Univerza v Ljubljani

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA IZOBRAŽEVANJE, ZNANOST IN ŠPORT

Naložba v vašo prihodnost
OPERACIJO DELNO FINANCIRA EVROPSKA UNIJA
Evropski socialni sklad

INSTITUT FRANÇAIS
SLOVÉNIE

VABILO NA PREDAVANJE
V OKVIRU DOKTORSKEGA ŠTUDIJA
KEMIJSKE ZNANOSTI

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z naslovom:

Inorganic metallodrugs against cancer resistant to apoptotic stimuli. An important societal expectation.

v sredo, 14. maja 2014 ob 15:00 uri
v Novi predavalnici, na Fakulteti
za kemijo in kemijsko tehnologijo, Aškerčeva 5

Vljudno vabljeni!

Operacija se izvaja v okviru Operativnega programa razvoja človeških virov za obdobje 2007-2013, razvojne prioritete 3 : »Razvoj človeških virov in vseživljenjskega učenja«; prednostne usmeritve 3.3 »Kakovost, konkurenčnost in odzivnost visokega šolstva«.

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Abstract

According to the WHO, we are witnessing an explosion of cases of cancer, a disease whose multiform nature makes it very difficult to treat. We have reached the stage where we may be said to have entered “the Age of Cancer”, with 6.5 million cancer deaths in 2003 reaching 14 million in 2012, and predictions for 2030 of 22 million deaths, 35 million by 2050. It is vital to give the lie to these dire predictions.

The value of platinum coordination complexes in oncology is well known with three of these complexes being used, generally in combination, in more than 70% of cancer treatments. This is despite the well-documented disadvantages of these DNA alkylating agents; their use is in fact sometimes only the result of a lack of alternatives. The coordination products of Pt are ineffective in the treatment of tumor cells that are resistant to apoptosis, and this is often the case with cancers that are difficult to treat (around 30%) and have poor outcomes.

Considering these gaps in the therapeutic arsenal, it is crucial to find new and effective angles of attack, probably by taking advantage of novel mechanisms of action. It is in this context that the development of a new medicinal organometallic chemistry may provide a key, thanks to the novel behavior of these molecules. The organometallics function *inter alia* via a novel use of chemical space and / or redox capacity on protein targets. Potent organometallic candidate drugs of gold, ruthenium and iron will be discussed.

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