Doses are mg/kg

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chemical | Non-neoplastic |  |  | Neoplastic |  |  | Chronic (or subchronic) Study Maximum Dose | Source/notes |
|  | Endpoint | BMD | BMDL | Endpoint | BMD | BMDL |  |  |
| ACR | Peripheral nerve (sciatic) axon degeneration | 0.61 | 0.43 | Thyroid gland follicular cell adenoma or carcinoma | 1.45 | 0.89 | 2.71 | 1 |
| BDCA | Bone marrow angiectasis | 2.3 | 1.87 | All organs malignant mesothelioma | 4.1 | 3.32 | 43 | 1 |
| COU | Liver necrosis | 5.85 | 4.85 | Kidney renal tubule adenoma | 69.35 | 44.64 | 100 | 1 |
| DE71 | Liver hepatocyte hypertrophy | 0.15 | 0.11 | Pituitary gland (pars distalis) adenoma | 6.68 | 4.53 | 50 | 1 |
| EE2 | Mammary gland alveolar hyperplasia | 0.00069 | 0.00047 | NA | NA | NA | 0.0033 | 1 |
| FEN | 78 week Liver weight | 0.1 | 0.052 | NA | NA | NA | 1000 | 10 |
| FUR | Liver cholangiofibrosis | 0.1 | 0.09 | Mononuclear cell leukemia | 0.47 | 0.29 | 2 | 1,2 |
| HCB | Chronic nephrosis (severe) | 0.59 | 0.35 | Adrenal pheochromocytoma | 1.23 | 0.60 | 2.35 | 1 |
| MET | Liver eosinophilic focus | 13.14 | 10.01 | Liver hepatocellular adenoma or carcinoma | 12.02 | 9.90 | 300 | 1 |
| PFOA | Liver hepatocyte hypertrophy | 0.5 | 0.41 | Pancreas adenoma | 0.73 | 0.57 | 8.8 | 1 |
| PUL | Nose olfactory epithelium degeneration | 14.02 | 9.47 | NA | NA | NA | 75 | 1 |
| TCAB | Forestomach epithelium hyperplasia | 2.86 | 2.13 | Lung cystic keratinizing epithelioma | 5.10 | 4.21 | 100 | 1 |
| THU | Kidney mineralization | 3.17 | 2.29 | Preputial gland adenoma or carcinoma | 22.89 | 16.57 | 50 | 1 |
|  |  |  |  |  |  |  |  |  |
| Ginseng | Relative kidney weight | 5056 | 4147 | NA | NA | NA | 5000 | 3 |
| MTE | Platelet count | 745 | 373 | NA | NA | NA | 4500 | 4 |
| BPAF | F2 absolute dorsolateral prostate weight | 39.5 | 27.8 | NA | NA | NA | 94 | 5 |
| DEHP | Bone marrow hypercellularity | 83.1 | 39.8 | Pancreatic acinar adenoma or carcinoma | 31.2 | 20.3 | 602/674 | 6, 11 |
| TCPP | lung granulomatous focal inflammation | 223.6 | 58.8 | NA | NA | NA | 1434 | 7 |
| TBBPA | Total thyroxine | 73.0 | 61.4 | NA | NA |  | 1000 | 8 |
| TRI | Total thyroxine (BMD20) | 14.5 | 7.23 | NA | NA |  | 300 | 9 |

Source/notes

1. BMDs and BMDLs are from Gwinn et al. 2020 Supplemental Material: Table 5 (non-neoplastic) and Table 6 (neoplastic); lowest BMD in each table for the chemical. Chronic (or subchronic) Study Maximum Dose are from Gwinn 20 Table 3.

2. Gwinn 2020 reports 2 different studies for furan, with maximum doses 2 and 8 mg/kg.

3. NTP 90-day gavage study of ginseng, NTP TR 567. BMDs calculated using EPA BMDS online. BMD is > maximum dose.

4. NTP 3-month feed study of milk thistle extract, NTP TR 565. Dose derived from feed dose in ppm and data on feed consumption.

5. NTP modified one-generation study of bisphenol AF, NTP DART 08. Dose derived from feed dose in ppm and data on feed consumption. Maximum dose given is the highest dose for which there were confirmed pregnant females.

6. Non-neoplastic from Gwinn et al. 2020 (see note 1). Neoplastic from analysis of NTP data in Table 6-4 of EPA document ‘Scientific Studies Supporting Development of Transcriptomic Points of Departure for EPA Transcriptomic Assessment Products’, ps://doi.org/10.23645/epacomptox.25365550 March 2024. Maximum dose 602 is from EPA document, 674 from Gwinn 2020.

7. From analysis of NTP data in Table 6-2 of EPA document ‘Scientific Studies Supporting Development of Transcriptomic Points of Departure for EPA Transcriptomic Assessment Products’, ps://doi.org/10.23645/epacomptox.25365550 March 2024.

8. NTP TR-587, 3-month gavage study of TBBPA, table F1.

9. Zorrilla 2009, TOXICOLOGICAL SCIENCES 107(1), 56–64 (2009),doi:10.1093/toxsci/kfn225.

10. Price SC, Hinton RH, Mitchell FE, Hall DE, Grasso P, Blane GF, Bridges JW. Time and dose study on the response of rats to the hypolipidaemic drug fenofibrate. Toxicology. 1986 Oct;41(2):169-91. doi: 10.1016/0300-483x(86)90198-8. PMID: 3764941.

<https://bmdsonline.epa.gov/analysis/5f1870e9-e7ff-4450-9da5-cbbb1fc8ae6e/lnfplmez9a5f/#/output>

BMD is very low relative to lowest non-control dose of 13 mg/kg.

11. <https://bmdsonline.epa.gov/analysis/bee05297-61b5-42a4-8008-eea48524e9f9/qunntut67p7p/#/output>   
https://www.ncbi.nlm.nih.gov/books/NBK579343/