



Laboratoř Metalomiky a Nanotechnologií

Vás zve na seminář k projektu ID 94:

Electrochemical detection of conjugation of ellipticine and carbon nanotube

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Abstrakt

Ellipticine (5,11-dimethyl-6H-pyrido[4,3-b] carbazole) is a natural antineoplastic plant alkaloid with a green fluorescence property, which can be extracted from natural sources including *Ochrosia elliptica*, *Strychnos dinklagei*, and *Bieckeria vitiensis*. Ellipticine and its derivatives were found have a highly cytotoxic activity against tumor cells back in 1967. Ellipticine and its analogues are able to intercalate in DNA, inhibit topoisomerase II activity, and form DNA adducts by hydrogen bonding and covalently binding, which result in their inhibitory effects on replication of DNA and transcription of RNA. However, the clinical applications of ellipticine and its derivatives have been limited due to their toxicity. Using a carbon nanotube as a carrier may decrease toxicity of ellipticine. Electrochemical detection was employed in this study for characterization of conjugation of ellipticine and carbon nanotube.

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