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Analysis of Drug Resistant HIV-1 Env Evolving in the Presence of C0-recptor Antagonist

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Analysis of Drug Resistant HIV-1 Env Evolving in the Presence of Co-receptor Antagonist

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Little is known about the development of CCR5-antagonist resistant HIV-1 *in vivo*. We analyzed one subject who was found to have both R5 and X4-using virus at virological failure from a phase II clinical trial of Vicriviroc (VCV). The presence of multiple viral tropisms indicates the multiple mechanisms of drug evasion. Our findings may describe the early transition into drug resistance. Studies with VCV based susceptibility assays show that there is a phenotypic difference between the R5 viral populations from week 0 (baseline) and 8 (virological failure). Genotypic analysis of the R5-population overtime suggest that the V1 region may facilitate more effective use of CCR5 or CD4 and may also contribute to VCV-susceptibility.