BINDING PARAMETERS OF ALKALOIDS BERBERINE AND SANGUINARINE WITH DNA

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S u m m a r y

We study the interaction of berberine and sanguinarine (plant alkaloids) with DNA in aqueous solutions, by using optical spectroscopy methods (absorption and fluorescence). The dependences of alkaloid spectral characteristics on the concentration ratio N/c between the DNA base pairs and alkaloid molecules in the solutions are considered, and the manifestations of the alkaloid–DNA binding are revealed. The character of binding is found to depend on N/c. The parameters of the binding of berberine and sanguinarine with DNA are determined, by using the modified Scatchard and McGhee–von Hippel equations.