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(54) Title: METHODS FOR IDENTIFYING SMALL MOLEDCULES THAT MODULATE PREMATURE TRANSLATION TERMINATION AND NONSENSE MEDIATED mRNA DECAY

(57) Abstract: The present invention relates to a method for screening and identifying compounds that modulate premature translation termination and/or nonsense-mediated messenger ribonucleic acid ("mRNA") by interacting with a preselected target ribonucleic acid ("rRNA"). In particular, the present invention relates to identifying compounds that bind to regions of the 28S ribosomal RNA ("rRNA") and analogs thereof. Direct, noncompetitive binding assays are advantageously used to screen libraries of compounds for those that selectively bind to a preselected target RNA. Binding of target RNA molecules to a particular compound is detected using any physical method that measures the altered physical property of the target RNA bound to a compound. The structure of the compound attached to the labeled RNA is also determined. The methods used will depend, in part, on the nature of the library screened. The methods of the present invention provide a simple, sensitive assay for high-throughput screening of libraries of compounds to identify pharmaceutical leads.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/23075

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) : C12Q 1/68 US CL : 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) U.S. : 435/6		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Note: no sequence search was required for a search of the claims.		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 01/44516 A2 (TULARIK INC. and PTC THERAPEUTICS) 21 June 2001 (21.06.01), especially pages 2-4.	1-15
Y, P	US 6,458,538 (BECKMANN et al) 01 October 2002 (01.10.02), column 1, lines 62-column 3, line 7.	1-15
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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09 January 2004 (09.01.2004)	06 JUL 2004	
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Continuation of B. FIELDS SEARCHED Item 3:

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