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Contact us if you have any questions. Both literature and a demonstration are available on request.



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adrenalectomy" (3). Defective adrenal cortical hormone synthesis has been demonstrated to have a carcinogenic effect.

Preventive programs might well embrace investigation of the relation between dietary deficiency and endocrine abnormalities of subtle or gross natures. Studies thus far indicate that such an interrelation creates fertile circumstances for the development of neoplasms.

Maugh comments that there is a distressing potential for a faddist approach in this entire matter. This approach could be averted if the usefulness and protectiveness of dietary sources of all nutrients, including sources of vitamin A, were to be outlined in public educational programs. Inappropriate medication with large amounts of vitamin A in capsule form is not suggested. Rather, attention to diet with consideration of existing endocrine defects is the reasonable approach based on the findings thus far.

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#### Particle Physics Race

Never before have I seen the absurd competition in high energy physics made so clear as in William D. Metz's articles (Research News, 6 Dec. 1974, pp. 909 and 910) about the discovery of the new particles.

Goldhaber retreated to write the paper announcing the Stanford result when there were only three data points. Only in the second draft could parameters of the resonance be included because they were not fully known at the time the first draft was being written.

The almost-hero of this comedy was Ting, who had sufficient judgment and caution to wonder if his data were correct or even spurious. As a result, he and his colleagues working at Brookhaven engaged in several months of reflection and experimental checking.

Yet, when the threat of a scoop appeared, he too rushed to publish.

I wonder if these scientists also run to the cashier's window the moment the horses in a race leave the starting gate.

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#### Organic Cations

The admirable hypothesis of D. McMahon (20 Sept. 1974, p. 1021) that differentiation of embryonic cells is determined by their content of inorganic ions and cyclic nucleotides leads me to consider the possibility that not only are inorganic cations of considerable importance in this connection, but that organic cations, such as putrescine, spermidine, and others, found in all nucleated mammalian cells, could also be of importance. These have been found to substitute and synergistically promote enzymatic activities stimulated by inorganic cations (1). Polyamine biosynthesis can also be stimulated by cyclic nucleotides (2). Furthermore, in addition to having ionic properties, these diamines, being derivatives of aliphatic hydrocarbons, have the ability of conformational adjustment into specific binding sites of macromolecules such as DNA and RNA (3). Because they are subject to enzymatic synthesis and catabolism, their biological activities could also be modulated by endogenic processes causing variation in concentrations of these compounds and resulting in a variety of other metabolites, as for instance conversion of putrescine by diaminoxidase (histaminase) to  $\gamma$ -aminobutyraldehyde and then to  $\Delta^1$ -pyrroline and polymers.

With all these events occurring in the cell, I could imagine that they contribute to the mechanisms considered by McMahon.

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