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61/193,636 11 December 2008 (11.12.2008) US(71) Applicants (for all designated States except US): **GLAXOSMITHKLINE LLC** [US/US]; One Franklin Plaza, 200 North 16th Street, Philadelphia, PA 19102 (US). **SHIONOGI & CO., LTD.** [JP/JP]; 1-8, Doshomachi 3-chome, Chuo-ku, Osaka-shi, Osaka, 541-0045 (JP).

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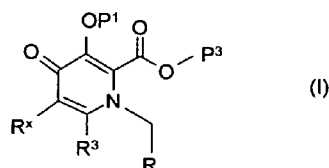
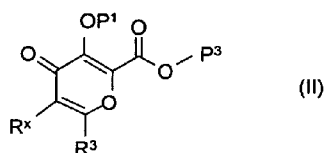
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(54) Title: PROCESSES AND INTERMEDIATES FOR CARBAMOYLPYRIDONE HIV INTEGRASE INHIBITORS



(57) **Abstract:** Processes are provided which create an aldehyde methylene, or hydrated or hemiacetal methylene attached to a heteroatom of a 6 membered ring without going through an olefinic group and without the necessity of using an osmium reagent. In particular, a compound of formula (I) can be produced from (II) and avoid the use of an allyl amine: (formulae I and II) where R, P¹, P³, R³ and R^x are as described herein.