

LAMPIRAN I
UJI ASUMSI DATA

1. **TNF-alpha**

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TNF_3	.151	20	.200*	.903	20	.048

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
trTNF_3	.122	20	.200*	.928	20	.140

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TNF_7	.122	20	.200*	.951	20	.375

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
trTNF_7	.158	20	.200*	.928	20	.138

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

trTNF_3

Levene Statistic	df1	df2	Sig.
2.018	4	15	.143

Test of Homogeneity of Variances

TNF_7

Levene Statistic	df1	df2	Sig.
2.204	4	15	.118

2. TUNEL

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TUNEL_3	.189	20	.059	.839	20	.004

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TUNEL_7	.217	20	.014	.925	20	.126

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

TUNEL_7

Levene Statistic	df1	df2	Sig.
2.031	4	15	.141

3. NSS

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
NSS3_0	.219	20	.013	.905	20	.052
NSS3_3	.175	20	.108	.923	20	.112
NSS7_0	.285	20	.000	.867	20	.010
NSS7_3	.190	20	.058	.906	20	.054
NSS7_7	.261	20	.001	.880	20	.018

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

NSS3_3

Levene Statistic	df1	df2	Sig.
2.054	4	15	.138

4. UJI NORMALITAS DATA KORELASI VARIABEL

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TUNEL_3	.250	4	.	.952	4	.726
TNF_3	.250	4	.	.932	4	.609
TUNEL_7	.250	4	.	.938	4	.642
TNF_7	.250	4	.	.952	4	.726
NSS_3	.329	4	.	.895	4	.406
NSS_7	.250	4	.	.945	4	.683

a. Lilliefors Significance Correction

LAMPIRAN II
UJI BEDA INTERKELOMPOK

1. TNF-alpha Hari-3

ANOVA

trTNF_3

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.182	4	.545	50.485	.000
Within Groups	.162	15	.011		
Total	2.344	19			

Multiple Comparisons

Dependent Variable: trTNF_3

Tukey HSD

(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.
Kontrol Negatif	Kontrol Positif	-.92000*	.07349	.000
	katekin 513 mg/kgBB/hari	-.76222*	.07349	.000
	katekin 926 mg/kgBB/hari	-.63560*	.07349	.000
	katekin 1113 mg/kgBB/hari	-.31233*	.07349	.005
Kontrol Positif	Kontrol Negatif	.92000*	.07349	.000
	katekin 513 mg/kgBB/hari	.15778	.07349	.252
	katekin 926 mg/kgBB/hari	.28440*	.07349	.011
	katekin 1113 mg/kgBB/hari	.60767*	.07349	.000
katekin 513 mg/kgBB/hari	Kontrol Negatif	.76222*	.07349	.000
	Kontrol Positif	-.15778	.07349	.252
	katekin 926 mg/kgBB/hari	.12662	.07349	.450
	katekin 1113 mg/kgBB/hari	.44989*	.07349	.000
katekin 926 mg/kgBB/hari	Kontrol Negatif	.63560*	.07349	.000
	Kontrol Positif	-.28440*	.07349	.011
	katekin 513 mg/kgBB/hari	-.12662	.07349	.450
	katekin 1113 mg/kgBB/hari	.32327*	.07349	.004
katekin 1113 mg/kgBB/hari	Kontrol Negatif	.31233*	.07349	.005
	Kontrol Positif	-.60767*	.07349	.000
	katekin 513 mg/kgBB/hari	-.44989*	.07349	.000
	katekin 926 mg/kgBB/hari	-.32327*	.07349	.004

Multiple Comparisons

Dependent Variable: trTNF_3

Tukey HSD

(I) perlakuan		95% Confidence Interval	
		Lower Bound	Upper Bound
Kontrol Negatif	Kontrol Positif	-1.1469	-.6931
	katekin 513 mg/kgBB/hari	-.9892	-.5353
	katekin 926 mg/kgBB/hari	-.8625	-.4087
	katekin 1113 mg/kgBB/hari	-.5393	-.0854
Kontrol Positif	Kontrol Negatif	.6931	1.1469
	katekin 513 mg/kgBB/hari	-.0692	.3847
	katekin 926 mg/kgBB/hari	.0575	.5113
	katekin 1113 mg/kgBB/hari	.3807	.8346
katekin 513 mg/kgBB/hari	Kontrol Negatif	.5353	.9892
	Kontrol Positif	-.3847	.0692
	katekin 926 mg/kgBB/hari	-.1003	.3536
	katekin 1113 mg/kgBB/hari	.2229	.6768
katekin 926 mg/kgBB/hari	Kontrol Negatif	.4087	.8625
	Kontrol Positif	-.5113	-.0575
	katekin 513 mg/kgBB/hari	-.3536	.1003
	katekin 1113 mg/kgBB/hari	.0963	.5502
katekin 1113 mg/kgBB/hari	Kontrol Negatif	.0854	.5393
	Kontrol Positif	-.8346	-.3807
	katekin 513 mg/kgBB/hari	-.6768	-.2229
	katekin 926 mg/kgBB/hari	-.5502	-.0963

*. The mean difference is significant at the 0.05 level.

2. TNF-alpha Hari -7

ANOVA

TNF_7

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.616	4	.154	59.866	.000
Within Groups	.039	15	.003		
Total	.655	19			

Multiple Comparisons

Dependent Variable: TNF_7

Tukey HSD

(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.
Kontrol Negatif	Kontrol Positif	-.533007*	.035877	.000
	katekin 513 mg/kgBB/hari	-.314578*	.035877	.000
	katekin 926 mg/kgBB/hari	-.257548*	.035877	.000
	katekin 1113 mg/kgBB/hari	-.164143*	.035877	.003
Kontrol Positif	Kontrol Negatif	.533007*	.035877	.000
	katekin 513 mg/kgBB/hari	.218429*	.035877	.000
	katekin 926 mg/kgBB/hari	.275459*	.035877	.000
	katekin 1113 mg/kgBB/hari	.368864*	.035877	.000
katekin 513 mg/kgBB/hari	Kontrol Negatif	.314578*	.035877	.000
	Kontrol Positif	-.218429*	.035877	.000
	katekin 926 mg/kgBB/hari	.057030	.035877	.525
	katekin 1113 mg/kgBB/hari	.150436*	.035877	.006
katekin 926 mg/kgBB/hari	Kontrol Negatif	.257548*	.035877	.000
	Kontrol Positif	-.275459*	.035877	.000
	katekin 513 mg/kgBB/hari	-.057030	.035877	.525
	katekin 1113 mg/kgBB/hari	.093405	.035877	.120
katekin 1113 mg/kgBB/hari	Kontrol Negatif	.164143*	.035877	.003
	Kontrol Positif	-.368864*	.035877	.000
	katekin 513 mg/kgBB/hari	-.150436*	.035877	.006
	katekin 926 mg/kgBB/hari	-.093405	.035877	.120

Multiple Comparisons

Dependent Variable: TNF_7

Tukey HSD

(I) perlakuan	(J) perlakuan	95% Confidence Interval	
		Lower Bound	Upper Bound
Kontrol Negatif	Kontrol Positif	-.64379	-.42222
	katekin 513 mg/kgBB/hari	-.42537	-.20379
	katekin 926 mg/kgBB/hari	-.36834	-.14676
	katekin 1113 mg/kgBB/hari	-.27493	-.05336
Kontrol Positif	Kontrol Negatif	.42222	.64379
	katekin 513 mg/kgBB/hari	.10764	.32922
	katekin 926 mg/kgBB/hari	.16467	.38625
	katekin 1113 mg/kgBB/hari	.25808	.47965
katekin 513 mg/kgBB/hari	Kontrol Negatif	.20379	.42537
	Kontrol Positif	-.32922	-.10764
	katekin 926 mg/kgBB/hari	-.05376	.16782
	katekin 1113 mg/kgBB/hari	.03965	.26122
katekin 926 mg/kgBB/hari	Kontrol Negatif	.14676	.36834
	Kontrol Positif	-.38625	-.16467
	katekin 513 mg/kgBB/hari	-.16782	.05376
	katekin 1113 mg/kgBB/hari	-.01738	.20419
katekin 1113 mg/kgBB/hari	Kontrol Negatif	.05336	.27493
	Kontrol Positif	-.47965	-.25808
	katekin 513 mg/kgBB/hari	-.26122	-.03965
	katekin 926 mg/kgBB/hari	-.20419	.01738

*. The mean difference is significant at the 0.05 level.

3. TUNEL 3 hari

Ranks

	perlakuan	N	Mean Rank
TUNEL_3	Kontrol Negatif	4	2.50
	Kontrol Positif	4	16.75
	katekin 513 mg/kgBB/hari	4	12.25
	katekin 926 mg/kgBB/hari	4	14.50
	katekin 1113 mg/kgBB/hari	4	6.50
	Total	20	

Test Statistics^{a,b}

	TUNEL_3
Chi-Square	15.786
df	4
Asymp. Sig.	.003

a. Kruskal Wallis Test

b. Grouping Variable: perlakuan

Ranks

	perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3	Kontrol Negatif	4	2.50	10.00
	Kontrol Positif	4	6.50	26.00
	Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3	Kontrol Negatif	4	2.50	10.00
	katekin 513 mg/kgBB/hari	4	6.50	26.00
	Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3	Kontrol Negatif	4	2.50	10.00
	katekin 926 mg/kgBB/hari	4	6.50	26.00
	Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3	Kontrol Negatif	4	2.50	10.00
	katekin 1113 mg/kgBB/hari	4	6.50	26.00
	Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3 Kontrol Positif	4	6.00	24.00
katekin 513 mg/kgBB/hari	4	3.00	12.00
Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	2.000
Wilcoxon W	12.000
Z	-1.732
Asymp. Sig. (2-tailed)	.083
Exact Sig. [2*(1-tailed Sig.)]	.114 ^b

- a. Grouping Variable: perlakuan
 b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3 Kontrol Positif	4	5.25	21.00
katekin 926 mg/kgBB/hari	4	3.75	15.00
Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	5.000
Wilcoxon W	15.000
Z	-.866
Asymp. Sig. (2-tailed)	.386
Exact Sig. [2*(1-tailed Sig.)]	.486 ^b

- a. Grouping Variable: perlakuan
 b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3 Kontrol Positif	4	6.50	26.00
katekin 1113 mg/kgBB/hari	4	2.50	10.00
Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3 katekin 513 mg/kgBB/hari	4	3.75	15.00
katekin 926 mg/kgBB/hari	4	5.25	21.00
Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	5.000
Wilcoxon W	15.000
Z	-.866
Asymp. Sig. (2-tailed)	.386
Exact Sig. [2*(1-tailed Sig.)]	.486 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3 katekin 513 mg/kgBB/hari	4	6.50	26.00
katekin 1113 mg/kgBB/hari	4	2.50	10.00
Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
TUNEL_3 katekin 926 mg/kgBB/hari	4	6.50	26.00
katekin 1113 mg/kgBB/hari	4	2.50	10.00
Total	8		

Test Statistics^a

	TUNEL_3
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

4. TUNEL 7 hari

ANOVA

TUNEL_7

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.604	4	.151	118.262	.000
Within Groups	.019	15	.001		
Total	.623	19			

Multiple Comparisons

Dependent Variable: TUNEL_7

Tukey HSD

(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.
Kontrol Negatif	Kontrol Positif	-.493136 [*]	.025272	.000
	katekin 513 mg/kgBB/hari	-.380199 [*]	.025272	.000
	katekin 926 mg/kgBB/hari	-.334308 [*]	.025272	.000
	katekin 1113 mg/kgBB/hari	-.159766 [*]	.025272	.000
Kontrol Positif	Kontrol Negatif	.493136 [*]	.025272	.000
	katekin 513 mg/kgBB/hari	.112938 [*]	.025272	.004
	katekin 926 mg/kgBB/hari	.158828 [*]	.025272	.000
	katekin 1113 mg/kgBB/hari	.333370 [*]	.025272	.000
katekin 513 mg/kgBB/hari	Kontrol Negatif	.380199 [*]	.025272	.000
	Kontrol Positif	-.112938 [*]	.025272	.004
	katekin 926 mg/kgBB/hari	.045890	.025272	.401
	katekin 1113 mg/kgBB/hari	.220432 [*]	.025272	.000
katekin 926 mg/kgBB/hari	Kontrol Negatif	.334308 [*]	.025272	.000
	Kontrol Positif	-.158828 [*]	.025272	.000
	katekin 513 mg/kgBB/hari	-.045890	.025272	.401
	katekin 1113 mg/kgBB/hari	.174542 [*]	.025272	.000
katekin 1113 mg/kgBB/hari	Kontrol Negatif	.159766 [*]	.025272	.000
	Kontrol Positif	-.333370 [*]	.025272	.000
	katekin 513 mg/kgBB/hari	-.220432 [*]	.025272	.000
	katekin 926 mg/kgBB/hari	-.174542 [*]	.025272	.000

Multiple Comparisons

Dependent Variable: TUNEL_7

Tukey HSD

(I) perlakuan	(J) perlakuan	95% Confidence Interval	
		Lower Bound	Upper Bound
Kontrol Negatif	Kontrol Positif	-.57117	-.41510
	katekin 513 mg/kgBB/hari	-.45824	-.30216
	katekin 926 mg/kgBB/hari	-.41235	-.25627
	katekin 1113 mg/kgBB/hari	-.23780	-.08173
Kontrol Positif	Kontrol Negatif	.41510	.57117
	katekin 513 mg/kgBB/hari	.03490	.19098
	katekin 926 mg/kgBB/hari	.08079	.23687
	katekin 1113 mg/kgBB/hari	.25533	.41141
katekin 513 mg/kgBB/hari	Kontrol Negatif	.30216	.45824
	Kontrol Positif	-.19098	-.03490
	katekin 926 mg/kgBB/hari	-.03215	.12393
	katekin 1113 mg/kgBB/hari	.14239	.29847
katekin 926 mg/kgBB/hari	Kontrol Negatif	.25627	.41235
	Kontrol Positif	-.23687	-.08079
	katekin 513 mg/kgBB/hari	-.12393	.03215
	katekin 1113 mg/kgBB/hari	.09650	.25258
katekin 1113 mg/kgBB/hari	Kontrol Negatif	.08173	.23780
	Kontrol Positif	-.41141	-.25533
	katekin 513 mg/kgBB/hari	-.29847	-.14239
	katekin 926 mg/kgBB/hari	-.25258	-.09650

*. The mean difference is significant at the 0.05 level.

5. NSS 3 hari

ANOVA

NSS3_3

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	39.700	4	9.925	17.515	.000
Within Groups	8.500	15	.567		
Total	48.200	19			

Multiple Comparisons

Dependent Variable: NSS3_3

Tukey HSD

(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval
					Lower Bound
kontrol negative	kontrol positif	-4.250*	.532	.000	-5.89
	513 mg/kgbb/hari	-1.750*	.532	.034	-3.39
	926 mg/kgbb/hari	-3.000*	.532	.000	-4.64
	1113 mg/kgbb/hari	-2.500*	.532	.002	-4.14
kontrol positif	kontrol negatif	4.250*	.532	.000	2.61
	513 mg/kgbb/hari	2.500*	.532	.002	.86
	926 mg/kgbb/hari	1.250	.532	.184	-.39
	1113 mg/kgbb/hari	1.750*	.532	.034	.11
513 mg/kgbb/hari	kontrol negatif	1.750*	.532	.034	.11
	kontrol positif	-2.500*	.532	.002	-4.14
	926 mg/kgbb/hari	-1.250	.532	.184	-2.89
	1113 mg/kgbb/hari	-.750	.532	.632	-2.39
926 mg/kgbb/hari	kontrol negatif	3.000*	.532	.000	1.36
	kontrol positif	-1.250	.532	.184	-2.89
	513 mg/kgbb/hari	1.250	.532	.184	-.39
	1113 mg/kgbb/hari	.500	.532	.877	-1.14
1113 mg/kgbb/hari	kontrol negatif	2.500*	.532	.002	.86
	kontrol positif	-1.750*	.532	.034	-3.39
	513 mg/kgbb/hari	.750	.532	.632	-.89
	926 mg/kgbb/hari	-.500	.532	.877	-2.14

*. The mean difference is significant at the 0.05 level.

6. NSS 7 hari

Ranks

Perlakuan	N	Mean Rank
NSS7_7 kontrol negatif	4	2.50

Multiple Comparisons

Dependent Variable: NSS3_3

Tukey HSD

(I) perlakuan		(J) perlakuan	95% Confidence Interval
			Upper Bound
kontrol negatif		kontrol positif	-2.61
		513 mg/kgbb/hari	-.11
		926 mg/kgbb/hari	-1.36
		1113 mg/kgbb/hari	-.86
kontrol positif		kontrol negative	5.89
		513 mg/kgbb/hari	4.14
		926 mg/kgbb/hari	2.89
		1113 mg/kgbb/hari	3.39
513 mg/kgbb/hari		kontrol negative	3.39
		kontrol positif	-.86
		926 mg/kgbb/hari	.39
		1113 mg/kgbb/hari	.89
926 mg/kgbb/hari		kontrol negatif	4.64
		kontrol positif	.39
		513 mg/kgbb/hari	2.89
		1113 mg/kgbb/hari	2.14
1113 mg/kgbb/hari		kontrol negatif	4.14
		kontrol positif	-.11
		513 mg/kgbb/hari	2.39
		926 mg/kgbb/hari	1.14
NSS7_7	kontrol positif	4	18.50
	513 mg/kgbb/hari	4	10.63
	926 mg/kgbb/hari	4	13.00
	1113 mg/kgbb/hari	4	7.88
	Total	20	

Test Statistics^{a,b}

	NSS7_7
Chi-Square	17.124
df	4
Asymp. Sig.	.002

a. Kruskal Wallis Test

b. Grouping Variable:

perlakuan

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 kontrol negatif	4	2.50	10.00
kontrol positif	4	6.50	26.00
Total	8		

Test Statistics^a

	NSS7_7
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.477
Asymp. Sig. (2-tailed)	.013
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 kontrol negatif	4	2.50	10.00
513 mg/kgbb/hari	4	6.50	26.00
Total	8		

Test Statistics^a

	NSS7_7
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.530
Asymp. Sig. (2-tailed)	.011
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 kontrol negatif	4	2.50	10.00
926 mg/kgbb/hari	4	6.50	26.00
Total	8		

Test Statistics^a

	NSS7_7
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.530
Asymp. Sig. (2-tailed)	.011
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 kontrol negatif	4	2.50	10.00
1113 mg/kgbb/hari	4	6.50	26.00
Total	8		

Test Statistics^a

	NSS7_7
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.530
Asymp. Sig. (2-tailed)	.011
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 kontrol positif	4	6.50	26.00
513 mg/kgbb/hari	4	2.50	10.00
Total	8		

Test Statistics ^a	NSS7_7
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.381
Asymp. Sig. (2-tailed)	.017
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 kontrol positif	4	6.50	26.00
926 mg/kgbb/hari	4	2.50	10.00
Total	8		

Test Statistics^a

Test Statistics ^a	NSS7_7
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.381
Asymp. Sig. (2-tailed)	.017
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 kontrol positif	4	6.50	26.00
1113 mg/kgbb/hari	4	2.50	10.00
Total	8		

Test Statistics^a

Test Statistics ^a	NSS7_7
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.381
Asymp. Sig. (2-tailed)	.017
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 513 mg/kgbb/hari	4	3.63	14.50
926 mg/kgbb/hari	4	5.38	21.50
Total	8		

Test Statistics^a

	NSS7_7
Mann-Whitney U	4.500
Wilcoxon W	14.500
Z	-1.323
Asymp. Sig. (2-tailed)	.186
Exact Sig. [2*(1-tailed Sig.)]	.343 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 513 mg/kgbb/hari	4	5.50	22.00
1113 mg/kgbb/hari	4	3.50	14.00
Total	8		

Test Statistics^a

	NSS7_7
Mann-Whitney U	4.000
Wilcoxon W	14.000
Z	-1.323
Asymp. Sig. (2-tailed)	.186
Exact Sig. [2*(1-tailed Sig.)]	.343 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

Ranks

perlakuan	N	Mean Rank	Sum of Ranks
NSS7_7 926 mg/kgbb/hari	4	6.13	24.50
1113 mg/kgbb/hari	4	2.88	11.50
Total	8		

Test Statistics ^a	NSS7_7
Mann-Whitney U	1.500
Wilcoxon W	11.500
Z	-2.055
Asymp. Sig. (2-tailed)	.040
Exact Sig. [2*(1-tailed Sig.)]	.057 ^b

a. Grouping Variable: perlakuan

b. Not corrected for ties.

7. Subset Homogen

trTNF_3

Tukey HSD^a

perlakuan	N	Subset for alpha = 0.05			
		1	2	3	4
Kontrol Negatif	4	1.0800			
katekin 1113 mg/kgBB/hari	4		1.3923		
katekin 926 mg/kgBB/hari	4			1.7156	
katekin 513 mg/kgBB/hari	4			1.8422	1.8422
Kontrol Positif	4				2.0000
Sig.		1.000	1.000	.450	.252

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.000.

TNF_7

Tukey HSD^a

perlakuan	N	Subset for alpha = 0.05			
		1	2	3	4
Kontrol Negatif	4	.04782			
katekin 1113 mg/kgBB/hari	4		.21196		
katekin 926 mg/kgBB/hari	4		.30537	.30537	
katekin 513 mg/kgBB/hari	4			.36240	
Kontrol Positif	4				.58083
Sig.		1.000	.120	.525	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.000.

Tukey HSD^a

perlakuan TUNEL 7	N	Subset for alpha = 0.05			
		1	2	3	4
Kontrol Negatif	4	.04623			
katekin 1113 mg/kgBB/hari	4		.20599		
katekin 926 mg/kgBB/hari	4			.38054	
katekin 513 mg/kgBB/hari	4			.42643	
Kontrol Positif	4				.53936
Sig.		1.000	1.000	.401	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.000.

NSS3_3

Tukey HSD^a

perlakuan	N	Subset for alpha = 0.05		
		1	2	3
kontrol negatif	4	.00		
513 mg/kgbb/hari	4		1.75	
1113 mg/kgbb/hari	4		2.50	
926 mg/kgbb/hari	4		3.00	3.00
kontrol positif	4			4.25
Sig.		1.000	.184	.184

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.000.

LAMPIRAN III
UJI KORELASI

1. TNF-alpha

Correlations

		trTNF_3	korelasi
trTNF_3	Pearson Correlation	1	-.838**
	Sig. (2-tailed)		.000
	N	20	16
korelasi	Pearson Correlation	-.838**	1
	Sig. (2-tailed)	.000	
	N	16	16

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		dosis	TNF_7
dosis	Pearson Correlation	1	-.921**
	Sig. (2-tailed)		.000
	N	16	16
TNF_7	Pearson Correlation	-.921**	1
	Sig. (2-tailed)	.000	
	N	16	20

** Correlation is significant at the 0.01 level (2-tailed).

2. TUNEL

Correlations

			dosis	TUNEL_3
Spearman's rho	dosis	Correlation Coefficient	1.000	-.691**
		Sig. (2-tailed)	.	.003
		N	16	16
	TUNEL_3	Correlation Coefficient	-.691**	1.000
		Sig. (2-tailed)	.003	.
		N	16	20

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		dosis	TUNEL_7
dosis	Pearson Correlation	1	-.890**
	Sig. (2-tailed)		.000
	N	16	16
TUNEL_7	Pearson Correlation	-.890**	1
	Sig. (2-tailed)	.000	
	N	16	20

** . Correlation is significant at the 0.01 level (2-tailed).

3. NSS

Correlations

		dosis	NSS3_3
dosis	Pearson Correlation	1	-.441
	Sig. (2-tailed)		.088
	N	16	16
NSS3_3	Pearson Correlation	-.441	1
	Sig. (2-tailed)	.088	
	N	16	20

Correlations

			dosis	NSS7_7
Spearman's rho	dosis	Correlation Coefficient	1.000	-.754**
		Sig. (2-tailed)	.	.001
		N	16	16
	NSS7_7	Correlation Coefficient	-.754**	1.000
		Sig. (2-tailed)	.001	.
		N	16	20

** . Correlation is significant at the 0.01 level (2-tailed).

4. Uji Korelasi Antar Variabel

Correlations

		TUNEL_3	TNF_3	NSS_3
TUNEL_3	Pearson Correlation	1	.844	-.897
	Sig. (2-tailed)		.156	.103
	N	4	4	4
TNF_3	Pearson Correlation	.844	1	-.983*
	Sig. (2-tailed)	.156		.017
	N	4	4	4
NSS_3	Pearson Correlation	-.897	-.983*	1
	Sig. (2-tailed)	.103	.017	
	N	4	4	4

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TUNEL_7	TNF_7	NSS_7
TUNEL_7	Pearson Correlation	1	.879	-.221
	Sig. (2-tailed)		.121	.779
	N	4	4	4
TNF_7	Pearson Correlation	.879	1	.272
	Sig. (2-tailed)	.121		.728
	N	4	4	4
NSS_7	Pearson Correlation	-.221	.272	1
	Sig. (2-tailed)	.779	.728	
	N	4	4	4

LAMPIRAN IV
UJI REGRESI

1. TNF-alpha 3 hari

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	korelasi ^b	.	Enter

- a. Dependent Variable: trTNF_3
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.838 ^a	.702	.681	.14273

- a. Predictors: (Constant), korelasi

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.673	1	.673	33.050	.000 ^b
	Residual	.285	14	.020		
	Total	.958	15			

- a. Dependent Variable: trTNF_3
b. Predictors: (Constant), korelasi

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.044	.064		31.884	.000
	korelasi	.000	.000	-.838	-5.749	.000

- a. Dependent Variable: trTNF_3

2. TNF-alpha 7

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	dosis ^b	.	Enter

a. Dependent Variable: TNF_7

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.921 ^a	.849	.838	.059997

a. Predictors: (Constant), dosis

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.282	1	.282	78.471	.000 ^b
	Residual	.050	14	.004		
	Total	.333	15			

a. Dependent Variable: TNF_7

b. Predictors: (Constant), dosis

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.563	.027		20.911	.000
	dosis	.000	.000	-.921	-8.858	.000

a. Dependent Variable: TNF_7

3. TUNEL 7

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	dosis ^b	.	Enter

a. Dependent Variable: TUNEL_7

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890 ^a	.793	.778	.060693

a. Predictors: (Constant), dosis

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.197	1	.197	53.594	.000 ^b
	Residual	.052	14	.004		
	Total	.249	15			

a. Dependent Variable: TUNEL_7

b. Predictors: (Constant), dosis

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.554	.027		20.320	.000
	dosis	.000	.000	-.890	-7.321	.000

a. Dependent Variable: TUNEL_7

4. NSS 3

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	dosis ^b	.	Enter

- a. Dependent Variable: NSS3_3
- b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.441 ^a	.194	.137	1.119

- a. Predictors: (Constant), dosis

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.224	1	4.224	3.374	.088 ^b
	Residual	17.526	14	1.252		
	Total	21.750	15			

- a. Dependent Variable: NSS3_3
- b. Predictors: (Constant), dosis

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.642	.502		7.248	.000
	dosis	-.001	.001	-.441	-1.837	.088

- a. Dependent Variable: NSS3_3

LAMPIRAN V
UJI PERBANDINGAN 2 VARIABEL

1. TNF-alpha

Perbandingan		Tests of Normality					
		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
TNF	K- 3	.250	4	.	.899	4	.428
	K+ 3	.250	4	.	.932	4	.609
	513 mg/kgBB/hari 3	.250	4	.	.959	4	.775
	926 mg/kgBB/hari 3	.256	4	.	.834	4	.179
	1113 mg/kgBB/hari 3	.250	4	.	.958	4	.768
	K- 7	.250	4	.	.958	4	.769
	K+ 7	.250	4	.	.952	4	.726
	513 mg/kgBB/hari 7	.250	4	.	.900	4	.429
	926 mg/kgBB/hari 7	.250	4	.	.896	4	.410
	1113 mg/kgBB/hari 7	.250	4	.	.937	4	.636

a. Lilliefors Significance Correction

Group Statistics

perbandingan	N	Mean	Std. Deviation	Std. Error Mean
TNF K- 3	4	.0768	.02089	.01044
TNF K- 7	4	.0478	.00198	.00099

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
TNF	Equal variances assumed	4.734	.072	2.759	6
	Equal variances not assumed			2.759	3.054

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower
TNF	Equal variances assumed	.033	.02894	.01049	.00327
	Equal variances not assumed	.069	.02894	.01049	-.00411

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference Upper	
TNF	Equal variances assumed		.05461
	Equal variances not assumed		.06200

Group Statistics

perbandingan	N	Mean	Std. Deviation	Std. Error Mean
TNF K+ 3	4	.6916	.06483	.03241
TNF K+ 7	4	.5808	.09548	.04774

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Independent Sample Test	Equal variances assumed	.323	.591	1.919	6
	Equal variances not assumed			1.919	5.281

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
TNF	Equal variances assumed	.103	.11074	.05771	-.03046
	Equal variances not assumed	.110	.11074	.05771	-.03525

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Upper	
TNF	Equal variances assumed	.25194	
	Equal variances not assumed	.25674	

Group Statistics

Perbandingan		N	Mean	Std. Deviation	Std. Error Mean
TNF	513 mg/kgBB/hari 3	4	.6073	.09870	.04935
	513 mg/kgBB/hari 7	4	.3624	.03384	.01692

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
TNF	Equal variances assumed	1.681	.242	4.695	6
	Equal variances not assumed			4.695	3.696

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
TNF	Equal variances assumed	.003	.24495	.05217	.11729
	Equal variances not assumed	.011	.24495	.05217	.09528

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Upper	
TNF	Equal variances assumed	.37260	
	Equal variances not assumed	.39462	

Group Statistics

Perbandingan		N	Mean	Std. Deviation	Std. Error Mean
TNF	926 mg/kgBB/hari 3	4	.5391	.04002	.02001
	926 mg/kgBB/hari 7	4	.3054	.03462	.01731

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
TNF	Equal variances assumed	.067	.804	8.836	6
	Equal variances not assumed			8.836	5.878

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
TNF	Equal variances assumed	.000	.23378	.02646	.16903
	Equal variances not assumed	.000	.23378	.02646	.16871

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Upper	
TNF	Equal variances assumed	.29852	
	Equal variances not assumed	.29884	

Group Statistics

Perbandingan		N	Mean	Std. Deviation	Std. Error Mean
TNF	1113 mg/kgBB/hari 3	4	.3308	.02284	.01142
	1113 mg/kgBB/hari 7	4	.2120	.03751	.01876

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	Df
TNF	Equal variances assumed	.687	.439	5.409	6
	Equal variances not assumed			5.409	4.956

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
TNF	Equal variances assumed	.002	.11879	.02196	.06506
	Equal variances not assumed	.003	.11879	.02196	.06219

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Upper	
TNF	Equal variances assumed	.17253	
	Equal variances not assumed	.17539	

2. TUNEL

Tests of Normality

Perbandingan		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
TUNEL	K- 3	.250	4	.	.960	4	.779
	K+ 3	.250	4	.	.952	4	.726
	513 mg/kgBB/hari 3	.250	4	.	.858	4	.252
	926 mg/kgBB/hari 3	.250	4	.	.862	4	.266
	1113 mg/kgBB/hari 3	.250	4	.	.855	4	.241
	K- 7	.250	4	.	.860	4	.261
	K+ 7	.250	4	.	.938	4	.642
	513 mg/kgBB/hari 7	.250	4	.	.955	4	.748
	926 mg/kgBB/hari 7	.250	4	.	.943	4	.675
	1113 mg/kgBB/hari 7	.250	4	.	.958	4	.766

a. Lilliefors Significance Correction

Group Statistics

perbandingan		N	Mean	Std. Deviation	Std. Error Mean
TUNEL	K- 3	4	.0486	.00651	.00325
	K- 7	4	.0462	.01216	.00608

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Independent Samples Test	Equal variances assumed	1.074	.340	.349	6
	Equal variances not assumed			.349	4.589

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
		Lower			
Independent Samples Test	Equal variances assumed	.739	.00241	.00689	-.01446
	Equal variances not assumed	.742	.00241	.00689	-.01580

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Upper	
Independent Samples Test	Equal variances assumed	.01928	
	Equal variances not assumed	.02062	

Group Statistics

		N	Mean	Std. Deviation	Std. Error Mean
Independent Samples Test	perbandingan				
	TUNEL K+ 3	4	.6054	.08166	.04083
	K+ 7	4	.5394	.06268	.03134

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Independent Samples Test	Equal variances assumed	.153	.710	1.284	6
	Equal variances not assumed			1.284	5.624

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
TUNEL	Equal variances assumed	.247	.06608	.05147	-.05987
	Equal variances not assumed	.250	.06608	.05147	-.06194

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Upper	
TUNEL	Equal variances assumed	.19203	
	Equal variances not assumed	.19410	

Group Statistics

Perbandingan	N	Mean	Std. Deviation	Std. Error Mean
TUNEL 513 mg/kgBB/hari 3	4	.5246	.03361	.01680
513 mg/kgBB/hari 7	4	.4264	.04120	.02060

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
TUNEL	Equal variances assumed	.066	.805	3.695	6
	Equal variances not assumed			3.695	5.767

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
TUNEL	Equal variances assumed	.010	.09822	.02659	.03317
	Equal variances not assumed	.011	.09822	.02659	.03253

Independent Samples Test

		t-test for Equality of Means
		95% Confidence Interval of the Difference
		Upper
TUNEL	Equal variances assumed	.16327
	Equal variances not assumed	.16392

Group Statistics

Perbandingan	N	Mean	Std. Deviation	Std. Error Mean
TUNEL 926 mg/kgBB/hari 3	4	.5573	.06089	.03044
926 mg/kgBB/hari 7	4	.3805	.00710	.00355

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
TUNEL	Equal variances assumed	4.605	.076	5.767	6
	Equal variances not assumed			5.767	3.082

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
TUNEL	Equal variances assumed	.001	.17678	.03065	.10178
	Equal variances not assumed	.010	.17678	.03065	.08068

Independent Samples Test

		t-test for Equality of Means
		95% Confidence Interval of the Difference
		Upper
TUNEL	Equal variances assumed	.25177
	Equal variances not assumed	.27287

Group Statistics

	Perbandingan	N	Mean	Std. Deviation	Std. Error Mean
TUNEL	1113 mg/kgBB/hari 3	4	.3827	.02775	.01387
	1113 mg/kgBB/hari 7	4	.2060	.02369	.01185

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
TUNEL	Equal variances assumed	.162	.702	9.687	6
	Equal variances not assumed			9.687	5.856

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
TUNEL	Equal variances assumed	.000	.17672	.01824	.13208
	Equal variances not assumed	.000	.17672	.01824	.13181

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Upper	
TUNEL	Equal variances assumed	.22136	
	Equal variances not assumed	.22162	

3. NSS 3 dan 7 hari

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
NSS3_0	.306	12	.003	.860	12	.048
NSS3_3	.284	12	.008	.875	12	.077
NSS7_0	.233	12	.072	.897	12	.146
NSS7_7	.323	12	.001	.780	12	.006

a. Lilliefors Significance Correction

Ranks		N	Mean Rank	Sum of Ranks
NSS3_3 - NSS3_0	Negative Ranks	9 ^a	5.00	45.00
	Positive Ranks	0 ^b	.00	.00
	Ties	3 ^c		
	Total	12		
NSS7_7 - NSS7_0	Negative Ranks	11 ^d	6.00	66.00
	Positive Ranks	0 ^e	.00	.00
	Ties	1 ^f		
	Total	12		

- a. NSS3_3 < NSS3_0
- b. NSS3_3 > NSS3_0
- c. NSS3_3 = NSS3_0
- d. NSS7_7 < NSS7_0
- e. NSS7_7 > NSS7_0
- f. NSS7_7 = NSS7_0

Test Statistics^a

	NSS3_3 - NSS3_0	NSS7_7 - NSS7_0
Z	-2.762 ^b	-2.979 ^b
Asymp. Sig. (2-tailed)	.006	.003

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.

LAMPIRAN VI

DATA AWAL

	TUNEL		TNF-alpha		NSS 3hari		NSS 7 hari		
	hari-3	hari-7	hari-3	hari-7	H0	H3	H0	H3	H7
K-	0.06	0.06	0.11	0.05	0	0	0	0	0
	0.04	0.04	0.07	0.05	0	0	0	0	0
	0.05	0.04	0.06	0.05	0	0	0	0	0
	0.05	0.05	0.08	0.05	0	0	0	0	0
K+	0.72	0.63	0.75	0.71	3	3	3	5	5
	0.58	0.51	0.72	0.48	2	4	3	6	4
	0.52	0.48	0.60	0.55	5	6	4	6	6
	0.61	0.54	0.69	0.58	3	4	3	6	5
513 mg/kgbb	0.57	0.48	0.71	0.41	2	1	4	3	1
	0.50	0.38	0.64	0.34	4	2	3	2	2
	0.50	0.41	0.47	0.33	3	2	3	2	2
	0.52	0.43	0.61	0.36	3	2	3	2	2
926 mg/kgbb	0.60	0.39	0.57	0.35	3	3	5	3	2
	0.47	0.37	0.57	0.29	6	4	3	2	3
	0.60	0.38	0.48	0.28	3	2	3	3	2
	0.56	0.38	0.54	0.31	4	3	4	3	2
1113 mg/kgbb	0.40	0.23	0.30	0.26	3	2	6	4	2
	0.40	0.21	0.33	0.20	2	2	2	1	1
	0.34	0.18	0.36	0.18	5	3	4	3	1
	0.38	0.21	0.33	0.21	3	3	4	3	1

LAMPIRAN VII
DOKUMENTASI PENELITIAN



LAMPIRAN VIII
DOKUMEN PENELITIAN



KEMENTERIAN RISET, TEKNOLOGI, DAN PENDIDIKAN TINGGI
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KETERANGAN KELAIKAN ETIK
("ETHICAL CLEARANCE")

No. 276 / EC / KEPK / 07 / 2016

KOMISI ETIK PENELITIAN KESEHATAN FAKULTAS KEDOKTERAN UNIVERSITAS BRAWIJAYA, SETELAH MEMPELAJARI DENGAN SEKSAMA RANCANGAN PENELITIAN YANG DIUSULKAN, DENGAN INI MENYATAKAN BAHWA PENELITIAN DENGAN

- JUDUL** : Pengaruh Pemberian *Catechins* terhadap Rasio Ekspresi Bcl-2/Bax, Ekspresi Brain Derived Neurotrophic Factor, Caspase 3, TNF α , Nf κ B, Caspase 8, Apoptosis Jaringan serta Neurological Severity Score Tikus jantan *Rattus norvegicus* Model Cedera Otak Traumatik Fokal
- PENELITI** : dr. Annisa Nurul Arofah
dr. Anastasia Novitasari
dr. Sartika Dewi Utami
dr. Made Ayu Hariningsih
Dr. dr. Masruroh Rahayu, M.Kes
- UNIT / LEMBAGA** : Fakultas Kedokteran – Universitas Brawijaya Malang
- TEMPAT PENELITIAN** : Laboratorium Fisiologi Fakultas Kedokteran Universitas Brawijaya Malang

DINYATAKAN LAIK ETIK.

Malang, 26 JUL 2016
Ketua,
Komisi Etik Penelitian Kesehatan

Prof. Dr. dr. Moch. Istiadjid ES, SpS, SpBS (K), M.Hum
NIP. 19460516 197111 1 001

Catatan :

Keterangan Laik Etik Ini Berlaku 1 (Satu) Tahun Sejak Tanggal Dikeluarkan Pada Akhir Penelitian, Laporan Pelaksanaan Penelitian Harus Diserahkan Kepada KEPK-FKUB Dalam Bentuk Soft Copy. Jika Ada Perubahan Protokol Dan / Atau Perpanjangan Penelitian, Harus Mengajukan Kembali Permohonan Kajian Etik Penelitian (Amandemen Protokol)

[UnivMed] Submission Acknowledgement



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Rita Hemawati

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The following message is being delivered on behalf of Universa Medicina.

doctor anastasia novita sari:

Thank you for submitting the manuscript, "Pengaruh Catechins terhadap Inflamasi, Apoptosis, dan Faktor Neurotropik serta Perbaikan Klinis Tikus Cedera Otak Traumatik" to Universa Medicina. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

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Kepada Yth. : Dr. dr. Retty Ratnawati, MSc(QU), AIF
Department of Fisiologi
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Universitas Brawijaya
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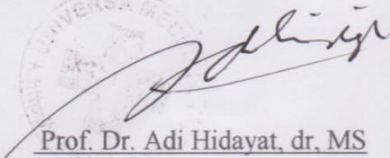
Dengan hormat,

Bersama ini kami kirimkan Jurnal Universa Medicina edisi Mei-Agustus 2017, Vol.36 No.2 sebanyak 1 (satu) eksemplar Jurnal dan 2 (dua) cetak lepas dari Redaksi Universa Medicina sebagai tanda terima kasih dan bukti atas publikasi artikel Saudara berjudul "*Catechins decrease neurological severity score through apoptosis and neurotropic factor pathway in rat traumatic brain injury*".

Semoga dengan dimuatnya artikel tersebut dapat menambah publikasi atas nama Saudara.

Terima kasih atas perhatian dan kerjasama Saudara pada Jurnal Universa Medicina. Kami sangat mengharapkan artikel Saudara yang lain.

Hormat kami,


Prof. Dr. Adi Hidayat, dr. MS
Pemimpin Redaksi



[UnivMed] Editor Decision



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Rita Hemawati

to me, Retty

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Dear Colleague anastasia novita sari:

We have reached a decision regarding your submission to Universa Medicina, "Pengaruh Catechins terhadap Inflamasi, Apoptosis, dan Faktor Neurotropik serta Perbaikan Klinis Tikus Cedera Otak Traumatik".

Our decision is to: Accept Submission

With best regards,

Editor

Universa Medicina

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Catechins decrease neurological severity score through apoptosis and neurotrophic factor pathway in rat traumatic brain injury

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ABSTRACT

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BACKGROUND

Catechins inhibit apoptosis through anti-oxidative and anti-inflammatory pathways, also increases brain-derived neurotrophic factor (BDNF). Only a few research that explained the role of catechins in traumatic brain injury (TBI). The objective of the study was to evaluate the effect of catechins administration on neurological severity score (NSS) through apoptosis and neurotrophic pathway in TBI rat model.

METHODS

A post test only controlled group design was conducted using *Rattus norvegicus* weight-drop models of TBI. It was divided into negative control, positive control, TBI+catechins 513 mg/kgBW, TBI+catechins 926 mg/kgBW, and TBI+catechins 1113 mg/kgBW groups. Catechins was administered daily for three days and seven days post-trauma. NSS was examined in the first hour, third day, and seventh day. Expression of TNF α , Bax, Bcl-2, caspase 8 caspase 3, BDNF, total expression of NF κ B p65, and apoptosis cells in brain tissue was measured by immunohistochemistry method. One way Anova and Kruskal Wallis were used to analyse the data.

RESULTS

Catechins decreased the expression of TNF α , caspase 8 caspase 3, total expression NF κ B p65, apoptosis cells and NSS significantly ($p < 0.050$) on the third day, either on the seventh day. Catechins increased the expression of BDNF significantly ($p < 0.050$) on the third day, either on the seventh day. Catechins increased the expression of Bcl-2/Bax significantly ($p < 0.050$) on the third day, neither on the seventh day ($p \geq 0.050$).

CONCLUSIONS

Administration of catechins decrease NSS by inhibiting inflammation and apoptosis, as well as triggering the neurotrophic factors in rat TBI.

Keywords: Catechins, TBI, apoptosis, inflammation
