

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Klaus GIESE, et al.	)	Confirmation No: 6369
	)	
Application Serial No.: 10/633,630	)	Group Art Unit: 1635
	)	
Filed: August 5, 2003	)	Examiner: Kimberly Chong
	)	
For: INTERFERING RNA MOLECULES	)	

United States Patent and Trademark Office  
Randolph Building  
401 Dulany Street  
Alexandria, Virginia 22314

**Declaration under 37 C.F.R. § 1.132**

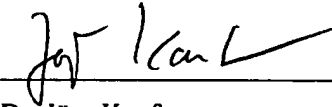
I, Dr. Jörg Kaufmann, declare and say:

1. I am an inventor of the captioned application..
2. I make this declaration to explain how to calculate the number of possible ways of arranging 2'- modified and unmodified nucleotides on antisense and sense strands of a double stranded RNA molecule where each strand is 23 nucleotides long.
3. In a double stranded RNA molecule of this type, any nucleotide on either strand can be either modified or unmodified. In other words, there are two possibilities for each position. Thus, on a single strand that is  $n$  nucleotides long, there are  $2^n$  possible ways of arranging modified and unmodified nucleotides on the strand. For example, each strand might be completely unmodified, might have from 1 to 22 modifications arranged in any possible combination of positions in the strand, or might be modified on every nucleotide.
4. On a strand containing 23 nucleotides, there are therefore  $2^{23}$  possible ways of arranging modified and unmodified nucleotides along the strand.

5. In a double stranded molecule where each strand is 23 nucleotides long, there are  $2^{23}$  possible ways of arranging modified and unmodified nucleotides on each strand, and the arrangements on each strand are independent. Accordingly, in such a double stranded molecule there are  $2^{23} \times 2^{23} = 2^{46} = 7.0 \times 10^{13}$  possible arrangements.

6. All statements made herein of my knowledge are true and all statements made on information and belief are believed to be true; and further, these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any document or any registration resulting therefrom.

Date: Feb. 08 / 2008

  
Dr. Jörg Kaufmann