

21st International Conference on

Past and Present Research Systems on Green Chemistry

August 27-28, 2018 | Boston, USA

The proton preparation "Ukrain" (NSC 631570): The selective and immunomodulating effect of the anti-cancer preparation on basis of greater celandine alkaloids NSC 631570

Wassil Nowicky

Nowicky Pharma"/ Ukrainian Anti-Cancer Institute, Austria

It is well known that all cells possess the negative charge and cancer cells have a much more negative charge than normal cells. This property has been used for the creation of the anticancer preparation on basis of greater celandine alkaloids with the positive charge. The experiment has been carried out on basis of the sum of greater celandine alkaloids as well as on basis of the pure chelidonine with the aim to understand the mechanism of action of the preparation NSC 631570. The greater celandine (*Chelidonium majus* L.) is a species of the *Papavera-ceae* family. The principal secondary metabolites of the plant are isoquinoline alkaloids; more than 30 were found here. The richest organ is the root, the total content of alkaloids in it reaching 2-3%. The dominant alkaloids of the root are chelidonine and coptisine. The aerial parts contain about 0.5-1.5% alkaloids. The principal base for the whole period of vegetation is coptisine, the representation of other alkaloids substantially changing during the development of the plant. Of nonalkaloidal secondary metabolites, esters of caffeic acid have recently been demonstrated in the plant drug. In the past, the drug was used to treat tumors. The extract of alkaloids from the plant is the base of the preparation Ukraine showing immunomodulating activity and being employed in the therapy of different types of carcinomata. Chelidonine is the tertiary alkaloid and due to it doesn't have the property to fluoresce. After its transformation into the quartet alkaloid, it becomes a proton, accumulates in cancer tumors very fast what is visible thanks to its autofluorescence. Until now this preparation has been tested on over 100 cancer cell lines and on 12 normal cell lines and the results of the studies carried out in more than 120 uni-versities and research centers (in particular at the National Cancer Institute (the USA)) have shown that the NSC 631570 killed only cancer cells without having damaged the normal cells what confirmed its selective effect. In clinical trials, it also has proved its anticancer efficacy and caused no noteworthy side effects. The results of *in vitro* studies also have shown the direct deletion of cancer cells and its ability to regenerate the immune system. Such a property is unusual for an anticancer agent but as it can be seen the NSC 631570 possesses some distinct immune properties. The development of this preparation was the first significant step on the way to solving the problem. *In vitro* tests showed that after incubation with NSC-631570 normal liver cells and Ehrlich a tumor ascitic cells demonstrate different oxygen consumption: after an initial increase, oxygen consumption in cancer cells falls to zero whereas oxygen consumption in normal cells returns to normal and the cells remain undamaged. This study brought the first indications that, in contrast to its starting substances thiotepa (a well known cytostatic agent) and greater celandine alkaloids, NSC-631570 is in fact only toxic against cancer cells and not against normal cells.

Biography

Wassil Nowicky — Dipl. Ing., Dr. techn., DDDr. h. c., Director of "Nowicky Pharma" and President of the Ukrainian Anti-Cancer Institute (Vienna, Austria). Inventor of the anti-cancer preparation on the basis of celandine alkaloids "NSC-631570". He is an author of over 300 scientific articles dedicated to cancer research. Dr. Wassil Nowicky is a real member of the New York Academy of Sciences, member of the European Union for applied immunology and of the American Association for scientific progress, honorary doctor of the Janka Kupala University in Hrodno, doctor "honoris causa" of the Open international university on complex medicine in Colombo, honorary member of the Austrian Society of a name of Albert Schweizer. He has received the award for merits of the National guild of pharmacists of America. the award of Austrian Society of sanitary, hygiene and public health services and others.

dr.nowicky@yahoo.de

Notes: