

LETTER TO THE EDITORS

CEDERBAUM and YOSHIDA (*Genetics* **72**: 363–367, October 1972) suggest that electrophoretically identical polymorphisms of tetrazolium oxidase (*T0*) exist in the blood and liver of rainbow trout, but that the enzymes of these two tissues are under separate genetic control. Our published work on this variation and homologous polymorphism in chinook salmon (UTTER, *Comp. Biochem. Physiol.*, **39B**: 891–895, 1971; UTTER and HODGINS, *Trans. Amer. Fish. Soc.* **101**: 494–502, 1972) and much additional unpublished data clearly indicate that parallel phenotypes of *T0* are expressed in the liver and blood of individual fish of these species. Tabulated below are data obtained specifically for this communication that demonstrate parallel expression of 5 *T0* phenotypes in liver and blood lysates from 35 rainbow trout.

		<i>T0</i> Expression in Liver				
		AA	AB	BB	BC	CC
<i>T0</i> Expression in Lysates	AA	3				
	AB		2			
	BB			11		
	BC				10	
	CC					9

We feel that the claim of CEDERBAUM and YOSHIDA—based on only 4 fish, two of which differed in phenotypes of liver and blood—was premature.

We hope that the paper of CEDERBAUM and YOSHIDA, because of its reputable source of publication, does not become uncritically cited as “another reflection of the polyploid genome of salmonid fishes.” While there is undisputable evidence of considerable gene duplication in salmonid fishes (UTTER and HODGINS, *Trans. Amer. Fish. Soc.* **101**: 494–502, 1972), the case for polyploidy as postulated by OHNO (*Trans. Amer. Fish. Soc.* **99**: 120–130, 1970) has not been proven and the uncritical assumption that salmonids are tetraploid stifles creative thinking concerning alternative models. The recent paper of DAVISSON, WRIGHT and ATHERTON (*Science* **178**: 992–994, 1972) demonstrates cytologically and biochemically an instance of limited gene duplication in a salmonid species that we believe warrants serious consideration as an alternative model to ancestral tetraploidy.

Sincerely,

FRED M. UTTER
 FRED W. ALLENDORF
 HAROLD O. HODGINS
 ALLYN G. JOHNSON

Northwest Fisheries Center
 National Marine Fisheries Service
 Seattle, Washington 98112

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