

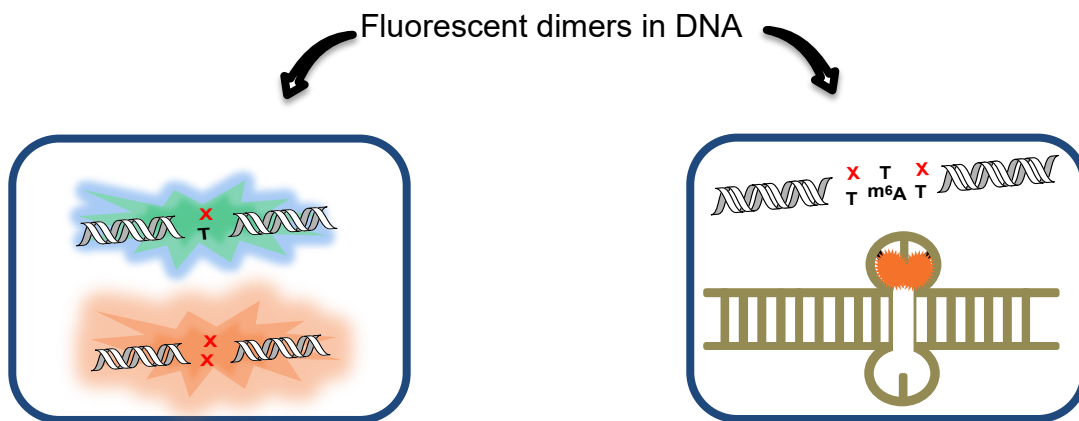
# New fluorescent dimers in DNA

Jan Kunzmann, Hans-Achim Wagenknecht\*

Karlsruhe Institute of Technology, Institute of Organic Chemistry,

Fritz-Haber-Weg 6, 76131 Karlsruhe

jan.kunzmann@kit.edu



**Figure 1:** DNA duplex with monomer and dimer (**left**), DNA probe to detect  $m^6A$  modification (**right**).

DNA contains the blueprint for the entire organism. A mutation of one base, a so-called single nucleotide polymorphism (SNP), can have considerable consequences. One possibility to detect such changes in DNA are fluorogenic probes, which sensitively reveal the SNPs by a wavelength shift of the fluorescence. The aim of this work is the formation of new fluorescent dimers in DNA, which shows a bathochromic shifted fluorescence compared to the monomer. On the one hand, dimers are to be generated in the double strand, in which one dye is present per strand, and on the other hand, dimers are to be generated in the double strand, in which both dyes are present in the same single strand. This dimer formation will be used to synthesize a DNA probe that detects an  $N^6$ -Methyladenosine ( $m^6A$ ) modification by hybridization.

## References:

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