liefs are not limited to any one religious creed, ethnic group, age level, or degree of educational achievement. Among the believers in Pele are some highly educated individuals and some prominent citizens of the island.

The old Hawaiian beliefs are remarkably rational and provide an apparently consistent explanation for geological growth processes. The beliefs appear to be reinforced by a number of factors. One such factor is the very sight of the lava fountains which are often over 1000 ft in height (see Fig. 2). This magnificent phenomenon is accompanied by auditory, olfactory, and tactile stimulation produced by the fountain and its accompanying fallout.

Another source of reinforcement for belief in Pele is the inability of science and technology to cope with the destructiveness of the lava flows. The building of dikes to contain or divert the lava appears to be uniformly unsuccessful.

The nature of the beliefs in Pele and the source of their perpetuation are being systematically investigated. Belief in Pele is openly acknowledged by many of the evacuees.

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Note

Research conducted to date has been aided by funds granted by the University of Hawaii. We thank Wayne Richardson, president of C. Brewer and Co. (Hilo branch), for providing I.B.M. facilities, and for granting access to one of the company's plantation towns, which was used as the control group. Excellent assistance is being rendered by the Civil Defense, American Red Cross, Hawaii County Police Department, Department of Public Instruction, Department of Social Welfare, Hawaii National Guard, U.S. Army Reserve, and Geological Survey volcanologists.

9 February 1960

A Nonsteroidal Androgen

Abstract. 2-Acetyl-7-oxo-1, 2, 3, 4, 4a, 4b, 5, 6, 7, 9, 10, 10a-dodecahydrophenanthrene possesses androgenic activity when applied directly to the chick's comb. This action is in addition to the antiandrogenic activity previously reported for this compound. This is the first demonstration of androgenic activity by a compound not possessing the steroid nucleus.

Up to the present time androgenicity has always been associated with compounds possessing the steroid nucleus or those having only minor modifications in the nucleus, such as the *D*-homo analogs of testosterone (*1*). It has now been demonstrated that a perhydro phenanthrene derivative, previously reported to be an antiandrogen in rats (*2*) and in chicks (*3*), also exhibits androgenic activity when applied directly to the chick's comb.

Table 1. Androgenic activity of Ro 2-7239 inthe chick, when inuncted in absolute alcohol to the comb.

Material inuncted	Total dose (μg)	No. of chicks	Mean comb ratio ± S.E.
	Experiment A		
None	0	18	0.39 ± 0.021
Testosterone	1	14	0.36 ± 0.016
Testosterone	3	14	0.48 ± 0.028
Testosterone	9	13	0.59 ± 0.038
Testosterone	27	13	0.97 ± 0.052
Ro 2-7239	1	14	0.42 ± 0.024
Ro 2-7239	10	14	0.42 ± 0.024
Ro 2-7239	50	13	0.50 ± 0.029
Ro 2-7239	250	14	0.52 ± 0.033
Ro 2-7239	1000	12	0.56 ± 0.034
	Experiment B		
None	0	15	0.33 ± 0.018
Testosterone	1	14	0.43 ± 0.019
Testosterone	4	15	0.47 ± 0.027
Testosterone	16	12	0.68 ± 0.047
Ro 2-7239	10	12	0.42 ± 0.018
Ro 2-7239	100	12	0.47 ± 0.024
Ro 2-7239	500	13	0.60 ± 0.036

Table 1 documents typical results on the influence of Ro 2-7239 (2-acetyl-7-oxo-1, 2, 3, 4, 4a, 4b, 5, 6, 7, 9, 10, 10a-dodecahydrophenanthrene) on the chick's comb when applied directly to it. For this test, 1-day-old white leghorn male chicks were inuncted once daily with 0.05 ml of an absolute alcohol solution of the test compound, the standard testosterone, or solvent alone. After seven daily inunctions, the combs were removed and weighed to the nearest 0.5 mg, and the results were expressed as the ratio of comb weight in milligrams to body weight in grams.

Statistically significant increases ($P = 0.01$) in the comb ratios were found at dose levels of 50, 250, and 1000 μg in experiment A and at 10, 100, and 500 μg quantities in experiment B for Ro 2-7239. The comb response to Ro 2-7239 was strikingly different from that found for testosterone. Although relatively small doses produced significant growth of the comb, increasing the amount inuncted on the comb by a factor of 20 produced only minor further increments (*4*).

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8 December 1959

Nervous Regulation of Conditioned Hyperglycemia to Nociceptive Stimulation

Abstract. A conditioned rise in blood sugar occurs in rats during a 10-minute waiting period prior to nociceptive stimulation. This conditioned "preparatory hyperglycemia" is abolished after a bilateral lesion is produced in the mid-line thalamic nuclei; the experiments point to the importance of the thalamic reticular formation in adaptative metabolic reactions.

Cortical and subcortical mechanisms apparently participate in the nervous regulation of blood-sugar levels. The importance of mechanisms of higher nervous activity has been shown by the method of conditioned reflexes (*1*); evidence concerning the importance of subcortical regulation is, however, less clear. Interest had been concentrated especially on the influence of hypothalamic nuclei in experiments in which stimulation (*2*) or lesions (*3*) of these nuclei were used.

With increasing evidence concerning the role played by nonspecific brainstem mechanisms in the establishment of conditioned reflexes (*4*), information has also been obtained indicating the importance of the activation of the reticular system on homeostatic processes (*5*), the action of adrenalin as a powerful stimulant of ascending and descending reticular facilitating systems being of special interest in this connection (*6*). Experiments in which the conditioned hyperglycemia that precedes nociceptive stimulation is studied offer a new approach for investigation of both aspects of the function of the reticular system in adaptative behavior, through study of the increasing alertness and the increase in blood-sugar levels which occur when animals are repeatedly conditioned to a nociceptive stimulus.

Rats were put into a cage, and after a "waiting period" of 10 minutes, electrical shocks were applied through the floor of the cage. Blood-sugar levels were then determined, before and at the end of the "waiting period," before the nociceptive stimulus was applied. No increase in blood sugar was found after the first exposure, but there was a statistically significant rise in blood glucose during the period of conditioning to nociceptive stimulation—that is, a "preparatory hyperglycemia" usually appeared after the third conditioning period. This conditioned metabolic reaction to nociceptive stimulation was accompanied by a considerable decrease in motor activity, this being especially marked at the end of the "waiting period."

In further experiments the development of this preparatory hyperglycemia reaction was studied in animals in which bilateral lesion of the mid-line thalamic