fluorescence also disappeared more rapidly from the former sites.

Table 3 summarizes an additional experiment performed to determine the effect of histamine upon the rate

TABLE 3

EFFECT OF HISTAMINE AND HISTAMINE + BENADRYL UPON THE DURATION OF FLUORESCENCE AT HUMAN SKIN SITES FOLLOWING INTRADERMAL INJECTION OF FLUORESCEIN MIXTURES

Mixture Injected	Subjects			
	SCB	GJD	MCJ	VKP
Fl.*	35	45	4†	30
Fl.* + Histamine (1 : 10,000)	4	8	4	10
Fl.* + Histamine (1 : 10,000) and Benadryl (1 : 2,000)	35	25	25	30‡

* Fluorescein 1 : 50,000 dilution in saline.

† Allergic subject (see text).

‡ Intensity of fluorescence at this site much less than at corresponding fluorescein site.

One-tenth ml of each mixture was injected intracutaneously in the forearm. Readings, made in ultraviolet light provided by a G-E purple X bulb were made every 4–5 min throughout the period of observation. Numbers indicate duration of fluorescence in minutes.

of absorption of intradermally deposited fluorescein and the influence of an antihistaminic drug upon this action of histamine. Three sites on the forearm of each of 4 subjects (3 normal, SCB, GJD, VKP, and 1 allergic, MCJ) were injected intradermally with 0.1-ml amounts of the following: (1) fluorescein diluted 1: 50,000 in saline, (2) fluorescein + histamine (1:10,000), (3) fluorescein + histamine (1:10,000) + Benadryl (1: 2,000). In the normal subjects, (1) the fluorescein sites remained visible under ultraviolet light for periods of 30–40 min, (2) the fluorescein + histamine sites no longer fluoresced after 4–10 min, and (3) the fluorescein + histamine + Benadryl remained visible as long as the fluorescein sites. In normal subjects, therefore, fluorescence disappeared rapidly under the influence of histamine, and the antihistaminic drug consistently neutralized this effect. In the allergic subject, the fluorescein site was visible for only 4 min, as was the fluorescein + histamine site, presumably because of local release of histamine or histamine-like substances in the fluorescein site; the fluorescein + histamine + Benadryl site fluoresced for 25 min, demonstrating the neutralizing effect of the antihistaminic drug.

These observations demonstrate that the time of appearance, intensity, and duration of fluorescence at sites injected with histamine may be quantitatively modified by the local presence of antihistaminic drugs. It is anticipated that the application of the dermofluorometer (*5*) to these studies (now in progress) will yield time-intensity curves permitting accurate bioassay of histamine and antihistaminic drugs, whether the latter are injected simultaneously or prior to testing. Such quantitative photometric determinations of fluorescence may also provide a useful tool for the investigation of the degree and duration of humoral and tissue antihistaminic properties following different routes of administration of various antihistaminic drugs.

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Effect of Hormone on Root Formation in *Artocarpus communis*

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The tropical breadfruit, *Artocarpus communis*, is usually propagated by means of sprouts which arise from the roots. Shoots arising from the roots of this tree, which extend for a considerable distance from the trunk but remain within a few inches of the soil surface, are separated from the tree when about 12–14″ tall. Sections of the root are planted with the young stem. Branch cuttings are not planted in usual practice.

Experiments in Liberia, West Africa, where the writer was research botanist in the Research Department, Firestone Plantations Company, Harbel, have shown that branch cuttings may be successfully used when treated with hormone. The cuttings dipped in a 1% indole-butyric acid solution gave best results, although others with their bases immersed in a .0002% indole-butyric acid solution for 24 hrs also gave good results Cuttings

TABLE 1

No. of cuttings	Treatment	No. rooted	% rooted
60	Control	0	0
60	24 hrs .0002% indole-butyric	36	60
60	dip in 1% indole-butyric	48	80

were about 12–15″ long, with 3–4 nodes/cutting, about ⅜″ in diameter, and were planted immediately in sand. Banana leaves were laid over the beds for three days after planting to prevent excessive drying. The beds were under a thatched roof which provided light shade. Cuttings were watered daily. Untreated cuttings failed to root, but treated cuttings gave up to 80% success and yielded healthy plants when set out.

The results are given in Table 1.

This method of propagation can be very useful where, as in Liberia, planting stock of breadfruit is not always available.