

formed by actinic oxidation of tyrosine is characterized (1) by rapid lightening of the color and (2) by formation of a yellow water-soluble substance from the colloidal particles of melanin. The "melanolysis" proceeds at a more rapid rate as the pH is lowered from 7.4 to 2.0. However, it also occurs at physiological pH's. This change might be of importance in the depigmentation of patients with Addison's disease treated with ascorbic acid.⁴ The same effect has been obtained in pieces of skin from Negroes.

Summary. Ascorbic acid furthers the actinic transformation of tyrosine into dopa and that of synephrin into epinephrine but inhibits any further oxidation. It reduces melanin to a water-soluble yellow substance.

11580

Excretion of Androgens and Estrogens in Males with Mammary Carcinoma.*

NAOMI YOLTON AND CHARLES REA. (Introduced by M. B. Visscher.)

From the Departments of Physiology and Surgery, University of Minnesota.

We have investigated the excretion of androgens and estrogens in 2 cases of male mammary carcinoma. The results obtained are recorded in Table I.

TABLE I.
Excretion of Androgens and Estrogens in Patients with Mammary Carcinoma.

Case	Sex	Age	Diagnosis	Androgens in mg of Androsterone per 24 hr	Estrogens in γ of Estrone per 24 hr
P.S. No. 658182	M	80	Scirrhous Carcinoma (Breast)	3.4 9.4 5.4	0.8-1.04 for 6 samples
A.A. No. 667313	M	78	Adeno-Carcinoma (Breast)	5.1 4.1 8.8	<1.25 <2.5
F.G. No. 694278	M	75	Control for Age and Sex (Ileostomy)	6.4 9.2 10.1	
S.W. No. 675993	M	66	Control for Age and Sex (Skin Graft)	6.7 11.4 7.2	
H.D. No. 683167	F	45	Scirrhous Carcinoma (Breast)	4.4 5.0 4.1 3.8	2.5-5.0 <5.0
E.K. No. 642071	F	52	Scirrhous Carcinoma	11.8 10.0	
O.H. No. 686366	F	53	Control for Age and Sex (Chronic Cholecystitis)	5.2 5.2 6.2 5.4	

* Aided by a grant from the Cancer Institute of the Medical School of the University of Minnesota.

Twenty-four-hour urine specimens were extracted and fractionated according to the method described by Gallagher, Peterson, Dorfman, Kenyon, and Koch.¹ Samples were assayed for their estrogenic potency by the vaginal smear technic, using mice. Androgenic† assays were done by a modification of the Zimmerman method as described by Friedgood and Whidden.² We endeavored to correct for the inherent color of the samples by subtracting the equivalent of the reading obtained when an aliquot (equal in amount to that used for the actual determination) was treated with all the reagents except m-dinitrobenzene. This method gives values higher than those which would be obtained by biologic assay, but we feel that it is probably acceptable for use in a comparative study.

It will be seen that the male patients with mammary carcinoma did not differ significantly from the controls in regard to the amount of androgens and estrogens excreted. The low excretion of both androgens and estrogens in the aged, found by several previous investigators, and the daily variability in the excretion of androgens reported by Gallagher, *et al.*,¹ are confirmed.

We are indebted to Drs. M. B. Visscher, L. T. Samuels, and L. Earle Arnow for their suggestions and coöperation.

11581

Comparative Activities of Certain Antihemorrhagic Compounds.

H. J. ALMQUIST AND A. A. KLOSE.

From the Division of Poultry Husbandry, University of California, College of Agriculture, Berkeley.

Various quinones with vitamin K activity have been assayed in order to establish the comparative potencies of these compounds in relation to a common reference standard. The reference standard is an hexane extract of dried alfalfa equivalent in potency to 1 g of dried alfalfa per cc. This reference standard at 2 or more levels has been employed in all of our assays for the past 2 years. A secondary

¹ Gallagher, T. F., Peterson, D. H., Dorfman, R. I., Kenyon, A. T., and Koch, F. C., *J. Clin. Invest.*, 1937, **16**, 695.

† Grateful acknowledgment is made to Ciba Pharmaceutical Products and to Schering Corporation for the crystalline androsterone; and to Parke-Davis for crystalline estrone.

² Friedgood, H. B., and Whidden, H. L., *Endocrin.*, 1939, **25**, 919.