

Less Toxic Chemotherapy with Palladium

An unusual and rare class of palladium compounds as anti-proliferating agents in some of the most aggressive tumors



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IP Status

Patent application submitted

Seeking

Licensing, Development partner

Background

Targeted, efficient and non-toxic anti-cancer drugs: a new class of palladium compounds could be used as innovative chemotherapeutic molecules against various types of cancers, limiting the typical side effects of treatments with cisplatin or related compounds.

Platinum-based antineoplastic drugs have been used since the late 1970s although they sometimes show significant nephro- and neurotoxicity; research in the field has therefore been directed at testing the potentiality of compounds based on other transition metals.

It will be possible to produce highly efficient drugs in the form of intravenous, intramuscular or subcutaneous solutions, pills or tablets.

Tech Overview

Researchers from Ca' Foscari have synthesized an unusual and rare class of palladium compounds - Pd (I) - which are unexpectedly stable despite their state of metal oxidation.

They tested them as anti-proliferating agents on some of the most aggressive tumors, such as ovarian, cervical, colon and lung cancers, achieving very promising results. In fact, the high cytotoxic effects on cancer cells is accompanied by a poor toxicity on cells extracted from healthy tissues.

Further pre-clinical and clinical tests will better define their potentiality and may be the prelude to their production on a larger scale.

Benefits

- High anti-proliferative activity
- Antitumor efficacy higher than that of cisplatin or other palladium compounds
- Limited toxicity for healthy cells

Applications

- Anti-cancer drugs, which can be administered intravenously (most frequently), intramuscularly or subcutaneously
- Anti-cancer drugs, which can be administered orally via pills or tablets

Opportunity

Open to collaborative projects to further develop the technology and/or licensing.

Patents

- IT: 102019000023079