

Technology information form

Technology title
A new organometallic complex as an efficient DNA molecule binder
One sentence description of technology and application
The invention relates to a potential anti-cancer drug, an efficient DNA binder and photo-induced DNA-cleaving agent composition, in particular, the use of a new organoplatinum complex as an efficient DNA binder and photo-induced DNA-cleaving agent.
Development status
Early stage <input type="checkbox"/> # <input type="checkbox"/> Preclinical <input type="checkbox"/> Phase I <input type="checkbox"/> Phase II <input type="checkbox"/> Phase III <input type="checkbox"/> Phase IV <input type="checkbox"/> <input type="checkbox"/> Preregistration <input type="checkbox"/> Registered <input type="checkbox"/>
Full description (Less than 400 words)
<p>A new organometallic complex is disclosed as a potential anti-cancer drug. It has been already established that several platinum complexes, such like Cisplatin and Carboplatin, possess anticancer activity because of their binding capability with DNA molecules. These two already known platinum complexes are already routinely used for the treatment of testicular and ovarian cancers. They and their derivatives have already been developed as new anticancer reagents with less toxic side effects and reduced drug resistance compared to existing therapies.</p> <p>Our new organometallic complex can be utilized as an efficient photo-induced DNA-cleaving agent under controllable conditions, and a strong DNA binder with site specificity. It is stable in the dark, but it can cleave DNA molecules upon UV irradiation. When it cleaves a DNA molecule, it is predominantly at deoxyadenosine residues without an external base treatment. The mechanism involves a novel step of photo-dissociation of the sulfoxide ligand from an intermediate of organoplatinium-deoxyribonucleobase complex. Furthermore, it has been found that the complex can be used for single-strand DNA cleavage. When it binds to DNA, it is with site specificity at the purine residues.</p>
Patent status and no.

US6,458,833B1, US6,812,247B2, TW I267377
Type of business relationship sought
Licensing
Licensing contact
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