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Column Header Definitions	
Header	**Description/Notes**
Compound	Common Compound Name
Therapeutic C_{max} (µM)	Published human therapeutic Cmax
Negative Exposure (µM) Daston et al., 2014	Negative Exposure Level published in Daston et al., 2014
Positive Exposure (µM) Daston et al., 2014	Positive Exposure Level published in Daston et al., 2014
FDA Pregnancy Category	FDA category to indicate the potential of a drug to cause birth defects if used during pregnancy
"Truth" Classification	Stemina's classification based on human or rodent data. Used for calculating accuracy of the predictions. If human data was available for a compound, it was used for classification.
Humans	Published developmental toxicity potential in humans
Rodent	Published developmental toxicity potential in rodents
Rabbit	Published developmental toxicity potential in rabbits
Zebrafish	Published developmental toxicity prediction in ZET
mEST	Published developmental toxicity prediction in ECVAM validated mEST (does not include predictions made with alterations to the original protocol).
WEC	Published developmental toxicity prediction in WEC
hESC devTOX *quick* Predict	Prediction of developmental toxicity was based on the Cmax for compounds with known human teratogenicity information while the 65uM threshold for used to classify compounds unknown developmental toxicity or lack human exposure data
iPSC devTOX *quick* Predict	Prediction of developmental toxicity was based on the Cmax for compounds with known human teratogenicity information while the 65uM threshold for used to classify compounds unknown developmental toxicity or lack human exposure data
Notes	Additional notes about results, etc.

General Notes

n.d. = no data available or not tested/determined; DT = Developmental Toxicant; NON = Non-Developmental Toxicant; Starred (*) compounds have additional notes (listed after table)

[a]Classification was based on human data when available. When human data is not available, data from rodent in vivo studies was used to classify the compounds as developmentally toxic or non-developmentally toxic. This methodology for determining teratogenicity results in higher accuracy, sensitivity and specificity in this group of compounds for the rodent model.

[b]Maternal toxicity was present at the concentration that had an effect on the fetus.

[c]Predictions for pharmaceutical compounds with known human developmental toxicity were based on human therapeutic Cmax. If no Cmax was available, predictions were based on the concentration threshold 65µM.

[d]If conflicting results were published for a test compound, the classification with the most references was used to determine assay accuracy. If there was an equal number of publications for each classification, the classification from the publication that evaluated more test compounds was used to determine assay accuracy. Cells are colored to indicate which classification was used for accuracy determination.

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13-cis Retinoic Acid	2.9	N/A	N/A	X	DT	DT (1)	DT (4)	DT (4)	DT (9)	DT (4)	DT (8)	DT	DT
2-methoxyacetic acid	N/A	N/A	5,000	n.d.	DT	n.d.	DT (6)	n.d.	DT (11)	DT (weak, 5,8,9,10)	DT (6,14)	n.d.	DT
2-Methoxyethanol	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	n.d.	NON (11)	NON (10)	NON (14)	n.d.	NON
5-Fluorouracil	4.25	N/A	N/A	D	DT	DT (1)	DT (1,2,4)	DT (2,4)	DT (2)	DT (9; High, 2; Strong, 5,6)	DT (4; Strong, 5)	DT	DT
9-cis Retinoic Acid	0.4	N/A	N/A	D	DT	DT	DT (mEST ref 4)	DT (6)	n.d.	DT (4)	n.d.	DT	DT
Acetaminophen	116.4	N/A	N/A	B	NON	NON (1)	NON (2)	n.d.	NON (8)	n.d.	DT (9)	NON	NON
Acitretin	1.3	N/A	N/A	X	DT	DT	DT (2)	DT (2)	n.d.	DT (4)	DT (19)	DT	DT
Acycloguanosine	3	N/A	N/A	B	NON	NON (1)	DT (2)	NON (6)	n.d.	n.d.	DT (10)	NON	NON
all-trans Retinoic Acid	1.2	0.0017	0.2	D	DT	DT (1)	DT (3)	DT (3)	DT (2,3,8,9,14)	DT (1,4; Strong, 5,6)	DT (7,8)	DT	DT
Aminopterin	0.3	N/A	N/A	X	DT	DT (1)	DT (4)	DT (2)	n.d.	n.d.	n.d.	DT	DT
Amoxicillin	20.5	N/A	N/A	B	NON	NON (1)	NON (2)	n.d.	n.d.	n.d.	n.d.	NON	NON
Artesunate	73.9	N/A	0.02	n.d.	DT	DT	DT (5,6)	DT (5,6)	n.d.	n.d.	n.d.	DT	n.d.
Ascorbic Acid	90	N/A	N/A	A	NON	NON (2)	NON (2)	n.d.	NON (2,4,8)	DT (1), NON (5)	NON (4)	NON	NON
Atrazine	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	DT (13); NON (5,14)	n.d.	n.d.	DT	DT
Bosentan	2	N/A	N/A	X	DT	DT	DT (1)	NON (1)	n.d.	n.d.	n.d.	NON	n.d.
Busulfan	49.6	N/A	N/A	D	DT	DT (1)	DT (2,4)	DT (6)	n.d.	DT (1; High, 2)	DT (Strong, 5)	DT	DT
Caffeine	9.3	7.7	325	C	NON	NON (1)	DT (2,4)	DT (4)	DT (3,8)	NON (1), DT (Weak, 5)	DT (6)	NON	NON
Camphor	N/A	N/A	N/A	n.d.	NON	NON (2)	NON (6)	NON (6)	NON (2)	NON (5,8), DT (Mod., 2)	NON (4), DT (weak, 5)	NON	NON
Carbamazepine	47	N/A	N/A	D	DT	DT (1)	DT (2,5)	n.d.	DT (7)	DT (Mod., 2)	DT (Weak, 5)	DT	DT
Chlorophacinone	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	n.d.	n.d.	n.d.	DT	DT
Clopyralid	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	DT (6)	NON (5), DT (14)	n.d.	n.d.	NON	NON
Cyproconazole	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)[b]	DT (6)	DT (5, 11)	DT (7)	DT (1)	NON	NON
Cytosine Arabinoside	0.6	N/A	N/A	D	DT	DT (1)	DT (4)	n.d.	DT (6)	DT (1; High, 2)	DT (Strong, 5)	DT	DT
Dibutylamine	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	n.d.	n.d.	n.d.	n.d.	NON	DT
Dimethyl phthalate	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	n.d.	DT (2, 5), NON (14)	NON (5,8), DT (Weak, 5,8;	DT (4, weak 5)	NON	NON

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Dimethylamine	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	n.d.	NON (15)	n.d.	NON (16)	NON	NON
Diniconazole	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)[b]	NON (6)	DT (5,14)	n.d.	n.d.	DT	DT
Dinoseb	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	DT (14)	DT (Weak, 3)	n.d.	NON	NON
Diphenhydramine	0.25	N/A	N/A	B	NON	NON (1)	NON (4), DT (9)	NON (4)	DT (8)	DT (1, 9; Weak, 5)	NON (4)	NON	NON
Diphenylhydantoin	79.3	N/A	N/A	D	DT	DT (1)	DT (4)	DT (4)	NON (6)	DT (1; Mod. 2,6; Weak 5)	DT (4; Weak, 5)	NON	NON
Diquat dibromide	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	DT (5), NON (14)	n.d.	n.d.	DT	DT
Doxylamine	0.38	N/A	N/A	B	NON	NON (1)	NON (4)	NON (4)	n.d.	DT (Weak, 3)	NON (4)	NON	NON
D-Penicillamine	13.4	N/A	N/A	D	DT	DT (1)	DT (4)	n.d.	NON (4)	NON (3)	NON (4)	DT	NON
Endosulfan	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	NON (6)	DT (5,14)	n.d.	n.d.	DT	DT
Epoxiconazole	N/A	N/A	N/A	n.d.	DT	n.d.	DT(10)[b]	DT(9)[b]	n.d.	DT (weak, 12)	n.d.	n.d.	DT
Ethylene Glycol*	N/A	1,400	57,000	n.d.	DT	n.d.	DT (5,6)	NON (6)	DT (14)	n.d.	DT (3,15)	n.d.	DT
Etretinate	1.1	N/A	N/A	X	DT	DT	DT (2)	DT (2)	n.d.	DT (4)	DT (19)	DT	DT
Everolimus	0.02	N/A	N/A	D	DT	DT	DT (1)[b]	DT (1)[b]	n.d.	n.d.	n.d.	DT	n.d.
Fipronil	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	DT (5,14)	n.d.	n.d.	DT	DT
Fluazinam	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	DT (5,14)	n.d.	n.d.	DT	DT
Flusilazole	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)[b]	DT (5,11,14)	DT (7)	DT (1)	DT	DT
Folic Acid	0.035	N/A	N/A	A	NON	NON (2)	NON (8)	n.d.	n.d.	n.d.	NON (2)	NON	NON
Genistein	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	n.d.	DT (14)	DT (Strong, 11)	DT (17)	DT	DT
Glycerol	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	DT (14)	n.d.	NON	NON	NON
Glycolic Acid	N/A	275	5,000	n.d.	DT	n.d.	DT (6)	n.d.	n.d.	n.d.	DT (15)	n.d.	DT
Hexaconazole	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)[b]	DT (5,11,14)	DT (7)	DT (1)	DT	DT
Hexazinone	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	NON (5), DT (14)	n.d.	n.d.	NON	NON
Hydroxyurea	565	N/A	350	D	DT	DT (1)	DT (3,4)	DT (3,4)	DT (2)	DT (9; High, 2; Strong, 5)	DT (4; Strong, 5)	DT	DT
Imazamox	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	NON (5,14)	n.d.	n.d.	NON	NON
Imazapyr	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	NON (5), DT (14)	n.d.	n.d.	NON	NON

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Isoniazid	51	N/A	N/A	C	NON	NON (1)	NON (3,4)	NON (3,4)	NON (2,6), DT (8,14)	NON (1,2,5)	DT (4; Weak, 5)	NON	NON
Ketoconazole	7.9	N/A	N/A	C	DT	n.d.	DT (2)	DT (2)[b]	n.d.	DT (weak, 12)	n.d.	n.d.	DT
Lapatinib*	4.2	N/A	N/A	D	DT	DT	DT (1)	DT (1)	n.d.	n.d.	n.d.	NON	n.d.
Levothyroxine	0.14	N/A	N/A	A	NON	NON (1)	NON (6)	NON (6)	n.d.	n.d.	n.d.	NON	NON
Loratadine	0.03	N/A	N/A	B	NON	NON	NON (6)	NON (6)	DT (4)	NON (2)	NON (4,5)	NON	n.d.
Lovastatin*	0.02	N/A	N/A	X	DT	DT	DT (1)	NON (1)	DT (4,14)	DT (Weak, Strong, 3)	n.d.	NON	n.d.
Methotrexate	0.2	N/A	N/A	X	DT	DT (1)	DT (4)	DT (4)	DT (4,14), NON (8)	DT (1; High, 2; Strong, 5)	DT (4)	DT	DT
Metoclopramide	0.15	N/A	N/A	B	NON	NON (1)	NON (2)	NON (2)	NON (4)	DT (Mod., 2; Weak, 3)	NON (4,5)	NON	NON
Myclobutanil	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	DT (1)	DT (7)	DT (1)	n.d.	DT
Novaluron	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	NON (5), DT (14)	n.d.	n.d.	NON	NON
o,p' -DDT	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	n.d.	NON (14)	n.d.	n.d.	DT	DT
Ochratoxin A	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	DT (16)	DT (weak, 3)	DT (14)	DT	DT
o-Phenylphenol	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	DT (14)	n.d.	n.d.	NON	NON
Penicillin G	134.6	N/A	N/A	B	NON	NON (1)	NON (3)	NON (3,4)	NON (2,6,8)	NON (1,2,5,6,9)	NON (4,5)	NON	NON
Propiconazole	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)[b]	DT (5,14)	DT (weak, 12)	n.d.	NON	DT
Propylene Glycol	N/A	N/A	850,000	n.d.	NON	n.d.	NON (6)	NON (6)	DT (14)	n.d.	n.d.	NON	NON
Pyridaben	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	NON (6)	DT (5,14)	n.d.	n.d.	DT	DT
Resveratrol	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	n.d.	NON (17)	n.d.	n.d.	DT	NON
Retinol	2.4	N/A	N/A	C	NON	NON (1)	DT (3)	DT (3)	DT (2,6,14)	NON (4)	DT (7)	NON	NON
Rotenone	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	n.d.	DT (5,12,14)	n.d.	n.d.	DT	DT
Saccharin	1.4	24	N/A	A	NON	NON (1)	NON (3,4)	NON (3,4)	NON (2,3,8)	NON (1,2,5,9)	DT (4), NON (5)	NON	NON
Sitagliptin*	0.95	N/A	N/A	B	NON	NON	DT (6)	NON (6)	n.d.	n.d.	n.d.	NON	n.d.
Sorbitol	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	n.d.	n.d.	n.d.	n.d.	NON	NON
Spiroxamine	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	DT (5), NON (14)	n.d.	n.d.	DT	NON
Tetrabromobisphenol A	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	n.d.	DT (14)	n.d.	n.d.	NON	NON

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Thalidomide	12.4	N/A	N/A	X	DT	DT (1)	NON (4)	DT (4)	DT (4,14)	n.d.	DT (4)	DT	DT
Thiacloprid	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	NON (5), DT (14)	n.d.	n.d.	NON	NON
Thiamine	0.67	N/A	N/A	A	NON	NON (1)	NON (6)	n.d.	n.d.	n.d.	n.d.	NON	NON
ThioTEPA	7	N/A	N/A	D	DT	DT	DT (6)	DT (1)	DT (10)	n.d.	n.d.	DT	n.d.
Thiram	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	DT (5,14)	n.d.	n.d.	DT	DT
Triadimefon	N/A	N/A	N/A	n.d.	DT	n.d.	DT (6)	DT (6)	DT (1)	DT (7)	DT (1)	n.d.	DT
Triclopyr	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	DT (5), NON (14)	n.d.	n.d.	NON	NON
Triethylene Glycol	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	NON (14)	n.d.	n.d.	NON	NON
Triticonazole*	N/A	N/A	N/A	n.d.	NON	n.d.	DT (6)[b]	DT (6)[b]	DT (1)	DT (7)	DT (1)	n.d.	DT
TTNPB	N/A	N/A	N/A	n.d.	DT	n.d.	DT (2)	DT (mEST ref 4)	n.d.	DT (4)	DT (19)	DT	DT
Valproic Acid	1000	N/A	800	D	DT	DT (1)	DT (3,4)	DT (3,4)	DT (3,6,8), NON (14)	DT (Mod., 2,6; Weak, 5; 9)	DT (4; Weak, 5)	DT	DT
Warfarin	23.4	N/A	N/A	X	DT	DT (1)	DT (2,6)	NON (4)	DT (4,14)	NON (2,3) DT (Weak, 3)	DT (4), NON (5)	DT	NON
Zoxamide	N/A	N/A	N/A	n.d.	NON	n.d.	NON (6)	NON (6)	DT (5,14)	n.d.	n.d.	DT	DT

Compound	Notes
Ethylene Glycol	Developmentally Toxic at very high exposures (Note positive exposure level from Daston et al., 2014)
Lapatinib	Human clinical exposure is equivalent to the approximate rodent developmental toxicity NOEL
Lovastatin	Developmental toxicity observed in rodents at doses >40X human dose
Sitagliptin	Develomental toxicity observed in rodents at doses 100X maximum human recommended daily dose.
Triticonazole	Rat dLEL is 1000 mg/kg/day and chemical is typically considered to be a non-developmental toxicant as maternal toxicity was also observed at this high exposure.

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Reference	Authors	Title	Year	Journal	Volume	Pages
Humans 1 Rodent 1 Rabbit 1	Briggs et al	Drugs in Pregnancy and Lactation, Ninth Edition	2011	N/A	N/A	N/A
Humans 2 Rodent 2 Rabbit 2	N/A	Teratogen Information System (TERIS). Web site: https://apps.uwmedicine.org/Teris/Teris1a.aspx?ReturnUrl=%2fteris%2fdefault.aspx	N/A	N/A	N/A	N/A
Rodent 3 Rabbit 3 ZET 2	Brannen et al	Development of a zebrafish embryo teratogenicity assay and quantitative prediction model.	2010	Birth Defects Research. Part B, Developmental and reproductive toxicology	89(1)	66-77
Rodent 4 Rabbit 4	Jelovsek et al	Prediction of risk for human developmental toxicity: How important are animal studies for hazard identification?	1989	Obstetrics & Gynecology	74(4)	624-636
Rodent 5 Rabbit 5	N/A	Data provided as part of DART WORKSHOP ON CONSENSUS LIST OF DEVELOPMENTAL TOXICANTS. May 17-18, 2011 Washington, D.C.	2011	N/A	N/A	N/A
Rodent 6 Rabbit 6 WEC 3	N/A	ACToR. Web site: http://actor.epa.gov/actor/faces/ACToRHome.jsp;jsessionid=C5C2FC997F58922FC306B786421ADF66	N/A	N/A	N/A	N/A
Rodent 7 Rabbit 7	Heindel et al	The developmental toxicity of boric acid in mice, rats and rabbits	1994	Environmental Health Perspectives	102(Suppl 7)	107-112
Rodent 8	Hansen et al	Effect of dietary supplementation with folic acid on valproate-induced neural tube defects	1993	Teratology	47(5)	420
Rabbit 8	Sweeting et al	Species- and strain-dependent teratogenicity of methanol in rabbits and mice	2011	Reproductive Toxicology	31(1)	50-58
Rodent 9	Bailey et al	The future of teratology research is in vitro	2005	Biogenic Amines	19(2)	97-145
Rodent 10 Rabbit 9	ECHA	BACKGROUND DOCUMENT TO THE OPINION OF THE COMMITTEE FOR RISK ASSESSMENT ON A PROPOSAL FOR HARMONISED CLASSIFICATION AND LABELLING OF EPOXICONAZOLE	2010	N/A	N/A	N/A
Rodent 11	EPA	TSCA Work Plan Chemical Risk Assessment for N-Methylpyrrolidone: Paint Stripper Use	2015	N/A	N/A	N/A

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Reference	Authors	Title	Year	Journal	Volume	Pages
mEST 1	Newall et al	The Stem-Cell Test: an in vitro assay for teratogenic potential Results of a blind trial with 25 compounds.	1996	Toxicology in Vitro	10	229-240
mEST 2	Paquette et al	Assessment of the embryonic stem cell test and application and use in the pharmaceutical industry	2008	Birth Defects Research. Part B, Developmental and reproductive toxicology	83	104-111
mEST 3	Marx-Stoelting et al	A review of the implementation of the embryonic stem cell test	2009	Alternatives to Laboratory Animals	37	313-328
mEST 4 WEC 19	Louisse et al	Relative developmental toxicity potencies of retinoids in the embryonic stem cell test compared with their relative potencies in in vivo and two other in vitro assays for developmental toxicity	2011	Toxicology Letters	203	1-8
mEST 5	Genschow et al	Validation of the embryonic stem cell test (EST) in the ECVAM international validation study on in vitro embryotoxicity	2004	Alternatives to Laboratory Animals	32	209-244
mEST 6	zur Nieden et al	Molecular multiple endpoint embryonic stem cell test - a possible approach to test for the teratogenic potential of compounds	2004	Toxicology and Applied Pharmacology	194	257-269
mEST 7 WEC 1 ZET 1	Jong et al	Comparison of the mouse embryonic stem cell test, the rat whole embryo culture and the zebrafish embryotoxicity test as alternative methods for developmental toxicity testing of six 1,2,4-triazoles	2011	Toxicology and Applied Pharmacology	253	103-111
mEST 8	Suzuki et al	Evaluation of a novel high-throughput embryonic stem cell tests with new molecular markers for screening embryotoxic chemicals in vitro	2011	Toxicological Sciences	124 (2)	460-471
mEST 9	Peters et al	Evaluation of the embryotoxic potency of compounds in a newly revised high throughput embryonic stem cell test	2008	Toxicological Sciences	105 (2)	342-350
mEST 10	Verwei et al	Prediction of in vivo embryotoxic effect levels with a combination of in vitro studies and PBPK modelling	2006	Toxicology Letters	165 (1)	79-87
mEST 11	Kong et al	Individual and combined developmental toxicity assessment of bisphenol A and genistein using the embryonic stem cell test in vitro.	2013	Food and Chemical Toxicolgy	60	497-505
mEST 12	Dreisig et al	Predictive Value of Cell Assays for Developmental Toxicity and Embryotoxicity of Conazole Fungicides	2013	ALTEX	30	319-330

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Reference	Authors	Title	Year	Journal	Volume	Pages
WEC 2	Hansen	Folates in reproduction: in vitro studies	1995	Teratology	51(6)	12A
WEC 4	Zhang et al	Development of a streamlined rat whole embryo culture assay for classifying teratogenic potential of pharmaceutical compounds	2012	Toxicological Sciences	127(2)	535-546
WEC 5	Thomson et al	Not a walk in the park: The ECVAM whole embryo culture model challenged with pharmaceuticals and attempted improvements with random forest design	2011	Birth Defects Research. Part B, Developmental and reproductive toxicology	92	111-121
WEC 6	Robinson et al	Embryotoxicant-specific transcriptomic responses in rat postimplantation whole-embryo culture	2010	Toxicological Sciences	118(2)	675-685
WEC 7	Ritchie et al	Effect of co-administration of retinoids on rat embryo development in vitro	2003	Birth Defects Research. Part A, Clinical and molecular teratology	67(6)	444-451
WEC 8	Klug et al	Influence of 13-cis and all-trans retinoic acid on rat embryonic development in vitro: correlation with isomerisation and drug transfer to the embryo.	1989	Archives of Toxicology	63(3)	185-192
WEC 9	Stark et al	Dysmorphogenesis elicited by microinjected acetaminophen analogs and metabolites in rat embryos cultured in vitro	1990	The Journal of Pharmacology and Experimental Therapeutics	255(1)	74-82
WEC 10	Klug et al	Effect of acyclovir on mammalian embryonic development in culture	1985	Archives of Toxicology	58(2)	89-96
WEC 14 ZET 12	N/A	http://ecvam-dbalm.jrc.ec.europa.eu/	N/A	N/A	N/A	N/A
WEC 15	Klug et al	Effects of ethylene glycol and metabolites on in vitro development of rat embryos during organogenesis.	2001	Toxicology in Vitro	15(6)	635-42
WEC 16	Guesta & Varmab	Developmental toxicity of methylamines in mice	1991	Journal of Toxicology and Environmental Health	32	319-330
WEC 17	McClain et al	Reproductive safety studies with genistein in rats.	2007	Food Chem Toxicol	45(8)	1319-32

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Reference	Authors	Title	Year	Journal	Volume	Pages
ZET 3	Selderslaghs et al	Development of a screening assay to identify teratogenic and embryotoxic chemicals using the zebrafish embryo.	2009	Reproductive Toxicology	28(3)	308-320
ZET 4	Gustafson et al	Inter-laboratory assessment of a harmonized zebrafish developmental toxicology assay - progress report on phase I.	2012	Reproductive Toxicology	33(2)	155-164
ZET 5	Padilla et al	Zebrafish developmental screening of the ToxCast™ Phase I chemical library.	2012	Reproductive Toxicology	33(2)	174-187
ZET 6	McGrath et al	Zebrafish: a predictive model for assessing drug-induced toxicity.	2008	Drug Discovery Today	13(9-10)	394-401
ZET 7	Madureira et al	The toxicity potential of pharmaceuticals found in the Douro River estuary (Portugal)--experimental assessment using a zebrafish embryo test.	2011	Environmental Toxicology and Pharmacology	32(2)	212-217
ZET 8	Selderslaghs et al	Feasibiligy study of the zebrafish assay as an alternative method to screen for developmental toxicity and embryotoxicity using a training set of 27 compounds	2112	Reproductive Toxicology	33	142-154
ZET 9	Herrmann	Teratogenic effects of retinoic acid and related subastances on the early development of the zebrafish as assessed by a novel scoring system	1995	Toxicology in Vitro	9(3)	267-283
ZET 10	Weigt et al	Zebrafish (*Danio rerio*) embryos as a model for testing proteratogens	2011	Toxicology	281 (1-3)	25-36
ZET 11	Hermsen et al	Relative embryotoxicity of two classes of chemicals in a modified zebrafish embryotoxicity test and comparison with their in vivo potencies	2011	Toxicology in Vitro	25 (3)	745-53
ZET 13	Wiegand et al	Toxicokinetics of atrazine in embryos of the zebrafish (Danio rerio).	2001	Ecotoxicology and Environmental Safety	49 (3)	199-205
ZET 14	Truong et al	Multidimensional in vivo hazard assessment using zebrafish.	2014	Toxicological Sciences	137 (1)	212-33
ZET 15	Groth et al	Toxicity studies in fertilized zebrafish eggs treated with N-methylamine, N,N-dimethylamine, 2-aminoethanol, isopropylamine, aniline, N-methylaniline, N,N-dimethylaniline, quinone, chloroacetaldehyde, or cyclohexanol.	1993	Bulletin of environmental contamination and toxicology	50(6)	878-82
ZET 16	Ali et al	Teratology in Zebrafish Embryos: A Tool for Risk Assessment	2007	MS Thesis	N/A	N/A
ZET 17	Jheng-Yu et al	Curcumin Affects Development of Zebrafish Embryo	2007	Biological and Pharmaceutical Bulletin	30 (7)	1336-1339
	Kleinstreuer et al.	Identifying developmental toxicity pathways for a subset of ToxCast chemicals using human embryonic stem cells and metabolomics	2011	Toxicology and Applied Pharmacology	257	111-121
	Daston et al.	Exposure-based validation list for developmental toxicity screening assays	2014	Birth Defects Research. Part B, Developmental and reproductive toxicology	101(6)	423-428