Influence of Ecomer/Alkymer alkylglycerols on different parameters in the blood of healthy subjects.

The study that has been carried out in Russia, is well designed and controlled. Groups of healthy volunteers have been administered daily oral Alkymer (the trade name is Ecomer in other countries) or placebo capsules during a 15-day period (double blind study). Neither the supervisor of the study, nor the subjects investigated have been aware of the type of capsule that has been administered. Each subject has taken booth types of capsules. In one group of subjects Alkymer was first administered and one month later placebos. In the other group placebo administration was followed by Alkymer in a corresponding way. This experimental set up gives a good picture on the biological effects of the capsules.

Data processing and statistical analysis.

Since the initial values for the subjects differed widely, the values of each subject have been normalized to 100%. The subsequent values have been related to the initial one and have also been expressed in percent. Since a number of extreme values have been noted and the values do not seem to be normally distributed, all the values have been logaritmized when calculating the mean values and standard deviation (M ± SD).
To make the tables more easy to read these $\log_{10}$ mean values have been antilogaritmized and presented as % in the tables. The statistical significance of differences between the initial value and a subsequent mean value has been tested using the paired Student´s t-test.

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Results.
In general it may be concluded that the placebo effects on the immune system have been very pronounced and in many cases statistically significant. An additional effect is thus required to draw the conclusion that Alkymer exerts a biological effect by its own. In this judgment I have found it useful to make a comparison between the two groups of subjects, i.e. those who started with Alkymer and those who started with placebo. If this comparison shows that the examined parameter changes numerically to a higher extent after administration of Alkymer and this trend also remains within each group I draw the conclusion that Alkymer has exerted a biological effect even though statistical significance may be lacking.

The following conclusions are drawn.

Tables 1,2	Alkymer does not influence the leukocyte counts.
Tables 3,4	**Alkymer increases the frequency of lymphocytes.**
Tables 5,6	**Alkymer increases the number of lymphocytes.**
Tables 7,8	Alkymer does not change the frequency of T-cells.
Tables 9,10	Alkymer does not change the number of T-cells.
Tables 11,12	Alkymer does not change the frequency of B-cells.
Tables 13,14	Alkymer probably does not change the number of B-cells.
Tables 15,16	Alkymer does not change the frequency of CD4+ cells.
Tables 17,18	Alkymer probably does not change the number of CD4+ cells.
Tables 19,20	Alkymer probably does not change the frequency of CD8+ cells.
Tables 21,22	Alkymer probably does not change the number of CD8+ cells.
Tables 23,24	Alkymer does not change the CD4+/CD8+ ratio.
Tables 25,26	Alkymer does not change CD3-, CD16+, CD56+ cells.
Tables 27,28	Alkymer does not change ConA-induced mitogenic activity.
Tables 29,30	**Alkymer most likely enhances the oxidative metabolism. This effect seems to remain for 1 month following Alkymer treatment.**
Tables 31,32	Alkymer does not change the amount of IgG.
Tables 33,34	Alkymer does not change the amount of IgA.
Tables 35,36	Alkymer does not change the amount of IgM.
Tables 37,38	Alkymer does not change the amount of kappa-chains.
Tables 39,40	Alkymer does not change the amount of lambda-chains.
Tables 41,42	Alkymer possible reduces the amount of alfa-1 antitrypsin.
Tables 43,44	Alkymer possibly reduces the amount of alfa-2 macroglobulin.
Tables 45,46	Alkymer does not change the amount of alfa-1 acidglycoprotein.
Tables 47,48	Alkymer does not change the amount of C4.
Tables 49,50	Alkymer does not change the amount of C3c.
Tables 51,52	Alkymer does not change the amount of C3-activator.

Conclusions.

Alkymer treatments most likely increase the blood lymphocyte counts. This may increase the capacity of the individual to develop an immunological defense against infectious agents and possibly also other antigenic structures. The number of studied subjects is to small to be able to determine which subset of lymphocytes that has increased to the highest extent. Alkymer treatment stimulates white blood cells to an increased oxidative metabolism per unit blood when exposed to a stimulating agent.
Because of the design of the test it is not possible to say whether monocytes, granulocytes, or both, are responsible for this augmentation of stimulability. It is also not possible to say if the effect is due to an increased number of such cells per unit of blood or if the individual cells have become more reactive. However, the Alkymer induced increase of oxidative metabolism is likely to increase the capacity of the subject to rapidly react against infectious agents.

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Table 1

Number of leukocytes per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	4908±757					
Relative value M±SD (log 10)	2.000	1.999±0.110	2.005±0.064	2.075±0.070 $p<0.05$	2.018±0.087	2.085±0.104
Antilog value (M)	100%	100%	101%	118%	104%	122%

Persons number 1, 10 and 11 have been excluded due to infections

Table 2

Number of leukocytes per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	4910±678					
Relative value M±SD (log 10)	2.000	2.019±0.104	2.038±0.105	2.053±0.125	2.036±0.106	2.107±0.110 $p<0.005$
Antilog value (M)	100%	104%	109%	113%	109%	128%

Persons number 18 and 23 deleted due to infections

Table 3

Lymphocytes (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	33,3±4,8					
Relative value M±SD (log 10)	2.000	1.949±0.109	2.110±0.077 $p<0.01$	2.029±0.095	2.067±0.088 n.s.	2.030±0.114
Antilog value (M)	100%	89%	129%	107%	117%	107%

Persons number 1, 10 and 11 excluded due to infections.

Table 4

Lymphocytes (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	33.8±4.4					
Relative value M±SD (log 10)	2.000	2.047±0.097	2.079±0.082 $p<0.05$	2.050±o.176	2.103±o.092 $p<0.01$	1.990±0.146
Antilog value (M)	100%	111%	120%	112%	127%	98%

Persons number 18 and 23 have been deleted.

Table 5

Number of lymphocytes per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	1627±305					
Relative value M±SD (log 10)	2.000	1.945±0.146	2.116±0.091 $p<0.01$	2.104±0.070	2.086±0.086 $p<0.05$	2.115±0.100
Antilog value (M)	100%	88%	131%	127%	122%	130%

Persons number 1, 10 and 11 excluded due to infections.

Table 6

Number of lymphocytes per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	1656±296					
Relative value M±SD (log 10)	2.000	2.059±0.138	2.116±0.066 $p<0.001$	2.103±0.082 $p<0.01$	2.140±0.119 $p<0.01$	2.097±0.135
Antilog value (M)	100%	115%	131%	127%	138%	125%

Table 7

T-lymphopcytes (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	66.2±8.8					
Relative value M±SD (log 10)	2.000	2.006±0.014	2.028±0.028 $p<0.05$	2.024±0.047	2.027±0.031 $p<0.05$	2.024±0.031 $p<0.05$
Antilog value (M)	100%	101%	107%	106%	106%	106%

Persons number 1, 10 and 11 have been excluded due to infections.

Table 8

T-lymhocytes (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	68.3±5.8					
Relative value M±SD (log 10)	2.000	2.006±0.011	2.012±0.023	2.011±0.021	2.009±0.019	1.997±0.032
Antilog value (M)	100%	101%	103%	103%	102%	99%

Table 9

Number of T-lymphocytes per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	1068±182					
Relative value M±SD (log 10)	2.000	1.953±0.137	2.147±0.080 p<0.001	2.130±0.059 p<0.001	2.096±0.102 p<0.05	2.141±0.084 p<0.001
Antilog value (M)	100%	90%	140%	135%	125%	138%

Patients number 1, 10 and 11 are excluded due to infections.

Table 10

Number of T-lyphocytes per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	1127±203					
Relative value M±SD (log 10)	2.000	2.064±0.137	2.128±0.057 p<0.001	2.114±0.087 p<0.01	2.148±0.109 p<0.01	2.094±0.136
Antilog value (M)	100%	116%	134%	130%	141%	124%

Table 11

B-lymphocytes (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	6.2±1.8					
Relative value M±SD (log 10)	2.000	2.027±0.122	2.002±0.164	2.041±0.102	2.033±0.144	2.012±0.201
Antilog value (M)	100%	106%	100%	110%	108%	103%

Patients number 1, 10 and 11 are excluded due to infections.

Table 12

B-lymphocytes (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	8.2±2.3					
Relative value M±SD (log 10)	2.000	2.020±0.115	1.997±0.105	2.000±0.081	2.013±0.110	1.986±0.061
Antilog value (M)	!00%	105%	99%	100%	103%	97%

Table 13

Number of B-lymphocytes per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	205±312					
Relative value M±SD (log 10)	2.000	1.948±0.172	2.096±0.092 $p<0.05$	2.131±0.076 $p<0.001$	2.106±0.165	2.091±0.200
Antilog value (M)	100%	89%	125%	135%	128%	125%

Patients number 1, 10 and 11 are excluded due to infections.

Table 14

Number of B-lymphocytes per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	139±59					
Relative value M±SD (log 10)	2.000	2.078±0.159	2.111±0.130 $p<0.05$	2.105±0.137	2.153±0.145 $p<0.001$	2.085±0.145
Antilog value (M)	100%	120%	129%	127%	142%	122%

Table 15

CD4+ cells (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	36±13					
Relative value M±SD (log 10)	2.000	2.028±0.075	2.029±0.078	2.032±0.046	2.0220.047	2.034±0.087
Antilog value (M)	100%	107%	107%	108%	105%	108%

Patients number 1, 10 and 11 are excluded due to infections.

Table 16

CD4+ cells (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	44.4±3.2					
Relative value M±SD (log 10)	2.000	1.998±0.038	1.996±0.040	1.991±0.033	1.998±0.029	2.000±0.034
Antilog value (M)	100%	100%	99%	98%	100%	100%

Table 17

CD4+ cells per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	667±115					
Relative value M±SD (log 10)	2.000	1.945±0.136	2.121±0.083 p<0.01	2.110±0.058 p<0.001	2.095±0.104 p<0.05	2.121±0.110 p<0.01
Antilog value (M)	100%	88%	132%	129%	124%	132%

Persons number 1, 10 and 11 are excluded due to infections.

Table 18

CD4+ cells per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	731±115					
Relative value M±SD (log 10)	2.000	2.054±0.127	2.113±0.070 p<0.001	2.094±0.088 p<0.01	2.137±0.120 p<0.01	2.099±0.139
Antilog value (M)	100%	113%	130%	124%	137%	126%

Table 19

CD8+ cells (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	24.6±6.7					
Relative value M±SD (log 10)	2.000	2.019±0.028	2.065±0.077 $p<0.05$	2.055±0.094	2.058±0.095	2.049±0.073
Antilog value (M)	100%	104%	116%	113%	114%	112%

Persons number 1, 10 and 11 excluded due to infections.

Table 20

CD8+ cells (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	22.9±5.6					
Relative value M±SD (log 10)	2.000	2.042±0.087	2.064±0.089	2.072±0.069 $p<0.001$	2.061±0.065 $p<0.05$	2.018±0.141
Antilog value (M)	100%	110%	115%	118%	115%	104%

Table 21

Number of CD8+ cells per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	345±151					
Relative value M±SD (log 10)	2.000	1.966±0.140	2.182±0.113 p<0.01	2.160±0.107 p<0.01	2.144±0.103 p<0.01	2.164±0.052 p<0.001
Antilog value (M)	100%	92%	152%	145%	139%	146%

Patients number 1, 10 and 11 are excluded due to infections.

Table 22

Number of CD8+ cells per µl						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	381±119					
Relative value M±SD (log 10)	2.000	2.102±0.198	2.182±0.106 p<0.001	2.176±0.133 p<0.01	2.190±0.111 p<0.001	2.110±0.194
Antilog value (M)	100%	126%	152%	150%	155%	129%

Table 23

CD4+/CD8+ (ratio)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	1.83±0.73					
Relative value M±SD (log 10)	2.000	1.979±0.041	1.939±0.096	1.950±0.107	1.937±0.098	1.959±0.086
Antilog value (M)	100%	96%	87%	89%	87%	91%

Persons number 1, 10 and 11 are excluded due to infections.

Table 24

CD4+/CD8+ (ratio)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	2.04±0.50					
Relative value M±SD (log 10)	2.000	1.934±0.102	1.942±0.109	1.918±0.083 $p<0.05$	1.948±0.073	1.987±0.144
Antilog value (M)	100%	86%	87%	83	88%	97%

Table 25

CD3-, CD16+, CD56+ cells (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	---	18.2±5.8				
Relative value M±SD (log 10)	---	2.000	1.950±0.089	1.957±0.103	1.918±0.094 $p<0.05$	1.987±0.120
Antilog value (M)	---	100%	89%	91%	83%	97%

Persons number 1, 10 and 11 are excluded due to infections.

Initial values are missing.

Table 26

CD3-, CD16+, CD56+ cells (%)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	---	14.8±6.8				
Relative value M±SD (log 10)	---	2.000	2.072±0.160	2.023±0.070	2.023±0.137	2.003±0.097
Antilog value (M)	---	100%	118%	105%	105%	101%

Persons number 18 and 23 deleted due to infections.

Initial values are missing.

Table 27

ConA-inducerd mitogenic activity (cpm/cell)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	1.01±0.53					
Relative value M±SD (log 10)	2.000	2.124±0.227	2.034±0.278	1.999±0196	2.026±0.227	1.934±0.208
Antilog value (M)	100%	133%	108%	100%	115%	86%

Persons number 1, 10 and 11 have been excluded due to infections.

Table 28

Con A-induced mitogenic activity (cpm/cell)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	1.36±0.63					
Relative value M±SD (log 10)	2.000	1.923±0.219	1.816±0.299	1.905±0.188	1.888±0.193	1.801±0.241
Antilog value (M)	100%	84%	66%	80%	77%	63%

Table 29

PMA-induced oxidative burst (mV)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	181±80					
Relative value M±SD (log 10)	2.000	2.143±0.097 p<0.01	2.401±0.185 p<0.001	2.273±0.220 p<0.01	2.250±0.173 p<0,01	2.277± 0.182
Antilog value (M)	100%	139%	252%	188%	178%	189%

Persons number 1, 10 and 11 have been excluded due to infections.

Table 30

PMA-induced oxidative burst (mV)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	219±102					
Relative value M±SD (log 10)	2.000	2.067±0.131	2.240±0.273 p<0.05	2.214±0.262 p<0.05	2.285±0.293 p<0.05	2.313±0.226 p<0,01
Antilog value (M)	100%	117%	174%	164%	193%	205%

Table 31

IgG (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	18.0±3.7					
Relative value M±SD (log 10)	2.000	1.973±0.043	1.966±0.039	1.957±0.046	1.969±0.053	1.949±0.432
Antilog value (M)	100%	94%	92%	91%	93%	89%

Persons number 1, 10 and 11 have been excluded due to infections.

Table 32

IgG (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	16.5±2.9					
Relative value M±SD (log 10)	2.000	1.961±0.062	1.946±0.099	1.966±0.085	1.969±0.076	1.958±0.077
Antilog value (M)	100%	91%	88%	92%	93%	91%

Table 33

IgA (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	3.35±0.55					
Relative value M±SD (log 10)	2.000	1.962±0.074	1.970±0.077	1.947±0.081	1.968±0.077	1.947±0.827
Antilog value (M)	100%	92%	93%	89%	93%	89%

Persons number 1,10 and 11 have been excluded due to infections.

Table 34

IgA (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	4.44±4.14					
Relative value M±SD (log 10)	2.000	1.946±0.075	1.926±0.148	1.976±0.078	1.969±0.067	1.951±0.066
Antilog value (M)	100%	88%	84%	95%	93%	89%

Table 35

IgM (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	2.52±0.56					
Relative value M±SD (log 10)	2.000	1.960±0.136	1.952±0.110	1.936±0.098	1.985±0.128	1.959±0.929
Antilog value (M)	100%	91%	90%	86%	97%	91%

Table 36

IgM (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	2.50±0.76					
Relative value M±SD (log 10)	2.000	1.925±0.115	1.913±0.146	1.966±0.147	1.934±0.115	1.917±0.112
Antilog value (M)	100%	84%	82%	93%	86%	83%

Table 37

Kappa chains (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	4.64±0.82					
Relative value M±SD (log 10)	2.000	1.911±0.049 p<0.001	1.897±0.034 p<0.001	1.904±0.029 p<0.001	1.911±0.056 p<0.01	1.890±0.412
Antilog value (M)	100%	82%	79%	80%	81%	78%

Persons number 1, 10 and 11 have been excluded due to infections.

Table 38

Kappa chains (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	3.92±0.95					
Relative value M±SD (log 10)	2.000	1.918±0.087 p<0.05	1.906±0.093 p<0.01	1.926±0.086 p<0.05	1.920±0.093 p<0.05	1.908±0.087
Antilog value (M)	100%	83%	81%	85%	83%	81%

Table 39

Lambda chains (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	2.46±0.28					
Relative value M±SD (log 10)	2.000	1.932±0.073	1.914±0.073	1.917±0.067	1.937±0.073	1.909±0.688
Antilog value (M)	100%	86%	82%	83%	86%	81%

Table 40

Lambda chains (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	2.54±0.76					
Relative value M±SD (log 10)	2.000	1.911±0.078	1.892±0.101	1.914±0.098	1.924±0.097	1.905±0.103
Antilog value (M)	100%	82%	78%	82%	84%	80%

Table 41

α1-antitrypsin (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	2.73±0.32					
Relative value M±SD (log 10)	2.000	1.879±0.061 p<0.001	1.863±0.058 p<0.001	1.877±0.094 p<0.01	1.884±0.090 p<0.01	1.879±0.508 p<0.001
Antilog value (M)	100%	76%	73%	75%	77%	76%

Persons number 1,10 and 11 have been excluded due to infections.

Table 42

α1-antitrypsin (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	2.30±0.58					
Relative value M±SD (log 10)	2.000	1.940±0.061 p<0.05	1.956±0.115	1.956±0.067	1.936±0.065 p<0.05	1.937±0.642
Antilog value (M)	100%	87%	91%	91%	86%	86%

Table 43

α2-macroglobulin (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	2.64±0.53					
Relative value M±SD (log 10)	2.000	1.860±0.083 p<0.001	1.838±0.053 p<0.001	1.841±0.060 p<0.001	1.860±0.080 p<0.001	1.835±0.522
Antilog value (M)	100%	72%	69%	69%	72%	68%

Persons number 1, 10 and 11 have been excluded due to infections.

Table 44

α2-macroglobulin (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	2.34±0.71					
Relative value M±SD (log 10)	2.000	1.903±0.069 p<0.01	1.908±0.119 p<0.05	1.886±0.099 p<0.01	1.884±0.088 p<0.01	1.874±0.887
Antilog value (M)	100%	80%	81%	77%	77%	75%

Table 45

α1-acid glycoprotein (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	1.09±0.143					
Relative value M±SD (log 10)	2.000	1.946±0.067 p<0.05	1.948±0.081	1.919±0,100 p<0.05	1.947±0.085	1.960±0,104
Antilog value (M)	100%	88%	89%	83%	88%	91%

Persons number 1, 10 and 11 have been excluded due to infections.

Table 46

α1-acid glycoprotein (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	0.80±0.20					
Relative value M±SD (log 10)	2.000	1.919±0.070 p<0.01	2.004±0.164	1.978±0106	1.965±0.089	1.963±0.102
Antilog value (M)	100%	83%	101%	95%	92%	92%

Table 47

C4 (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	0.324±0.070					
Relative value M±SD (log 10)	2.000	2.016±0.169	1.988±0.158	1.990±0.168	2.020±0.167	2.029±0.187
Antilog value (M)	100%	104%	97%	98%	105%	107%

Persons number 1, 10 and 11 have been excluded due to infections.

Table 48

C4 (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	0.32±0.10					
Relative value M±SD (log 10)	2.000	1.952±0.112	2.010±0.157	1.999±0.155	1.979±0.101	1.984±0.114
Antilog value (M)	100%	90%	102%	100%	95%	96%

Table 49

C3c (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	1.300±0.298					
Relative value M±SD (log 10)	2.000	1.843±0.092 p<0.001	1.820±0.065 p<0.001	1.805±0.068 p<0.001	1.808±0.078 p<0.001	1.787±0.077
Antilog value (M)	100%	70%	66%	64%	64%	61%

Persons number 1,10 and 11 has been excluded due to infections.

Table 50

C3c (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	1.71±0.72					
Relative value M±SD (log 10)	2.000	1.783±0.161 p<0.001	1.792±0.171 p<0.05	1.794±0.156 p<0,01	1.796±0.185 p<0.01	1.773±0.173
Antilog value (M)	100%	61%	62%	62%	58%	59%

Table 51

C3-activator (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=9	Initial value	Before Alkymer	End of Alkymer	Before placebo	End of placebo	Terminate
Arithmetic value (M±SD)	0.176±0.036					
Relative value M±SD (log 10)	2.000	1.899±0.070 p<0.01	1.869±0.101 p<0.01	1.892±0.083 p<0,01	1.908±0.069 p<0.01	1.922±0.055
Antilog value (M)	100%	79%	74%	78%	81%	84%

Persons number 1,10 and 11 have been excluded due to infections.

Table 52

C3 activator (g/l)						
	Day 0	Day 15	Day 30	Day 60	Day 75	Day 105
n=10	Initial value	Before placebo	End of placebo	Before Alkymer	End of Alkymer	Terminate
Arithmetic value (M±SD)	0.20±0.07					
Relative value M±SD (log 10)	2.000	1.862±0.102 p<0.01	1.908±0.134	1.908±0.120 p<0.05	1.897±0.107 p<0.05	1.897±0.130 p<0.05
Antilog value (M)	100%	73%	81%	81%	79%	79%