine OR memantine OR amantadine OR dextromethorphan OR phencyclidine ORmethoxetamine

#3 MH "Pain" OR MH “Analgesia” OR Pain OR Analgesi\*

#4 MH “Pain Threshold” OR threshold OR tolerance OR cold OR heat OR thermal OR ischemic OR ischaemic OR ischemia OR ischaemia OR chemical OR pressure OR mechanical OR electric OR electrical OR chemical OR capsaicin OR reflex OR “experimental pain” OR bladder OR dental OR “von frey” OR thermal OR exercise OR tourniquet OR needle

#5 (#1 OR #2)

#6 MH “Animal Studies”

#7 ZT abstract OR ZT academic journal OR ZT conference paper OR ZT conference proceeding OR ZT doctoral dissertation

#8

#3 AND #4 AND #5 AND #7 NOT #6

#9 #8 NOT #6

**Web of Science (Core Collection)**

#1 TS=(n-methylaspartate OR NMDA OR ketamine OR memantine OR amantadine OR dextromethorphan OR phencyclidine OR methoxetamine)

#2 TS=(pain OR analgesi\*)

#3 TS=(threshold OR tolerance OR cold OR heat OR thermal OR ischemic OR ischaemic OR ischemia OR ischaemia OR chemical OR pressure OR mechanical Or electric OR electrical OR capsaicin OR reflex OR “experimental pain” OR bladder OR dental OR “von frey” OR exercise OR tourniquet OR needle)

#4 (DT=Article OR DT=Meeting Abstract OR DT= Proceedings Paper)

#5 #1 AND #2 AND #3 AND #4

**Embase (1974+) (Ovid)**

#1 exp "n methylaspartic acid"/ OR ketamine/ OR memantine/ OR phencyclidine/ OR dextromethorphan/ OR amantadine/

#2 ("n methylaspartic acid" or NMDA or ketamine or memantine or amantadine or dextromethorphan or phencyclidine or Methoxetamine).ti,ab,kw

#3 exp pain/ OR exp analgesia/ OR pain.ti,ab,kw OR analgesi\*.ti,ab,kw

#4 exp "Pain Threshold"/ OR exp "cold pressor test"/ OR exp "mechanical stimulus test"/ OR exp "experimental pain test"/ OR exp "experimental pain"/ OR threshold.ti,ab,kw OR tolerance.ti,ab,kw OR cold.ti,ab,kw OR heat.ti,ab,kw OR thermal.ti,ab,kw OR ischemic.ti,ab,kw OR ischaemic.ti,ab,kw OR ischemia.ti,ab,kw OR ischaemia.ti,ab,kw OR chemical.ti,ab,kw OR pressure.ti,ab,kw OR mechanical.ti,ab,kw OR electric.ti,ab,kw OR electrical.ti,ab,kw OR chemical.ti,ab,kw OR capsaicin.ti,ab,kw OR reflex.ti,ab,kw OR bladder.ti,ab,kw OR dental.ti,ab,kw OR "von frey" .ti,ab,kw OR thermal.ti,ab,kw OR exercise.ti,ab,kw OR tourniquet.ti,ab,kw OR needle.ti,ab,kw

#5 #1 OR #2

#6 conference paper OR Article OR Conference Proceeding).pt

#7 (exp animal/ OR nonhuman/) NOT exp human/

#8 #3 AND #4 AND #5 AND #6

#9 8 NOT 7

#10 limit 9 to exclude medline journals