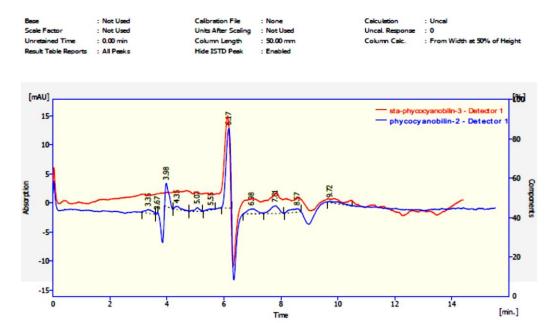
Sequences producing significant alignments									
	Download Y Select columns Y Sh				how 1	00 🗸 😗			
select all 100 sequences selected	<u>GenBa</u>	<u>ink</u> (	<u>Graphic</u>	<u>cs Di</u>	stance	tree of re	<u>esults</u>	MSA Viewer	
Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession	
Arthrospira platensis NIES-46 gene for 16S ribosomal RNA,	<u>Arthrospi</u>	1279	1279	99%	0.0	99.02%	1485	LC455668.1	
Arthrospira platensis A 16S ribosomal RNA gene, partial seq	<u>Arthrospi</u>	1279	1279	100%	0.0	98.75%	759	MH318616.1	
Arthrospira platensis YZ genome	Arthrospi	1279	2558	98%	0.0	99.29%	6520772	CP013008.1	
Arthrospira platensis NIES-39 DNA, complete genome	Arthrospi	1279	2558	98%	0.0	99.29%	6818916	AP026945.1	

Appendix 1. Blast result in NCBI.



**Appendix 2.** HPLC peak of c-Phycocyanin (Blue peak is the sample; Red Peak is the standard).

**Appendix 3.** The Comparisons of the Averages of Animal Tests in the Injectable Adjuvant Form.

							Power
		Sum of					of
		squares	Df	Mean square	F	Sig.	study
AST	Between	25651.600	4	6412.900	1.059	0.425	0.23
(U/I)	the						
	groups						

	Within the groups	60541.333	10	6054.133			
	Total	86192.933	14				
	Between	2452.933	4	613.233	2.273	0.133	0.46
ALT	the						
(U/I)	groups						
	Within	2698.000	10	269.800			
	the						
	groups						
	Total	5150.933	14				
	Between	2712185.304	4	678046.326	430.998	0.000	1
HBsAb	the						
(IU/ml)	groups						
	Within	15732.013	10	1573.201			
	the						
	groups						
	Total	2727917.317	14				
	Between	440.333	4	110.083	38.161	0.000	1
IFN-γ	the						
( <i>p</i> g/ml)	groups						
	Within	28.847	10	2.885			
	the						
	groups						
	Total	469.180	14				
	Between	139.676	4	34.919	8.184	0.003	0.97
IL-4	the						
( <i>p</i> g/ml)	groups						

Within	42.665	10	4.267	
the				
groups				
 Total	182.342	14		

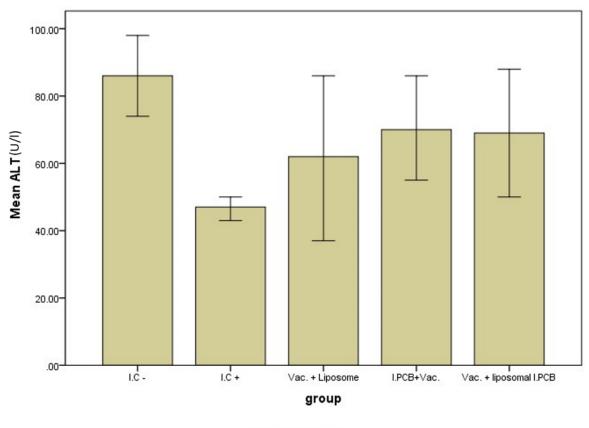
**Abbreviations:** AST, aspartate aminotransferase; ALT, alanine aminotransferase; HBsAb, hepatitis B surface antibody; IFN-γ, interferon gamma; IL-4, interleukin 4.

Appendix 4. The Comparisons of the Averages of Animal Tests in the Oral Adjuvant Form

							Power
		Sum of					of
		squares	Df	Mean square	F	Sig.	study
	Between	635593.481	7	90799.069	11.699	0.000	1
	the						
IL-4	groups						
( <i>p</i> g/ml)	Within	186275.852	24	7761.494			
	the						
	groups						
	Total	821869.333	31				
	Between	8584785.525	7	1226397.932	70.542	0.000	1
	the						
IFN-γ	groups						
( <i>p</i> g/ml)	Within	417248.904	24	17385.371			
	the						
	groups						
	Total	9002034.429	31				
	Between	1170792.792	7	167256.113	58.995	0.000	1
	the						
HBsAb	groups						

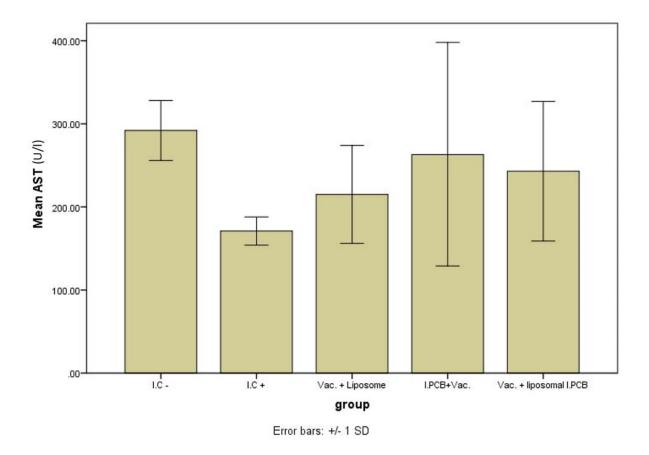
(IU/ml)	Within the groups	68042.083	24	2835.087			
	Total	1238834.875	31				
ALT	Between the groups	67806.000	7	9686.571	3.866	0.006	0.93
(U/I)	Within the groups	60131.500	24	2505.479			
	Total	127937.500	31				
AST	Between the groups	197782.125	7	28254.589	9.774	0.000	1
(U/I)	Within the groups	69377.750	24	2890.740			
	Total	267159.875	31				

**Abbreviations:** IL-4, interleukin 4; IFN-γ, interferon gamma; HBsAb, hepatitis B surface antibody; ALT, alanine aminotransferase; AST, aspartate aminotransferase.

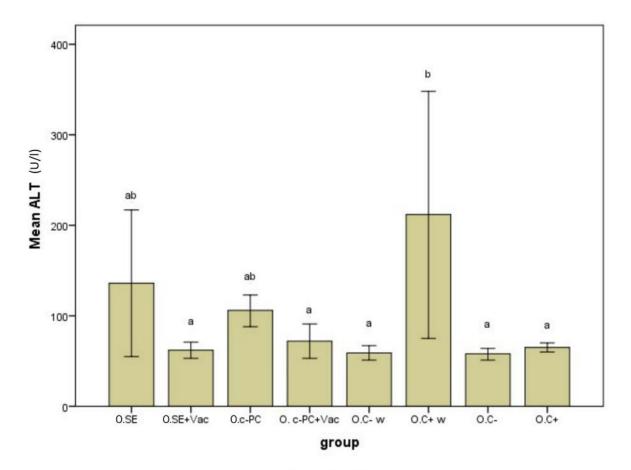


Error bars: +/- 1 SD

**Appendix 5.** Comparison of the average level of ALT changes in different groups receiving injectable adjuvant (IC-: 86.33, IC+: 47.00, Vac. Liposome: 62.00, I.PCB +Vac.: 70.67 & Vac. +Liposomal I.PCB: 69.33).

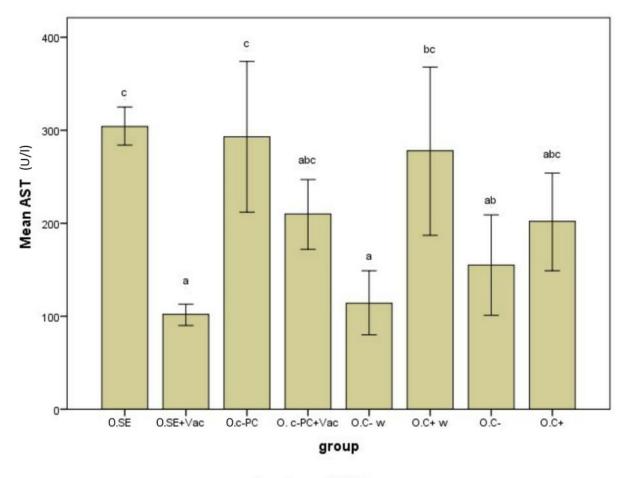


**Appendix 6.** Comparison of the average level of AST changes in different groups receiving injectable adjuvant (IC-: 292.33, IC+: 171.67, Vac. Liposome: 215.33, I.PCB+Vac.: 263.67 & Vac.+Liposomal I.PCB: 243.33).



Error bars: +/- 1 SD

**Appendix 7.** Comparison of the average level of ALT changes in different groups receiving oral adjuvant (O.SE: 136.50, O.SE+Vac.:62.17, O.C-PC: 106.00, O.C-PC+Vac.: 72.50, O.C-w: 59.00, O.C+w:212.00, O.C-: 58.00 & O.C+:65.33). Although, the treatments have been categorized into 2main groups (a & b), significant differences are classified as groups: a, ab & b. While a groups (a & ab) and b groups (b & ab) have no significant difference in their own groups.



Error bars: +/- 1 SD

**Appendix 8.** Comparison of the average level of AST changes in different groups receiving oral adjuvant (O.SE: 304.75, O.SE +Vac.: 102.17, O.C-PC: 293.50, O.C-PC +Vac.: 210.00, O.C-w: 114.67, O.C +w: 278.33, O.C-: 155.67 & O.C+: 202.33). Although, the treatments have been categorized into 3 main groups (a, b & c), significant differences are classified as groups: a, ab, bc, abc & c. While a groups (a, ab & abc), b groups (bc & abc) and c groups (c, bc & abc) have no significant difference in their own groups.