

Title (en)  
DNA-BINDING PYRROLE AND IMIDAZOLE POLYAMIDE DERIVATIVES

Title (de)  
DNA-BINDENDE PYRROL- UND IMIDAZOLPOLYAMIDDERIVATE

Title (fr)  
DERIVES DE POLYAMIDES PYRROLE-IMIDAZOLE LIANT L'ADN

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Application  
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Abstract (en)  
[origin: WO9849142A1] Novel small molecule polyamides of Formula (I) that specifically bind with subnanomolar affinity to any predetermined sequence in the human genome with potential use in molecular biology and human medicine are described. Further, the designed compounds which target the minor groove of B-form double helical DNA offer a general approach for the control of gene-expression. Simple rules are disclosed which provide for rational control of the DNA-binding sequence specificity of synthetic polyamides containing N-methylpyrrole and N-methylimidazole amino acids. A series of molecular templates for polyamide design are disclosed which provide for small molecules which recognize predetermined DNA sequences with affinities and specificities comparable to sequence specific DNA-binding proteins such as transcription factors.

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