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**BACKGROUND:** This study demonstrates the use of homeopathic remedies, this pharmacotechnical method was developed by Samuel Hahnemann and produces ultra-diluted substances with important pharmacologically activity. The ultradilutions have minimal adverse effects, low cost and have been used to treat tumors such as primary or adjuvant therapy in cancer treatment. This study uses ultra-dilutions in the FAO method (Self-Organizing Factors), a method under development (work in progress), which was initially reported in the detoxification of professionals who deal with pesticides. This methodology was successful in reversing poisoning by organophosphate insecticides in rats (MOREIRA, 2008).

AIM: This study evaluated the effectiveness of ultra-dilutions (homeopathic remedies on the scales: Hahnemannian decimal – DH and fifty milesimal – LM) on the survival of animals inoculated with Ehrlich ascitic tumor.

MATERIAL AND METHODS : Forty male Swiss mice, weighing between 25 and 30 grams each, were inoculated intraperitoneally with 10<sup>3</sup> viable tumor cells. The animals were divided into four groups randomized of ten each (A, B, C and D). Group A was the control. Animals from other groups received as treatment ultra-diluted remedies as FAO method composed of a complex of drugs : Antimonium crudum, Kali carbonicum, Mercurius solubis, Sulphur, Natrum Muriaticum, Aurum metallicum, Ammonium Muriaticum. The ultra-dilutions indicated for groups were as follows: group B - 12DH/9DH - 5 hours after 10DH/9DH; group C - 11DH/9DH - 5 hours after 10DH/9DH; group D - 4LM/2LM - 5 hours after 3LM/2LM. The sequence of combination of these components, as well as the time intervals between them until they are administered, are essential to this complex process of drug action. It was a blind study and the animals were observed from survival time (days) to inoculation of the tumor until their death. Animals that were still alive at 570 days of the experiment were euthanized in CO<sub>2</sub> chamber followed by a macroscopic necropsy. The values obtained in groups were compared, adopting a significance level of 5% probability to reject the null hypothesis. All statistical calculations were performed using GraphPad Prism v.5.0, 2011 and the software DAWS GRAPH 18.0.

## Survival of mice with Ehrlich ascitic tumor treated with ultra-dilutions

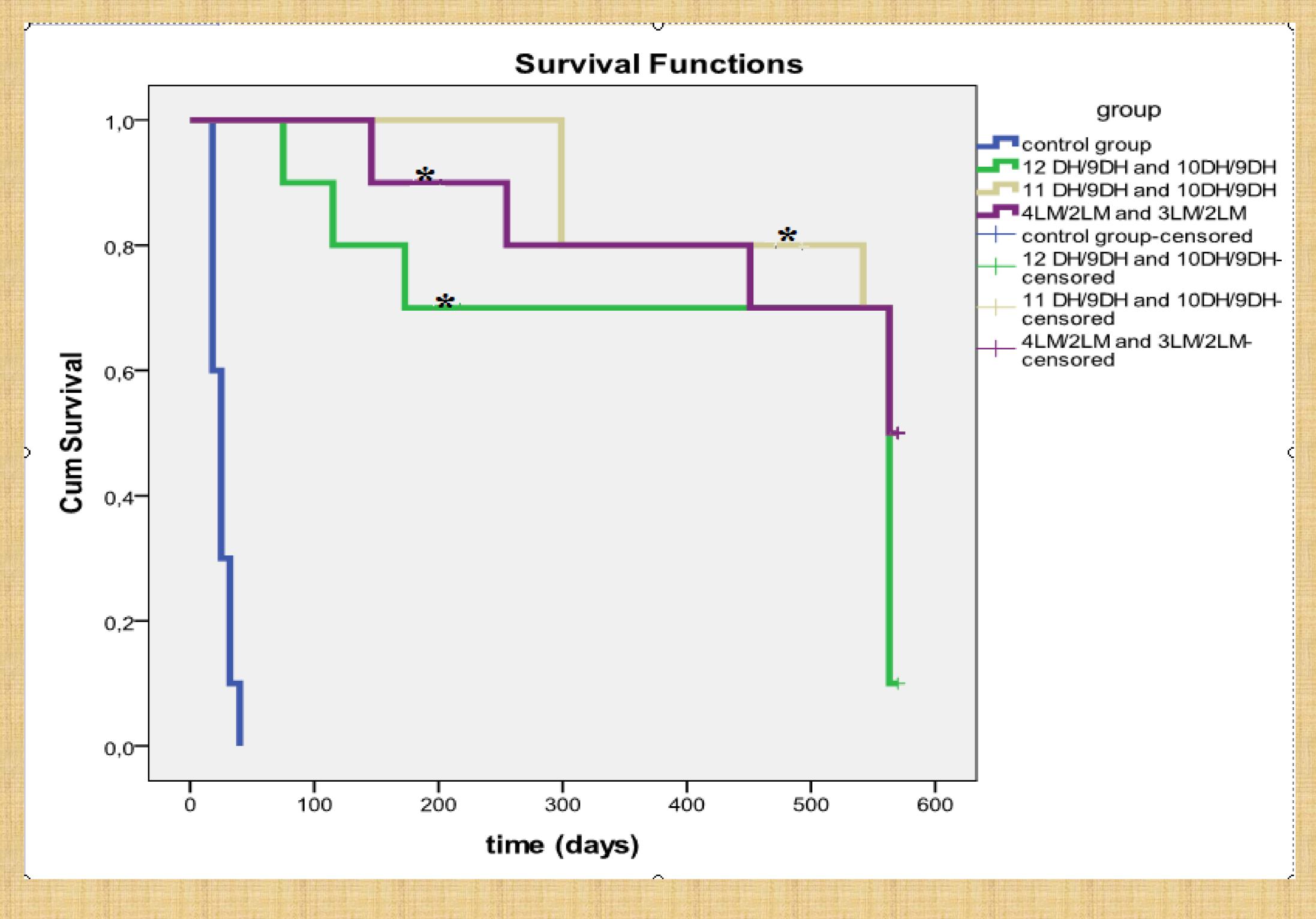
**RESULTS AND DISCUSSION:** The results are presented below in the form of tables and graph: For the control group the median survival was 25 days while for the three treatment groups was between 431 and 511 days (Table 1).

## Table 1. Survival Time (days)

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	Group	1	2	3	4	5	6	7	8	9	10	Media and Standart Deviatione
E STATE	A - Control	18	40	25	32	25	25	18	18	18	32	25,1 ± 7,6
No. of Concession, Name	B - 12 DH/9DH and 10DH/9DH	563	563	563	173	75	563	563	570	115	563	431,1 ± 215,3
10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C - 11 DH/9DH and 10DH/9DH	570	542	563	570	299	570	563	570	299	570	511,6 ± 112,4
	D - 4LM/2LM and 3LM/2LM	570	570	563	570	255	146	563	451	570	570	482,8 ± 155,4
10												

Regarding the survival rate (log-rank test (Mantel-Cox) in the control group was significantly lower p ≤ 0.05 (0.001) than the other groups, which showed no statistically significant difference between B x C =  $p \ge 0.05$  (0.137); BxD =  $p \ge 0.05$  (0.155) and CXD =  $p \ge 0.05$  (0.909) (Figure 1).





\* Significance p≤0,05 (0,001)

The results regarding the number of animals alive at 570 days or the end of the experiment were analyzed by Chi-square compared to the groups of animals treated with the control group (Table 2). Considering the result of probability of  $p \le 0.05$ was able to demonstrate significant differences between the control and treated C and D.

## Table 2: Group of animals that survived until the end of the experiment

Experiment Gruop	A-	Control		C - 11 DH/9DH and 10DH/9DH	D - 4LM/2LM and 3LM/2LM	
Animals a Live et 570 days		0	1	5*	5*	

of ascites; lung, liver and kidney failure; splenomegaly; nodule in the peritoneal wall and dorsal skin lesions (alopecia). Studies of ultra-diluted medicines to treat cancer, using as an experimental model of Ehrlich ascites tumor, has shown satisfactory results. Preethi et al, 2006 demonstrated a survival of 150 days in animals treated with Ruta graveolens 200c. Sunilla et al, 2007 also showed that apart from Ruta graveolens 200c, the 200c Hydrastis canadensis significantly increased the survival of animals with the Ehrlich ascites tumor. These studies corroborate the findings of this study, in which the group treated with ultra diluted drugs in FAO method survived for 570 days.

**CONCLUSION:** There was that ultra-diluted medicines used in the form of a complex FAO act with effectiveness on the Ehrlich transplantable tumor, since the treated animals survived 14 times longer when compared to control. This study demonstrates the possibility of using ultra-diluted drug in the treatment of cancer, further studies are needed to exploit these results so striking. And this study corroborates the thinking global search of differentiated products, which are identified as less aggressive (natural) and health promoters, and in this universe are included medicines produced from ultra-diluted substances.



## \* Chi-Square. Significance $p \le 0.05$ (0.039) compared to control

In a macroscopic necropsy realized in euthanized animals were finding: Absence

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