

# Effectiveness of different preparations homeopathic *Arnica montana* experimental treatment of poisoning with poison *Philodryas olfersii*

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The administration of antivenom is not recommended in poisonings caused by snakes of the species *Philodryas olfersii*, thus, any homeopathic or allopathic treatment may ultimately contribute to the brief recovery of patients. The aim of this work is to study the effects of different preparations of *Arnica montana* 6cH in experimental poisoning with the *P. olfersii* venom in mice. Therefore, adult male Swiss mice were blindly inoculated into the footpad with *P. olfersii* venom and treated with *Arnica montana* 6cH prepared by conventional method and by a magnetic simulator device of commercial use – MSD (OAK®). The vehicle control group was treated with succussed hydro-alcoholic solution. The negative control group received no treatment. The development of inflammatory edema generated within 24 hours was evaluated. During the tests the following behavioral data was recorded:

- Animals treated with Arnica 6cH-MSD remained calm, quiet, eating a little, drinking a little water and slept most of the time;
- Animals treated with conventional Arnica 6cH got always more hectic after venom inoculation up to 2 hours later, when compared to the animals from the other groups during handling. They licked the paw after inoculation, which might be a sign of pain.
- Animals from untreated control were more agitated when compared to other groups, licking his paw where the poison was inoculated during all the experimental time. They moved a lot, fought, ate and drank well, hung up on the grid.

The edema evolution after the venom inoculation showed no significant differences among groups. Table 1 shows the average and standard deviation of the thickness (edema) of the footpad. The use of magnetic devices instead of conventional homeopathic medicines is still controversial and deserver further studies.

A

Time 30 minutes - Phase 1 - Evolution of Edema - %				
animal	A(mm)	B(mm)	C(mm)	D(mm)
1	43,9	34,5	12,6	46,5
2	22,2	64,1	69,2	55,3
3	40,6	38	45	47,4
4	42,2	46,2	53,9	48,2
5	34,7	43,2	39,8	39,4
6	52,1	58	56,6	58,3
<b>Average</b>	<b>39</b>	<b>47</b>	<b>46</b>	<b>49,2</b>
<b>SD</b>	<b>10</b>	<b>12</b>	<b>19</b>	<b>6,7</b>

B

Time 1 hour - Phase 1 - Evolution of Edema - %				
animal	A(mm)	B(mm)	C(mm)	D(mm)
1	23,5	12,8	23	48,4
2	21,3	41,8	48,5	67,8
3	18,3	17,2	34,1	27,4
4	30	25,5	30,3	38,1
5	36,5	37,5	26,2	23,4
6	29,3	29,1	27	29,4
<b>Average</b>	<b>26,5</b>	<b>27</b>	<b>31,5</b>	<b>39</b>
<b>SD</b>	<b>6,7</b>	<b>11</b>	<b>9,1</b>	<b>17</b>

C

Time 2 hours - Phase 1 - Evolution of Edema - %				
animal	A(mm)	B(mm)	C(mm)	D(mm)
1	11,3	8,84	15,9	52,1
2	13,3	34,5	33,8	13,8
3	10,9	11,9	19,1	2,8
4	19,2	12,7	11,8	21,1
5	32,9	31	29,1	32,7
6	17,7	16,5	21,7	26,5
<b>Average</b>	<b>17,6</b>	<b>19</b>	<b>21,9</b>	<b>25</b>
<b>SD</b>	<b>8,2</b>	<b>11</b>	<b>8,2</b>	<b>17</b>

**D**

Time 3 hours - Phase 1 - Evolution of Edema - %				
animal	A(mm)	B(mm)	C(mm)	D(mm)
1	9,95	7,1	0	45,1
2	10,2	25,9	14,1	9,8
3	3	8,8	12,3	3,2
4	7,5	7,1	3,5	7,8
5	0	9,6	12,6	21,2
6	14,4	13,6	11,3	24,6
<b>Average</b>	<b>7,5</b>	<b>12,0</b>	<b>9,0</b>	<b>19</b>
<b>SD</b>	<b>5,2</b>	<b>7,2</b>	<b>5,8</b>	<b>15</b>

**E**

Time 24hours - Phase 1 - Evolution of Edema - %				
animal	A(mm)	B(mm)	C(mm)	D(mm)
1	2,7	0	0	2,3
2	0	17,7	9,6	4,5
3	0	0,4	5,91	0
4	0	0,5	0,9	1,4
5	0	0	7,2	11,06
6	1,9	1,4	2,3	12,8
<b>Average</b>	<b>0,8</b>	<b>3,3</b>	<b>4,3</b>	<b>5,3</b>
<b>SD</b>	<b>1,2</b>	<b>7,1</b>	<b>3,8</b>	<b>5,3</b>

**Table 1** - Evolution of the paw thickness after venom inoculation in different groups (A) 30 minutes, (B) 1 hour, (C) 2 hours (D) 3 hours (E) 24 hours after venom inoculation. A(mm) = mice treated with Arnica 6cH-MSD; B(mm) = mice treated with succused hydro-alcoholic solution (vehicle); C(mm) = mice treated with conventional Arnica 6cH; D(mm) = mice from the untreated control group. SD = standard deviation.



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