

**CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT**

**SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986
(Proposition 65)**

**CHEMICALS UNDER CONSIDERATION FOR POSSIBLE LISTING
VIA THE AUTHORITATIVE BODIES MECHANISMS:
REQUEST FOR RELEVANT INFORMATION**

September 29, 2000

The Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65 or the Act) requires the Governor to publish, and update at least annually, a list of chemicals known to the State to cause cancer or reproductive toxicity. The Act provides two mechanisms for administratively listing chemicals as known to the State to cause cancer or reproductive toxicity (Health and Safety Code Section 25249.8(b)).

One mechanism by which a chemical is listed is if a body considered to be authoritative by the state's qualified experts has formally identified it as causing cancer or reproductive toxicity. For carcinogenicity, the U.S. Environmental Protection Agency (U.S. EPA), the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), the U.S. Food and Drug Administration (FDA), and the National Institute for Occupational Safety and Health (NIOSH) have been identified as authoritative bodies for purposes of the Act. The criteria for listing chemicals through the "authoritative bodies" mechanism are set forth in Title 22, California Code of Regulations (22 CCR) Section 12306.

The second mechanism for the administrative listing of a chemical applies if an agency of state or federal government has formally required that the chemical be labeled or identified as causing cancer or reproductive toxicity. The criteria for listing chemicals through this mechanism are set forth in 22 CCR Section 12902.

As the lead agency for the implementation of Proposition 65, the Office of Environmental Health Hazard Assessment (OEHHA) of the California Environmental Protection Agency is investigating the possible listing of the chemicals identified below, based upon information in the references cited. Documentation summarizing the rationale for considering the evaluation of these chemicals for possible administrative listing is available from OEHHA's Proposition 65 Implementation Office at the address and telephone number indicated below, or from the Internet at the following address:
<http://www.oehha.ca.gov/>.

OEHHA is committed to public participation and external scientific peer review in its implementation of Proposition 65, and welcomes public input on this listing process. As part of its efforts to ensure that regulatory decisions are based upon a thorough consideration of all relevant information, OEHHA is soliciting information which may be relevant to the evaluation of these chemicals in the context of the Proposition 65 administrative listing regulatory criteria (22 CCR Section 12306 or Section 12902, as appropriate).

A public forum will be held on **Thursday, October 26, 2000**, to provide an opportunity for interested parties to present oral comments and to discuss the scientific data and other information relevant to a determination as to whether these chemicals meet the criteria for listing set forth in 22 CCR Section 12306 or Section 12902. The public forum will begin at 10:00 a.m. at 1515 Clay Street, Elihu Harris State Building, Conference Room A, Oakland, California and will last until all business has been conducted or until 5:00 p.m.

Written comments provided in **triplicate**, along with supporting information, may also be submitted to:

Cynthia Oshita
Office of Environmental Health Hazard Assessment
301 Capitol Mall, 2nd Floor
Sacramento, California 95814
FAX: (916) 327-1097
Telephone: (916) 445-6900

In order to be considered, comments must be postmarked (if sent by mail) or received at OEHHA (if hand-delivered or sent by fax) by 5:00 p.m. Tuesday, November 28, 2000.

Following the review of all comments received, OEHHA will announce its intention to proceed with the listing of those candidate chemicals that meet the regulatory criteria for administrative listing in a *Notice of Intent to List Chemicals*.

- A. Chemicals which may meet the criteria set forth in 22 CCR Section 12306 for listing as known to cause **carcinogenicity** via the “authoritative bodies” mechanism:

Chemical	CAS No.	Reference
Catechol	120-80-9	IARC (1999a)
DEF (S,S,S-tributyl phosphorotrithioate; Tribufos)	78-48-8	U.S. EPA (1997c)
Ethoprop	13194-48-4	U.S. EPA (1997a)
Indium phosphide	22398-80-7	NTP (2000a; 2000c)
Lynestrenol	52-76-6	IARC (1999b)
Naphthalene	91-20-3	NTP (2000b; 2000c)
Norethynodrel	68-23-5	IARC (1999b)
Propachlor	1918-16-7	U.S. EPA (1997b)
Strong inorganic acid mists containing sulfuric acid	7664-93-9 (sulfuric acid)	NTP (2000d)

- B. Chemicals which may meet the criteria set forth in 22 CCR Section 12902 for listing as known to cause **reproductive toxicity** via the “formally required to be labeled or identified” mechanism:

Chemical	CAS No.	Toxicological Endpoints	References
Albuterol	18559-94-9	Developmental toxicity	FDA (1986)
Amantadine hydrochloride	665-66-7	Developmental toxicity	FDA (1993a)
Atorvastatin calcium	134523-03-8	Developmental toxicity	FDA (1998a)
Diazoxide	364-98-7	Developmental toxicity	FDA (1994a)
Dichlorphenamide	120-97-8	Developmental toxicity	FDA (1994b)
Diltiazem hydrochloride	42399-41-7	Developmental toxicity	FDA (1996b)
Famciclovir	104227-87-4	Male reproductive toxicity	FDA (1997a)
Felodipine	72509-76-3	Developmental toxicity Female reproductive toxicity	FDA (1998b)
Filgrastim	121181-53-1	Developmental toxicity	FDA (1992)
Fluvastatin sodium	93957-55-0	Developmental toxicity Male reproductive toxicity	FDA (1999)
Nimodipine	66085-59-4	Developmental toxicity	FDA (1996c)
Ribavirin*	36791-04-5	Male reproductive toxicity	FDA (1993b)
Rifampin	13292-46-1	Developmental toxicity Female reproductive toxicity	FDA (1997b)
Trientine hydrochloride	38260-01-4	Developmental toxicity	FDA (1988)

* Ribavirin was added to the list of chemicals known to cause reproductive toxicity on the basis of a developmental toxicity endpoint on April 1, 1990.

References

Blanzat-Reboud D, Russfield AB (1969). Effect of parenteral steroids on induction of tumors in mice by 2-methylcholanthrene. *Am J Obstet Gynecol* **103**: 96-101.

California Department of Pesticide Regulation (1999). *Evaluation of S,S,S-Tributyl phosphorotrithioate (DEF) as a Toxic Air Contaminant. Part C. Human Health Assessment* found at URL <http://www.cdpr.ca.gov/docs/empmp/pubs/def/defaircn.htm>.

Committee on Safety of Medicines (1972). *Carcinogenicity Tests of Oral Contraceptives*. London, Her Majesty's Stationery Office.

Food and Drug Administration (FDA, 1986). Final printed labeling for the drug albuterol. FDA approved 1986.

Food and Drug Administration (FDA, 1993a). Final printed labeling for the drug amantadine hydrochloride. FDA approved 1993.

Food and Drug Administration (FDA, 1998a). Final printed labeling for the drug atorvastatin calcium. FDA approved 1998.

Food and Drug Administration (FDA, 1994a). Final printed labeling for the drug diazoxide. FDA approved 1994.

Food and Drug Administration (FDA, 1994b). Final printed labeling for the drug dichlorphenamide. FDA approved 1994.

Food and Drug Administration (FDA, 1996b). Final printed labeling for the drug diltiazem hydrochloride. FDA approved 1996.

Food and Drug Administration (FDA, 1997a). Final printed labeling for the drug famciclovir. FDA approved 1997.

Food and Drug Administration (FDA, 1998b). Final printed labeling for the drug felodipine. FDA approved 1998.

Food and Drug Administration (FDA, 1992). Final printed labeling for the drug filgrastim. FDA approved 1992.

Food and Drug Administration (FDA, 1999). Final printed labeling for the drug fluvastatin sodium. FDA approved 1999.

Food and Drug Administration (FDA, 1996c). Final printed labeling for the drug nimodipine. FDA approved 1996.

Food and Drug Administration (FDA, 1993b). Final printed labeling for the drug ribavirin. FDA approved 1993.

Food and Drug Administration (FDA, 1997b). Final printed labeling for the drug rifampin. FDA approved 1997.

Food and Drug Administration (FDA, 1988). Final printed labeling for the drug trientine hydrochloride. FDA approved 1988.

Hirose M, Fukushima S, Shirai T, Hasegawa R, Kato T, Tanaka H, Asakawa E, Ito N (1990). Stomach carcinogenicity of caffeic acid, sesamol and catechol in rats and mice. *Jpn J Cancer Res* **81**: 207-212.

Hirose M, Fukushima S, Tanaka H, Asakawa E, Takahashi S, Ito N (1993). Carcinogenicity of catechol in F344 rats and B6C3F₁ mice. *Carcinogenesis* **14**: 525-529.

International Agency for Research on Cancer (IARC, 1979). *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*. Volume 21: 407-415 and 461-477. *Sex Hormones (II)*. IARC, Lyon France.

International Agency for Research on Cancer (IARC, 1992). *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*. Volume 54: 41-119. *Occupational Exposures to Mists and Vapours from Strong Inorganic Acids; and Other Industrial Chemicals*. IARC, Lyon France.

International Agency for Research on Cancer (IARC, 1999a). *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*. Volume 71: 433-452. *Re-evaluation of Some Organic Chemicals, Hydrazine and Hydrogen Peroxide (Part Two)*. IARC, Lyon France.

International Agency for Research on Cancer (IARC, 1999b). *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*. Volume 72: 49-338. *Hormonal Contraception and Post-Menopausal Hormonal Therapy*. IARC, Lyon France.

Misdorp W (1991). Progestogens and mammary tumors in dogs and cats. *Acta Endocrinol* **125**: 27-31.

National Toxicology Program (NTP, 2000a). *Toxicology and Carcinogenesis Studies of Indium Phosphide (CAS No. 22398-80-7) in F344/N Rats and B6C3F₁ Mice (Inhalation Studies)*. Board Draft. NTP Technical Report Series No. 499. NTIS Publication No. 00-4433. U.S. Department of Health and Human Services, NTP, Research Triangle Park, NC.

National Toxicology Program (NTP, 2000b). *Toxicology and Carcinogenesis Studies of Naphthalene (CAS No. 91-20-3) in F344/N Rats (Inhalation Studies)*. NTP Technical Report Series No. 500. NTIS Publication No. 00-4434. U.S. Department of Health and Human Services, NTP, Research Triangle Park, NC.

National Toxicology Program (NTP, 2000c). *Summary Minutes from Peer Review of Draft Technical Reports of Long-Term Toxicology and Carcinogenesis Studies by the Technical Reports Review Subcommittee on May 18, 2000*. NTP, Research Triangle Park, NC.

National Toxicology Program (NTP, 2000d). *Ninth Report on Carcinogens* as reported on the NTP website at <http://ntp-server.niehs.nih.gov>.

Rudali G (1975). Induction of tumors in mice with synthetic sex hormones. *Gann Monogr* **17**: 243-252.

Schuppler J, Gunzel P (1979). Liver tumors and steroid hormones in rats and mice. *Arch Toxicol Suppl* **2**: 181-195.

Siemiatycki J (ed). (1991). *Risk Factors for Cancer in the Workplace*. Boca Raton, FL, CRC Press.

Soskolne CL, Zeighami EA, Hanis NM, Kupper LL, Herrmann N, Amsel J, Mausner JS, Stellman JM (1984). Laryngeal cancer and occupational exposure to sulfuric acid. *Am J Epidemiol* **120**: 358-369.

Soskolne CL, Jhangri GS, Siemiatycki J, Lakhani R, Dewar R, Burch JD, Howe GR, Miller AB (1992). Occupational exposure to sulfuric acid in southern Ontario, Canada, in association with laryngeal cancer. *Scand J Work Environ Health* **18**: 225-32.

Steenland K (1997). Laryngeal cancer incidence among workers exposed to acid mists (United States). *Cancer Causes Control* **8**: 34-8.

Steenland K, Beaumont J (1989). Further follow-up and adjustment for smoking in a study of lung cancer and acid mists. *Am J Ind Med* **16**: 347-354.

Steenland K, Schnorr T, Beaumont J, Halperin W, Bloom T (1988). Incidence of laryngeal cancer and exposure to acid mists. *Br J Ind Med* **45**: 766-776.

Tanaka H, Hirose M, Hagiwara A, Imaida K, Shirai T, Ito N (1995). Rat strain differences in catechol carcinogenicity to the stomach. *Food Chem Toxicol* **33**: 93-98.

U.S. Environmental Protection Agency (U.S. EPA, 1997a). Cancer Assessment Document. Evaluation of the Carcinogenic Potential of Ethoprop. Cancer Assessment Review Committee. Health Effects Division. Office of Pesticide Programs. September 25, 1997.

U.S. Environmental Protection Agency (U.S. EPA, 1997b). *Memorandum: Carcinogenicity Peer Review of Propachlor*. Office of Prevention, Pesticides and Toxic Substances. October 16, 1997.

U.S. Environmental Protection Agency (U.S. EPA, 1997c). *Memorandum: Carcinogenicity Peer Review of Tribufos (DEF)*. Office of Prevention, Pesticides and Toxic Substances. May 22, 1997.