

LAMPIRAN

Lampiran 1. Timeline penelitian.

Tanggal	Kegiatan
15 desember 2015	Pengerjaan proposal permohonan penelitian di PAU UGM
9 januari 2016	<i>Survey</i> tikus putih
15 januari 2016	Pengajuan proposal penelitian
16 januari 2016	Pembelian metformin dan streptozotocin
17 januari 2016	<i>Survey</i> daun kersen
15 februari 2016	Persiapan kandang di lab PAU
16 februari – 23 februari 2016	Adaptasi tikus
23 februari 2016	Pengambilan sampel GDP, SGOT, SGPT, HDL, LDL, TG, Kolesterol
24 februari 2016	Induksi STZ-NA
28 februari 2016	Pengambilan sampel GDP, SGOT, SGPT, HDL, LDL, TG, Kolesterol
29 februari 2016	Persiapan seduhan daun kersen
29 februari – 13 maret 2016	Intervensi seduhan daun kersen
14 maret 2016	Pengambilan sampel GDP, SGOT, SGPT, HDL, LDL, TG, Kolesterol, MDA, GPx, SOD

Lampiran 2. Hasil uji analisis data SPSS.

a) Rerata berat badan tikus sebelum induksi STZ-NA dan sebelum perlakuan.

Report

Kelompok Perlakuan		Berat Badan sebelum STZ	Berat Badan Sebelum Perlakuan
Negatif	Mean	168.50	171.50
	N	6	6
	Std. Deviation	21.998	21.998
positif	Mean	179.83	183.67
	N	6	6
	Std. Deviation	15.224	15.253
P1	Mean	169.50	173.17
	N	6	6
	Std. Deviation	16.121	15.804
P2	Mean	176.17	179.83
	N	6	6
	Std. Deviation	14.851	14.798
P3	Mean	184.00	188.50
	N	6	6
	Std. Deviation	10.640	11.606
Total	Mean	175.60	179.33
	N	30	30
	Std. Deviation	16.194	16.416

b) Normalitas data GDP.

Tests of Normality

kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
Sebelum STZ	Negatif	.161	6	.200*	.954	6	.773
	positif	.180	6	.200*	.957	6	.795
	P1(250 mg kersen)	.190	6	.200*	.956	6	.786
	P2(500 mg kersen)	.229	6	.200*	.864	6	.204
	P3(750 mg kersen)	.167	6	.200*	.949	6	.733
Sesudah STZ	Negatif	.170	6	.200*	.946	6	.708
	positif	.227	6	.200*	.956	6	.787
	P1(250 mg kersen)	.209	6	.200*	.928	6	.568
	P2(500 mg kersen)	.165	6	.200*	.989	6	.986
	P3(750 mg kersen)	.200	6	.200*	.936	6	.626
Sesudah Kersen	Negatif	.178	6	.200*	.946	6	.707
	positif	.151	6	.200*	.980	6	.953
	P1(250 mg kersen)	.181	6	.200*	.941	6	.669
	P2(500 mg kersen)	.139	6	.200*	.963	6	.839
	P3(750 mg kersen)	.212	6	.200*	.912	6	.449

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

a. Lilliefors Significance Correction

c) Homogenitas data GDP.

Test of Homogeneity of Variance

		Levene Statistic	df 1	df 2	Sig.
Sebelum STZ	Based on Mean	.283	4	25	.886
	Based on Median	.283	4	25	.886
	Based on Median and with adjusted df	.283	4	22.725	.886
	Based on trimmed mean	.287	4	25	.883
Sesudah STZ	Based on Mean	2.862	4	25	.044
	Based on Median	2.672	4	25	.055
	Based on Median and with adjusted df	2.672	4	18.186	.065
	Based on trimmed mean	2.857	4	25	.044
Sesudah Kersen	Based on Mean	4.929	4	25	.005
	Based on Median	4.293	4	25	.009
	Based on Median and with adjusted df	4.293	4	15.548	.016
	Based on trimmed mean	4.889	4	25	.005

d) Rerata kadar GDP 5 kelompok.

Perlakuan		Sebelum STZ	Sesudah STZ	Sesudah Kersen
Negatif	Mean	60.7333	213.3200	214.2283
	Minimum	57.20	205.79	207.32
	Maximum	63.26	220.08	220.73
	Std. Deviation	2.26798	5.71214	5.26715
	Std. Error of Mean	.92590	2.33197	2.15030
Positif	Mean	59.4700	206.8217	99.2550
	Minimum	57.58	204.25	97.15
	Maximum	62.12	210.04	101.63
	Std. Deviation	1.62443	1.91776	1.57444
	Std. Error of Mean	.66317	.78292	.64276
P1	Mean	62.2467	211.0050	157.6567
	Minimum	60.23	206.18	154.47
	Maximum	65.15	218.53	159.76
	Std. Deviation	1.72179	4.26886	1.88026
	Std. Error of Mean	.70292	1.74275	.76761
P2	Mean	59.9750	207.5283	136.9917
	Minimum	56.44	204.25	134.15
	Maximum	61.74	210.81	140.24
	Std. Deviation	1.91065	2.22048	2.35347
	Std. Error of Mean	.78002	.90651	.96080
P3	Mean	58.8383	211.8400	103.1150
	Minimum	56.06	207.34	99.59
	Maximum	61.36	215.44	105.69
	Std. Deviation	2.08355	3.18844	2.42234
	Std. Error of Mean	.85061	1.30167	.98892
Total	Mean	60.2527	210.1030	142.2493
	Minimum	56.06	204.25	97.15
	Maximum	65.15	220.08	220.73
	Std. Deviation	2.15820	4.30551	42.82358
	Std. Error of Mean	.39403	.78608	7.81848

e) *Paired t-test* GDP pada kelompok negatif, positif, P1, P2, P3.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP Sebelum STZ(Negatif) - GDP Sesudah STZ(Negatif)	-152.587	5.70807	2.33031	-158.577	-146.596	-65.479	5	.000
Pair 2	GDP Sesudah STZ(Negatif) - GDP akhir(tanpa perlakuan)	-.90833	.73262	.29909	-1.67717	-.13949	-3.037	5	.029

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP sebelum STZ(positif) - GDP sesudah STZ(positif)	-147.352	2.09253	.85427	-149.548	-145.156	-172.488	5	.000
Pair 2	GDP sesudah STZ(positif) - GDP Sesudah Metformin	107.56667	.53772	.21952	107.00236	108.13097	489.998	5	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP Sebelum STZ(P1) - GDP Sesudah STZ(P1)	-148.758	4.67916	1.91026	-153.669	-143.848	-77.873	5	.000
Pair 2	GDP Sesudah STZ(P1) - GDP Sesudah kersen(P1)	53.34833	3.33242	1.36045	49.85117	56.84549	39.214	5	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP Sebelum STZ(P2) - GDP Sesudah STZ(P2)	-147.553	2.84999	1.16351	-150.544	-144.562	-126.818	5	.000
Pair 2	GDP Sesudah STZ(P2) - GDP Sesudah Kersen(P2)	70.53667	.75277	.30732	69.74668	71.32665	229.523	5	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP Sebelum STZ(P2) - GDP Sesudah STZ(P2)	-147.553	2.84999	1.16351	-150.544	-144.562	-126.818	5	.000
Pair 2	GDP Sesudah STZ(P2) - GDP Sesudah Kersen(P2)	70.53667	.75277	.30732	69.74668	71.32665	229.523	5	.000

f) Uji beda *One way ANOVA* GDP.

ANOVA

GDP Sebelum perlakuan-sesudah perlakuan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49156.620	4	12289.155	3875.728	.000
Within Groups	79.270	25	3.171		
Total	49235.890	29			

g) Post-hoc Tuckey HSD GDP.

Multiple Comparisons

Dependent Variable: GDP Sebelum perlakuan-sesudah perlakuan

Tukey HSD

(I) kelompok perlakuan	(J) kelompok perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Negatif	Positif	-108.47167*	1.02807	.000	-111.4910	-105.4523
	P1	-54.25500*	1.02807	.000	-57.2743	-51.2357
	P2	-71.44333*	1.02807	.000	-74.4627	-68.4240
	P3	-109.62833*	1.02807	.000	-112.6477	-106.6090
Positif	Negatif	108.47167*	1.02807	.000	105.4523	111.4910
	P1	54.21667*	1.02807	.000	51.1973	57.2360
	P2	37.02833*	1.02807	.000	34.0090	40.0477
	P3	-1.15667	1.02807	.792	-4.1760	1.8627
P1	Negatif	54.25500*	1.02807	.000	51.2357	57.2743
	Positif	-54.21667*	1.02807	.000	-57.2360	-51.1973
	P2	-17.18833*	1.02807	.000	-20.2077	-14.1690
	P3	-55.37333*	1.02807	.000	-58.3927	-52.3540
P2	Negatif	71.44333*	1.02807	.000	68.4240	74.4627
	Positif	-37.02833*	1.02807	.000	-40.0477	-34.0090
	P1	17.18833*	1.02807	.000	14.1690	20.2077
	P3	-38.18500*	1.02807	.000	-41.2043	-35.1657
P3	Negatif	109.62833*	1.02807	.000	106.6090	112.6477
	Positif	1.15667	1.02807	.792	-1.8627	4.1760
	P1	55.37333*	1.02807	.000	52.3540	58.3927
	P2	38.18500*	1.02807	.000	35.1657	41.2043

*. The mean difference is significant at the .05 level.

h) *Paired t-test* Kolesterol pada kelompok negatif, positif, P1, P2, P3.

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Kolesterol sebelum STZ (Negatif) - Kolesterol sesudah STZ (Negatif)	-109.783	5.79783	2.36695	-115.868	-103.699	-46.382	5	.000
Pair 2	Kolesterol sesudah STZ (Negatif) - Kolesterol akhir (tanpa perlakuan)	-.98667	.55827	.22791	-1.57254	-.40080	-4.329	5	.008

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Kolesterol sebelum STZ (positif) - Kolesterol sesudah STZ (positif)	-99.87667	4.80944	1.96345	-104.924	-94.82947	-50.868	5	.000
Pair 2	Kolesterol sesudah STZ (positif) - Kolesterol sesudah Metformin	81.90833	1.27529	.52064	80.56999	83.24667	157.323	5	.000

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Kolesterol sebelum STZ (P1) - Kolesterol sesudah STZ (P1)	-104.468	4.61177	1.88275	-109.308	-99.62858	-55.487	5	.000
Pair 2	Kolesterol sesudah STZ (P1) - Kolesterol sesudah Kersen (P1)	30.31333	4.39197	1.79301	25.70425	34.92242	16.906	5	.000

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Kolesterol sebelum STZ (P2) - Kolesterol sesudah STZ (P2)	-99.81000	4.09138	1.67030	-104.104	-95.51636	-59.756	5	.000
Pair 2	Kolesterol sesudah STZ (P2) - Kolesterol sesudah Kersen (P2)	47.36500	1.38480	.56534	45.91174	48.81826	83.781	5	.000

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Kolesterol sebelum STZ (P3) - Kolesterol sesudah STZ (P3)	-108.755	6.21564	2.53753	-115.278	-102.232	-42.859	5	.000
Pair 2	Kolesterol sesudah STZ (P3) - Kolesterol sesudah Kersen (P3)	83.90667	2.69366	1.09968	81.07985	86.73349	76.301	5	.000

i) *Paired t-test* Trigliceride pada kelompok negatif, positif, P1, P2, P3.

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Trigliceride sebelum STZ (negatif) - Trigliceride sesudah STZ (negatif)	-72.99500	6.16435	2.51659	-79.46409	-66.52591	-29.006	5	.000
Pair 2	Trigliceride sesudah STZ (negatif) - Trigliceride akhir (tanpa perlakuan)	-.72000	.27092	.11060	-1.00432	-.43568	-6.510	5	.001

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Triglisericide sebelum STZ (positif) - Triglisericide sesudah STZ (positif)	-75.23167	5.70804	2.33030	-81.22189	-69.24144	-32.284	5	.000
Pair 2	Triglisericide sesudah STZ (positif) - Triglisericide sesudah Metformin (positif)	60.82500	1.04483	.42655	59.72852	61.92148	142.598	5	.000

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Triglisericide sebelum STZ (P2) - Triglisericide sesudah STZ (P2)	-78.96667	2.56025	1.04522	-81.65348	-76.27985	-75.551	5	.000
Pair 2	Triglisericide sesudah STZ (P2) - Triglisericide sesudah Kersen (P2)	44.56167	3.57528	1.45960	40.80964	48.31369	30.530	5	.000

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Triglisericide sebelum STZ (P1) - Triglisericide sesudah STZ (P1)	-75.11333	7.15608	2.92146	-82.62317	-67.60349	-25.711	5	.000
Pair 2	Triglisericide sesudah STZ (P1) - Triglisericide sesudah Kersen (P1)	30.83000	6.08533	2.48432	24.44384	37.21616	12.410	5	.000

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Triglisericide sebelum STZ (P3) - Triglisericide sesudah STZ (P3)	-77.66000	2.52839	1.03221	-80.31338	-75.00662	-75.237	5	.000
Pair 2	Triglisericide sesudah STZ (P3) - Triglisericide sesudah Kersen (P3)	61.33833	3.01648	1.23147	58.17273	64.50394	49.809	5	.000

j) Uji beda *One way ANOVA* Kolesterol.

ANOVA

Kolesterol sebelum - Kolesterol sesudah perlakuan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	30904.656	4	7726.164	1272.703	.000
Within Groups	151.767	25	6.071		
Total	31056.423	29			

k) Post-hoc Tuckey HSD Kolesterol.

Multiple Comparisons

Dependent Variable: Kolesterol sebelum - Kolesterol sesudah perlakuan

Tukey HSD

(I) Kelompok perlakuan	(J) Kelompok perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
negatif	positif	-82.89667*	1.42252	.000	-87.0744	-78.7189
	p1	-31.29833*	1.42252	.000	-35.4761	-27.1206
	p2	-48.35167*	1.42252	.000	-52.5294	-44.1739
	p3	-84.89167*	1.42252	.000	-89.0694	-80.7139
positif	negatif	82.89667*	1.42252	.000	78.7189	87.0744
	p1	51.59833*	1.42252	.000	47.4206	55.7761
	p2	34.54500*	1.42252	.000	30.3672	38.7228
	p3	-1.99500	1.42252	.632	-6.1728	2.1828
p1	negatif	31.29833*	1.42252	.000	27.1206	35.4761
	positif	-51.59833*	1.42252	.000	-55.7761	-47.4206
	p2	-17.05333*	1.42252	.000	-21.2311	-12.8756
	p3	-53.59333*	1.42252	.000	-57.7711	-49.4156
p2	negatif	48.35167*	1.42252	.000	44.1739	52.5294
	positif	-34.54500*	1.42252	.000	-38.7228	-30.3672
	p1	17.05333*	1.42252	.000	12.8756	21.2311
	p3	-36.54000*	1.42252	.000	-40.7178	-32.3622
p3	negatif	84.89167*	1.42252	.000	80.7139	89.0694
	positif	1.99500	1.42252	.632	-2.1828	6.1728
	p1	53.59333*	1.42252	.000	49.4156	57.7711
	p2	36.54000*	1.42252	.000	32.3622	40.7178

*. The mean difference is significant at the .05 level.

1) Uji beda *One way ANOVA* Trigliceride.**ANOVA**

Triglicerida sebelum - Triglicerida sesudah perlakuan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15903.458	4	3975.864	330.567	.000
Within Groups	300.686	25	12.027		
Total	16204.143	29			

m) Post-hoc Tuckey HSD Trigliceride.

Multiple Comparisons

Dependent Variable: Triglicerida sebelum - Triglicerida sesudah perlakuan

Tukey HSD

(I) kelompok perlakuan	(J) kelompok perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
negatif	positif	-61.55000*	2.00228	.000	-67.4305	-55.6695
	p1	-31.55333*	2.00228	.000	-37.4338	-25.6729
	p2	-45.28500*	2.00228	.000	-51.1655	-39.4045
	p3	-62.06667*	2.00228	.000	-67.9471	-56.1862
positif	negatif	61.55000*	2.00228	.000	55.6695	67.4305
	p1	29.99667*	2.00228	.000	24.1162	35.8771
	p2	16.26500*	2.00228	.000	10.3845	22.1455
	p3	-.51667	2.00228	.999	-6.3971	5.3638
p1	negatif	31.55333*	2.00228	.000	25.6729	37.4338
	positif	-29.99667*	2.00228	.000	-35.8771	-24.1162
	p2	-13.73167*	2.00228	.000	-19.6121	-7.8512
	p3	-30.51333*	2.00228	.000	-36.3938	-24.6329
p2	negatif	45.28500*	2.00228	.000	39.4045	51.1655
	positif	-16.26500*	2.00228	.000	-22.1455	-10.3845
	p1	13.73167*	2.00228	.000	7.8512	19.6121
	p3	-16.78167*	2.00228	.000	-22.6621	-10.9012
p3	negatif	62.06667*	2.00228	.000	56.1862	67.9471
	positif	.51667	2.00228	.999	-5.3638	6.3971
	p1	30.51333*	2.00228	.000	24.6329	36.3938
	p2	16.78167*	2.00228	.000	10.9012	22.6621

*. The mean difference is significant at the .05 level.