A reinvestigation of the effect of zinc deficiency noted by Carsiotis, M. and A. Meyers. Decreased activity of Noson et al. (1951 J. Bio). Chem. 188: 397) has revealed all tryptophan biosynthetic enzymes due to zinc deficiency. that all enzymes of the tryptophan biosynthetic pathway are decreased two- to five-fold when zinc is omitted from the growth medium (Vogel's Medium N). The effect is more marked in a histidine mutant than in the wild type. An explanation of this effect is being sought currently. = - - Department of

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