

upon the growth, the erythrocyte count and the hemoglobin content of the animals. Goats' milk produces in many instances a severe anemia of hyperchromic character, cows' milk produces a distinctly hypochromic anemia in a smaller percentage of the animals, and human milk does not have any deleterious effect upon the growth or the red blood picture of the growing albino rat.

7846 C

Further Evidence of Insusceptibility of the Rat to a Dietary Deficiency of Vitamin C.

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Svirbely¹ has reported that the adrenal gland and liver tissues of rats and mice, reared for several generations on a diet devoid of vitamin C, were rich in the anti-scorbutic substance. As far as one can ascertain from the literature, the vitamin C requirement of the rat had been investigated chiefly from the standpoint of growth and fertility, since the characteristic scorbutic lesions such as osteoporosis, sub-periosteal hemorrhages, and petechiae of cutaneous and mucous surfaces had not been observed in this species.² Moreover, such observations had not been extended, as a rule, to more than one generation. Therefore in order to obtain further evidence that the rat requires no dietary supplement of vitamin C, the incisors of animals maintained and reared for 3 generations on scorbutic diet were examined histologically according to the method of Höjer,³ as one of the most specific and sensitive criteria of the scorbutic process.

A small series of 6 female and 7 male rats was placed on a diet of boiled whole milk and dried bread. This diet, tested on guinea pigs, was found to be scorbutic; but in other respects complete and adequate. The substitution of fresh whole milk not only prevented and cured scurvy, but maintained guinea pigs in good health. After

¹Svirbely, J. L., *Biochem. J.*, 1933, **27**, 960.

²Harden, A., and Zilva, S. S., *Biochem. J.*, 1918, **12**, 408; Drummond, J. C., *Biochem. J.*, 1919, **13**, 77; Parsons, H. T., *Biochem. J.*, 1920, **14**, 587; Kennedy, *Quart. J. Exp. Physiol.*, 1926, **16**, 281; Hartwell, G. A., *Biochem. J.*, 1930, **24**, 967; Gùdjonsson, S. V., *Biochem. J.*, 1930, **24**, 1591.

³Höjer, A., *Brit. J. Path.*, 1926, **7**, 356.

6 months of this regime the group was bred, and the offspring in turn raised and bred on the C-deficient diet. Of the 3 generations so obtained, the lower incisors were examined histologically for evidence of scurvy. The average ages of the f_0 , f_1 , f_2 groups were respectively 12 to 15, $5\frac{1}{2}$, and 2 months. In no instance did the sections show any deviations from the normal tooth structure. The organization of the odontoblasts, the process of dentine formation and the vascularity and cellular content of the pulp cavity were in no way disturbed. Furthermore, from gross examination the adrenals showed no signs of hypertrophy nor any diminution in the speed of reduction of silver nitrate (0.4% solution). Consequently there was no evidence reflecting a latent or early disturbance resultant from the continuous omission of vitamin C from the diet.

7847 P

Blood Grouping of the Rwala Arabs.

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Although many investigators have made blood typings on Asiatics in both the Near East and the Far East, no studies have been previously reported on the inhabitants of the Syrian desert. The subjects of this study all belong to the Rwala tribe whose customs and manners have been fully elucidated by Musil.¹ Being entirely nomadic and very powerful, the Rwala penetrate the deepest parts of

TABLE I.
Percentage of distribution of blood groups among Rwala Arabs.

Camp	No. Persons	% in each group				Frequencies			Racial Index
		O	A	B	AB	p	q	r	
1*	79	94.94	5.06	0	0	.21	.00	9.74	0
2	77	87.01	9.09	2.60	1.30	.54	.17	9.33	2.66
3	58	82.76	12.07	5.17	0	.63	.27	9.09	2.33
4	59	72.88†	13.56	11.86	1.69	.79	.68	8.53	1.12
5	47	63.83†	21.28	12.77	2.13	1.24	.76	7.99	1.57

* Since the Rwala are nomadic a camp number is designated instead of naming the locality.

† Decrease in O due to negro slave admixture.

¹ Musil, A., *The Customs and Manners of the Rwala Bedouins*. American Geographical Society, Oriental Explorations and Studies, No. 6, 1928.