TECHNOLOGY

# Recognition-Driven Alkylation of Biopolymers

## OVERVIEW

DNA modification due to conformation dependent activation is an important mechanism for developing a chemotherapeutic agent for treatment of cancer or viral diseases. Existing methods for target-specific reaction include the use of affinity reagents (wherein target selectivity depends on a fast binding and slow reaction to avoid non-specific modification of competing reactants) or inducible reagents such as mechanism-based inhibitors. In both these cases the principles behind their action cannot be generalized to other systems such as site directed reagents or target sequences.

Researchers at the Department of Chemistry and Biochemistry, University of Maryland, have developed a new and novel method for target promoted alkylation of DNA. This method may be applied generally and predictably in biological systems in vivo or in vitro. Thus enabling the delivery of reactive reagents in a precise and specific manner to a chosen biological target. The process is driven by target recognition to achieve the most thermodynamically stable product, which can be utilized as a general strategy to develop target activating alkylating reagents.

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# Additional Information

## INSTITUTION

University of Maryland, College Park

## PATENT STATUS

Patent(s) pending

## LICENSE STATUS

Contact OTC for licensing information

## CATEGORIES

- Biomaterials

## EXTERNAL RESOURCES