

Control injections of androsterone were made intramuscularly into the breast in accordance with the method of Parkes and Emmens.³

Extracts under test were administered over 6 days, the androsterone over 5 days. Change in comb size was calculated as the sum of the changes in length and height occurring between the first day of treatment and the first or second day following the last administration.

The results of the assays are given in Table

³ Parkes and Emmens, *Vitamins and Hormones*, Harris and Thimann, Editors, Academic Press, Inc., New York, 1944, **2**, 376.

I. No androgenic response was observed after administration of either of the pollen extracts. The response of the capons to androsterone was almost exactly that previously observed by others.³ It can be calculated from the figures presented that the smaller doses administered would have given a positive response if the corn pollen had contained 0.003% or more of an androgen as potent as androsterone and if 30% of such an androgen had been extracted by the procedure employed.

Summary. Extraction of corn pollen and assay of the extracts according to procedures commonly used on animal materials failed to yield any evidence of androgenic substances.

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Incidence of the Eight RH Types Among 179 White Puerto Ricans.

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In the early work on the Rh factor, it was noticed that some bloods might be classified as Rh positive or Rh negative depending upon the human anti-Rh serum employed. It has been shown that human anti-Rh sera vary in their specificity, because they contain antibodies resulting from immunization to different Rh antigens. The anti-Rh sera that have thus far been found contain the following antibodies: anti-Rh₀, anti-Rh', anti-Rh'', anti-Rh'₀, and anti-Rh''₀. The anti-Rh₀ sera correspond in specificity with anti-Rh sera obtained by immunizing animals with *Macacus rhesus* blood. The anti-Rh'₀ contain two antibodies, anti-Rh₀ and anti-Rh'; this holds true for anti-Rh''₀ containing antibody anti-Rh₀ and anti-Rh''.¹ Anti-Rh sera containing other antibody combinations have been found by British authors.²

Employing the 3 different varieties of human anti-Rh sera containing only one anti-

body, 8 Rh types have been defined by Wiener,³ Rh₀, Rh₁, Rh₂, Rh₁Rh₂, Rh', Rh'', Rh'Rh'', and Rh negative. Type Rh₁ may also be designated as Rh'₀, Type Rh₀ as Rh''₀, Type Rh₁Rh₂ as Rh'₀Rh''₀ to indicate the antibodies with which they react. (See Table I.)

There are some bloods giving weak reactions with some of these three varieties of anti-Rh sera; they have been classified as intermediate Rh types Rh₁('), Rh₂('), Rh₀(''), and Rh₀(') (Wiener⁴). (Table II.) Murray, Race, and Taylor⁵ have also described a rare agglutinin, Rh_x.

The distribution of the various Rh blood types among white individuals in New York City and among Negroes can be seen in Table III.

With the data here presented, a study has been undertaken to determine the incidence

³ Wiener, A. S., *Science*, 1944, **99**, 532.

⁴ Wiener, A. S., *Science*, 1944, **100**, 595.

⁵ Murray, J., Race, R. R., and Taylor, G. L., *Nature*, 1945, **155**, 112.

¹ Wiener, A. S., *Am. J. Clin. Path.*, 1945, **15**, 106.

² Stratton, T., *Nature*, 1944, **153**, 773.

FIG. 1.
TABLE I.
The Eight Standard Rh Types (After Wiener).

Anti-Rh ₀ Negative	Rh Anti-sera		Rh Type Negative
	Anti-Rh' Negative	Anti-Rh'' Negative	
+	+	Neg.	Rh ₁
+	Neg.	+	Rh ₂
+	Neg.	Neg.	Rh ₀
+	+	+	Rh ₁ Rh ₂
Neg.	+	Neg.	Rh'
Neg.	Neg.	+	Rh''
Neg.	+	+	Rh'Rh''

TABLE II.
Intermediate Rh Types (After Wiener).

Intermediate types	Reactions with anti-sera			Formerly classed together with major types
	Anti-Rh ₀	Anti-Rh'	Anti-Rh''	
Rh ₁ (')	Positive	Positive	Weak	Rh ₁
Rh ₂ (')	Pos.	Weak	Pos.	Rh ₂
Rh ₀ (')	Pos.	Neg.	Weak	Rh ₀
Rh'	Weak	Pos.	Neg.	Rh'

TABLE III.
Distribution of the Rh Types Among Whites and Negroes in New York City* and White Puerto Ricans.
Rh Types.

No. tested	Race	Location	Rh negative	Rh ₀	Rh ₁	Rh ₂	Rh ₁ Rh ₂	Rh'	Rh''	Rh'Rh''
1000	White	N. Y. City	12.9	2.6	54.1	12.8	16.4	0.9	0.3	—
223	Negro	"	8.1	41.2	20.2	22.4	5.4	2.7	—	—
179	White	Puerto Rico	10.06	15.08	39.10	19.54	13.97	1.68	.55	—

* From Wiener, A. S., Davidson, I., and Potter, E. L., *J. Exp. Med.*, 1945, **81**, 63.

of the Rh types among the white Puerto Rican population. Table III also shows the results of a study to determine the Rh types of 179 white individuals; the bloods have been obtained from blood donors and hospital employees coming from different parts of the island.

Rh type determinations have been performed employing anti-Rh₀, anti-Rh', and anti-Rh'' sera;* 100 of these determinations were performed with anti-Rh'₀ and anti-Rh''₀ sera; to prepare the anti-Rh' and anti-Rh'' sera blocking anti-Rh₀ serum was added in a proportion suggested to us by Dr. Wiener⁶

* Obtained through the courtesy of Dr. Alexander S. Wiener, of the Office of the Chief Medical Examiner of New York City.

⁶ Personal communication.

with the purpose of eliminating the action of the anti-Rh₀ antibody. The rest of the Rh types were determined by employing pure anti-Rh' and anti-Rh'' sera so that it was not necessary to add blocking serum because anti-Rh₀ agglutinins were absent.

It can be observed that the percentage of the different Rh types in Puerto Rico varies from those obtained in the United States. We have found about 15% Rh₀ individuals as compared to 2.4% among white Americans; type Rh₂ also has a higher incidence, while type Rh₁ represents only 39.1% compared to 54.4% obtained by Wiener in New York City. In Puerto Rico there are only about 10% Rh negative individuals. Twenty-two of the 179 bloods studied gave weakly positive reactions with one of the anti-Rh sera used