Title: METHOD FOR TAILORING ADMINISTRATION OF DRUGS BY QUANTITATION OF mRNA

Abstract: The present invention discloses a method for tailoring drug protocols to individual patients based on the levels of marker mRNA measured in leukocytes after stimulation of whole blood of the patient with candidate drugs. A method of measuring a patient’s responsiveness to a drug is disclosed that includes exposing whole blood of the patient to the drug for 7 hours or less; after the exposure, measuring the amount of an mRNA associated with an effect of the drug in blood cells; and identifying responsiveness to the drug based on the results of the measurement, wherein a change in the amount of the mRNA indicates the patient’s responsiveness to the drug. The amount of mRNA measured in the blood cells may be compared with the level of mRNA present in the cells before exposure or with the level of mRNA present in cells exposed for the same amount of time to a control vehicle. Marker mRNAs useful in the present invention include mRNAs encoding the gene product of the p21, BAX, PUMA, NOXA, and IL-2 genes. The method may be employed for patients with, among other conditions, cancer or diseases or conditions requiring immunosuppression.
**INTERNATIONAL SEARCH REPORT**

**INTERNATIONAL APPLICATION No**
PCT/US05/37925

**A CLASSIFICATION OF SUBJECT MATTER**

IPC C12Q 1/68( 2006 01)

USPC 435/6

According to International Patent Classification (IPC) or to both national classification and IPC

**B FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

US 435/6

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C DOCUMENTS CONSIDERED TO BE RELEVANT**

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<th>Category</th>
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<th>Relevant to claim No</th>
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**Date of the actual completion of the international search**
19 January 2007 (19 01 2007)

**Date of mailing of the international search report**
21 FEB 2007

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Form PCT/ISA/210 (second sheet) (April 2005)