LAMPIRAN

Lampiran 1 : Kaji etik dan verifikasi buah

KOMISI ETIK RISET
FAKULTAS KEDOKTERAN
UNIVERSITAS TRISAKTI
Jalan Kyai Tapa,Grogol, (Kampus B) Jakarta 11440
Telp: (021) 5672731,5655786
Fax : (021) 5660706

PERSETUJUAN ETIK
Ethical Clearance
Nomor: 125/KER/FK/XII/2017

Komisi Etik Riset Fakultas Kedokteran Universitas Trisakti setelah mempelajari dengan seksama dan mendengarkan penjelasan dari peneliti utama tentang kemungkinan adanya dampak etis terhadap subyek riset, masyarakat dan lingkungan, menetapkan penelitian dengan judul:

"PENGARUH PEMBERIAN EKSTRAK DAUN *CRESCENTIA CUJETE* TERHADAP STRES OKSIDATIF PADA JANTUNG DAN OTAK TIKUS *SPRAGUE DAWLEY* YANG DIINDUKSI HIPOKSIA"

Peneliti Utama : Alfred H Alphanto

Lembaga/Tempat penelitian : FK Universitas Tarumanagara

Dinyatakan memenuhi persyaratan etik untuk dilaksanakan.

Jakarta, 18 Desember 2017

Ketua	Sekretaris
Prof.DR.dr.Adi Hidayat,MS	dr.Alvina.SpPK

LEMBAGA ILMU PENGETAHUAN INDONESIA
(INDONESIAN INSTITUTE OF SCIENCES)
PUSAT PENELITIAN BIOLOGI
(RESEARCH CENTER FOR BIOLOGY)
Cibinong Science Center, Jl. Raya Jakarta - Bogor KM. 46 Cibinong 16911
Telp. (+62 21) 87907636 - 87907604, Fax. 87907612
Website : www.biologi.lipi.go.id

Cibinong, Agustus 2017

Nomor 1986/IPH.1.01/If.07/VIII/2017
Lampiran : -
Perihal : *Hasil identifikasi/ determinasi Tumbuhan*

Kepada Yth.
Bpk./Ibu/Sdr(i). **Alfred H. Alphanto**
Univ. TARUMANAGARA
Jl. Letjen S. Parman No. 1
Jakarta 11440

Dengan hormat,

Bersama ini kami sampaikan hasil identifikasi/determinasi tumbuhan yang Saudara kirimkan ke "Herbarium Bogoriense", Bidang Botani Pusat Penelitian Biologi-LIPI Bogor, adalah sebagai berikut :

No.	No. Kol.	Jenis	Suku
1	Berenuk	*Crescentia cujete* L.	Bignoniaceae

Demikian, semoga berguna bagi Saudara.

Kepala Bidang Botani
Pusat Penelitian Biologi-LIPI,

Dr. Joeni Setijo Rahajoe
NIP. 196706241993032004

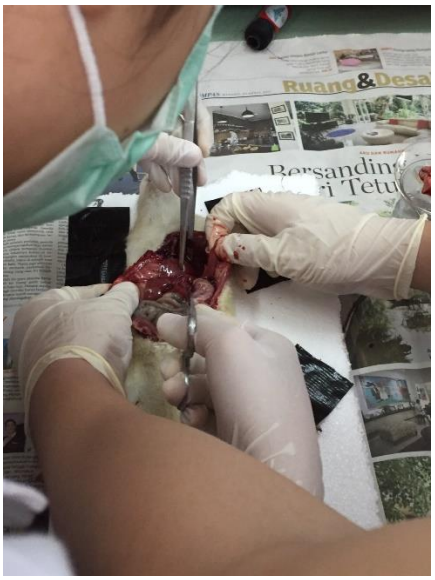
C:\Users\windows 7\Desktop\dokumen lia\Ident 2017\Alfred H. Alphant OKEo.doc\Mega-Narti
Page 1 of 1

Lampiran 2: Penimbangan Ekstrak Daun Berenuk

Lampiran 3: Kandang Tikus *Sprague Dawley*

Lampiran 4: Proses Pembiusan

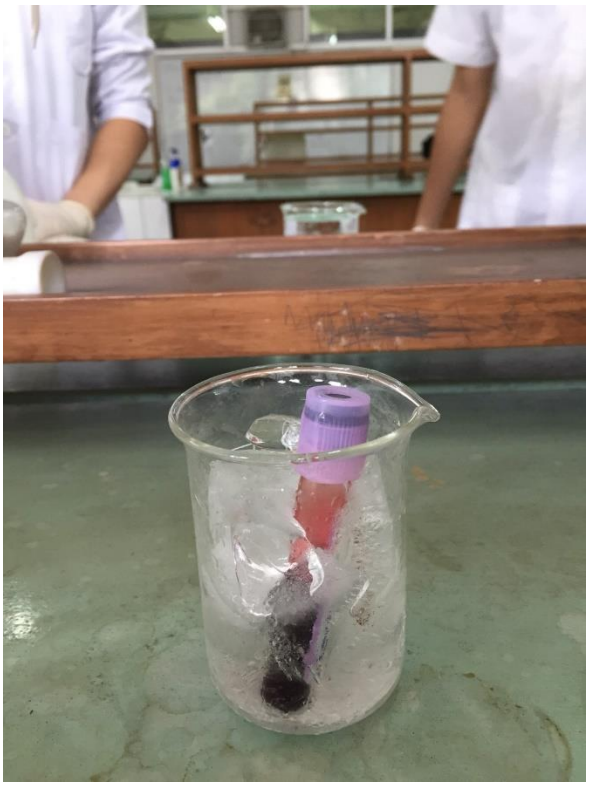
Lampiran 5: Proses pengambilan Organ



Lampiran 6: Organ Beku

Lampiran 7: Proses Pengambilan Lisat Darah

Lampiran 8: Darah Beku



Lampiran 9: Uji duplo absorbansi kadar GSH hati

Kelompok	Sub Kelompok	Sampel	Å		Rata-rata Å Uji
			I	II	
Normoksia	Cekok	T1NC	0.033	0.035	0.034
		T2NC	0.037	0.033	0.035
		T3NC	0.034	0.036	0.035
		T4NC	0.037	0.035	0.036
	Tidak Cekok	T1NK	0.032	0.036	0.034
		T2NK	0.033	0.031	0.032
		T3NK	0.032	0.032	0.032
		T4NK	0.032	0.03	0.031
Hipoksia 3 Hari	Cekok	T1H3C	0.03	0.032	0.031
		T2H3C	0.032	0.032	0.032
		T3H3C	0.036	0.032	0.034
		T4H3C	0.037	0.033	0.035
	Tidak Cekok	T1H3K	0.028	0.03	0.029
		T2H3K	0.026	0.028	0.027
		T3H3K	0.027	0.027	0.027
		T4H3K	0.03	0.028	0.029
Hipoksia 7 Hari	Cekok	T1H7C	0.024	0.026	0.025
		T2H7C	0.026	0.022	0.024
		T3H7C	0.25	0.027	0.026
		T4H7C	0.03	0.028	0.029

		T1H7K	0.018	0.016	0.017
	Tidak Cekok	T2H7K	0.018	0.018	0.018
		T3H7K	0.018	0.02	0.019
		T4H7K	0.021	0.017	0.019
		T1H14C	0.018	0.018	0.018
		T2H14C	0.017	0.021	0.019
	Cekok	T3H14C	0.021	0.023	0.022
		T4H14C	0.018	0.02	0.019
Hipoksia 14 Hari		T1H14K	0.15	0.15	0.015
		T2H14K	0.16	0.14	0.015
	Tidak Cekok	T3H14K	0.14	0.12	0.013
		T4H14K	0.11	0.13	0.012

Lampiran 10: Uji duplo kadar GSH darah

Kelompok	Sub Kelompok	Sampel	Å		Rata-rata Å Uji
			I	II	
		T1NC	0.184	0.182	0.183
	Cekok	T2NC	0.166	0.168	0.167
Normoksia		T3NC	0.152	0.152	0.152
		T4NC	0.17	0.172	0.171
	Tidak Cekok	T1NK	0.145	0.149	0.147
		T2NK	0.153	0.157	0.155

		T3NK	0.159	0.161	0.16
		T4NK	0.151	0.155	0.153
		T1H3C	0.087	0.087	0.087
		T2H3C	0.059	0.061	0.06
	Cekok	T3H3C	0,056	0,052	0.054
		T4H3C	0.062	0,058	0.06
Hipoksia 3 Hari		T1H3K	0.031	0.033	0.032
		T2H3K	0.031	0.031	0.031
	Tidak Cekok	T3H3K	0.034	0.036	0.035
		T4H3K	0.031	0.035	0.033
		T1H7C	0.028	0.03	0.029
		T2H7C	0.042	0.04	0.041
	Cekok	T3H7C	0.032	0.028	0.03
		T4H7C	0.055	0.051	0.053
Hipoksia 7 Hari		T1H7K	0.031	0.029	0.03
		T2H7K	0.025	0.025	0.025
	Tidak Cekok	T3H7K	0.019	0.023	0.021
		T4H7K	0.018	0.02	0.019

Hipoksia 14 Hari	Cekok	T1H14C	0.028	0.026	0.027
		T2H14C	0.028	0.03	0.029
		T3H14C	0.023	0.023	0.023
		T4H14C	0.017	0.019	0.018
	Tidak Cekok	T1H14K	0.026	0.026	0.026
		T2H14K	0.019	0.017	0.018
		T3H14K	0.017	0.015	0.016
		T4H14K	0.017	0.19	0.018

Lampiran 11: Linear Reg, of kurva standar

Best-fit values ± SE	
Slope	0.02364 ± 0.0005366
Y-intercept	-0.02263 ± 0.0029
X-intercept	0.957
1/slope	42.3
95% Confidence Intervals	
Slope	0.02193 to 0.02535
Y-intercept	-0.03185 to -0.0134
X-intercept	0.6011 to 1.277
Goodness of Fit	
R square	0.9985
Sy.x	0.003764
Is slope significantly non-zero?	
F	1941
DFn, DFd	1, 3
P value	<0.0001
Deviation from zero?	Significant
Equation	Y = 0.02364*X - 0.02263
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

Lampiran 12: Col stats. of hati cekok

	Normoksia	Hipoksia 3	Hipoksia 7	Hipoksia 14
Number of values	4	4	4	4
Minimum	2.396	2.269	1.973	1.719
Maximum	2.48	2.438	2.184	1.888
Mean	2.438	2.353	2.057	1.782
Std. Deviation	0.03454	0.07723	0.09138	0.07327
Std. Error of Mean	0.01727	0.03862	0.04569	0.03663
Lower 95% CI of mean	2.383	2.23	1.912	1.666
Upper 95% CI of mean	2.493	2.476	2.203	1.899
Geometric mean	2.438	2.352	2.056	1.781
Geometric SD factor	1.014	1.033	1.045	1.041
Sum	9.751	9.413	8.228	7.129

Lampiran 13: Mann-Whitney normoksia vs hipoksia 3 hari

Table Analyzed	Hati cekok
Column A	Normoksia
vs.	vs.
Column B	Hipoksia 3
Mann Whitney test	
P value	0.2000
Exact or approximate P value?	Exact
P value summary	Ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	23.5 , 12.5
Mann-Whitney U	2.5
Difference between medians	
Median of column A	2.438, n=4
Median of column B	2.353, n=4
Difference: Actual	0.0846
Difference: Hodges-Lehmann	0.0846

Lampiran 14: Mann-Whitney normoksia vs hipoksia 7 hari

Table Analyzed	Hati cekok
Column A	Normoksia
vs.	vs.
Column C	Hipoksia 7
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes

One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	2.438, n=4
Median of column C	2.036, n=4
Difference: Actual	0.4019
Difference: Hodges-Lehmann	0.4019

Lampiran 15: Mann-Whitney normoksia vs hipoksia 14 hari

Table Analyzed	Hati cekok
Column A	Normoksia
vs.	vs.
Column D	Hipoksia 14
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	2.438, n=4
Median of column D	1.761, n=4
Difference: Actual	0.6768
Difference: Hodges-Lehmann	0.6768

Lampiran 16: Col stats. of hati kontrol

Number of values	4	4	4	4
Minimum	2.269	2.099	1.676	1.465
25% Percentile	2.279	2.099	1.687	1.475
Median	2.311	2.142	1.74	1.549
75% Percentile	2.374	2.184	1.761	1.592
Maximum	2.396	2.184	1.761	1.592
Mean	2.321	2.142	1.729	1.539
Std. Deviation	0.05323	0.04884	0.0405	0.06345
Std. Error of Mean	0.02661	0.02442	0.02025	0.03173
Lower 95% CI of mean	2.237	2.064	1.665	1.438
Upper 95% CI of mean	2.406	2.219	1.794	1.64
Sum	9.286	8.567	6.917	6.156

Lampiran 17: Mann-Whitney normoksia vs hipoksia 3 hari

Table Analyzed	Hati kontrol
Column A	Normoksia
vs.	vs.
Column B	Hipoksia 3
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	2.311, n=4
Median of column B	2.142, n=4
Difference: Actual	0.1692
Difference: Hodges-Lehmann	0.1904

Lampiran 18: Mann-Whitney normoksia vs hipoksia 7 hari

Table Analyzed	Hati control
Column A	Normoksia
vs.	vs.
Column C	Hipoksia 7
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	2.311, n=4
Median of column C	1.74, n=4
Difference: Actual	0.5711
Difference: Hodges-Lehmann	0.5922

Lampiran 19: Mann-Whitney normoksia vs hipoksia 14 hari

Table Analyzed	Hati control
Column A	Normoksia
vs.	vs.
Column D	Hipoksia 14

Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	2.311, n=4
Median of column D	1.549, n=4
Difference: Actual	0.7614
Difference: Hodges-Lehmann	0.8037

Lampiran 20: Col stats. of Darah cekok

Number of values	4	4	4	4
Minimum	7.387	3.242	2.184	1.719
25% Percentile	7.546	3.305	2.195	1.772
Median	8.106	3.495	2.459	2.015
75% Percentile	8.571	4.352	3.072	2.163
Maximum	8.698	4.637	3.199	2.184
Mean	8.074	3.717	2.575	1.983
Std. Deviation	0.541	0.6249	0.4753	0.2054
Std. Error of Mean	0.2705	0.3125	0.2377	0.1027
Lower 95% CI of mean	7.214	2.723	1.819	1.656
Upper 95% CI of mean	8.935	4.712	3.332	2.31
Sum	32.3	14.87	10.3	7.932

Lampiran 21: Mann-Whitney normoksia vs hipoksia 3 hari

Table Analyzed	Darah cekok
Column B	Hipoksia 3
vs.	vs.
Column A	Normoksia
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	8.106, n=4
Median of column B	3.495, n=4

Difference: Actual	-4.611
Difference: Hodges-Lehmann	-4.526

Lampiran 22: Mann-Whitney normoksia vs hipoksia 7 hari

Table Analyzed	Darah cekok
Column A	Normoksia
vs.	vs.
Column C	Hipoksia 7
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	8.106, n=4
Median of column C	2.459, n=4
Difference: Actual	5.647
Difference: Hodges-Lehmann	5.499

Lampiran 23: Mann-Whitney normoksia vs hipoksia 14 hari

Table Analyzed	Darah cekok
Column A	Normoksia
vs.	vs.
Column D	Hipoksia 14
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	8.106, n=4
Median of column D	2.015, n=4
Difference: Actual	6.091
Difference: Hodges-Lehmann	6.091

Lampiran 24 : Col stats. of Darah kontrol

Number of values	4	4	4	4
Minimum	7.176	2.269	1.761	1.634
25% Percentile	7.239	2.279	1.782	1.655
Median	7.472	2.332	1.93	1.719
75% Percentile	7.673	2.417	2.173	1.973
Maximum	7.725	2.438	2.226	2.057
Mean	7.461	2.343	1.962	1.782
Std. Deviation	0.2275	0.07224	0.2054	0.1876
Std. Error of Mean	0.1137	0.03612	0.1027	0.0938
Lower 95% CI of mean	7.099	2.228	1.635	1.484
Upper 95% CI of mean	7.823	2.458	2.289	2.081
Sum	29.84	9.371	7.848	7.129

Lampiran 25: Mann-Whitney normoksia vs hipoksia 3 hari

Table Analyzed	Darah kontrol
Column A	Normoksia
vs.	vs.
Column B	Hipoksia 3
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	7.472, n=4
Median of column B	2.332, n=4
Difference: Actual	5.14
Difference: Hodges-Lehmann	5.14

Lampiran 26: Mann-Whitney normoksia vs hipoksia 7 hari

Table Analyzed	Darah kontrol
Column A	Normoksia
vs.	vs.
Column C	Hipoksia 7
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes

One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	7.472, n=4
Median of column C	1.93, n=4
Difference: Actual	5.541
Difference: Hodges-Lehmann	5.499

Lampiran 27: Mann-Whitney normoksia vs hipoksia 14 hari

Table Analyzed	Darah kontrol
Column A	Normoksia
vs.	vs.
Column D	Hipoksia 14
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	7.472, n=4
Median of column D	1.719, n=4
Difference: Actual	5.753
Difference: Hodges-Lehmann	5.711

Lampiran 28: Mann-Whitney normoksia hati cekok vs kontrol

Table Analyzed	Hati cekok vs kontrol
Column B	NK
vs.	vs.
Column A	NC
Mann Whitney test	
P value	0.0571
Exact or approximate P value?	Exact
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	25.5 , 10.5
Mann-Whitney U	0.5
Difference between medians	
Median of column A	2.438, n=4
Median of column B	2.311, n=4

Difference: Actual	-0.1269
Difference: Hodges-Lehmann	-0.1269

Lampiran 29: Mann-Whitney hipoksia 3 hari hati cekok vs kontrol

Table Analyzed	Hati cekok vs kontrol
Column D	H3K
vs.	vs.
Column C	H3C
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column C,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column C	2.353, n=4
Median of column D	2.142, n=4
Difference: Actual	-0.2115
Difference: Hodges-Lehmann	-0.2115

Lampiran 30: Mann-Whitney hipoksia 7 hari hati cekok vs kontrol

Table Analyzed	Hati cekok vs kontrol
Column F	H7K
vs.	vs.
Column E	H7C
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column E,F	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column E	2.036, n=4
Median of column F	1.74, n=4
Difference: Actual	-0.2961
Difference: Hodges-Lehmann	-0.2961

Lampiran 31: Mann-Whitney hipoksia 14 hari hati cekok vs kontrol

Table Analyzed	Hati cekok vs kontrol
Column H	H14K
vs.	vs.
Column G	H14C
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column G,H	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column G	1.761, n=4
Median of column H	1.549, n=4
Difference: Actual	-0.2115
Difference: Hodges-Lehmann	-0.2538

Lampiran 32: Mann-Whitney normoksia hari darah cekok vs kontrol

Table Analyzed	Darah cekok vs kontrol
Column B	NK
vs.	vs.
Column A	NC
Mann Whitney test	
P value	0.2000
Exact or approximate P value?	Exact
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	23 , 13
Mann-Whitney U	3
Difference between medians	
Median of column A	8.106, n=4
Median of column B	7.472, n=4
Difference: Actual	-0.6345
Difference: Hodges-Lehmann	-0.6345

Lampiran 33: Mann-Whitney hipoksia 3 hari darah cekok vs kontrol

Table Analyzed	Darah cekok vs kontrol 2
Column D	H3K
vs.	vs.
Column C	H3C
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column C,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column C	3.495, n=4
Median of column D	2.332, n=4
Difference: Actual	-1.163
Difference: Hodges-Lehmann	-1.163

Lampiran 34: Mann-Whitney hipoksia 7 hari darah cekok vs kontrol

Table Analyzed	Darah cekok vs kontrol 2
Column F	H7K
vs.	vs.
Column E	H7C
Mann Whitney test	
P value	0.0857
Exact or approximate P value?	Exact
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column E,F	24.5 , 11.5
Mann-Whitney U	1.5
Difference between medians	
Median of column E	2.459, n=4
Median of column F	1.93, n=4
Difference: Actual	-0.5288
Difference: Hodges-Lehmann	-0.4653

Lampiran 35: Mann-Whitney hipoksia 14 hari darah cekok vs kontrol

Table Analyzed	Darah cekok vs kontrol 2
Column H	H14K
vs.	vs.
Column G	H14C
Mann Whitney test	
P value	0.2000
Exact or approximate P value?	Exact
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column G,H	23 , 13
Mann-Whitney U	3
Difference between medians	
Median of column G	2.015, n=4
Median of column H	1.719, n=4
Difference: Actual	-0.2961
Difference: Hodges-Lehmann	-0.2115

Lampiran 36: Korelasi hati cekok - darah cekok

Pearson r	
r	0.8052
95% confidence interval	-0.6894 to 0.9957
R squared	0.6483
P value	
P (two-tailed)	0.1948
P value summary	ns
Significant? (alpha = 0.05)	No
Number of XY Pairs	4

Lampiran 37: Korelasi hati kontrol - darah kontrol

Pearson r	
r	0.7741
95% confidence interval	-0.7304 to 0.995
R squared	0.5992
P value	
P (two-tailed)	0.2259
P value summary	ns
Significant? (alpha = 0.05)	No
Number of XY Pairs	4

Lampiran 38: Daftar Riwayat Hidup

Nama	: Sandi Asbandi
NIM	: 405150031
Alamat	: Citra 3 ext blok C10/17a Pegadungan Kalideres, Jakarta Barat
Tempat/tanggal lahir	: Jakarta, 7 Maret 1997
Jenis Kelamin	: Laki- laki
Agama	: Buddha
No Telp.	: 087887555686 / (021)5442115

Latar belakang pendidikan

Pendidikan formal

- 2003 - 2009 SD DIAN KASIH
- 2009 - 2012 SMP DIAN KASIH
- 2012 - 2015 SMA DIAN KASIH

Skill dan keterampilan

Menguasai Ms word dan excel

Demikian daftar riwayat hidup ini saya buat dengan sebenar-benarnya

Jakarta, 5 Juli 2018

Sandi Asbandi