A bloody affair: Novel indicator dye and Cucurbit[8]uril (CB8) conjugate for detection of supramolecules in blood

Low-cost, robust artificial receptors like CB8 can be used as "reporters" for detecting and monitoring drug levels.



However, numerous molecules are present in blood, which compete to bind with these reporters reducing the effectiveness of such sensing methods.

Synthesis of novel indicator dye in conjunction with receptor CB8

Indicator dye (MPCP)



Host (CB8)

Benefits of this detection:

High binding strength

Accurate estimation

Purely synthetic hosts

Sensitive to sample variations

ast and inexpensive

CB8-based chemosensing ensemble exhibits excellent sensing capabilities and could be used for developing diverse blood serum-based supramolecular assays.

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Chemical Science

Receptor conjugate tested for evaluating Memantine (Alzheimer's drug) in blood

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Indicator displacement assay allows accurate estimation in complex environment



Rational Design and Implementation of a Cucurbit[8]uril based Indicator-Displacement Assay for Application in **Blood Serum** Sinn *et al*. (2019)



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