## ABSTRACT

This invention provides catalytic molecules capable of cleaving target nucleotide sequences. More specifically, the invention provides an endonuclease of the formula (I)

X——M——Y (I)

wherein X and Y represent nucleotide sequences comprised of deoxyribonucleotides, ribonucleotides, or combinations thereof or derivatives thereof; said nucleotide sequences being of sufficient length to allow hybridization to a target nucleic acid sequence desired to be cleaved by said endonuclease;

and wherein M represents a catalytic region of the formula (II):

5' $C^1$ $C^2$ $G^3$ $A^4$ $N^5$ $G^6$ $A^7$ P $G^8$ $A^9$ $A^{10}$ $A^{11}$ $N^{12}$ 3' (II)

where, A, G, C and U respectively represent bases adenine, guanine, cytosine and uracil which may be in the form of deoxyribonucleotides, ribonucleotides, or combinations thereof or derivatives thereof; and $N^{12}$ is selected from any of the bases adenine, guanine, cytosine, uracil or thymine, or derivatives thereof;

and wherein;

P is one or more nucleotides, which nucleotides may be deoxyribonucleotides, ribonucleotides, or a combination of one or more deoxyribonucleotides and one or more ribonucleotides, or derivatives thereof, wnerein if said nucleotides solely comprise ribonucleotides and the nucleotide sequences X and Y are solely comprised of ribonucleotides, then said ribonucleotides of the group P are not base paired to one another; or a bond or any atom or any group of interconnected atoms linking nucleotides $A^7$ and $G^8$, which does not destroy the cleavage capability of the catalytic region and which is not solely comprised of nucleotides.

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