

Zaprionus	M. sp. nr. ditan	-	+	-
	M. sp. nr. fracticosta	-	+	-
	Z. ghesquierei	+	-	-
	Z. inermis	+	-	-
	Z. koroleu	+	-	-
	Z. tuberculatus	+	-	-
	Z. vittiger	+	-	-
	Z. sp. nr. koroleu	+	-	-

Table 2

Genus	Species	Organic material				
		Flowers	Fruits	Fungi	Exudate	Stems/leaves
Amiota	A. sp.	-	-	+	-	-
Drosophila	D. akai	-	+	-	-	+
	D. ananassae	+	+	-	-	-
	D. aterrima	+	-	-	-	-
	D. dyaramankana	+	-	+	-	-
	D. framire	-	+	-	-	-
	D. lambi	+	+	-	-	-
	D. melanogaster/simulans	+	+	-	-	-
	D. pruinosa	-	+	+	-	-
	D. repleta	-	+	-	-	-
	D. seguyi complex	+	+	+	-	+
	D. suma	+	-	-	-	-
	D. sp. nr. ananassae	-	-	+	-	-
	D. sp. nr. pugionata	-	-	-	-	+
Hirtodrosophila	H. sp. nr. akabo or nr. hirticornis	-	-	+	-	-
Leucophenga	L. sp.	-	-	+	-	-
Lissocephala	L. punctipennis	-	+	-	-	-
Mycodrosophila	M. bombax	-	-	-	+	-
	M. ditan	-	-	+	-	-
	M. fracticosta	-	-	+	-	-
	M. sp. nr. ditan	-	-	+	-	-
	M. sp. nr. fracticosta	-	-	+	-	-
Stegana	S.? proximata	+	-	-	-	-
Zaprionus	Z. ghesquierei	-	+	-	-	-
	Z. tuberculatus	+	+	-	-	-
	Z. vittiger	+	+	-	-	-
	Z. vrydaghi	+	-	-	-	-
	Z. sp. A	+	-	-	-	-
	Z. sp. B	-	-	-	+	-

Donady, J. City of Hope Medical Center, Duarte, California. Failure to demonstrate genes for nerve or muscle differentiation on chromosome four.

It is assumed that a mutation blocking any step in the differentiation of nerve or muscle cells will be an embryonic lethal. All known recessive embryonic lethals of chromosome four (received from B. Hochman) have been tested for their ability to give nerve and muscle cell

differentiation in vitro.

Egg counts for each mutant [1(4)2h, 5, 7, 23 and ci^D] showed the expected 25% failure to hatch. However, in twenty single-embryo cultures for each mutant, all cultures produced differentiated nerve and muscle cells. Normal differentiation, as compared to control cultures, is based on the appearance of axons (50μ or longer) and ganglion cells for nerve, and pulsating spindle-shaped cells for muscle. Therefore, these mutations are not in the pathway for nerve or muscle cell differentiation. Supported by NIH Grant No. AI05038 and NS09330 to R. Seecof.