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(71) Applicant *(for all designated States except US)*: VIRCO N.V. [BE/BE]; Drie Eikenstraat 661, B-2650 Edegem (BE).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: DE BETHUNE, Marie-Pierre [BE/BE]; Tweeleeuwenstraat 15, B-3078 Everberg (BE). HERTOGS, Kurt [BE/BE]; Sint Vincentiusstraat 53, B-2018 Antwerpen (BE). PAUWELS, Rudi [BE/BE]; Damstraat 166, B-1982 Weerde (BE).

(74) Agent: RYAN, Anne; Anne Ryan & Co., 60 Northumberland Road, Ballsbridge, Dublin 4 (IE).

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(54) Title: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY OF HUMAN HIV STRAINS

(57) Abstract

A method of managing HIV chemotherapy of patients who are HIV positive comprises transfecting a cell line susceptible to infection by HIV with a sequence, preferably that coding for RT and protease, from the pol gene of HIV obtained from a patient and a HIV-DNA construct from which the sequence has been deleted, culturing the transfected cells so as to create a stock of chimeric viruses, assessing the phenotypic sensitivity of the chimeric viruses to an inhibitor of the enzyme encoded by the pol gene of HIV and assigning a value thereto, constructing a data set comprising the value for chimeric virus sensitivity and the corresponding value for a chimeric wild-type strain of HIV, repeating the sensitivity assessment for at least two further inhibitors and thereby constructing at least three such data sets in total, representing the data sets in two-dimensional or three-dimensional graphical form such that the difference between the chimeric and wild-type sensitivities in the case of each data set provides a visual measure of the resistance of the chimeric stock to treatment by the inhibitor in question, and selecting the optimum inhibitor(s) on the basis of the graphical representation of the resistances so measured. The method yields phenotypic information on individual HIV infected patients on a large scale, economically and rapidly. The method is applicable to all currently available chemotherapeutic regimens and it is expected to be equally applicable to future chemotherapeutic regimens.

