Difenilhidantoína. Efeito anti proliferativo em vários tipos de tumor .
Resumo da Fundação Jack Dreyfus

LeVon, Gordon and Stefani. Onocology (1972), 1268 reported that intraperitoneal PHT (3 mg/kg/day, for three days) prolonged the life span of mice that had been implanted with Ehrlich ascites tumor. On day twenty-two, 43% of the PHT-treated mice were alive compared with no survivors in the control group.


Levo, Naunyn-Schmiedeberg's Archiv Fur Pharmacologie (1974), 1279 in a controlled study, observed that PHT (0.5 mg/day, for seven days) reduced the incidence of lung adenomas induced by urethane in SWR mice. Fourteen mice were treated with PHT, fifteen were injected with the solvent used to suspend PHT, and fifteen were untreated. The animals were sacrificed after twelve weeks. The fifteen mice treated with solvent had a total of seventy adenomas. The fifteen untreated mice had a total of sixty-eight adenomas. The fifteen mice treated with PHT had a total of forty-one adenomas. See also Ref. 1279.


Kornblith, Callahan and Caswell. Neurosurgery (1978), 1934 reported that PHT inhibited the growth of seven of ten cultured human astrocytoma cell lines. PHT (20-100 µg/ml) produced significant dose-dependent growth reduction. At comparable doses, the growth of normal fibroblasts and astrocytes was unaffected.


Kornblith, Hartnett, Anderson, Quindlen and Smith, Neurosurgery (1979), 1933 described significant growth inhibition by PHT of two murine astrocytoma cell lines in tissue culture. When the same tumor cells were implanted subcutaneously or intracranially in rats, the PHT-treated group showed significantly slower rates of tumor growth than the untreated group. Both tumor volume and number of actively dividing tumor cells were less in the PHT-treated group.


Anisimov, Ostriumova and Dilman, Bulletin of Experimental Biology and Medicine (1980), 2294 reported that administration of PHT (7.5 mg/kg/day) for three weeks prior to the induction of rat mammary tumors by 7,12-dimethylbenzanthracene reduced the incidence of such tumors by approximately 25%.


1974. Anisimov, Ostriumova and Dilman, Gerontology (1974), 2294 reported that PHT (0.5 mg/day, for seven days) reduced the incidence in C3H/Sn mice, Gerontology, 26: 241-6, 1980.

Shiba and Weinкам, Cancer Chemotherapy and Pharmacology (1983), 2949 studied the effects of PHT, in combination with the chemotherapeutic agent procarbazine, on the lifespan of mice implanted with L1210 ascites leukemia cells. Procarbazine by itself increased life span, decreased spontaneous tumor incidence by 2.3 times and prolonged mean life span by 25%, compared to controls. A similar effect was observed with phenformin.


Leonard, Stohs, Pfeiffer and Campbell, Proceedings of the American Association for Cancer Research (1984), 2701 noting reports of a lower incidence of breast and genital cancer among epileptic women taking anticonvulsants for more than ten years, evaluated the prophylactic activity of PHT against 7,12-dimethylbenzanthracene (DMBA)-induced mammary tumors in female rats. All control rats (133) developed breast carcinoma within six to nine months of DMBA exposure. Oral PHT (0.1%, in water), started fifteen days prior to DMBA exposure and continued for the six-to-nine month observation period, protected eleven of fifty-nine rats indefinitely from developing breast carcinoma. Six of sixty-three control rats (133) developed breast carcinoma within six to nine months of DMBA exposure. Oral PHT (0.1%, in water), started fifteen days prior to DMBA exposure and continued for the six-to-nine month observation period, protected eleven of fifty-nine rats indefinitely from developing breast carcinoma.


2956. Singer, S. J., Slesinger, P., Effect of anticonvulsants on a neuroblastoma X glioma cell clone (NG 108-15) in culture. All four agents suppressed cell growth, but PHT (12.5-50 µg/ml) and valproic acid had the greatest effect. PHT also decreased activity of choline acetyl-transferase and β-galactosidase.


