

NEURAMINIDASE ASSOCIATED WITH MEASLES VIRUS

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Summary. No neuraminidase activity was found in highly concentrated measles virus preparations. Enzyme activity previously reported has been attributed to a latent virus.

It was previously reported (1) that concentrated preparations of measles virus (Edmonston vaccine strain) propagated in either HeLa or stable amnion cells contained neuraminidase activity. Failure to confirm these results with highly concentrated and density gradient purified virus grown in African green monkey (Vero) cells (Table 1) prompted reexamination of Vero-passaged virus derived from lots of measles virus originally reported to have neuraminidase activity. The methods used have been described (1). Three of four lots tested were positive for enzyme. One of the HeLa lots represented in the preliminary communication also was positive. However, the enzyme activity of these preparations was not neutralized by potent measles antisera but was partially blocked by parainfluenza 2 antiserum. In addition, each of the enzyme-active preparations tested was found to contain parainfluenza virus, demonstrable either by hemagglutination or by recovery of infective virus. The latter virus in all probability accounts for the neuraminidase activity ascribed to measles virus. The original report must therefore be superseded by the conclusion that strains of measles virus examined to

date contain no demonstrable enzyme. Absence of neuraminidase thus remains an important distinguishing characteristic in the classification of paramyxoviruses.

Table 1. N-acetylneuraminic acid (nM) released from substrates incubated with concentrates of measles virus grown in Vero cells

Virus preparation	Hemagglutinin units	Substrate	
		Neuraminlactose (Galbiochem)	Collacalia Mucoid (2)
Measles no. 210	2048	< 1	<1
Measles no. 211	3072	< 1	<1
Measles no. 202, Hemagglutinin fraction (1.19 g/ml) from sucrose-D ₂ O gradient	1024	< 1	<1
Newcastle Disease Virus Control	1150	52	35

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References.

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