inhibitory effects even when the 17mers were added at 2 h after infection (Fig. 5, lanes 4, 9, and 14). It is thus plausible that the anti-HIV-1 activity of the 17mers is primarily associated with the gp120 inhibition but not the integrase inhibition.

In conclusion, the binding mode of Zintevir with the gp120 molecule has not yet been manifested. The polyanionic compounds such as dextran sulfate and heparin also bind to the gp120 molecule [25] to exhibit potent inhibitory effects on HIV replication [26]. The polyanionic nature of the 17mers may correlate with their anti-HIV-1 activity as dextran sulfate and heparin. However, the anti-HIV-1 activity of G-quartet-forming oligonucleotides is so significantly sequence-dependent [9,27,28] that the folded tertiary structure of the 17mers should be a critical factor for their binding to the gp120 molecule. Nevertheless, our results described here reveal that the interaction of Zintevir with the gp120 molecule does not depend on its chirality at all. Thus, L-17mer is an attractive molecule to facilitate to manifest the mode of the characteristic interaction of Zintevir with the gp120 molecule, together with its therapeutic potency. The comparative investigations for the binding mode of the 17mers with gp120 are currently under way.

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