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Conformationally fixed tricarboyanines modified with β -alanine, as the basis for the vector delivery of biogenic molecules

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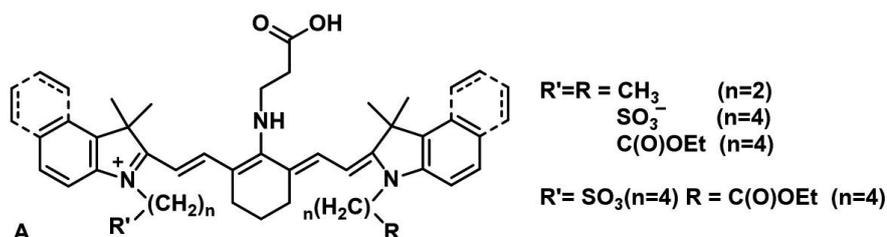
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The effective fluorescence of tricarboyanine dyes in the near infrared region allows their use in medicine and biology. The formation of complexes with transport proteins of the blood (for example, serum albumin HSA) is another key factor due to which they can be used in angiography [1].

As reagents that effectively participate in the modification of conformationally fixed tricarboyanines at the meso-position, ω -amino acids, for example, β -alanine, have been described [2]. In the framework of this study, a series of symmetric conformationally fixed tricarboyanines based on indolenin and benzindolenin was synthesized and a meso-position was modified by β -alanine. The molecular docking method was used to evaluate the possibility of binding the previously described modified dyes **A** with HSA and it was shown that the interaction of the ligand with the protein is possible at three binding sites of IIA, IIIA and IIB. The optical properties of the dye-albumin complexes were studied using spectrofluorimetry and time-resolved fluorimetry (TCSPC). The binding constants of modified tricarboyanines **A** with BSA are determined.



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