

## **Supplementary Material**

**Table S1**

### **Full search strategy for Medline**

IBS	exp Irritable Bowel Syndrome/ or ("Irritable Bowel" or IBS or "Irritable Colon" or "Mucous Colitis" or "Spastic Colitis" or "Spastic Colon").tw.
Omics	exp Metabolomics/ or exp Genomics/ or exp Proteomics/ or exp Transcriptome/ or exp Genome/ or exp Proteome or exp Metabolome/ or (omic* or multi-omic* or metabolomic* or transcriptomic* or genomic* or proteomic*).tw. or (Transcriptome* or Genome* or Proteome* or Metabolome*).tw.
Animal Filters	((exp animal experiment/ OR exp animal model/ OR exp experimental animal/ OR exp transgenic animal/ OR exp male animal/ OR exp female animal/ OR exp juvenile animal/ OR animal/ OR chordata/ OR vertebrate/ OR tetrapod/ OR exp fish/ OR amniote/ OR exp amphibia/ OR mammal/ OR exp reptile/ OR exp sauropsid/ OR therian/ OR exp monotreme/ OR placental mammal/ OR exp marsupial/ OR Euarchontoglires/ OR exp Afrotheria/ OR exp Boreoeutheria/ OR exp Laurasiatheria/ OR exp Xenarthra/ OR primate/ OR exp Dermoptera/ OR exp Glires/ OR exp Scandentia/ OR Haplorhini/ OR exp prosimian/ OR simian/ OR exp tarsiiiform/ OR Catarrhini/ OR exp Platyrrhini/ OR ape/ OR exp Cercopithecidae/ OR hominid/ OR exp hylobatidae/ OR exp chimpanzee/ OR exp gorilla/ OR exp orang utan/ OR exp cephalopod/) OR (rat OR rats OR animal OR animals OR mice OR "in vivo" OR mouse OR rabbit OR rabbits OR murine OR pig OR pigs OR dog OR dogs OR bovine OR fish OR vertebrate OR vertebrates OR cat OR cats OR rodent OR rodents OR mammal OR mammals OR chicken OR chickens OR monkey OR monkeys OR sheep OR canine OR canines OR porcine OR cattle OR bird OR birds OR hamster OR hamsters OR primate OR primates OR cow OR cows OR chick OR horse OR horses OR avian OR avians OR calf OR swine OR swines OR xenopus OR turkeys OR bear OR bears OR frog OR frogs OR zebrafish OR goat OR goats OR equine OR calves OR poultry OR macaque OR macaques OR mole OR moles OR ovine OR lamb OR lambs OR fishes OR diptera OR amphibian OR amphibians OR snake OR snakes OR ruminant OR ruminants OR hen OR hens OR piglet OR piglets OR feline OR felines OR simian OR simians OR laevis OR trout OR trouts OR teleost OR teleosts OR salmon OR salmons OR seal OR seals OR bull OR bulls OR ewe OR ewes OR hedgehog OR hedgehogs OR macaca OR macacas OR proteus OR pigeon OR pigeons OR bat OR bats OR duck OR ducks OR chimpanzee OR chimpanzees OR baboon OR baboons OR deer OR deers OR rana OR ranas OR carp OR carps OR heifer OR swallow OR swallows OR lizard OR lizards OR canis OR sow OR sows OR cynomolgus OR quail OR quails OR reptile OR reptiles OR turtle OR turtles OR buffalo OR

	<p> gerbil OR gerbils OR boar OR boars OR squirrel OR squirrels  OR oncorhynchus OR mus OR toad OR toads OR fowl OR fowls  OR rerio OR danio OR ara OR aras OR musculus OR tadpole OR  tadpoles OR mulatta OR salmo OR ram OR eagle OR eagles OR  ferret OR ferrets OR goldfish OR catfish OR whale OR whales  OR fox OR foxes OR ape OR apes OR elephant OR elephants  OR bos OR marmoset OR marmosets OR cod OR cods OR shark  OR sharks OR wolf OR eel OR eels OR auratus OR rattus OR  zebra OR zebras OR tilapia OR tilapias OR gilt OR camel OR  camels OR squid OR gallus OR marsupial OR marsupials OR  vole OR voles OR fascicularis OR ovis OR salmonid OR  salmonids OR tiger OR tigers OR dolphin OR dolphins OR robin  OR robins OR carpio OR opossum OR opossums OR cyprinus  OR salamander OR salamanders OR felis OR mink OR minks  OR swan OR swans OR norvegicus OR bufo OR torpedo OR  bass OR lamprey OR lampreys OR sus OR python OR pythons  OR tetrapod OR tetrapods OR shrew OR shrews OR lion OR  lions OR hog OR hogs OR songbird OR songbirds OR  oreochromis OR starling OR starlings OR caprine OR carassius  OR owl OR owls OR newt OR newts OR papio OR scrofa OR  hare OR hares OR gorilla OR gorillas OR flounder OR flounders  OR goose OR herring OR herrings OR therian OR buffaloes OR  canary OR sparrow OR sparrows OR microtus OR octopus OR  troglodytes OR tuna OR amphibia OR chinchilla OR chinchillas  OR ide OR oryzias OR cervus OR kangaroo OR kangaroos OR  armadillo OR armadillos OR callithrix OR "pan troglodytes" OR  saimiri OR cichlid OR cichlids OR donkey OR donkeys OR  bream OR char OR chars OR finch OR raccoon OR raccoons OR  bothrops OR anguilla OR perch OR cricetus OR seabird OR  seabirds OR buck OR bucks OR naja OR coturnix OR salmonids  OR geese OR minnow OR minnows OR raptor OR raptors OR  merione OR meriones OR rodentia OR elaphus OR amniote OR  amniotes OR elasmobranch OR emu OR emus OR peromyscus  OR hominid OR hominids OR bubalus OR crotalus OR gull OR  gulls OR anas OR anura OR lemur OR lemurs OR crow OR  crows OR camelus OR gibbon OR gibbons OR waterfowl OR  parrot OR parrots OR eels OR cob OR stickleback OR  sticklebacks OR columba OR mesocricetus OR ambystoma OR  raven OR ravens OR gadus OR penguin OR penguins OR  orangutan OR orangutans OR sturgeon OR sturgeons OR  cuniculus OR aves OR virginianus OR cephalopod OR  cephalopods OR cebus OR sparus OR tortoise OR tortoises OR  guttata OR morhua OR unguiculatus OR dogfish OR vulpes OR  mallard OR mallards OR apodemus OR alligator OR alligators  OR oryctolagus OR llama OR llamas OR reindeer OR mustela  OR duckling OR ducklings OR wolves OR sander OR amazona  OR zebu OR badger OR badgers OR dove OR doves OR  ictalurus OR capra OR capras OR equus OR camelid OR  camelids OR poecilia OR mule OR mules OR perciformes OR  salvelinus OR labrax OR cyprinidae OR ariidae OR crocodile OR </p>
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	<p> crocodiles OR fundulus OR dicentrarchus OR clarias OR  cercopithecus OR chiroptera OR alpaca OR alpacas OR pike OR  pikes OR paralichthys OR puma OR pumas OR didelphis OR  pisces OR macropus OR triturus OR bison OR bisons OR  epinephelus OR gasterosteus OR panthera OR acipenser OR  mackerel OR mackerels OR tamarin OR tamarins OR ostrich OR  anolis OR vervet OR vervets OR wallaby OR glareolus OR  beaver OR beavers OR dromedary OR catus OR killifish OR  pimephales OR promelas OR aotus OR phoca OR panda OR  pandas OR porpoise OR porpoises OR myotis OR yak OR yaks  OR agkistrodon OR vipera OR otter OR otters OR turbot OR  turbot OR squamate OR carnivora OR mullet OR mullets OR  hawk OR hawks OR taeniopygia OR seahorse OR seahorses OR  "poecilia reticulata" OR falcon OR falcons OR prosimian OR  prosimians OR parus OR perca OR fingerling OR fingerlings OR  antelope OR antelopes OR tupaia OR passeriformes OR sepia OR  saguinus OR coyote OR coyotes OR pongo OR meleagris OR  reptilia OR lepus OR psittacine OR hagfish OR warbler OR  warblers OR "russell s viper" OR "russell s vipers" OR smolt OR  smolts OR budgerigar OR sardine OR sardines OR cavia OR  cavias OR hyla OR pleurodeles OR siluriformes OR "great tit"  OR "great tits" OR guppy OR bonobo OR bonobos OR rutilus  OR trichosurus OR muridae OR phodopus OR channa OR  squalus OR lynx OR sturnus OR petromyzon OR vitulina OR  monodelphis OR cuttlefish OR adder OR adders OR lepomis OR  canaria OR gambusia OR guppies  OR xiphophorus OR flatfish OR koala OR koalas OR labeo OR  stingray OR stingrays OR chelonia OR lampetra OR  spermophilus OR crocodilian OR "passer domesticus" OR  sciurus OR artiodactyla OR ranidae OR corvus OR necturus OR  platypus OR canaries OR bovid OR lagopus OR trimeresurus OR  gariepinus OR marten OR martens OR drosophilidae OR mugil  OR sunfish OR porcellus OR cypriniformes OR alouatta OR  scophthalmus OR anser OR electrophorus OR putorius OR  iguana OR iguanas OR lama OR lamas OR takifugu OR circus  OR eptesicus OR flycatcher OR galago OR galagos OR  trachemys OR lungfish OR characiformes OR shorebird OR  shorebirds OR giraffe OR giraffes OR micropterus OR  scyliorhinus OR cichlidae OR loligo OR porcupine OR  porcupines OR chub OR chubs OR solea OR pleuronectes OR  hylidae OR viperidae OR echis OR sorex OR anchovy OR  lagomorph OR ostriches OR vulture OR vultures OR whitefish  OR araneus OR jird OR jirds OR tern OR esox OR drake OR  drakes OR elapidae OR gallopavo OR chordata OR myodes OR  caretta OR serinus OR grouse OR misgurnus OR meles OR  blackbird OR blackbirds OR coregonus OR bobwhite OR  bobwhites OR heteropneustes OR mammoth OR mammoths OR  turdus OR rhinella OR ateles OR characidae OR clupea OR  bungarus OR brill OR "struthio camelus" OR sloth OR sloths OR  pteropus OR sculpin OR anthropoids OR pollock OR pollocks </p>
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	<p> OR morone OR "pan paniscus" OR litoria OR chipmunk OR chipmunks OR balaenoptera OR marmota OR melopsittacus OR hyrax OR lemming OR lemmings OR halibut OR hylobates OR lates OR caiman OR caimans OR sigmodon OR stenella OR barbel OR barbels OR sterna OR parakeet OR parakeets OR phocoena OR leptodactylus OR canidae OR buteo OR harengus OR gopher OR gophers OR marmot OR marmots OR gosling OR goslings OR platichthys OR gar OR gars OR sebastes OR marsupialia OR notophthalmus OR gazelle OR gazelles OR insectivora OR paridae OR felidae OR russula OR galliformes OR bombina OR colobus OR echidna OR echidnas OR seabass OR syncerus OR plaice OR "blue tit" OR "blue tits" OR pagrus OR catfishes OR cetacea OR barbus OR cygnus OR ficedula OR chamois OR colubridae OR perches OR coelacanth OR fitch OR urodela OR cynops OR martes OR halichoerus OR aix OR salmonidae OR leuciscus OR magpie OR magpies OR silurus OR whiting OR whittings OR anseriformes OR colinus OR rhea OR chlorocebus OR octodon OR acinonyx OR mouflon OR mouflons OR ibex OR tetraodon OR bufonidae OR equidae OR jackal OR cephalopoda OR dendroaspis OR glama OR muskrat OR muskrats OR sable OR sables OR wildebeest OR streptopelia OR albifrons OR vespertilionidae OR woodpecker OR woodpeckers OR muntjac OR muntjacs OR archosaur OR branta OR cricetulus OR megalobrama OR poeciliidae OR desmodus OR snakehead OR snakeheads OR tench OR teal OR teals OR bandicoot OR bandicoots OR apteronotus OR phyllostomidae OR crocidura OR buzzard OR buzzards OR larimichthys OR cercocebus OR pipistrellus OR erithacus OR impala OR impalas OR rousettus OR haddock OR haddocks OR tinca OR ratite OR calidris OR cynoglossus OR hypophthalmichthys OR bullock OR bullocks OR dromedaries OR alectoris OR filly OR salamandra OR cingulata OR bitis OR grus OR ammodytes OR macaw OR macaws OR hypoleuca OR sapajus OR cyprinodontiformes OR hippopotamus OR pelophylax OR capybara OR capybaras OR weasel OR weasels OR cairina OR cynomys OR lutra OR cockatoo OR cockatoos OR lachesis OR lagomorpha OR rupicapra OR daboia OR "orang utan" OR "orang utans" OR platyrrhini OR charadriiformes OR micrurus OR psittaciformes OR spalax OR loris OR mustelidae OR sylvilagus OR vitticeps OR cockatiel OR mustelus OR cottus OR erythrocebus OR dipodomys OR platessa OR callicebus OR loricariidae OR catostomus OR cuneata OR cyanistes OR cyprinodon OR sigmodontinae OR elasmobranchii OR trichechus OR sauropsid OR xenarthra OR dormouse OR perissodactyla OR nautilus OR cirrhinus OR gulo OR gulos OR tragelaphus OR merula OR numida OR sciaenidae OR cerastes OR sciuridae OR gibbosus OR octopuses OR eland OR elands OR phyllomedusa OR pogona OR walrus OR agamidae OR leptodactylidae OR ridibundus OR leontopithecus OR anteater OR anteaters OR pelodiscus OR cebidae OR columbianus OR "pelteobagrus" </p>
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	fulvidraco" OR hominoidea OR mandrillus OR "zonotrichia leucophrys" OR agama OR gobiocypris OR "bearded dragon" OR "bearded dragons" OR sarotherodon OR talpa OR discoglossus OR hagfishes OR sphenodon OR gudgeon OR amphiuma OR aythya OR tenrec OR tenrec OR hominidae OR risoria OR salamandridae OR camelidae OR columbiformes OR latimeria OR plover OR plovers OR afrotheria OR "falco sparverius" OR polecat OR polecats OR crotalinae OR salvadora OR tarsier OR lucioperca OR anchovies OR lungfishes OR terrapin OR "dromaius novaehollandiae" OR lateolabrax OR eigenmannia OR pelamis OR theropithecus OR murinae OR gander OR gymnotus OR pseudacris OR gymnophiona OR gymnotiformes OR laticauda OR falconiformes OR dugong OR dugongs OR pintail OR pintails OR rook OR rooks OR lasiurus OR catshark OR catsharks OR micropogonias OR "red junglefowl" OR paddlefish OR ophiophagus OR hollandicus OR nymphicus OR pimelodidae OR aepyceros OR cobitidae OR strigiformes OR cobitis OR dormice OR alytes OR calloselasma OR guanaco OR guanacos OR phasianidae OR "round goby" OR trichogaster OR catarrhini OR eelpout OR eelpouts OR galaxias OR gaur OR pungitius OR suslik OR susliks OR flatfishes OR percidae OR caprinae OR todarodes OR osmerus OR ameiurus OR anthropoidea OR "castor canadensis" OR pouting OR poutings OR tetraodontiformes OR arvicolinae OR siamang OR siamangs OR "castor fiber" OR nomascus OR "red knot" OR "red knots" OR syngnathidae OR iguanidae OR eretmochelys OR ursidae OR callimico OR columbidae OR microhylidae OR anaxyrus OR menidia OR pipistrelle OR greylag OR pipidae OR scandentia OR bowfin OR bowfins OR dendrobatidae OR zenaida OR bushbaby OR harrier OR harriers OR macropodidae OR pygerythrus OR clupeidae OR odorrana OR corvidae OR jerboa OR jerboas OR canutus OR hylobatidae OR clupeiformes OR "great cormorant" OR "great cormorants" OR scorpaeniformes OR chondrostea OR garfish OR proboscidea OR psetta OR diapsid OR serotinus OR tetrao OR walruses OR carcharhiniformes OR leucoraja OR pumpkinseed OR dosidicus OR acipenseriformes OR daubentonii OR emberizidae OR gadiformes OR hyraxes OR stizostedion OR wolverine OR wolverines OR lissotriton OR acanthurus OR centrarchidae OR gloydius OR laurasiatheria OR limosa OR psittacula OR leporidae OR proteidae OR zander OR zanders OR arapaima OR bagridae OR cyprinodontidae OR mithun OR pandion OR jackdaw OR jackdaws OR procyonidae OR carus OR jaculus OR salmoniformes OR "common sole" OR "common soles" OR protobothrops OR calamita OR brachyteles OR trionyx OR turdidae OR boidae OR luscinia OR pugnax OR euarchontoglires OR saithe OR saithes OR symphalangus OR armadillo OR armadillos OR oystercatcher OR oystercatchers OR arius OR corydoras OR poacher OR poachers OR aurochs OR cebuella OR crecca OR lemuridae OR sirenia OR lemming OR perdix OR
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	<p> glires OR lepidosaur OR muskox OR deinagkistrodon OR  pholidota OR holocephali OR cercopithecinae OR clariidae OR  agapornis OR doryteuthis OR tyrannidae OR dicroglossidae OR  godwit OR godwits OR monedula OR pongidae OR  atheriniformes OR colobinae OR lophocebus OR atelidae OR  cottidae OR leucopsis OR acanthuridae OR didelphimorphia OR  elver OR elvers OR lapponica OR dermoptera OR "european  hake" OR "european hakes" OR gerbillinae OR banteng OR  hartebeest OR hartebeests OR hogget OR haematopus OR  "anguis fragilis" OR "grey heron" OR "grey herons" OR "blue  whiting" OR "blue whittings" OR furnariidae OR macrovipera OR  esocidae OR lapwing OR lapwings OR mylopharyngodon OR  wallabia OR beloniformes OR potoroo OR potoroos OR "athene  noctua" OR pleuronectidae OR bushbabies OR muscicapidae OR  alligatoridae OR fuligula OR "bush baby" OR guineafowl OR  spoonbill OR spoonbills OR viverridae OR catostomidae OR  zebrafishes OR ibexes OR vendace OR estrildidae OR  monotremata OR sepiella OR ambystomatidae OR shelduck OR  shelducks OR treeshrew OR treeshrews OR hoplobatrachus OR  pochard OR hoolock OR hoolocks OR lynxes OR antelope OR  antilopes OR blackbuck OR blackbucks OR cricetinae OR  paramisgurnus OR skylark OR skylarks OR soleidae OR  allobates OR "northern wheatear" OR "northern wheatears" OR  pitheciidae OR takin OR theria OR vanellus OR galaxiidae OR  lorisidae OR ostralegus OR palaeognathae OR "stone loach" OR  alauda OR callitrichinae OR caniformia OR duttaphrynus OR  ictaluridae OR osteoglossiformes OR poultries OR curema OR  "ruddy turnstone" OR "ruddy turnstones" OR sheatfish OR  sunfishes OR centropomidae OR hemachatus OR platalea OR  thamnophilidae OR "song thrush" OR atherinopsidae OR  siluridae OR tadorna OR chroicocephalus OR ermine OR  ermine OR gavialis OR ruff OR tupaiidae OR diprotodontia OR  hyaenidae OR antilopinae OR crocodylidae OR herpestidae OR  hippopotamidae OR "northern shoveler" OR "round gobies" OR  cheirogaleidae OR indriidae OR fundulidae OR pythonidae OR  rhynchocephalia OR anodorhynchus OR "red-backed shrike" OR  "red-backed shrikes" OR triakidae OR phalangeridae OR aoudad  OR boreoeutheria OR "eurasian jay" OR "eurasian jays" OR  feliformia OR haplorhini OR osteoglossidae OR paenungulata  OR struthioniformes OR ferina OR sanderling OR sanderlings  OR spheniscidae OR cuttlefishes OR cygnet OR dasycneme OR  gadwall OR gadwalls OR "pelobates fuscus" OR wryneck OR  wrynecks OR afrosoricida OR culaea OR "dover sole" OR "dover  soles" OR paralichthyidae OR passeridae OR osteolaemus OR  "song thrushes" OR bluethroat OR bluethroats OR hydrophiidae  OR megrim OR mephitidae OR strepsirhini OR tomistoma OR  epidalea OR osmeriformes OR "bush babies" OR tarsiiform OR  atelinae OR bufotes OR "eurasian coot" OR "eurasian coots" OR  galagidae OR geopelia OR philomachus OR tubulidentata OR  bombinatoridae OR pelobatidae OR tachysurus OR ailuridae OR </p>
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	<p> woodlark OR woodlarks OR alcelaphinae OR redshank OR redshanks OR salientia OR "sand smelt" OR "sand smelts" OR woodmice OR woodmouse OR dasyproctidae OR "eurasian wigeon" OR "eurasianwigeons" OR garganey OR garganeys OR "lemon sole" OR "lemon soles" OR "common dab" OR "common dabs" OR graylag OR graylags OR leucorodia OR osphronemidae OR bewickii OR "common moorhen" OR "common moorhens" OR decapodiformes OR gobbler OR gobblers OR odontophoridae OR paddlefishes OR eutheria OR salmonine OR esociformes OR "eurasian woodcock" OR "eurasian woodcocks" OR "european smelt" OR "european smelts" OR goldfishes OR tenches OR tyranni OR "common chaffinch" OR "common chaffinches" OR "common redstart" OR "common redstarts" OR "common roach" OR "common roachs" OR "great knot" OR "great knots" OR potoroidae OR alytidae OR coregonine OR dipteral OR leveret OR "poeciliopsis gracilis" OR amphiumidae OR batrachoidiformes OR "bighead goby" OR heteropneustidae OR lullula OR "norway pout" OR "norway pouts" OR sipunculida OR dogfishes OR sebastidae OR tarsiidae OR alethinophidia OR "common nase" OR "common nases" OR "common sandpiper" OR "common sandpipers" OR "eurasian blackcap" OR "eurasian blackcaps" OR pterocnemis OR syngnathiformes OR "common chaffinches" OR eupleridae OR octopodiformes OR phascolarctidae OR scophthalmidae OR "starry smooth-hound" OR "starry smooth-hounds" OR whitefishes OR cuniculidae OR "european sprat" OR "european sprats" OR "rosy bitterling" OR "rosy bitterlings" OR "common dace" OR "common daces" OR "lesser weever" OR "lesser weevers" OR sculdfish OR "water rail" OR "water rails" OR alouattinae OR centrarchiformes OR "common whitethroat" OR "common whitethroats" OR gavialidae OR "grey gurnard" OR "grey gurnards" OR lateolabracidae OR rheiformes OR "tub gurnard" OR "tub gurnards" OR "common chiffchaff" OR "common chiffchaffs" OR garfishes OR "lesser whitethroat" OR "lesser whitethroats" OR myoxidae OR seabasses OR spariformes OR umbridae OR "yellow boxfish" OR anabantiformes OR aotidae OR "common bleak" OR "common bleaks" OR "common rudd" OR "common rudds" OR "greater pipefish" OR hapale OR nandiniidae OR "stone loaches" OR whinchat OR whinchats OR acanthuriformes OR "brotula barbata" OR "common ling" OR "common lings" OR "common roaches" OR cottonrat OR cottonrats OR douroucoulis OR dromaiidae OR fitches OR fitchew OR galaxiiformes OR laprine OR saimiriinae OR solenette OR tarsii OR "tompot blenny" OR "common dragonet" OR "common dragonets" OR "longspined bullhead" OR "longspined bullheads" OR monotremate OR monotremates OR pempheriformes OR perdicinae OR presbytini OR smegmamorpha OR "bighead gobies" OR "carangaria incertae sedis" OR coiidae OR "fivebeard rockling" OR foulmart OR fougart OR grasskeet OR "greater pipefishes" OR ibices OR </p>
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	millionfish OR muguliformes OR "norwegian topknot" OR peewit OR "red sea sailfin tang" OR rupicapras OR sheatfishes OR "tompot blennies" OR "twait shad" OR "yellow boxfishes").ti,ab,kw.
<b>Results</b>	438

### Full search strategy for EMBASE

IBS	'irritable colon'/exp OR 'irritable colon' OR 'irritable bowel':ti,ab OR 'ibs':ti,ab OR 'irritable colon':ti,ab OR 'mucous colitis':ti,ab OR 'spastic colitis':ti,ab OR 'spastic colon':ti,ab
Omics	'metabolomics'/exp OR 'genomics'/exp OR 'proteomics'/exp OR 'transcriptome'/exp OR 'genome'/exp OR 'proteome'/exp OR 'metabolome'/exp OR 'omic*':ti,ab OR 'multi-omic*':ti,ab OR 'metabolomic*':ti,ab OR 'transcriptomic*':ti,ab OR 'genomic*':ti,ab OR 'proteomic*':ti,ab OR 'transcriptome*':ti,ab OR 'genome*':ti,ab OR 'proteome*':ti,ab OR 'metabolome*':ti,ab
Human Filter	("animal experiment"/exp OR "animal model"/exp OR "experimental animal"/exp OR "transgenic animal"/exp OR "male animal"/exp OR "female animal"/exp OR "juvenile animal"/exp OR animal/de OR chordata/de OR vertebrate/de OR tetrapod/de OR fish/exp OR amniote/de OR amphibia/exp OR mammal/de OR reptile/exp OR sauropsid/exp OR therian/de OR monotreme/exp OR "placental mammal"/de OR marsupial/exp OR Euarchontoglires/de OR Afrotheria/exp OR Boreoeutheria/exp OR Laurasiatheria/exp OR Xenarthra/exp OR primate/de OR Dermoptera/exp OR Glires/exp OR Scandentia/exp OR Haplorhini/de OR prosimian/exp OR simian/de OR tarsiiiform/exp OR Catarrhini/de OR Platyrrhini/exp OR ape/de OR Cercopithecidae/exp OR hominid/de OR hylobatidae/exp OR chimpanzee/exp OR gorilla/exp OR "orang utan"/exp OR cephalopod/exp) OR (rat OR rats OR animal OR animals OR mice OR "in vivo" OR mouse OR rabbit OR rabbits OR murine OR pig OR pigs OR dog OR dogs OR bovine OR fish OR vertebrate OR vertebrates OR cat OR cats OR rodent OR rodents OR mammal OR mammals OR chicken OR chickens OR monkey OR monkeys OR sheep OR canine OR canines OR porcine OR cattle OR bird OR birds OR hamster OR hamsters OR primate OR primates OR cow OR cows OR chick OR horse OR horses OR avian OR avians OR calf OR swine OR swines OR xenopus OR turkeys OR bear OR bears OR frog OR frogs OR zebrafish OR goat OR goats OR equine OR calves OR poultry OR macaque OR macaques OR mole OR moles OR ovine OR lamb OR lambs OR fishes OR diptera OR amphibian OR amphibians OR snake OR snakes OR ruminant OR ruminants OR hen OR hens OR piglet OR piglets OR feline OR felines OR simian OR simians OR laevis OR trout OR trouts OR teleost OR teleosts OR salmon OR salmons OR seal OR seals OR bull OR bulls OR ewe OR ewes OR hedgehog OR hedgehogs

	<p> OR macaca OR macacas OR proteus OR pigeon OR pigeons  OR bat OR bats OR duck OR ducks OR chimpanzee OR  chimpanzees OR baboon OR baboons OR deer OR deers OR  rana OR ranas OR carp OR carps OR heifer OR swallow OR  swallows OR lizard OR lizards OR canis OR sow OR sows  OR cynomolgus OR quail OR quails OR reptile OR reptiles  OR turtle OR turtles OR buffalo OR gerbil OR gerbils OR  boar OR boars OR squirrel OR squirrels OR oncorhynchus OR  mus OR toad OR toads OR fowl OR fowls OR rerio OR danio  OR ara OR aras OR musculus OR tadpole OR tadpoles OR  mulatta OR salmo OR ram OR eagle OR eagles OR ferret OR  ferrets OR goldfish OR catfish OR whale OR whales OR fox OR  foxes OR ape OR apes OR elephant OR elephants OR bos OR  marmoset OR marmosets OR cod OR cods OR shark OR sharks  OR wolf OR eel OR eels OR auratus OR rattus OR zebra OR  zebras OR tilapia OR tilapias OR gilt OR camel OR camels OR  squid OR gallus OR marsupial OR marsupials OR vole OR voles  OR fascicularis OR ovis OR salmonid OR salmonids OR tiger  OR tigers OR dolphin OR dolphins OR robin OR robins OR  carpio OR opossum OR opossums OR cyprinus OR salamander  OR salamanders OR felis OR mink OR minks OR swan OR  swans OR norvegicus OR bufo OR torpedo OR bass OR lamprey  OR lampreys OR sus OR python OR pythons OR tetrapod OR  tetrapods OR shrew OR shrews OR lion OR lions OR hog OR  hogs OR songbird OR songbirds OR oreochromis OR starling  OR starlings OR caprine OR carassius OR owl OR owls OR newt  OR newts OR papio OR scrofa OR hare OR hares OR gorilla OR  gorillas OR flounder OR flounders OR goose OR herring  OR herrings OR therian OR buffaloes OR canary OR  sparrow OR sparrows OR microtus OR octopus OR troglodytes  OR tuna OR amphibia OR chinchilla OR chinchillas OR ide OR  oryzias OR cervus OR kangaroo OR kangaroos OR armadillo OR  armadillos OR callithrix OR "pan troglodytes" OR saimiri OR  cichlid OR cichlids OR donkey OR donkeys OR bream OR char  OR chars OR finch OR raccoon OR raccoons OR bothrops OR  anguilla OR perch OR cricetus OR seabird OR seabirds OR buck  OR bucks OR naja OR coturnix OR salmonids OR geese OR  minnow OR minnows OR raptor OR raptors OR merione OR  meriones OR rodentia OR elaphus OR amniote OR amniotes  OR elasmobranch OR emu OR emus OR peromyscus OR  hominid OR hominids OR bubalus OR crotalus OR gull OR gulls  OR anas OR anura OR lemur OR lemurs OR crow OR crows OR  camelus OR gibbon OR gibbons OR waterfowl OR parrot OR  parrots OR eels OR cob OR stickleback OR sticklebacks OR  columba OR mesocricetus OR ambystoma OR raven OR ravens  OR gadus OR penguin OR penguins OR orangutan OR  orangutans OR sturgeon OR sturgeons OR cuniculus OR aves  OR virginianus OR cephalopod OR cephalopods OR cebus  OR sparus OR tortoise OR tortoises OR guttata OR morhua  OR unguiculatus OR dogfish OR vulpes OR mallard OR </p>
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	<p> mallards OR apodemus OR alligator OR alligatorsOR  oryctolagus OR llama OR llamas OR reindeer OR mustela OR  duckling OR ducklings OR wolves OR sander OR amazona OR  zebu OR badger OR badgers OR dove OR doves OR ictalurus  OR capra OR capras OR equus OR camelid OR camelids  OR poecilia OR mule OR mules OR perciformes OR  salvelinus OR labrax OR cyprinidae OR ariidae OR crocodile OR  crocodiles OR fundulus OR dicentrarchus OR clarias OR  cercopithecus OR chiroptera OR alpaca OR alpacas OR pike  OR pikes OR paralichthys OR puma OR pumas OR  didelphis OR pisces OR macropus OR triturus OR bison OR  bisons OR epinephelus OR gasterosteus OR panthera OR  acipenser OR mackerel OR mackerels OR tamarin OR  tamarins OR ostrich OR anolis OR vervet OR vervets OR  wallaby OR glareolus OR beaver OR beavers OR dromedary  OR catus OR killifish OR pimphales OR promelas OR  aotus OR phoca OR panda OR pandas OR porpoise OR  porpoises OR myotis OR yak OR yaks OR agkistrodon OR  vipera OR otter OR otters OR turbot OR turbot OR  squamate OR carnivora OR mullet OR mullets OR hawk  OR hawks OR taeniopygia OR seahorse OR seahorses OR  "poecilia reticulata" OR falcon OR falcons OR prosimian OR  prosimians OR parus OR perca OR fingerling OR fingerlings  OR antelope OR antelopes OR tupaia OR passeriformes OR sepia  OR saguinus OR coyote OR coyotes OR pongo OR meleagris  OR reptilia OR lepus OR psittacine OR hagfish OR warbler OR  warblers OR "russell s viper" OR "russell s vipers" OR smolt OR  smolts OR budgerigar OR sardine OR sardines OR cavia OR  cavias OR hyla OR pleurodeles OR siluriformes OR "great tit"  OR "great tits" OR guppy OR bonobo OR bonobos OR rutilus  OR trichosurus OR muridae OR phodopus OR channa OR  squalus OR lynx OR sturnus OR petromyzon OR vitulina OR  monodelphis OR cuttlefish OR adder OR adders OR lepomis  OR canaria OR gambusia OR guppies OR xiphophorus OR  flatfish OR koala OR koalas OR labeo OR stingray OR stingrays  OR chelonia OR lampetra OR spermophilus OR crocodilian  OR "passer domesticus" OR sciurus OR artiodactyla OR  ranidae OR corvus OR necturus OR platypus OR canaries OR  bovid OR lagopus OR trimeresurus OR gariepinus OR marten  OR martens OR drosophilidae OR mugil OR sunfish OR  porcellus OR cypriniformes OR alouatta OR scophthalmus  OR anser OR electrophorus OR putorius OR iguana OR iguanas  OR lama OR lamas OR takifugu OR circus OR eptesicus OR  flycatcher OR galago OR galagos OR trachemys OR lungfish  OR characiformes OR shorebird OR shorebirds OR giraffe  OR giraffes OR micropterus OR scyliorhinus OR cichlidae  OR loligo OR porcupine OR porcupines OR chub OR  chubs OR solea OR pleuronectes OR hylidae OR viperidae OR  echis OR sorex OR anchovy OR lagomorph OR ostriches OR  vulture OR vultures OR whitefish OR araneus OR jird OR </p>
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jirds OR tern OR esox OR drake OR drakes OR elapidae  
OR gallopavo OR chordata OR myodes OR caretta OR serinus  
OR grouse OR misgurnus OR meles OR blackbird OR blackbirds  
OR coregonus OR bobwhite OR bobwhites OR heteropneustes  
OR mammoth OR mammoths OR turdus OR rhinella OR ateles  
OR characidae OR clupea OR bungarus OR brill OR "struthio  
camelus" OR sloth OR sloths OR pteropus OR sculpin OR  
anthropoids OR pollock OR pollocks OR morone OR "pan  
paniscus" OR litoria OR chipmunk OR chipmunks OR  
balaenoptera OR marmota OR melopsittacus OR hyrax OR  
lemming OR lemmings OR halibut OR hylobates OR lates OR  
caiman OR caimans OR sigmodon OR stenella OR barbel OR  
barbels OR sterna OR parakeet OR parakeets OR phocoena  
OR leptodactylus OR canidae OR buteo OR harengus OR  
gopher OR gophers OR marmot OR marmots OR gosling OR  
goslings OR platichthys OR gar OR gars OR sebastes OR  
marsupialia OR notophthalmus OR gazelle OR gazelles OR  
insectivora OR paridae OR felidae OR russula OR galliformes  
OR bombina OR colobus OR echidna OR echidnas OR seabass  
OR syncerus OR plaice OR "blue tit" OR "blue tits" OR pagrus  
OR catfishes OR cetacea OR barbus OR cygnus OR ficedula OR  
chamois OR colubridae OR perches OR coelacanth OR fitch OR  
urodela OR cynops OR martes OR halichoerus OR aix OR  
salmonidae OR leuciscus OR magpie OR magpies OR silurus OR  
whiting OR whittings OR anseriformes OR colinus OR rhea OR  
chlorocebus OR octodon OR acinonyx OR mouflon OR  
mouflons OR ibex OR tetraodon OR bufonidae OR equidae  
OR jackal OR cephalopoda OR dendroaspis OR glama OR  
muskrat OR muskrats OR sable OR sables OR wildebeest OR  
streptopelia OR albifrons OR vespertilionidae OR woodpecker  
OR woodpeckers OR muntjac OR muntjacs OR archosaur  
OR branta OR cricetulus OR megalobrama OR poeciliidae  
OR desmodus OR snakehead OR snakeheads OR tench OR  
teal OR teals OR bandicoot OR bandicoots OR apteronotus  
OR phyllostomidae OR crocidura OR buzzard OR buzzards  
OR larimichthys OR cercocebus OR pipistrellus OR  
erithacus OR impala OR impalas OR rousettus OR  
haddock OR haddocks OR tinca OR ratite OR calidris  
OR cynoglossus OR hypophthalmichthys OR bullock OR  
bullocks OR dromedaries OR alectoris OR filly OR salamandra  
OR cingulata OR bitis OR grus OR ammodytes OR macaw  
OR macaws OR hypoleuca OR sapajus OR  
cyprinodontiformes OR hippopotamus OR pelophylax OR  
capybara OR capybaras OR weasel OR weasels OR cairina OR  
cynomys OR lutra OR cockatoo OR cockatoos OR lachesis OR  
lagomorpha OR rupicapra OR daboia OR "orang utan" OR  
"orang utans" OR platyrrhini OR charadriiformes OR micrurus  
OR psittaciformes OR spalax OR loris OR mustelidae OR  
sylvilagus OR vitticeps OR cockatiel OR mustelus OR cottus  
OR erythrocebus OR dipodomys OR platessa OR callicebus OR

	loricariidae OR catostomus OR cuneata OR cyanistes OR cyprinodon OR sigmodontinae OR elasmobranchii OR trichechus OR sauropsid OR xenarthra OR dormouse OR perissodactyla OR nautilus OR cirrhinus OR gulo OR gulos OR tragelaphus OR merula OR numida OR sciaenidae OR cerastes OR sciuridae OR gibbosus OR octopuses OR eland OR elands OR phyllomedusa OR pogona OR walrus OR agamidae OR leptodactylidae OR ridibundus OR leontopithecus OR anteater OR anteaters OR pelodiscus OR cebidae OR columbianus OR "pelteobagrus fulvidraco" OR hominoidea OR mandrillus OR "zonotrichia leucophrys" OR agama OR gobiocypris OR "bearded dragon" OR "bearded dragons" OR sarotherodon OR talpa OR discoglossus OR hagfishes OR sphenodon OR gudgeon OR amphiuma OR aythya OR tenrec OR tenrec OR hominidae OR risoria OR salamandridae OR camelidae OR columbiformes OR latimeria OR plover OR plovers OR afrotheria OR "falco sparverius" OR polecat OR polecats OR crotalinae OR salvadora OR tarsier OR luciperca OR anchovies OR lungfishes OR terrapin OR "dromaius novaehollandiae" OR lateolabrax OR eigenmannia OR pelamis OR theropithecus OR murinae OR gander OR gymnotus OR pseudacris OR gymnophiona OR gymnotiformes OR laticauda OR falconiformes OR dugong OR dugongs OR pintail OR pintails OR rook OR rooks OR lasiurus OR catshark OR catsharks OR micropogonias OR "red junglefowl" OR paddlefish OR ophiophagus OR hollandicus OR nymphicus OR pimelodidae OR aepyceros OR cobitidae OR strigiformes OR cobitis OR dormice OR alytes OR calloselasma OR guanaco OR guanacos OR phasianidae OR "round goby" OR trichogaster OR catarrhini OR eelpout OR eelpouts OR galaxias OR gaur OR pungitius OR suslik OR susliks OR flatfishes OR percidae OR caprinae OR tadarodes OR osmerus OR ameiurus OR anthropoidea OR "castor canadensis" OR pouting OR poutings OR tetraodontiformes OR arvicolinae OR siamang OR siamangs OR "castor fiber" OR nomascus OR "red knot" OR "red knots" OR syngnathidae OR iguanidae OR eretmochelys OR ursidae OR callimico OR columbidae OR microhylidae OR anaxyrus OR menidia OR pipistrelle OR greylag OR pipidae OR scandentia OR bowfin OR bowfins OR dendrobatidae OR zenaida OR bushbaby OR harrier OR harriers OR macropodidae OR pygerythrus OR clupeidae OR odorrana OR corvidae OR jerboa OR jerboas OR canutus OR hylobatidae OR clupeiformes OR "great cormorant" OR "great cormorants" OR scorpaeniformes OR chondrostea OR garfish OR proboscidea OR psetta OR diapsid OR serotinus OR tetrao OR walruses OR carcharhiniformes OR leucoraja OR pumpkinseed OR dosidicus OR acipenseriformes OR daubentonii OR emberizidae OR gadiformes OR hyraxes OR stizostedion OR wolverine OR
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	<p> wolverines OR lissotriton OR acanthurus OR centrarchidae OR  gloydius OR laurasiatheria OR limosa OR psittacula OR  leporidae OR proteidae OR zander OR zanders OR arapaima  OR bagridae OR cyprinodontidae OR mithun OR pandion OR  jackdaw OR jackdaws OR procyonidae OR carus OR jaculus OR  salmoniformes OR "common sole" OR "common soles" OR  protobothrops OR calamita OR brachyteles OR trionyx OR  turdidae OR boidae OR luscini OR pugnax  OR euarchontoglires OR saithe OR saithes OR symphalangus OR  aardvark OR aardvarks OR oystercatcher OR oystercatchers OR  arius OR corydoras OR poacher OR poachers OR aurochs OR  cebuella OR crecca OR lemuridae OR sirenia OR lemmus OR  perdix OR glires OR lepidosaur OR muskox OR  deinagkistrodon OR pholidota OR holocephali OR  cercopithecinae OR clariidae OR agapornis OR doryteuthis OR  tyrannidae OR dicroglossidae OR godwit OR godwits OR  monedula OR pongidae OR atheriniformes OR colobinae OR  lophocebus OR atelidae OR cottidae OR leucopsis OR  acanthuridae OR didelphimorphia OR elver OR elvers OR  lapponica OR dermoptera OR "european hake" OR "european  hakes" OR gerbillinae OR banteng OR hartebeest OR  hartebeests OR hogget OR haematopus OR "anguis fragilis"  OR "grey heron" OR "grey herons" OR "blue whiting" OR  "blue whittings" OR furnariidae OR macrovipera OR esocidae OR  lapwing OR lapwings OR mylopharyngodon OR wallabia OR  beloniformes OR potoroo OR potoroos OR  "athenenoctua" OR pleuronectidae OR bushbabies OR  muscapidae OR alligatoridae OR fuligula OR "bush baby"  OR guineafowl OR spoonbill OR spoonbills OR viverridae  OR catostomidae OR zebrafishes OR ibexes OR vendace OR  estrildidae OR monotremata OR sepiella OR ambystomatidae  OR shelduck OR shelducks OR treeshrew OR treeshrews OR  hoplobatrachus OR pochard OR hoolock OR hoolocks OR lynxes  OR antelope OR antilopes OR blackbuck OR blackbucks OR  cricketinae OR paramisgurnus OR skylark OR skylarks OR  soleidae OR allobates OR "northern wheatear" OR "northern  wheatears" OR pitheciidae OR takin OR theria OR vanellus  OR galaxiidae OR lorisidae OR ostralegus OR palaeognathae  OR "stone loach" OR alauda OR callitrichinae OR caniformia  OR duttaphrynus OR ictaluridae OR osteoglossiformes OR  poultres OR curema OR "ruddy turnstone" OR "ruddy  turnstones" OR sheatfish OR sunfishes OR centropomidae OR  hemachatus OR platalea OR thamnophilidae OR "song  thrush" OR atherinopsidae OR siluridae OR tadorna OR  chroicocephalus OR ermine OR ermines OR gavialis OR  ruff OR tupaiidae OR diprotodontia OR hyaenidae OR  antilopinae OR crocodylidae OR herpestidae OR hippopotamidae  OR "northern shoveler" OR "round gobies" OR cheirogaleidae  OR indriidae OR fundulidae OR pythonidae OR  rhynchocephalia OR anodorhynchus OR "red-backed shrike" </p>
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	<p> OR "red-backed shrikes" OR triakidae OR phalangeridae OR aoudad OR boreoeutheria OR "eurasian jay" OR "eurasian jays" OR feliformia OR haplorhini OR osteoglossidae OR paenungulata OR struthioniformes OR ferina OR sanderlingOR sanderlings OR spheniscidae OR cuttlefishes OR cygnet OR dasycneme OR gadwall OR gadwalls OR "pelobates fuscus" OR wryneck OR wrynecks OR afrosoricida OR culaea OR "dover sole" OR "dover soles" OR paralichthyidae OR passeridae OR osteolaemus OR "song thrushes" OR bluethroat OR bluethroats OR hydrophiidae OR megrim OR mephitidae OR strepsirhini OR tomistoma OR epidalea OR osmeriformes OR "bush babies" OR tarsiiform OR atelinae OR bufotes OR "eurasian coot" OR "eurasian coots" OR galagidae OR geopelia OR philomachus OR tubulidentata OR bombinatoridae OR pelobatidae OR tachysurus OR ailuridae OR woodlark OR woodlarks OR alcelaphinae OR redshank OR redshanks OR salientia OR "sand smelt" OR "sand smelts" OR woodmice OR woodmouse OR dasypsectidae OR "eurasian wigeon" OR "eurasian wigons" OR garganey OR garganeys OR "lemon sole" OR "lemon soles" OR "common dab" OR "common dabs" OR graylag OR graylags OR leucorodia OR osphronemidae OR bewickii OR "common moorhen" OR "common moorhens" OR decapodiformes OR gobblerOR gobblers OR odontophoridae OR paddlefishes OR eutheria OR salmonine OR esociformes OR "eurasian woodcock" OR "eurasian woodcocks" OR "european smelt" OR "european smelts" OR goldfishes OR tenches OR tyranni OR "common chaffinch" OR "common chaffinches" OR "common redstart" OR "common redstarts" OR "common roach" OR "common roachs" OR "great knot" OR "great knots" OR potoroidae OR alytidae OR coregonine OR dipteral OR leveret OR "poeciliopsis gracilis" OR amphiumidae OR batrachoidiformes OR "bighead goby"OR heteropneustidae OR lullula OR "norway pout" OR "norway pouts" OR sipunculida OR dogfishes OR sebastidae OR tarsiidae OR alethinophidia OR "common nase" OR "common nases" OR "common sandpiper" OR "common sandpipers" OR "eurasian blackcap" OR "eurasian blackcaps" OR pterocnemina OR syngnathiformes OR "common chaffinches" OR eupleridae OR octopodiformes OR phascolarctidae OR scophthalmidae OR "starry smooth-hound" OR "starry smooth-hounds" OR whitefishes OR cuniculidae OR "european sprat" OR "european sprats" OR "rosy bitterling" OR "rosy bitterlings" OR "common dace" OR "common daces" OR "lesser weever" OR "lesser weevers" OR sculdfish OR "water rail" OR "water rails" OR alouattinae OR centrarchiformes OR "common whitethroat" OR "common whitethroats" OR gavialidae OR "grey gurnard" OR "grey gurnards" OR lateolabracidae OR rheiformes OR "tub gurnard" OR "tub gurnards" OR "common chiffchaff" OR "common chiffchaffs" </p>
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	OR garfishes OR "lesser whitethroat" OR "lesser whitethroats" OR myoxidae OR seabasses OR spariformes OR umbridae OR "yellow boxfish" OR anabantiformes OR aotidae OR "common bleak" OR "common bleaks" OR "common rudd" OR "common rudds" OR "greater pipefish" OR hapale OR nandiniidae OR "stone loaches" OR whinchat OR whinchats OR acanthuriformes OR "brotula barbata" OR "common ling" OR "common lings" OR "common roaches" OR cottonrat OR cottonrats OR douroucoulis OR dromaiidae OR fitches OR fitchew OR galaxiiformes OR laprine OR saimiriinae OR solenette OR tarsii OR "tompot blenny" OR "common dragonet" OR "common dragonets" OR "longspined bullhead" OR "longspined bullheads" OR monotremate OR monotremates OR pempheriformes OR perdicinae OR presbytini OR smegmamorpha OR "bighead gobies" OR "carangaria incertae sedis" OR coiidae OR "fivebeard rockling" OR foulmart OR founmart OR grasskeet OR "greater pipefishes" OR ibices OR millionfish OR muguliformes OR "norwegian topknot" OR peewit OR "red sea sailfin tang" OR rupicapras OR sheatfishes OR "tompot blennies" OR "twait shad" OR "yellow boxfishes"):ti,ab,kw
Article Filter	'article'/it
<b>Results</b>	<b>426</b>

### Full search strategy for Cochrane

IBS	MeSH descriptor: [Irritable Bowel Syndrome] explode all trees ("Irritable Bowel" or IBS or "Irritable Colon" or "Mucous Colitis" or "Spastic Colitis" or "Spastic Colon"):ti,ab,kw
Omics	MeSH descriptor: [Metabolomics] explode all trees MeSH descriptor: [Genomics] explode all trees MeSH descriptor: [Proteomics] explode all trees MeSH descriptor: [Transcriptome] explode all trees MeSH descriptor: [Genome] explode all trees MeSH descriptor: [Proteome] explode all trees MeSH descriptor: [Metabolome] explode all trees  ((omic* or multi-omic* or metabolomic* or transcriptomic* or genomic* or proteomic* or Transcriptome* or Genome* or Proteome* or Metabolome*)):ti,ab,kw
<b>Results</b>	<b>79</b>