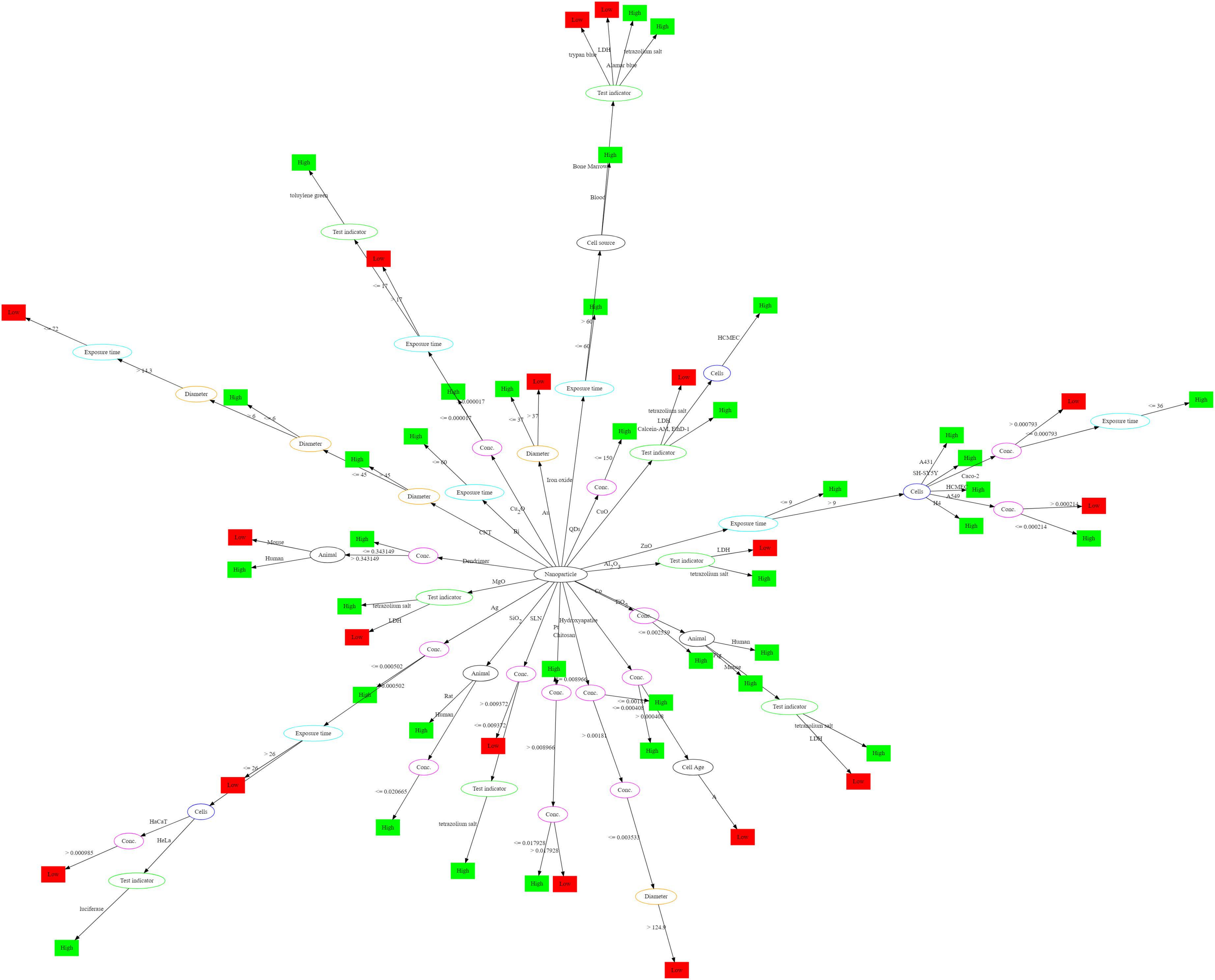
Nanoparticle
= CuO
= ZnO
= Iron oxide
= TiO2
= Co
= Bi
= Pt
= Hydroxyapatite
= Cu2O
= MgO
= Al2O3
= QDs
= SiO2
= Au
= Ag
= Dendrimer
= SLN
= CNT
= Chitosan
Test indicator
= tetrazolium salt
= LDH
= Calcein-AM, EthD-1
Cells
= HCMEC
High
Low
High
Exposure time
<= 9
> 9
High
Cells
= A549
= HCMEC
= SH-SY5Y
= H4
= A431
= Caco-2
Conc.
<= 0.000214
> 0.000214
High
Low
High
High
High
High
Conc.
<= 0.000793
> 0.000793
Exposure time
<= 36
High
Low
Exposure time
<= 60
> 60
High
Cell source
= Bone Marrow
= Blood
Test indicator
= tetrazolium salt
= LDH
= trypan blue
= Alamar blue
High
Low
Low
High
High
Animal
= Mouse
= Human
= Pig
Test indicator
= tetrazolium salt
= LDH
High
Low
High
High
Conc.
<= 0.002539
High
Exposure time
<= 60
High
Conc.
<= 0.008966
> 0.008966
High
Conc.
<= 0.017928
> 0.017928
High
Low
Conc.
<= 0.000408
> 0.000408
High
Cell Age
= A
Low
Conc.
<= 0.000017
> 0.000017
High
Exposure time
<= 17
> 17
Test indicator
= toluylene green
High
Low
Test indicator
= tetrazolium salt
= LDH
High
Low
Test indicator
= tetrazolium salt
= LDH
High
Low
Conc.
<= 150
High
Animal
= Human
= Rat
Conc.
<= 0.020665
High
High
Diameter
<= 37
> 37
High
Low
Conc.
<= 0.000502
> 0.000502
High
Exposure time
<= 26
> 26
Cells
= HeLa
= HaCaT
Test indicator
= luciferase
High
Conc.
> 0.000985
Low
Low
Conc.
<= 0.343149
> 0.343149
High
Animal
= Mouse
= Human
Low
High
Conc.
<= 0.009372
> 0.009372
Test indicator
= tetrazolium salt
High
Low
Diameter
<= 45
> 45
Diameter
<= 6
> 6
High
Diameter
> 14.3
Exposure time
<= 72
Low
High
Conc.
<= 0.00181
> 0.00181
High
Conc.
<= 0.003533
Diameter
> 124.9
Low


Nanoparticle
CNT
Bi
Cu_2O
Au
Iron oxide
QDs
CuO
ZnO
Al_2O_3
Co
TiO_2
Dendrimer
MgO
Ag
SiO_2
SLN
Pt
Hydroxyapatite
Chitosan
Diameter
<= 45
> 45
Diameter
> 6
<= 6
Diameter
> 14.3
Exposure time
<= 72
Low
High
Exposure time
<= 60
Conc.
<= 0.000017
> 0.000017
Exposure time
<= 17
> 17
Test indicator
toluylene green
Diameter
<= 37
> 37
Exposure time
<= 60
> 60
Cell source
Bone Marrow
Blood
Test indicator
trypan blue
LDH
Alamar blue
tetrazolium salt
Conc.
<= 150
Test indicator
tetrazolium salt
LDH
Calcein-AM, EthD-1
Cells
HCMEC
Exposure time
<= 9
> 9
Cells
A431
SH-SY5Y
Caco-2
HCMEC
A549
H4
Conc.
> 0.000793
<= 0.000793
Exposure time
<= 36
Conc.
> 0.000214
<= 0.000214
Test indicator
LDH
tetrazolium salt
Conc.
<= 0.002539
Animal
Human
Pig
Mouse
Test indicator
tetrazolium salt
LDH
Conc.
<= 0.343149
> 0.343149
Animal
Mouse
Human
Test indicator
tetrazolium salt
LDH
Conc.
<= 0.000502
> 0.000502
Exposure time
> 26
<= 26
Cells
HaCaT
HeLa
Conc.
> 0.000985
Test indicator
luciferase
Animal
Rat
Human
Conc.
<= 0.020665
Conc.
> 0.009372
<= 0.009372
Test indicator
tetrazolium salt
Conc.
<= 0.008966
> 0.008966
Conc.
<= 0.017928
> 0.017928
Conc.
<= 0.00181
> 0.00181
Conc.
<= 0.003533
Diameter
> 124.9
Conc.
<= 0.000408
> 0.000408
Cell Age
A

Nanoparticle
= CuO
= CuS
= ZnO
= Iron oxide
= TiO2
= Ti
= Cr
= Co
= MnO
= Bi
= Pt
= Hydroxyapatite
= Cu2O
= QDs
= SiO2
= Au
= Ag
= Eudragit RL
= Dendrimer
= PLGA
= Liposomes
= SLN
= CNT
= Carbon NP
= Chitosan
Test indicator
= Calcein AM, Ethidium homodimer-1
High
High
Conc.
<= 0.000448
> 0.000448
High
Cells
= A549
= SH-SY5Y
= H4
= Caco-2
Low
High
High
Low
Exposure time
<= 60
> 60
High
Cell organ tissue source
= Bone Marrow
= Blood
Biochemical metric
= cell metabolic activity
= cell membrane integrity
= LDH leakage
High
Low
Low
High
Biochemical metric
= cell metabolic activity
= lysosomal uptake
= LDH leakage
= ATP content
High
High
Low
High
High
High
High
High
Exposure time
<= 60
High
Conc.
<= 0.008966
> 0.008966
High
Conc.
<= 0.017928
> 0.017928
High
Low
Diameter
> 60
High
Conc.
<= 0.000016
> 0.000016
High
Exposure time
<= 17
> 17
Test
= NR
High
Low
Conc.
<= 150
High
Biochemical metric
= cell metabolic activity
= cell membrane integrity
= LDH leakage
= ATP content
Conc.
<= 26.489407
High
Conc.
<= 281.902101
High
Low
Conc.
<= 0.020665
High
Diameter
<= 37
> 37
High
Low
Conc.
High
Conc.
<= 0.000502
> 0.000502
High
Exposure time
<= 26
> 26
Cells
= HeLa
= HaCaT
Biochemical metric
= cell metabolic activity
= ATP content
Conc.
> 0.000918
Low
High
Conc.
> 0.000985
Low
Low
High
High
<= 0.343149
> 0.343149
High
Human Animal
= A
= H
Cells
= J774
Low
High
Conc.
> 0.009372
Low
Diameter
<= 6
High
Cell organ tissue source
= Brain
= Kidney
= Skin
High
Conc.
<= 0.027967
Diameter
<= 179.3
High
Conc.
<= 0.000097
High
Conc.
<= 0.00181
> 0.00181
High
Conc.
<= 0.003533
Diameter
> 124.9
Low