

rays from other animals, as Hueper succeeded recently in producing in a strain of white coated, blue eyed rabbits a severe actinic dermatitis with ulcerations, keratoses, pigmentary shifts, scaling, hyperemia, etc., when the animals were shaved with an electric razor in frequent intervals and exposed daily for two hours to the rays of a Hanovia lamp delivering 1,300 microwatts at 30 inch distance. The density of the hair doubtless plays an important role in checking in animals the effect of the ultraviolet rays, upon the skin emphasizing thereby the statement made by Watkins-Pitchford in 1909, that the liability of man to cutaneous cancer is due to the lack of a hairy coat which protects the skin of animals against the carcinogenic action of the sun radiation. Recent observations, made by Hueper in congenitally hairless rats having normally a thick keratinized epidermis, illustrated, on the other hand, the remarkable protective effect exerted by the horny layer against the cancerigenic action of u.v. rays (Blum).

*Exogenous Sensitizing Agents.* A great number of environmental agents, such as foodstuffs (buckwheat), tar, mineral oils and their derivatives, medicinal substances, such as sulfanilamide, perfumes containing Bergamot oil, may increase the sensitivity of the skin to solar rays or, as in the case of arsenicals, may accentuate the irritative action of these agents. Bechet noted that the degree of exposure to solar radiation depends not only upon the direct irradiation, but also upon the indirect irradiation by reflected rays, as he observed that sun-burns and cancers were more frequent among the inhabitants of regions having a light white clay soil or living on or near large bodies of water, than among people living on a reddish or dark colored soil which absorbs the rays. It is of importance in this respect to recall that sun-light reflected from surfaces of water, snow, ice, white sand, etc., contains an unusually large amount of ultraviolet rays.

Attempts have been made to minimize the value of clinical and experimental observations indicating the cancerigenic effect of solar radiation upon the human skin (Beard, Boggess and von Haam; Luce-Clausen; and others). These investigators argued that the positive results obtained by the irradiation of albino rats and mice with ultraviolet rays were not applicable to man, as the skin of these animals, which are accustomed to a dark habitat, is much more sensitive to solar rays than the human skin and that the doses of ultraviolet rays administered for the production of these experimental solar cancers was moreover disproportionally high in comparison to those encountered by man under environmental or occupational conditions, thus leaving to man a wide margin of safety. It was pointed out that solar cancer was rarely seen in animals (cattle, horses) which were exposed to sun light the year round. Apart from the fact that this conception as well as the interpretation of the evidence is not shared by other investigators (Roffo; Putschar and Holtz), there seems to be little doubt that the data presented in favor of a carcinogenic