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TUMORIGENESIS BY N-*n*-PROPYL-N-FORMYLHYDRAZINE IN MICE

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Summary.—Continuous administration of 0·04% N-*n*-propyl-N-formylhydrazine (PFH) for life in drinking water to 6-week-old randomly bred Swiss mice induced tumours of the lungs, preputial glands, liver and gall bladder. The tumour incidences

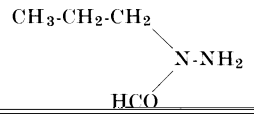

FIGURE.—Chemical structure of N-*n*-propyl-

an additional lower dose, 0·04%, was started separately. This toxicity technique was developed in our laboratory (Toth, 1972).

The solutions were prepared 3 times weekly, and the total consumption of water contain-

during the entire treatment. The solutions were contained in brown bottles because of the possible light sensitivity of the chemical.

tinuously extracted for 48 h with 1 l of ethyl ether. The ether extract was dried (Na_2SO_4) and fractionally distilled until the volume was

The 0·04 and 0·08% solutions of PFH were

TABLE I.—*Treatment and survival rate in N-n-propyl-N-formylhydrazine (PFH)-treated and control Swiss mice*

Group	PHF in drinking water for life	Initial No. of mice	No. of survivors (age in weeks)														
			10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
1	0·08%	50♀	50	49	40	23	19	13	3	—							
		50♂	50	37	11	2	—										
2	0·04%	50♀	50	50	50	50	45	35	18	2	—						
		50♂	50	48	45	32	23	5	—								
3	Nil	100♀	100	99	98	92	83	77	70	55	45	30	16	6	1	1	—
		100♂	100	100	100	96	91	81	63	44	28	11	4	1	—		

† (29, 39)
7, 72)
clitoral
orestomach
n (54)
1)
(41)
(80)
n (64)
(55)
ary (77)
odenum (65)
litoral
(19, 31, 36)
neous (59)

2	117	1	lignant lymphomas (16, 48, 66,
			79, 87, 87, 90, 91, 92, 96, 98, 98,
			, 107, 116, 125, 128)
		6	iomas in livers, uteri and
			ries (60, 90, 98, 108, 110, 125)
		4	iosarcomas in livers and uteri
			82, 84, 111)
		4	illomas of forestomachs (66, 90,
			101)
		2	nocarcinomas of breasts (103,
			)
		2	osarcomas, subcutaneous
			100)
		1	oma, retroperitoneal (103)
		1	enocortical adenoma (117)
		1	nulocytic leukaemia (91)
		1	osarcoma of uterus (105)
		1	nulosa-cell tumour (49)
		1	poid adenoma of colon (84)
		1	nocarcinoma of kidney (96)
		1	osarcoma of submandibular
			id (112)
		1	nocarcinoma of submandibular
			id (141)
		1	oma of breast (114)
—	—	8	gnant lymphomas (31, 70, 70,
			39, 93, 104, 106)
		9	omas in livers (69, 69, 75, 87,
			98, 98, 104, 115)
		4	osarcomas in livers (56, 82, 93,
		1	osarcoma, subcutaneous (91)
		1	nal cortical adenoma (93)
		1	noma of thyroid (93)

Other tumours

In a number of instances other types of neoplasms were also observed and are

1980*a*). Furthermore, as a third step, N-*n*-butyl-N-formylhydrazine at a chronic dose of 0·04%, again given under condi-

DRUCKREY, H. (1970) Production of colonic carcinomas by 1,2-dialkylhydrazines and azoxyalkanes.

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