

LETTER TO THE EDITOR

We are pleased to receive Letters to the Editor on appropriate subjects. These Letters should be submitted in typewritten form, double-spaced, and are not to exceed 2½ pages. When appropriate, we will solicit comments from the original authors. All Letters to the Editor are subject to editing and possible abridgment.

To the Editor:

The article by Ohtaki and Miyazaki (*J Invest Dermatol* 61:339, 1974) unjustifiably calls three dopa oxidase bands from mouse melanoma homogenates "tyrosinase." Studies in our laboratory have indicated that peroxidase activity is present in both the soluble and insoluble fractions of mouse melanoma homogenates (*Pigmentation: Its Genesis and Biologic Control*, New York, Appleton-Century-Crofts, 1972, pp 571-592) and that it can be demonstrated histochemically in normal and neoplastic melanocytes (*J Invest Dermatol* 48:461, 1967; 55:1, 1970; 61:60, 1973; *Histochemie* 23:295, 1970) in the melanosomes. Biochemical studies (*Biochem J* 124:439, 1971) have shown that peroxidases can oxidize tyrosine, as well as dopa, to melanin. Conversely, the mammalian aerobic dopa oxidase called "tyrosinase" cannot oxidize tyrosine even with cofactor.

It is unfortunate that Ohtaki and Miyazaki did not consider the question of peroxidase activity in their crude preparations (which included material from leukocytes with peroxidase activity, as well as from melanoma cells).

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Dr. Okun's letter was submitted to Dr. Ohtaki, who offers the following reply:

We do not believe our tyrosinase preparations, purified by gel filtration and column chromatography, were contaminated with "peroxidase." There are very apparent differences in molecular weights and physicochemical properties between tyrosinases and peroxidase (*Biochem Z* 344:478, 1966; *J Invest Dermatol* 57:81, 1971). Furthermore, our purified tyrosinases are able to oxidize tyrosine with dopa as a cofactor. Such evidence is supported by many other authors (*Arch Dermatol* 96:305, 1967; *J Biol Chem* 242:5308, 1967). It is true, we believe, that peroxidase can oxidize tyrosine, as well as dopa, to melanin, but this was not the problem approached in the paper discussed.