The development of (EFdA) 4’-Ethynyl-2-fluoro-2’-deoxyadenosine with potent antiviral activity to highly resistant HIV strains

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A research group led by Senior Assistant Professor Eiichi Kodama of Department of Comprehensive Infection, Tohoku University Hospital, along with Yamasa Corporation (Choshi, Chiba Prefecture), Kumamoto University, Kyoto University, and Yokohama College of Pharmacy in collaboration, has entered into an exclusive licensing agreement with Merck & Co., Inc. (Whitehouse Station, NJ) for the development of a novel therapeutic drug against infections of highly resistant human immunodeficiency virus (HIV) with plans for full scale clinical development.

EFdA-mono-phosphate is bound at a hydrophobic pocket (yellow arrow) in the reverse transcriptase. The novel mechanism provides high efficacy even on resistant HIV without adverse effect.