

1-16. Evaluation of 1-DNJ extracted from
Silkworm in GBV-B Infected Marmoset
Hepatocytes

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Alpha-glucosidase inhibitor, 1-deoxynojirimycin, has been shown to eliminate the production of ER-budding viruses in the ER of host cell. This glucose-derived iminosugar derivative, 1-DNJ, has been largely purified from midgut of silkworm, *Bombyx mori*. Here, we have screened the antiviral activity in the GBV-B infected marmoset hepatocyte cell line. GBV-B viruses infected into marmoset hepatocyte were grown in the presence of positive antiviral controls, 1-DNJ, for 6 days and then a reduction of intracellular viral replication and reduction of virus secreted into culture medium was observed. In comparison to parallel hepatocyte cultures grown in the presence of ribavirin or interferon- α (INF- α), 1-DNJ exhibited an antiviral effect similar to that of INF- α control. The maximal reduction of intracellular GBV-B titers were 1.41, 0.9 and 0.52 logs for INF- α , 1-DNJ and ribavirin, respectively. Further testing investigate the possible synergistic effects of 1-DNJ in combination therapy with ribavirin or INF- α .

The results of such a study would justify trials in the live primate model animal, marmoset, and whether to use 1-DNJ as a monotherapeutic agent or in combination with conventional therapies.