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Anti-HIV activity by MGN-3 In Vitro

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Objective: To examine the effect of MGN-3 on HIV induced syncytia formation (SF) In Vitro. MGN-3 is an arabinoxylan from rice bran, that is enzymatically treated with an extract from Hyphomycetes mycelia.

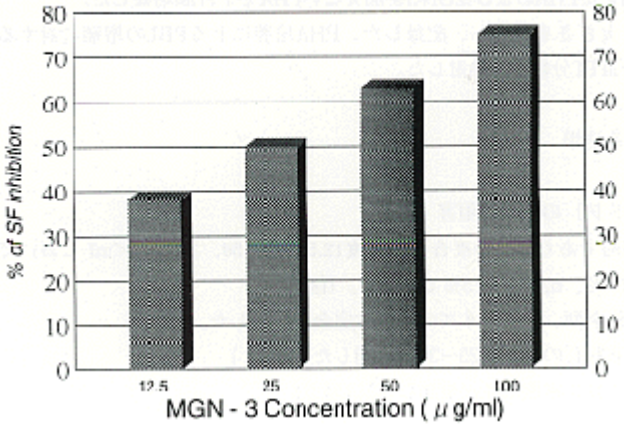
Method: Peripheral Blood Lymphocytes (PBL) from AIDS patients were cultured with PHA in the presence or absence of different concentrations of MGN-3 (12.5 - 100 μg / ml) for 7 days. The number of syncytia were evaluated, and the size of each was also recorded. The effect of MGN-3 on PHA induced PBL proliferation was studied by MTT assay.

Results: Treatment with MGN-3 resulted in:

1) Significant inhibition in the SF,

2) The effcct was dose dependent, percentage of inhibition in SF was 38.5, 50, 62.5, and 75% at concentrations of 12.5, 25, 50, and 100 μg / ml respectively; (Fig1)

Fig 1
Effect of MGN-3 on Syncytia Formation (SF) in Vitro



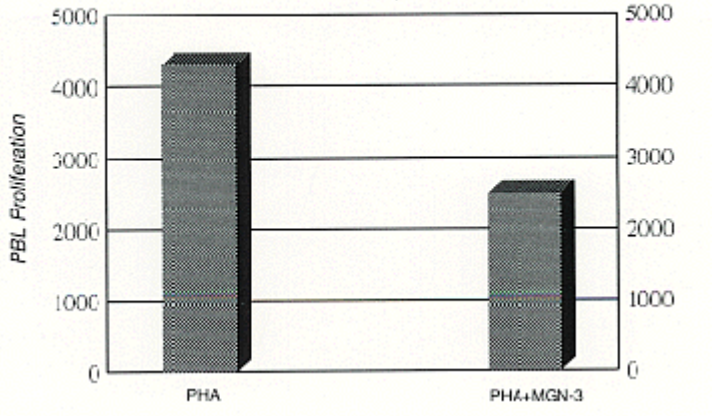
3) Complete absence of SF having large and median size post treatment, and (table1)

Table 1
Effect of MGN-3 on size of Syncytia formation (SF)

MGN-3 Concentration (μ g/ml)	Size of SF.		
	Small	Medium	Large
0	+	+	+
12.5	+	+	+
25	+	+	‡
50	+	‡	-
100	+	-	-

4) MGN-3 caused 25 - 30% inhibition of PBL proliferation. (Fig2)

Fig 2
Effect of MGN-3 on PBL proliferation In Vitro



Conclusion: We conclude that MGN-3 is a natural product that possesses a potent effect against syncytia formation by HIV. This property of MGN-3 may be of potential value in therapy of HIV infecion.

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