

caused by 2.5 mg/kg of chlorpromazine was between 1.9 and 3.1°C. These values are in agreement with the findings of others^{8,9}. AY-9944 produced a maximal decrease of 1.2°C and of 2.8°C at 30 mg/kg and 90 mg/kg dose levels respectively. When both compounds were administered a fall of 6.0 to 7.9°C was recorded. The maximal decrease of temperature was found when AY-9944 was given 5 min before the injection of chlorpromazine.

When a dose of 30 mg/kg of AY-9944 was given to mice 30 min before treble the median lethal dose of Schradan (i.e. 50 mg/kg) the agent conferred on the animals some resistance to the anticholinesterase. The mean survival time of mice treated with AY-9944 was 42% longer than that of controls ($p < 0.01$).

These results suggest that in mice AY-9944 has an inhibitory action on the metabolism of certain drugs. Qualitatively similar results were reported for isoniazid, iproniazid, SKF-525-A when the above three pharmacologic assays were used to estimate inhibition of drug oxidation⁶. Hexobarbital sleeping time is regarded as a good index of the activity of microsomal enzymes¹⁰. The enzymes responsible for the metabolism of pentobarbital, hexobarbital, carisoprodol, strychnine and Schradan were only found in microsomes of liver¹¹. It is reasonable to conclude that AY-9944 is also an inhibitor of the 'non-specific' microsomal oxidase system in the liver.

These results also show that AY-9944 produces hypothermia in mice. Various agents are known which lower body temperature and also potentiate barbiturate hypnosis^{8,12,13}. It is evident that the activity of the microsomal oxidase system like that of many other enzyme systems, can be modified by changes in temperature. The questions, however, how the hypothermia and the potentiation of barbiturate hypnosis are related in the case of AY-9944, and what is the underlying mechanism responsible for the hypothermia induced by AY-9944 alone, are to be investigated.

Genetic Tumours of *Nicotiana* Hybrids and the Hormone Balance

Hybrids of *Nicotiana glauca* × *Nicotiana langsdorffii* have been cultured for five successive years. They were rendered autofertile by amphidiploidy with colchicine. KOSTOFF¹ and others observed those hybrids bearing tumours regularly on roots and twigs, the so-called 'genetic tumours'. The neoplasms start by the union of two different genomes and are bacteriologically sterile. We have noted by macroscopic account of the number of tumours on the roots, that the tumour-inciting power diminished progressively in each generation of plants and disappeared completely after five years of successive culture. Our plants cultivated outdoors progressively recovered normal appearance as they restored the normal hormonal equilibrium. No variations or mutations are noted on chromosomes.

THIMANN² suggested that the growth hormones liberated by the *Rhizobium bacterium* may incite the nodule development in leguminous plants. KEHR and SMITH³ argued that the tumours in *Nicotiana* hybrids may have a hormonal origin through a defective functioning of the plant hormones. It is well known that a sufficient amount of nitrogen in the soil does inhibit or suppress completely

the formation of nodules on leguminous plants. From our experiments over a sufficient number of years, it seems likely that the culture of *Nicotiana* hybrids on soils with a sufficient amount of mineral nutrients can progressively suppress the so-called 'genetic tumours' in the hybrids. This surprising fact is presented to other researchers because it may invalidate the theory of the genetic origin of those tumours and reduce the phenomenon to a hormonal disturbance.

Further studies utilizing biochemical parameters on drug biotransformation are in progress. The study in detail will be published elsewhere.

Résumé. Un composé hypocholestérolémique (AY-9944) administré par voie intrapéritonéale provoque chez les souris une action hypothermique de même qu'une action inhibitrice sur le système enzymatique d'oxidase «non-spécifique» du foie.

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the formation of nodules on leguminous plants. From our experiments over a sufficient number of years, it seems likely that the culture of *Nicotiana* hybrids on soils with a sufficient amount of mineral nutrients can progressively suppress the so-called 'genetic tumours' in the hybrids. This surprising fact is presented to other researchers because it may invalidate the theory of the genetic origin of those tumours and reduce the phenomenon to a hormonal disturbance.

Résumé. Les tumeurs «génétiques» des hybrides de *Nicotiana* sont dues à une perturbation de l'équilibre hormonal, susceptible de restitution. L'origine génétique de ces tumeurs paraît improbable.

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