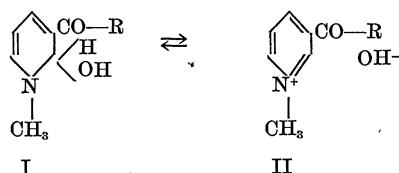


nicotinic acid administration, although one can be readily obtained after the administration of nicotinamide. On this account we are inclined to disagree with the conclusion of Perlzweig *et al.*<sup>4, 5</sup> that the administration of nicotinic acid gives rise to the excretion of the N-methyl amide derivative in urine.

Our interpretation of these findings<sup>7, 8</sup> is that the urinary precursor of F<sub>2</sub> consists in large part, if not entirely, of a radical which we may refer to as the "F<sub>2</sub> nucleus," which appears to be the N<sup>1</sup>-methyl  $\alpha$ -carbinol (I). This, however, may be in equilibrium with pyridinium compounds (II):



in which case at acid pHs one might have an appreciable fraction of the urinary precursor present as pyridinium salt.

We have no wish to belittle the work of Perlzweig and his collaborators, the merit of which we thoroughly appreciate. However, their claim for the complete identification of the F<sub>2</sub> precursor in urine as the cation N<sup>1</sup>-methylnicotinamide does not appear to be supported by all the evidence available, that which we have cited above as well as that of Ellinger and Coulson.<sup>9, 10</sup>

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#### ASCORBIC AND DEHYDROASCORBIC ACID IN COOKED GARDEN BEETS

RECENTLY some beets of the Detroit Blood Red variety, which had been stored in a vegetable storage cabinet from October, 1943, to July, 1944, were brought to our laboratory. The beets were firm and very well preserved. Since our work on potatoes indicates that some of the reduced ascorbic acid is apparently changed to dehydroascorbic acid on storage, it seemed worthwhile to test the beets. Accordingly, representative samples of the 1943 crop of stored beets and of the 1944 crop of fresh beets grown on the same soil were obtained. The 1944 beets were nearly as large as the 1943 beets, but were not quite so mature.

<sup>7</sup> V. A. Najjar, V. White and D. B. M. Scott, *Bull. Johns Hopkins Hosp.*, 74: 378, 1944.

<sup>8</sup> V. A. Najjar, M. M. Hammond, M. A. English, C. C. Deal and M. B. Wooden, *Bull. Johns Hopkins Hosp.*, 74: 406, 1944.

<sup>9</sup> P. Ellinger and R. A. Coulson, *Nature*, 152: 383, 1943.

<sup>10</sup> R. A. Coulson and P. Ellinger, *Biochem. Jour.*, 37: Proc. XVII, 1943.

The 1943 crop had been stored in a vegetable storage cabinet well insulated from the furnace heat of the basement. The cabinet was provided with an opening to admit cold air from the outside, and the withdrawal of warm air by means of an electric fan.

Since beets are not eaten raw, they were cooked until done, peeled and assayed immediately for ascorbic acid. The data are presented in Table 1.

TABLE 1  
ASCORBIC ACID AND DEHYDROASCORBIC ACID IN COOKED GARDEN BEETS

Description of sample*	Ascorbic acid, fresh basis, mg/100 gms		
	Reduced	Dehydro	Total
1944 crop—fresh . . . . .	17.48	8.41	25.89
1943 crop—stored 9 months	12.61	13.14	25.75

\* The beets were furnished by J. Clayton Russell in the Department of Agricultural Engineering, North Dakota Extension Service.

Although the beets were from different crops, the differences in the relative amounts of reduced and dehydroascorbic acids in the fresh and stored beets indicate a considerable change of ascorbic acid to the dehydroascorbic form during storage, without any appreciable destruction. Furthermore, the full vitamin C value is not shown by determining only the reduced ascorbic acid.

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#### AGE AT STARRING IN AMERICAN MEN OF SCIENCE

THE age at which the representatives of the various sciences were starred has varied among the sciences and from time to time. In general, this recognition is earliest attained in the physical sciences and slowest in pathology and botany. Since 1909 the trend has averaged upward, but there has been little change in chemistry and psychology, while in astronomy and geology a downward trend is indicated by the recent

TABLE 1  
MEDIAN AGE OF THOSE STARRED

Starred in	1903	1909	1921	1927	1932	1937	1943
Anatomy . . . . .	39	36	40	40	47	51	46
Anthropology . . .	51	36	44	52	41	42	48
Astronomy . . . . .	48	37	46	45	42	39	36
Botany . . . . .	41	38	45	48	46	49	49
Chemistry . . . . .	40	37	42	42	40	43	43
Geology . . . . .	46	40	47	48	49	46	43
Mathematics . . . .	42	33	39	39	35	38	37
Pathology . . . . .	45	39	44	45	47	50	52
Physics . . . . .	42	38	40	41	35	39	40
Physiology . . . . .	41	34	41	41	42	42	50
Psychology . . . . .	40	39	42	44	43	43	41
Zoology . . . . .	40	38	44	42	44	43	46