

Company News

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Joint Research with Kumamoto University on Anti-HIV Medicines

Aiming to develop novel medicines based on genomics technologies, Ono Pharmaceutical Co., Ltd. (Ono) has been seeking to determine the function of genes and identify drug targets. Studies conducted by many researchers until today have shown that binding to proteins (receptors) called CXCR4 and CCR5 on cell surface is important for AIDS virus (HIV) infection. Among genes obtained by Ono is a gene called SDF-1, which we have found to produce a protein that binds to CXCR4.

To step up our research outcome, we have been collaborating with Prof. Hiroaki Mitsuya, Kumamoto University School of Medicine on development of CCR5 receptor antagonist. As a result, we have successfully discovered a promising lead compound (E913), although still in the early phase. E913 represents structurally a new group of low molecular weight compounds, which block HIV entry by antagonizing CCR5. These compounds are also effective on drug-resistant strains of virus, against which no existing anti-HIV drugs such as reverse transcriptase inhibitors and protease inhibitors show effectiveness. With their verified oral bioavailability, they have potential to be developed as drugs for oral administration.

Ono is optimizing E913 so as to start clinical studies within 1-2 years. An article concerning this topic will be published in the Journal of Biological Chemistry (September 14, 2001).

*lead compound: drug candidate compound