Appendix A – Search methodology for the literature search

A.1. Method

The bibliographic databases listed in Table 1 were searched to identify relevant studies. The databases have been identified in line with the defined scope of the literature search.

Table 1: Bibliographic databases searched for relevant studies

Source of information	Platform
PubMed	PubMed
Web of Science Core Collection • Science Citation Index Expanded • Emerging Sources Citation Index	Web of Science

The search strings as run in the sources of information are available in Sections A.2.1 and A.2.2. They are structured to include the combination of TiO2 terms and concepts related to toxicity outcomes or types of studies and study design relevant to assess the questions of interest.

A wide range of search terms are used to cover possible synonyms, related terms, and variations for each concept. Search terms were selected based on previous searches, interaction with EFSA experts and staff, and using text mining tools such as PubMed Pubreminer[1] and Voyant[2] that were used with a set of articles referenced in previous EFSA opinions (EFSA ANS Panel 2016, EFSA FAF Panel, 2019).

The searches are limited to documents published in the English language from 2015 onwards. Limits to remove editorial material and letters from the results have been applied.

While testing the search strategies and reviewing the results retrieved to assess them, it was noticed that there was a high number of publications related to the use of TiO_2 as a catalyst or photocatalyst along with other uses not relevant for the assessment. Vosviewer[3] was used to produce a network visualisation of the results based on the co-occurrence of keywords in the articles. The network illustrated a big number of articles referred to the previously mentioned uses that did not have relationship with possible relevant articles. Trying to maximise the precision of the search and minimise the risk of missing relevant studies, we introduced a search string to exclude papers with the following words in the title: "laser melting", cataly*, photocataly*, sunscreen*, "visible light", "visible lights, batteries, electric, electrode".

Searches were run on 26 February 2020: 4,463 documents were retrieved in PubMed and 8,786 in the Web of Science platform. The output of the searches, i.e. records retrieved from bibliographic databases was exported into an Endnote library (Clarivate Analytics). A total of 3,336 duplicate references were removed by a combination of automatic and semi-automatic detection of duplicates. A total of 9,913 references were imported into DistillerSR software for screening.

An update of the searches was run on 5 September 2020 and after that, monthly search alerts were set. All the results retrieved from the different updates were de-duplicated as

---

[1] https://hgserver2.amc.nl/cgi-bin/miner/miner2.cgi

[2] https://voyant-tools.org/

[3] https://www.vosviewer.com/

previously described, and a total of 1,938 references were uploaded in DistillerSR. The last update was run on 2 December 2020.

A.2. **Search strings**

A.2.1. PubMed (legacy PubMed platform)

Date of the search 26/2/2020

Search	Query	Items found
#28	Search #26 NOT #27	4,463
#27	Search ("editorial"[Publication Type]) OR "letter"[Publication Type]	1,580,430
#26	Search #24 NOT #25	4,473
#25	Search "laser melting"[ti] OR catalys*[ti] OR photocataly*[ti] OR sunscreen*[ti] OR "visible light"[ti] OR "visible lights"[ti] OR batteries[ti] OR electric[ti] OR electrode[ti]	111,579
#24	Search ((#23) AND ("2015"[Date - Publication] : "3000"[Date - Publication])) AND "english"[Language]	5,548
#23	Search #22 AND #1	12,886
#22	Search #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #15 OR #17 OR #19 OR #19 OR #20 OR #21	22,301,961
#21	Search "Creatinine"[Mesh] OR "Kidney"[Mesh] OR "Kidney Diseases"[Mesh] OR "Urinary Bladder"[Mesh] OR "Urinary Tract"[Mesh] OR Bladder*[tiab] OR Creatinine[tiab] OR Kidne*[tiab] OR nephropathy*[tiab] OR Nephrotox*[tiab] OR renal disease*[tiab] OR renal disorder*[tiab] OR renal injur*[tiab] OR Urinar*[tiab]	1,358,233
#20	Search "Clinical Study" [Publication Type] OR "Case Reports" [Publication Type] OR "Epidemiologic Studies"[Mesh] OR Case stud*[tiab] OR Case serie*[tiab] OR Case histor*[tiab] OR trial[tiab] OR trials[tiab] OR cohort[tiab] OR cohorts[tiab] OR "cross sectional"[tiab]	6,079,854
#19	Search "abnormalities" [Subheading] OR "Abortion, Spontaneous"[Mesh] OR "Congenital, Hereditary, and Neonatal Diseases and Abnormalities"[Mesh] OR "Congenital Abnormalities"[Mesh] OR "Embryonic Structures"[Mesh] OR "Fetus"[Mesh] OR "Genital Diseases, Female"[Mesh] OR "Genital Diseases, Male"[Mesh] OR "Maternal-Fetal Relations"[Mesh] OR "Pre-Eclampsia"[Mesh] OR "Pregnancy"[Mesh] OR "Pregnancy Complications"[Mesh:noexp] OR "Prenatal Injuries"[Mesh] OR "Prenatal Exposure Delayed Effects"[Mesh] OR "Reproduction"[Mesh:noexp] OR "Reproductive Physiological Phenomena"[Mesh] OR "Spermatozoa"[Mesh] OR "Spermatogenesis"[Mesh] OR "Sperm Count"[Mesh] OR "Teratogenesis"[Mesh] OR "Teratogens"[Mesh] OR "Teratogens" [Pharmacological Action] OR "Teratology"[Mesh] OR "Urogenital System"[Mesh] OR Abortion*[tiab] OR Abortiv*[tiab] OR Abnormalit*[tiab] OR Blood testis barrier*[tiab] OR Testis blood barrier*[tiab] OR Congeni*[tiab] OR Embryo*[tiab] OR Fetal[tiab] OR Foetal[tiab] OR Fertility[tiab] OR Fetotoxic*[tiab] OR Foetotoxic*[tiab] OR Fetus[tiab] OR Fetuses[tiab] OR Foetus [tiab] OR Foetuses[tiab] OR Genital disease*[tiab] OR Gestation*[tiab] OR "In utero"[tiab] OR Infertility[tiab] OR Malformation[tiab] OR Miscarriage[tiab] OR Ovary[tiab] OR Ovari*[tiab] OR "pre eclampsia"[tiab] OR preeclampsia[tiab] OR Pregnan*[tiab] OR Prenatal disorder*[tiab] OR Prenatal exposure*[tiab] OR Prenatal structure*[tiab] OR Perinatal[tiab] OR Postnatal[tiab] OR Reproducti*[tiab] OR Reprotox*[tiab] OR Sterility[tiab] OR Sperm[tiab] OR sperma*[tiab] OR Teratogen*[tiab] OR Testis[tiab] OR Testicle*[tiab] OR Testicular*[tiab] OR Urogenital disease*[tiab]	4,707,239
#18	Search "Toxic Actions"[Mesh] OR "toxicity" [Subheading] OR "Toxicity Tests"[Mesh] OR "Toxicological Phenomena"[Mesh] OR "Toxicology"[Mesh] OR "dose response"[tiab] OR "dose responses"[tiab] OR "dose effect"[tiab] OR "dose effects"[tiab] OR Hypertoxic*[tiab] OR intox*[tiab] OR lethal*[tiab] OR LD50[tiab] OR LD90 [tiab] OR LD95[tiab] OR "No Observed Adverse Effect Level"[tiab] OR "No Observed Adverse Effect Levels"[tiab] OR "No Observed Effect Level" [tiab] OR "No Observed Effect Levels"[tiab] OR "No Observable Adverse Effect Level"[tiab] OR "No Observable Adverse Effect Levels"[tiab] OR "No Observable Effect Level"[tiab] OR "No Observable Effect Levels"[tiab] OR	1,795,765

	NOAEL[tiab] OR NOAELs[tiab] OR NOEL[tiab] OR NOELs[tiab] OR Toxic*[tiab] OR toxif*[tiab]	
#17	Search "Neurotoxins"[Mesh] OR "Nervous System Diseases"[Mesh] OR "Brain"[Mesh] OR "Neuroanatomy"[Mesh] OR "Nervous System"[Mesh] OR "Nervous System Diseases"[Mesh] OR "Neuropathology"[Mesh] OR "Neurologic Manifestations"[Mesh] OR "Neurotoxicity Syndromes"[Mesh] OR "Neurologic Manifestations"[Mesh] OR Brain[tiab] OR Brains[tiab] OR Cerebellum[tiab] OR Cortex [tiab] OR Hippocamp*[tiab] OR Neurobehav*[tiab] OR neurologic disease*[tiab] OR neurologic disorder*[tiab] OR neurologic dysfunction*[tiab] OR neurologic manifestation*[tiab] OR nervous disease*[tiab] OR nervous disorder*[tiab] OR nervous dysfunction*[tiab] OR nervous manifestation*[tiab] OR nervous system*[tiab] OR Neuroanatom*[tiab] OR neurocognit*[tiab] OR neurolog*[tiab] OR neuropath*[tiab] OR Neurotoxi*[tiab]	4,561,838
#16	Search "Inflammation"[Mesh:noexp] OR "Systemic Inflammatory Response Syndrome"[Mesh] OR Inflammat*[tiab] OR microinflammat*[tiab] OR Neuroinflammat*[tiab] OR Proinflammat*[tiab]	1,062,628
#15	Search "In Vitro Techniques"[Mesh] OR "Caco-2 Cells"[Mesh] OR "Lysosomes"[Mesh] OR "Hypoxanthine Phosphoribosyltransferase"[Mesh] OR "Autopsy"[Mesh] OR "Micronucleus Tests"[Mesh] OR "Pathology"[Mesh] OR Autops*[tiab] OR histopath*[tiab] OR "in vivo"[tiab] OR "in vitro"[tiab] OR GALT[tiab] OR Caco 2 cell*[tiab] OR Colonic Epithelial Cell*[tiab] OR Colorectal epithelial cell*[tiab] OR Comet assay*[tiab] OR HPRT[tiab] OR "Hypoxanthine Phosphoribosyltransferase"[tiab] OR "hypoxanthin phosphoribosyl transferase"[tiab] OR Lysosom*[tiab] OR "M cell"[tiab] OR "M cells"[tiab] OR "Microfold cell"[tiab] OR "Microfold cells"[tiab] OR Micronucleus assay*[tiab] OR Micronucleus test*[tiab] OR "read across"[tiab] OR SCGE assay*[tiab] OR single-cell gel electrophoresis assay*[tiab] OR "xanthine guanine phosphoribosyl transferase"[tiab] OR "xanthine guanine phosphoribosyltransferase"[tiab] OR xprt[tiab]	2,502,865
#14	Search "Computer Simulation"[Mesh] OR "Quantitative Structure-Activity Relationship"[Mesh] Or "in silico"[tiab] OR Computer based simulation*[tiab] OR Computational based simulation*[tiab] OR Computer model*[tiab] OR Computational model*[tiab] OR Computer simulation*[tiab] OR Computational simulation*[tiab] OR Quantitative Structure Activity Relation*[tiab] OR QSAR[tiab]	307375
#13	Search "Allergy and Immunology"[Mesh] OR "Cell Survival"[Mesh] OR "Cytotoxins"[Mesh] OR "Endocrine disruptors"[Mesh] OR "Hormones"[Mesh] OR "Hypersensitivity"[Mesh] OR "Immunotoxins"[Mesh] OR "Lymph Nodes"[Mesh] OR "Lymphoid tissue"[Mesh] OR "Macrophages"[Mesh] OR "Spleen"[Mesh] OR "Thymus Gland"[Mesh] OR allerg*[tiab] OR Cell impairment*[tiab] OR Cell toxicity[tiab] OR Cell prolifer*[tiab] OR Cell survival[tiab] OR cytotox*[tiab] OR Endocrine disruptor*[tiab] OR Hormon*[tiab] OR Hypersensitiv*[tiab] OR immunol*[tiab] OR Immunotox*[tiab] OR Immune system[tiab] OR Immunotoxic*[tiab] OR Lymph node*[tiab] OR Lymphatic node*[tiab] OR Lymphoid tissue*[tiab] OR Lymphatic tissue* [tiab] OR Macrophage*[tiab] OR Peyer's patch*[tiab] OR Peyer patch*[tiab] OR sensitisation[tiab] OR sensitization[tiab] OR Spleen*[tiab] OR Thymic[tiab] OR Thymus[tiab]	3,427,622
#12	Search "Body Size"[Mesh] OR "Body Weight Changes"[Mesh:noexp] OR "Weight Loss"[Mesh] OR "Obesity"[Mesh] OR adipos* OR body size*[tiab] OR body weight*[tiab] OR bodysize*[tiab] OR bodyweigh*[tiab] OR fat [tiab] OR fatty [tiab] OR lipotoxic*[tiab] OR obesity[tiab] OR weight change* [tiab] OR weight gain*[tiab] OR weight loss* [tiab] OR "weight reduction"[tiab]	1,193,845
#11	Search "Aneugens"[Mesh] OR "Aneuploidy"[Mesh] OR "apoptosis"[Mesh] OR "Chromatids"[Mesh] OR "Chromosomes"[Mesh] OR "DNA Damage"[Mesh] OR "DNA Repair"[Mesh] OR "Mutagens" [Pharmacological Action] OR "Mutagens"[Mesh] OR "Mutagenesis"[Mesh] OR "Oxidative Stress"[Mesh] OR Aneugen*[tiab] OR Aneuploid*[tiab] OR Chromatid*[tiab] OR Chromosome*[tiab] OR Clastogen*[tiab] OR "DNA binding"[tiab] OR DNA fragmentation*[tiab] OR DNA damage*[tiab] OR "DNA lesion"[tiab] OR "DNA lesions"[tiab] OR "DNA repair" [tiab] OR genotox*[tiab] OR mutagen*[tiab] OR Mutat*[tiab] OR oxidative stress*[tiab]	1,838,186
#10	Search "Digestion"[Mesh] OR "Digestive System"[Mesh] OR "Chemical and	3,522,279

	Drug Induced Liver Injury"[Mesh] OR "Gastrointestinal Absorption"[Mesh] OR "Gastrointestinal Diseases"[Mesh] OR "Gastrointestinal Microbiome"[Mesh] OR "Gastrointestinal Tract"[Mesh] OR "Liver"[Mesh] OR "Liver Diseases"[Mesh] OR "Pancreas"[Mesh] OR colon[tiab] OR colonic[tiab] OR Crohn[tiab] OR Crohns[tiab] OR "Digestive tract"[tiab] OR Epithel*[tiab] OR Gastrointestinal*[tiab] OR "GI Tract"[tiab] OR Gut[tiab] OR Hepati*[tiab] OR Hepatoc*[tiab] OR Hepatot*[tiab] OR Intestin*[tiab] OR Liver[tiab] OR Microbiom*[tiab] OR Mouth[tiab] OR pancreas[tiab] OR pancreatic[tiab] OR Stomach*[tiab]	
#9	Search "Growth and Development"[Mesh] OR "Attention"[Mesh] OR "Behavior"[Mesh:noExp] OR "Behavior, Animal"[Mesh] OR "Behavioral Symptoms"[Mesh] OR "Cognition"[Mesh] OR "Cognition Disorders"[Mesh] OR "Cognitive Dysfunction"[Mesh] OR "Depression" OR "Developmental Biology"[Mesh] OR "Embryonic and Fetal Development"[Mesh] OR "Executive Function"[Mesh] OR "Human development"[Mesh:noExp] "Intelligence"[Mesh:NoExp] OR "Learning"[Mesh] OR "Memory"[Mesh] OR "Motor Activity"[Mesh] OR "Motor Skills"[Mesh] "Morphogenesis"[Mesh] OR "Neuropathology"[Mesh] OR "Neurocognitive Disorders"[Mesh] OR "Neuropsychological Tests"[Mesh] OR "Psychomotor Disorders"[Mesh] OR "Psychomotor Performance"[Mesh] OR (Attent*[tiab] AND (deficit[tiab] OR disorder*[tiab] OR function*[tiab])) OR attention[ti] OR behavioural[tiab] OR behavioural[tiab] OR ((Behaviour*[tiab] OR Behavior*[tiab]) AND (animal*[tiab] OR human*[tiab] OR pup[tiab] OR pups[tiab] OR litter[tiab] OR litters[tiab] OR child*[tiab] OR adult*[tiab])) OR Cognition*[tiab] OR Cognitiv*[tiab] OR Comprenhensi*[tiab] OR Depressi*[tiab] OR DNT[tiab] OR Developmental[tiab] OR (development*[tiab] AND (animal*[tiab] OR human*[tiab] OR pup[tiab] OR pups[tiab] OR litter[tiab] OR litters[tiab] OR child*[tiab] OR newborn*[tiab] OR adult*[tiab] OR organ[tiab] OR organs[tiab])) OR Embryo*[tiab] OR Executive control[tiab] OR Executive function*[tiab] OR Executive dysfunction*[tiab] OR Executive impair*[tiab] OR intelligence[tiab] OR Learning[tiab] OR Locomotor*[tiab] OR memor*[tiab] OR metamemory*[tiab] OR Mnemonic[tiab] OR Mood[tiab] OR Motor*[tiab] OR Morphogen*[tiab] OR Morphometr*[tiab] OR Metacognit*[tiab] OR Ontogen*[tiab] OR Organogene*[tiab] OR Neurocognitive*[tiab] OR Neuropsycholog*[tiab] OR neurodevelopment*[tiab] OR placental barrier*[tiab] OR psychochemic*[tiab] OR "Psycho chemical"[tiab] OR "psycho chemic"[tiab] OR remember*[tiab]	3,282,293
#8	Search "Blood Pressure"[Mesh] OR "Cardiovascular diseases"[Mesh] OR "Cardiotoxicity"[Mesh] OR "Cardiotoxins"[Mesh] Included in toxic agents OR "Cholesterol"[Mesh] OR "Heart"[Mesh] OR "Heart diseases"[Mesh] OR "Triglycerides"[Mesh] OR "Vasodilation"[Mesh] OR Atherosclero*[tiab] OR "Blood pressure"[tiab] OR Cardiotox*[tiab] OR Cardiac[tiab] OR Cardiovascul*[tiab] OR Cholesterol*[tiab] OR Heart[tiab] OR Triglyceride*[tiab] OR Vascular[tiab] OR Vasodilatat*[tiab]	2,954,010
#7	Search "Carcinogens"[Mesh:noExp] OR "Carcinogens" [Pharmacological Action] OR "Carcinogenicity Tests"[Mesh] OR "Biomarkers, Tumor"[Mesh] OR "Lymphoma"[Mesh] OR "Neoplasms"[Mesh] OR "Cell Growth Processes"[Mesh] OR adenocarcinom*[tiab] OR Carcinogen*[tiab] OR Cancer* [tiab] OR Carcinom*[tiab] OR cell grow*[tiab] OR Cocarcinogen*[tiab] OR lymphom* [tiab] OR Neoplas*[tiab] OR Tumor[tiab] OR Tumors[tiab] OR Tumori*[tiab] OR Tumour[tiab] OR Tumours[tiab] OR Tumouri*[tiab]	4,565,088
#6	Search (("blood"[Mesh] OR blood[tiab] OR hematologic*[tiab] OR haematologic*[tiab]) AND change*[tiab])	404,856
#5	Search "Biomarkers"[Mesh] OR biomarker*[tiab] OR Biological Marker*[tiab] OR Biologic Marker*[tiab] OR clinical Marker*[tiab] OR Immunologic Marker*[tiab] OR Immune Marker*[tiab] OR viral Marker*[tiab] OR serum Marker*[tiab] OR Surrogate Endpoint*[tiab] OR Surrogate Marker*[tiab] OR biochemical Marker*[tiab] OR laboratory Marker*[tiab]	899,115
#4	Search "Adverse Outcome Pathways"[Mesh] OR adverse outcome pathway*[tiab] OR molecular initiating event*[tiab]	710
#3	Search "adverse effects" [Subheading] OR "chemically induced" [Subheading] OR "Death"[Mesh] OR "Mortality"[Mesh] OR "drug effects" [Subheading] OR "Chemically-Induced Disorders"[Mesh:noexp] OR "Drug-Related Side Effects and Adverse Reactions"[Mesh:noexp] OR "Long Term Adverse Effects"[Mesh]	6,156,530

	OR "Substance-Related Disorders"[Mesh:noexp] OR "adverse effect"[tiab] OR "adverse effects"[tiab] OR "Adverse health effect"[tiab] OR "adverse health effects"[tiab] OR adverse reaction*[tiab] OR death*[tiab] OR dead[tiab] OR mortality[tiab]	
#2	Search "Administration, Oral"[Mesh] OR "Diet"[Mesh] OR "Pharmacokinetics"[Mesh] OR "Toxicokinetics"[Mesh] OR "Food additives"[Mesh:noexp] OR "Food Coloring Agents"[Mesh] OR ADME[tiab] OR Accumulat*[tiab] OR Bioavailab*[tiab] OR Bioconcentr*[tiab] OR Clearance*[tiab] OR Diet[tiab] OR Diets[tiab] OR Dieta*[tiab] OR Distribut*[tiab] OR Eliminat*[tiab] OR Excret*[tiab] OR Food additive*[tiab] OR Food color*[tiab] OR Food colour*[tiab] OR Gavage[tiab] OR Metabol*[tiab] OR (Oral[tiab] AND intak*[tiab]) OR Pharmacodynamic*[tiab] OR Pharmacokinet*[tiab] OR Toxicokinetic*[tiab] OR "Titanium/administration and dosage"[Mesh] OR "Titanium/analysis"[Mesh] OR "Titanium/metabolism"[Mesh] OR "Titanium/pharmacokinetics"[Mesh]	3,938,273
#1	Search "titanium dioxide" [Supplementary Concept] OR Titanium dioxide*[tiab] OR TiO2[tiab] OR "TiO 2"[tiab] OR E171[tiab] OR "E 171"[tiab] OR Anatase[tiab] OR Rutile[tiab] OR Nanoanatase[tiab] OR Nanotitanium[tiab] OR "13463 67 7"[tiab] OR "1317 70 0"[tiab] OR "1317 80 2"[tiab]	31,366

A.2.2. Web of Science. Science Citation Index and Emerging Source Citation Index

Date of the search: 26/2/2020

Search	Query	Items found
# 26	(#24) *AND* LANGUAGE: (English) Refined by: DOCUMENT TYPES: (ARTICLE OR BOOK CHAPTER OR REPRINT OR REVIEW OR CORRECTION OR RETRACTED PUBLICATION OR PROCEEDINGS PAPER OR DATA PAPER OR NEWS ITEM OR RETRACTION OR EARLY ACCESS) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	8,786
# 25	(#24) *AND* LANGUAGE: (English) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	8,867
# 24	#22 NOT #23 *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	9,033
# 23	TI=("Laser melting" OR catalys* OR photocataly* OR sunscreen* OR "visible light" OR "visible lights" OR "batteries" OR electric OR electrode OR "electrodes" OR "ag T*") *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	204,298
# 22	#21 AND #1 *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	11,940
# 21	#20 OR #19 OR #18 OR #17 OR #16 OR #15 OR #14 OR #13 OR #12 OR #11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	5,599,725
# 20	TI=(ADME OR Accumulat* OR bioavailab* OR bioaccumulat* OR clearance* OR diet OR diets OR dieta* OR distribut* OR eliminat* OR excret* OR ((food OR foods) AND (additive* OR color* OR colour*)) OR gavage OR metabol* OR (oral AND intak*) OR pharmacodynamic* OR pharmacokinet* OR toxicokinetic*) OR AB=(ADME OR Accumulat* OR bioavailab* OR bioaccumulat* OR clearance* OR diet OR diets OR dieta* OR distribut* OR eliminat* OR excret* OR ((food OR foods) NEAR/3 (additive* OR color* OR colour*)) OR gavage OR metabol* OR (oral NEAR/3 intak*) OR pharmacodynamic* OR pharmacokinet* OR toxicokinetic*) OR AK=(ADME OR Accumulat* OR bioavailab* OR bioaccumulat* OR clearance* OR diet OR diets OR dieta* OR distribut* OR eliminat* OR excret* OR ((food OR foods) AND (additive* OR color* OR colour*)) OR gavage OR metabol* OR (oral AND intak*) OR pharmacodynamic* OR pharmacokinet* OR toxicokinetic*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	1,559,940
# 19	TI=(artherosclero* OR (blood AND pressure) OR cardiotox* OR cardiac OR cardiovascul* OR cholesterol* OR heart OR triglyceride* OR vascular OR	587,351

	vasodilatat*) OR AB=(artherosclero* OR (blood NEAR/3 pressure) OR cardiotox* OR cardiac OR cardiovascul* OR cholesterol* OR heart OR triglyceride* OR vascular OR vasodilatat*) OR AK=(artherosclero* OR (blood NEAR/3 pressure) OR cardiotox* OR cardiac OR cardiovascul* OR cholesterol* OR heart OR triglyceride* OR vascular OR vasodilatat*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	
# 18	TI=(biomarker* OR "surrogate endpoint*" OR ((Biochemical OR Biological OR Clinical OR Immune OR Immunologic OR biomarker OR laboratory OR serum OR viral) NEAR/3 (marker OR markers))OR ((case OR cases) AND (stud* OR serie* OR histor*)) OR trial OR trials OR cohort OR cohorts OR "cross sectional") OR AB=(biomarker* OR "surrogate endpoint*" OR ((case OR cases) NEAR/3(stud* OR serie* OR histor*)) OR trial OR trials OR cohort OR cohorts OR "cross sectional" OR ((Biochemical OR Biological OR Clinical OR Immune OR Immunologic OR biomarker OR laboratory OR serum OR viral) NEAR/3 (marker OR markers))) OR AK=(biomarker* OR "surrogate endpoint*" OR ((case OR cases) NEAR/3 (stud* OR serie* OR histor*)) OR trial OR trials OR cohort OR cohorts OR "cross sectional" OR ((Biochemical OR Biological OR Clinical OR Immune OR Immunologic OR biomarker OR laboratory OR serum OR viral) NEAR/3 (marker OR markers))) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	1,142,227
# 17	TI=(Bladder* OR Creatinine OR Kidne* OR Nephropat* OR Nephrotox* OR (renal AND (disease* OR diorder* OR injur*)) OR Urinar*) OR AB=(Bladder* OR Creatinine OR Kidne* OR Nephropat* OR Nephrotox* OR (renal AND (disease* OR diorder* OR injur*)) OR Urinar*) OR AK=(Bladder* OR Creatinine OR Kidne* OR Nephropat* OR Nephrotox* OR Nephrotox* OR (renal AND (disease* OR diorder* OR injur*)) OR Urinar*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	245,650
# 16	TI=(Abortion* OR Abortiv* OR Abnormalit* OR ("Blood testis" AND barrier*) OR ("Testis blood" AND barrier*) OR Congeni* OR Embryo* OR Fetal OR Foetal OR Fertility OR Fetotoxic* OR Foetotoxic* OR Fetus OR Fetuses OR Foetus OR Foetuses OR Genital disease* OR Gestation* OR "In utero" OR Infertility OR Malformation OR Miscarriage OR Ovary OR Ovari* OR "pre eclampsia" OR preeclampsia OR Pregnan* OR "Prenatal disorder*" OR "Prenatal exposure*" OR "Prenatal structure*" OR Perinatal OR Postnatal OR Reproducti* OR Reprotox* OR Sterility OR Sperm* OR Teratogen* OR Testis OR Testicle* OR Testicular* OR Urogenital disease*) OR AB=(Abortion* OR Abortiv* OR Abnormalit* OR (Blood NEAR/3 barrier*) OR Congeni* OR Embryo* OR Fetal OR Foetal OR Fertility OR Fetotoxic* OR Foetotoxic* OR Fetus OR Fetuses OR Foetus OR Foetuses OR Genital disease* OR Gestation* OR "In utero" OR Infertility OR Malformation OR Miscarriage OR Ovary OR Ovari* OR "pre eclampsia" OR preeclampsia OR Pregnan* OR "Prenatal disorder*" OR "Prenatal exposure*" OR "Prenatal structure*" OR Perinatal OR Postnatal OR Reproducti* OR Reprotox* OR Sterility OR Sperm* OR Teratogen* OR Testis OR Testicle* OR Testicular* OR Urogenital disease*) OR AK=(Abortion* OR Abortiv* OR Abnormalit* OR (("Blood testis" OR "Testis blood") AND barrier*) OR Congeni* OR Embryo* OR Fetal OR Foetal OR Fertility OR Fetotoxic* OR Foetotoxic* OR Fetus OR Fetuses OR Foetus OR Foetuses OR Genital disease* OR Gestation* OR "In utero" OR Infertility OR Malformation OR Miscarriage OR Ovary OR Ovari* OR "pre eclampsia" OR preeclampsia OR Pregnan* OR "Prenatal disorder*" OR "Prenatal exposure*" OR "Prenatal structure*" OR Perinatal OR Postnatal OR Reproducti* OR Reprotox* OR Sterility OR Sperm* OR Teratogen* OR Testis OR Testicle* OR Testicular* OR Urogenital disease*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	553,583
# 15	TI=(Brain OR Brains OR Cerebellum OR Cortex OR Hippocamp* OR Neurobehav* OR ((neurologic OR nervous) AND (disease* OR disorder* OR dysfunction* OR manifestation*)) OR "nervous system*" OR Neuroanatom* OR neurocognit* OR neurolog* OR neuropath* OR Neurotoxi*) OR AB=(Brain OR Brains OR Cerebellum OR Cortex OR Hippocamp* OR Neurobehav* OR ((neurologic OR nervous) NEAR/3 (disease* OR disorder* OR dysfunction* OR manifestation*)) OR "nervous system*" OR Neuroanatom* OR neurocognit* OR neurolog* OR neuropath* OR Neurotoxi*) OR AK=(Brain OR Brains OR Cerebellum OR Cortex OR Hippocamp* OR Neurobehav* OR ((neurologic OR nervous) NEAR/3 (disease* OR disorder* OR dysfunction* OR manifestation*))	463,825

	OR "nervous system*" OR Neuroanatom* OR neurocognit* OR neurolog* OR neuropath* OR Neurotoxi*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	
# 14	TI=(Inflammat* OR microinflammat* OR Neuroinflammat* OR Proinflammat*) OR AB=(Inflammat* OR microinflammat* OR Neuroinflammat* OR Proinflammat*) OR AK=(Inflammat* OR microinflammat* OR Neuroinflammat* OR Proinflammat*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	342,056
# 13	TI=(allerg* OR (Cell AND (impairment* OR prolifer* OR survival)) OR cytotox* OR "Endocrine disruptor*" OR Hormon* OR Hypersensitiv* OR immunol* OR Immunotox* OR "Immune system" OR Immunotoxic* OR "Lymph node*" OR "Lymphatic node*" OR "Lymphoid tissue*" OR "Lymphatic tissue*" OR Macrophage* OR "Peyer's patch*" OR Peyer patch* OR "sensitisation" OR "sensitization" OR Spleen* OR Thymic OR Thymus) OR AB=(allerg* OR (Cell AND (impairment* OR prolifer* OR survival)) OR cytotox* OR "Endocrine disruptor*" OR Hormon* OR Hypersensitiv* OR immunol* OR Immunotox* OR "Immune system" OR Immunotoxic* OR "Lymph node*" OR "Lymphatic node*" OR "Lymphoid tissue*" OR "Lymphatic tissue*" OR Macrophage* OR "Peyer's patch*" OR Peyer patch* OR Spleen* OR Thymic OR Thymus OR "sensitisation" OR "sensitization") OR AK=(allerg* OR (Cell AND (impairment* OR prolifer* OR survival)) OR cytotox* OR "Endocrine disruptor*" OR Hormon* OR Hypersensitiv* OR immunol* OR Immunotox* OR "Immune system" OR Immunotoxic* OR "Lymph node*" OR "Lymphatic node*" OR "Lymphoid tissue*" OR "Lymphatic tissue*" OR Macrophage* OR "Peyer's patch*" OR Peyer patch* OR "sensitisation" OR "sensitization" OR Spleen* OR Thymic OR Thymus) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	640,407
# 12	TI=(bodyweight* OR "body weight*" OR bodysize* OR "body size*" OR fat OR fatty OR lipotoxic* OR obesity OR (weight AND (change* OR gain* OR loss* OR reduction))) OR AB=(bodyweight* OR "body weight*" OR bodysize* OR "body size*" OR fat OR fatty OR lipotoxic* OR obesity OR (weight NEAR/3 (change* OR gain* OR loss* OR reduction))) OR AK=(bodyweight* OR "body weight*" OR bodysize* OR "body size*" OR fat OR fatty OR lipotoxic* OR obesity OR (weight AND (change* OR gain* OR loss* OR reduction))) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	333,747
# 11	TI=(Aneugen* OR Aneuploid* OR Chromatid* OR Chromosome* OR Clastogen* OR (DNA AND (binding OR fragmentation* OR damage* OR lesion OR lesions OR repair)) OR genotox* OR mutagen* OR Mutat* OR "oxidative stress*") OR AB=(Aneugen* OR Aneuploid* OR Chromatid* OR Chromosome* OR Clastogen* OR (DNA NEAR/3 (binding OR fragmentation* OR damage* OR lesion OR lesions OR repair)) OR genotox* OR mutagen* OR Mutat* OR "oxidative stress*") OR AK=(Aneugen* OR Aneuploid* OR Chromatid* OR Chromosome* OR Clastogen* OR (DNA AND (binding OR fragmentation* OR damage* OR lesion OR lesions OR repair)) OR genotox* OR mutagen* OR Mutat* OR "oxidative stress*") *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	381,592
# 10	TI=(Attention OR "behavioural" OR "behavioral" OR ((Behaviour* OR Behavior*) AND (animal* OR human* OR pup OR litter OR child* OR adult*)) OR Cognition* OR Cognitiv* OR Comprenhensi* OR Depressi* OR DNT OR "developmental" OR (Development* AND (animal* OR human* OR pup OR litter OR child* OR adult* OR organ OR organs)) OR Embryo* OR (Executive AND (control OR function* OR dysfunction* OR impair*)) OR intelligence OR Learning OR Locomotor* OR (memor* AND (disorder* OR dysfunction* OR impair*)) OR metamemory* OR Mnemonic OR Mood OR Motor* OR Morphogen* OR Morphometr* OR Metacognit* OR Ontogen* OR Organogene* OR Neurocognitive* OR Neuropsycholog* OR neurodevelopment* OR placental barrier* OR psychochemic* OR "Psycho chemic*" OR remember*) OR AB=("behavioural" OR "behavioral" OR ((Behaviour* OR Behavior*) NEAR (animal* OR human* OR pup OR litter OR child* OR adult*)) OR Cognition* OR Cognitiv* OR Comprenhensi* OR Depressi* OR DNT OR (Development* NEAR/3 (animal* OR human* OR pup OR litter OR child* OR adult* OR organ OR organs)) OR Embryo* OR (Executive NEAR/3 (control OR function* OR dysfunction* OR impair*)) OR intelligence OR Learning OR Locomotor* OR (memor* AND (disorder* OR dysfunction* OR impair*)) OR metamemory* OR	907,454

	Mnemonic OR Mood OR Motor* OR Morphogen* OR Morphometr* OR Metacognit* OR Ontogen* OR Organogene* OR Neurocognitive* OR Neuropsycholog* OR neurodevelopment* OR placental barrier* OR psychochemic* OR "Psycho chemic*" OR remember*) OR AK=("behavioural" OR "behavioral" OR ((Behaviour* OR Behavior*) AND (animal* OR human* OR pup OR litter OR child* OR adult*)) OR Cognition* OR Cognitiv* OR Comprenhensi* OR Depressi* OR DNT OR (Development* NEAR/3 (animal* OR human* OR pup OR litter OR child* OR adult* OR organ OR organs)) OR Embryo* OR (Executive NEAR/3 (control OR function* OR dysfunction* OR impair*)) OR intelligence OR Learning OR Locomotor* OR (memor* AND (disorder* OR dysfunction* OR impair*)) OR metamemory* OR Mnemonic OR Mood OR Motor* OR Morphogen* OR Morphometr* OR Metacognit* OR Ontogen* OR Organogene* OR Neurocognitive* OR Neuropsycholog* OR neurodevelopment* OR placental barrier* OR psychochemic* OR "Psycho chemic*" OR remember*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	
# 9	TI=((Crohn* NEAR/3 disease*) OR "Digestive tract" OR Epithel* OR Gastrointestinal* OR "GI Tract" OR Gut OR Hepati* OR Hepato* OR Intestin* OR Liver OR Microbiom* OR Mouth OR pancreas OR pancreatic OR Stomach*) OR AB=((Crohn* NEAR/3 disease*) OR "Digestive tract" OR Epithel* OR Gastrointestinal* OR "GI Tract" OR Gut OR Hepati* OR Hepato* OR Intestin* OR Liver OR Microbiom* OR Mouth OR pancreas OR pancreatic OR Stomach*) OR AK=((Crohn* NEAR/3 disease*) OR "Digestive tract" OR Epithel* OR Gastrointestinal* OR "GI Tract" OR Gut OR Hepati* OR Hepato* OR Intestin* OR Liver OR Microbiom* OR Mouth OR pancreas OR pancreatic OR Stomach*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	620,494
# 8	TI=(Adenocarcinom* OR Carcinogen* OR Cancer* OR "Cell grow*" OR Carcinom* OR Cocarcinogen* OR lymphom* OR Neoplas* OR Tumor OR Tumors OR Tumori* OR Tumour OR Tumours OR Tumouri*) OR AB=(Adenocarcinom* OR Carcinogen* OR Cancer* OR Carcinom* OR "Cell grow* OR Cocarcinogen* OR lymphom* OR Neoplas* OR Tumor OR Tumors OR Tumori* OR Tumour OR Tumours OR Tumouri*) OR AK=(Adenocarcinom* OR Carcinogen* OR Cancer* OR Carcinom* OR "Cell grow* OR Cocarcinogen* OR lymphom* OR Neoplas* OR Tumor OR Tumors OR Tumori* OR Tumour OR Tumours OR Tumouri*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	1,041,726
# 7	TI=((blood OR hematologic* OR haematologic*) NEAR/3 change*) OR AB=((blood OR hematologic* OR haematologic*) NEAR/3 change*) OR AK=((blood OR hematologic* OR haematologic*) NEAR/3 change*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	9,241
# 6	TI=((adverse AND (effect OR effects OR reaction*)) OR death* OR mortality) OR AB=((adverse NEAR/3 (effect OR effects OR reaction*)) OR death* OR mortality) OR AK=((adverse NEAR/3 (effect OR effects OR reaction*)) OR death* OR mortality) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	512,616
# 5	TI=("adverse outcome pathway*" OR (molecular AND "initiating event*")) OR AB=("adverse outcome pathway*" OR (molecular NEAR/3 "initiating event*")) OR AK=("adverse outcome pathway*" OR (molecular NEAR/3 "initiating event*")) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	614
# 4	TI=("in silico" OR (Comput* NEAR/3 (simulation* OR model*)) OR "Quantitative Structure Activity Relation*" OR "QSAR") OR AB=("in silico" OR (Comput* NEAR/3 (simulation* OR model*)) OR "Quantitative Structure Activity Relation*" OR "QSAR") OR AK=("in silico" OR (Comput* NEAR/3 (simulation* OR model*)) OR "Quantitative Structure Activity Relation*" OR "QSAR") *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	103,738
# 3	TI=(Autops* OR histopath* OR "in vivo" OR "in vitro" OR GALT OR Caco 2 cell* OR "Colonic Epithelial Cell*" OR "Colorectal epithelial cell*" OR "Comet assay*" OR HPRT OR "Hypoxanthine Phosphoribosyltransferase" OR "hypoxanthin phosphoribosyl transferase" OR Lysosom* OR "M cell" OR "M cells" OR "Microfold cell" OR "Microfold cells" OR "Micronucleus assay*" OR " Micronucleus test*" OR "read across" OR "SCGE assay*" OR "single-cell gel electrophoresis assay*" OR "xanthine guanine phosphoribosyl transferase" OR	519,150

	"xanthine guanine phosphoribosyltransferase" OR xprt) OR AB=(Autops* OR histopath* OR "in vivo" OR "in vitro" OR GALT OR "Caco 2 cell*" OR "Colonic Epithelial Cell*" OR "Colorectal epithelial cell*" OR "Comet assay*" OR HPRT OR "Hypoxanthine Phosphoribosyltransferase" OR "hypoxanthin phosphoribosyl transferase" OR Lysosom* OR "M cell" OR "M cells" OR "Microfold cell" OR "Microfold cells" OR "Micronucleus assay*" OR " Micronucleus test*" OR "read across" OR "SCGE assay*" OR "single-cell gel electrophoresis assay*" OR "xanthine guanine phosphoribosyl transferase" OR "xanthine guanine phosphoribosyltransferase" OR xprt) OR AK=(Autops* OR histopath* OR "in vivo" OR "in vitro" OR GALT OR Caco 2 cell* OR "Colonic Epithelial Cell*" OR "Colorectal epithelial cell*" OR "Comet assay*" OR HPRT OR "Hypoxanthine Phosphoribosyltransferase" OR "hypoxanthin phosphoribosyl transferase" OR Lysosom* OR "M cell" OR "M cells" OR "Microfold cell" OR "Microfold cells" OR "Micronucleus assay*" OR " Micronucleus test*" OR "read across" OR "SCGE assay*" OR "single-cell gel electrophoresis assay*" OR "xanthine guanine phosphoribosyl transferase" OR "xanthine guanine phosphoribosyltransferase" OR xprt) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	
# 2	TI=("dose response" OR "dose effect*" OR Hypertoxic* OR intox* OR lethal* OR LD50 OR LD90 OR LD95 OR "No Observed Adverse Effect Level" OR "No Observed Adverse Effect Levels" OR "No Observed Effect Level" OR "No Observed Effect Levels" OR "No Observable Adverse Effect Level" OR "No Observable Adverse Effect Levels" OR "No Observable Effect Level" OR "No Observable Effect Levels" OR NOAEL OR NOAELs OR NOEL OR NOELs OR Toxic* OR toxif*) OR AB=("dose response" OR "dose effect*" OR Hypertoxic* OR intox* OR lethal* OR LD50 OR LD90 OR LD95 OR "No Observed Adverse Effect Level" OR "No Observed Adverse Effect Levels" OR "No Observed Effect Level" OR "No Observed Effect Levels" OR "No Observable Adverse Effect Level" OR "No Observable Adverse Effect Levels" OR "No Observable Effect Level" OR "No Observable Effect Levels" OR NOAEL OR NOAELs OR NOEL OR NOELs OR Toxic* OR toxif*) OR AK=("dose response" OR "dose effect*" OR Hypertoxic* OR intox* OR lethal* OR LD50 OR LD90 OR LD95 OR "No Observed Adverse Effect Level" OR "No Observed Adverse Effect Levels" OR "No Observed Effect Level" OR "No Observed Effect Levels" OR "No Observable Adverse Effect Level" OR "No Observable Adverse Effect Levels" OR "No Observable Effect Level" OR "No Observable Effect Levels" OR NOAEL OR NOAELs OR NOEL OR NOELs OR Toxic* OR toxif*) *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	265,186
# 1	TI=("titanium dioxide" OR "Titanium dioxide*" OR TiO2 OR "TiO 2" OR E171 OR "E 171" OR Anatase OR Rutile OR Nanoanatase OR Nanotitanium OR "13463 67 7" OR "1317 70 0" OR "1317 80 2") OR AB=("titanium dioxide" OR "Titanium dioxide*" OR TiO2 OR "TiO 2" OR E171 OR "E 171" OR Anatase OR Rutile OR Nanoanatase OR Nanotitanium OR "13463 67 7" OR "1317 70 0" OR "1317 80 2") OR AK=("titanium dioxide" OR "Titanium dioxide*" OR TiO2 OR "TiO 2" OR E171 OR "E 171" OR Anatase OR Rutile OR Nanoanatase OR Nanotitanium OR "13463 67 7" OR "1317 70 0" OR "1317 80 2") *Indexes=SCI-EXPANDED, ESCI Timespan=2015-2020*	61,344