NORTHEAST REGIONAL ENVIRONMENTAL HEALTH CENTER

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Date: 1/12/96

No. of Pages (Including Coversheet):

To: Dr. Alvin Greenberg

Message Ref:

Time:

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- ☐ Please Call to Confirm Receipt of Fax
- ☐ Original to Follow in: ☐ Regular Mail ☐ Express Mail
- ☐ No Original To Follow

Notes:

We have looked up the chemicals that you have sent us. Of the 15 chemicals listed, 5 are currently in our database. They are benzo(a)pyrene (50-32-8), benz(a)anthracene (56-55-3), chrysene (218-01-9), dibenz(ah)anthracene (53-70-3), and benzo(ghi)perylene. The other compounds are not currently part of our database, but that does not necessarily mean they are not single exposure carcinogens. We are providing you with the citations that we have on these compounds separated by whether they were considered positive or negative. We also have several citations for that we have not assessed at this time which we are not including. Some citations may be listed under both positive and negative results. This would occur if the authors examined different strains, routes of exposure, age, or any other factor that effected the results. An example would be if the authors tested two (or more strains) and one strain was sensitive while another was resistant. The citations may also be listed under more than one of the chemicals of interest because the authors tested more than one chemical in that citation. We have not included citations for foreign articles unless they have been reported in the Single Exposure Carcinogen Database. If you have any questions feel free to call.

BENZO A)PYRENE:

Positive Citations:

Andervont, H.B., and Shimkin, M.B. (1940). Biologic Testing of Carcinogens. II. Pulmonary-Tumor-Induction Technique. Journal of the National Cancer Institute 1:225-239.

Berenblum, I., and Haran, N. (1955). The Influence of Dose of Carcinogen, Emptiness of Stomach, and Other Factors on Tumor Induction in the Forestomach of the Mouse. Cancer Research 15:504-519.

Bryan, W.R., and Shimkin, M.B. (1940). Quantitative Analysis of Dose-Response Data Obtained With Three Carcinogenic Hydrocarbons in Strain C3H Male Mice. Journal of the National Cancer Institute 1:503-531.

Engelbreth-Holm, J., and Iversen, S. (1947). The Effect of Ultraviolet Irradiation on the Carcinogenic Potency of Certain Hydrocarbons. Cancer Research 7:372-378.

Grant, G., and Roe, F.J.C. (1963). The Effects of Phenanthrene on Tumor Induction by 3,4-Benzopyrene Administration to Newly Born Mice. British Journal of Cancer 17:261-265.

Hieger, I. (1965). Studies in Carcinogenesis. British Journal of Cancer 19:761-776.

Horburger, F., Hsueh, S., Kerr, C.S., and Russfield, A.B. (1972).

Inherited Susceptibility of Inbred Strains of Syrian Hamsters to Induction of Subcutaneous Sarcomas and Mammary and Gastrointestinal Carcinomas by Subcutaneous and Gastric Administration of Polynuclear Hydrocarbons. Cancer Research 32:360-366.

Huggins, C., and Yang, N.C. (1962). Induction and Extension of Mammary Cancer. Science 137.257-262.

Noyes, W.F. (1968). Carcinogen-Induced Sarcoma in the Primitive Primate, Tupaia glis. Proceedings of the Society for the Experimental Biology and Medicine 127:594-596.

Payne, W.W., and Hueper, W.C. (1960). The Carcinogenic Effects of Single and Repeat Doses of 3,4-Benzpyrene. American Industrial Hygiene Association Journal 21:350-355.

Pietra, G., Rappaport, H., and Shubik, P. (1961). Effects of Carcinogenic Chemicals in Newborn Mice. Cancer 14:308-317.

Rask-Nielsen, R. (1950). On the Susceptibility of the Thymus, Lung, Subcutaneous and Mammary Tissues in Strain Street Mice to Direct Application of Small Doses of Four Different Carcinogenic Hydrocarbons. British Journal of Cancer 4:108-116.

Rask-Nielsen, R. (1950). Local and Remote Tumours in Strain Street Mice Following Subcutaneous Injection of Large Doses of Four Different Carcinogenic Hydrocarbons. British Journal of Cancer 4.124-132.

Rask-Nielsen, R., (1950). Types of Tumours in the Lungs of Strain Street Mice Following Direct Application of Large Doses of Four Different Carcinogenic Hydrocarbons. British Journal of Cancer 4:117-123.

Roe, F.J.C., and Walters, M.A. (1967). Induction of Hepatoma in Mice by Carcinogens of the Polycyclic Hydrocarbon Type. Nature 214:299-300.

Shabad, L.M. (1971). Dose-Response Studies in Experimentally Induced Lung Tumours. Environmental Research 4:305-315.

Shear, M.J. (1936). Studies in Carcinogenesis. I. The Production of Tumors in Mice With Hydrocarbons. American Journal of Cancer 26:322-332.

Shimkin, M.B. (1938). Induced Pulmonary Tumors in Mice. II. Reaction of Lungs of Strain A Mice to Carcinogenic Hydrocarbons. American Medical Association Archives of Pathology 29:239-255.

Stoner, G.D., Greisiger, E.A., Schut, H.A., Pereira, M.A., Loeb, T.R., Klaunig, J.E., and Branstetter, D.G. (1984). A Comparison of the Lung Adenoma Response in Strain A/J Mice After Intraperitoneal and Oral Administration of Carcinogens. Toxicology and Applied Pharmacology 72:313-323.

Tannenbaum, A., and Silverstone, H. (1949). The Genesis and Growth of Tumors IV. Effects of Varying the Proportion of Protein (Casein) in the Diet. Cancer Research 9:162-173.

Tokiwa, H., Sera, N., Nakashima, A., Nakashima, K., Nakanishi, Y., and Shigematu, N. (1994). Mutagenic and Carcinogenic Significance and the Possible Induction of Lung Cancer by Nitro Aromatic Hydrocarbons in Particular Pollutants. Environmental Health Perspectives 102(Suppl 4):107-110.

Vesselinovitch, S.D., Kyriazis, A.P., Mihailovich, N., and Rao, K.V.N. (1975). Conditions Modifying Development of Tumors in Mice at Various Sites by Benzo(a)pyrene. Cancer Research 35:2948-2953.

Wattenberg, L.W. (1974). Inhibition of Carcinogenic and Toxic Effects of Polycyclic Hydrocarbons by Several Sulfur-Containing Compounds. Journal of the National Cancer Institute 52(5):1583-1587

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Witschi, H.R., and Doherty, D.G. (1984). Butylated Hydroxyanisole and Lung Tumor Development in A/J Mice. Fundamental and Applied Toxicology 4:795-801.

Yun, Y.Y., Moon, H.S., Oh, Y.R., Jo, S.K., Kim, Y.J., and Yun, T.K. (1997). Effect of Red Ginseng on Natural Killer Cell Activity in Mice With Lung Adenoma Induced by Urethan and Benzo(a)pyrene. Cancer Detection and Prevention Supplement 1:301-309

Negative citations:

Adamson, R.H., Cooper, R.W., and O'Gara, R.W. (1970). Carcinogen-Induced Tumors in Primitive Primates. Journal of the National Cancer Institute 45(3):555-560.

Breedis, C. (1951). Transplantable Sarcoma of the Salamander Induced by Methylcholanthrene. Cancer Research 11:239

Krieger, I. (1965). Studies in Carcinogenesis. British Journal of Cancer 19:761-776.

Pound, A.W. (1968). The Influence of Preliminary Irritation by Acetic Acid or Croton Oil on Skin Tumor Production in Mice After a Single Application of Dimethylbenzanthracene, Benzopyrene, or Dibenzanthracene. British Journal of Cancer 22:533-544.

Rask-Nielsen, R. (1950). On the Susceptibility of the Thymus, Lung, Subcutaneous and Mammary Tissues in Strain Street Mice to

Direct Application of Small Doses of Four Different Carcinogenic Hydrocarbons. British Journal of Cancer 4:108-116.

Rask-Nielsen, R. (1950). Local and Remote Tumours in Strain Street Mice Following Subcutaneous Injection of Large Doses of Four Different Carcinogenic Hydrocarbons. British Journal of Cancer 4:124-132.

Shear, M.J., and Stewart, H.L. (1940). Studies in Carcinogenesis: XIII. Tumors of the Spleen and Liver in Mice Following the Introduction of Hydrocarbons Into These Organs. Journal of the National Cancer Institute 1:291-302.

BENZ(A)ANTHRACENE

Positive Citations:

Andervont, H.B., and Shimkin, M.B. (1940). Biologic Testing of Carcinogens. II. Pulmonary-Tumor-Induction Technique. Journal of the National Cancer Institute 1:225-239.

Homburger, F., Hsueh, S., Kerr, C.S., and Russfield, A.B. (1972). Inherited Susceptibility of Inbred Strains of Syrian Hamsters to Induction of Subcutaneous Sarcomas and Mammary and Gastrointestinal Carcinomas by Subcutaneous and Gastric Administration of Polynuclear Hydrocarbons. Cancer Research 32:360-366.

Roe, F.J.C., Mitchley, B.C.V., and Walters, M. (1963). Tests for Carcinogenesis Using Newborn Mice: 1,2-Benzanthracene, 2-Naphthylamine, 2-Naphthylhydroxylamine and Ethyl Methane Sulphonate. British Journal of Cancer 7:255-260.

Steiner, P.E., and Falk, H.L. (1951). Summation and Inhibition Effects of Weak and Strong Carcinogenic Hydrocarbons: 1:2-Benzanthracene, Chrysene, 1:2:5:6-Dibenzanthracene, and 20-Methylcholanthrene. Cancer Research 11:56-63.

Negative Citations:

Andervont, H.B., and Shimkin, M.B. (1940). Biologic Testing of Carcinogens. II. Pulmonary-Tumor-Induction Technique. Journal of the National Cancer Institute 1:225-239.

Hadler, H.I., Darchun, V., and Lee, K. (1954). Initiation and Promotion Activity of Certain Polynuclear Hydrocarbons. Journal of the National Cancer Institute 25:1383-1387.

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Van Duuren, B.L., Sivak, A., Goldschmidt, B.M., Katz, C., and Mechionne, S. (1970). Initiating Activity of Aromatic Hydrocarbons in Two-Stage Carcinogenesis. Journal of the National Cancer Institute 44(5):1167-1173.

CHRYSENE

Positive Citations:

Steiner, P.E., and Falk, H.L. (1951). Summation and Inhibition Effects of Weak and Strong Carcinogenic Hydrocarbons: 1:2-Benzanthracene, Chrysene, 1:2:5:6-Dibenzanthracene, and 20-Methylcholanthrene. Cancer Research 11:56-63.

DIBENZANTHRACENE

Positive Citations:

Andervont, H.B. (1935). Further Studies on the Production of Dibenzanthracene Tumors in Pure Strain and Stock Mice. Public Health Reports 50(36):1211-1217.

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Boyland, E., and Warren, F.L. (1937). The Induction of Tumours by Methylcholanthrene in Two Strains of Mice. Journal of Pathology and Bacteriology 45:171-177.

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Heinrich, U., Pott, F., Mohr, U., Fuhst, R., and Konig, J. (1986). Lung Tumours in Rats and Mice After Inhalation of PAH-Rich Emissions. Experimental Pathology 29:29-34.

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Kelly, M.G., and O'Gara, R.W. (1961). Induction of Tumors in Newborn Mice With Dibenz(a,h)anthracene and 3-Methylcholanthrene. Journal of the National Cancer Institute 26:651-679.

O'Gara, R.W., Kelly, M.G., Brown, J., and Mantel, N. (1965). Induction of Tumors in Mice Given a Minute Single Dose of Dibenz(a,h)anthracene or 3-Methylcholanthrene as Newborns. A Dose Response Study. Journal of the National Cancer Institute 35:1027-1041.

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Rask-Nielsen, R. (1950). On the Susceptibility of the Thymus, Lung, Subcutaneous and Mammary Tissues in Strain Street Mice to Direct Application of Small Doses of Four Different Carcinogenic Hydrocarbons. British Journal of Cancer 4:108-116.

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Shear, M.J. (1936). Studies in Carcinogenesis. I. The Production of Tumors in Mice With Hydrocarbons. American Journal of Cancer 26:322-332.

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Shimkin, M.B. (1938). Induced Pulmonary Tumors in Mice. II. Reaction of Lungs of Strain A Mice to Carcinogenic Hydrocarbons. American Medical Association Archives of Pathology 29:239-255.

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Steiner, P.E., and Falk, H.L. (1951). Summation and Inhibition Effects of Weak and Strong Carcinogenic Hydrocarbons: 1:2-Benzanthracene, Chrysene, 1:2:5:6-Dibenzanthracene, and 20-Methylcholanthrene. Cancer Research 11:56-63.

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Brumfield, R.T. (1940). The Production of Tumors by Injection of a Carcinogen into the Amniotic Fluid of Mice. Science 91(2352):96-98

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Paul, D. (1969). Effects of Carcinogenic, Noncarcinogenic, and Cocarcinogenic Agents on the Biosynthesis of Nucleic Acids in Mouse Skin. Cancer Research 29:1218-1225.

Pietra, G , Rappaport, H., and Shubik, P. (1961). The Effects of Carcinogenic Chemicals in Newborn Mice. Cancer 14:308-317.

Pound, A.W. (1968). The Influence of Preliminary Irritation by Acetic Acid or Croton Oil on Skin Tumor Production in Mice After a Single Application of Dimethylbenzanthracene, Benzopyrene, or Diberzanthracene. British Journal of Cancer 22:533-544.

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Slaga, T.J., Bowden, G.T., Shapas, B.G., and Boutwell, R.K. (1974). Macromolecular Syntnesis Following a Single Application of Polycyclic Hydrocarbons Used as Initiators of Mouse Skin Tumorigenesis. Cancer Research 34:771-777.

BENZO(g,h,i)PERYLENE

Negative Citations:

Van Duuren, B.L., Sivak, A., Goldschmidt, B.M., Katz, C., and Melchionne, S. (1970). Initiating Activity of Aromatic Hydrocarbons in Two-Stage Carcinogenesis. Journal of the National Cancer Institute 44(5):1167-1173.