

LAMPIRAN

LAMPIRAN 1. Lembar Persetujuan Etik



KOMISI ETIK RISET
FAKULTAS KEDOKTERAN
UNIVERSITAS TRISAKTI
Jalan Kyai Tapa, Grogol, (Kampus B) Jakarta 11440
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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

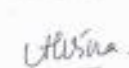
Lembaga/Tempat penelitian : FK Universitas Tarumanagara

Dinyatakan memenuhi persyaratan etik untuk dilaksanakan.

Jakarta, 18 Desember 2017

Ketua

Prof. DR. dr. Adi Hidayat, MS

Sekretaris

dr. Alvina, SpPK

LAMPIRAN 2. Identifikasi Daun Berenuk



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	<i>Crescentia cujete</i> L.	Bignoniaceae

Demikian, semoga berguna bagi Saudara.

Kepala Bidang Botani
Pusat Penelitian Biologi-LIPI,

Dr. Joeni Setijo Rahajoc
NIP. 196706241993032004

LAMPIRAN 3. Tabel Hasil Absorbansi dan Kadar GSH Jantung

Normoksi a kontrol	1	2	RAT A	Kada r GSH
1	0,03 3	0,02 9	0,031	2.271 1
2	0,03 2	0,02 8	0,030	2.228 8
3	0,02 9	0,02 5	0,027	2.101 6
4	0,03 3	0,02 9	0,031	2.271 1
Rata-rata			0.029	2.218 1

Hipoks 3 hari kontrol	1	2	RAT A	Kada r GSH
1	0,02 9	0,02 5	0.027	2.101 6
2	0,02 2	0,01 8	0.020	1.805 0
3	0,02 7	0,02 3	0.025	2.016 9
4	0,02 6	0,02 2	0.024	1.974 5
Rata-rata			0.024	1.974 5

Hipoks 7 hari kontrol	1	2	RAT A	Kada r GSH
1	0,02 1	0,01 7	0.019	1.762 7
2	0,02 0	0,01 6	0.018	1.720 3
3	0,02 1	0,01 7	0.019	1.762 7
4	0,02 0	0,01 6	0.018	1.720 3
Rata-rata			0.019	17,41 5

Hipoks 14 hari kontrol	1	2	RATA	Kadar GSH
1	0,016	0,012	0.014	1.5508
2	0,019	0,015	0.017	1.6779
3	0,020	0,016	0.018	1.7203
4	0,021	0,017	0.019	1.7627
Rata-rata			0.017	1.6779

Normoksia uji	1	2	RATA	Kadar GSH
1	0,037	0,033	0.035	2.4406
2	0,034	0,030	0.032	2.3135
3	0,035	0,031	0.033	2.3559
4	0,038	0,034	0.036	2.4830
Rata-rata			0.034	2.3982

;

Hipoks 3 hari uji	1	2	RATA	Kadar GSH
1	0,032	0,028	0.030	2.2288
2	0,032	0,028	0.030	2.2288
3	0,030	0,026	0.028	2.1440
4	0,029	0,025	0.027	2.1016
Rata-rata			0.029	2.1758

Hipoks 7 hari uji	1	2	RATA	Kadar GSH
1	0,030	0,026	0.028	2.1440
2	0,028	0,024	0.026	2.0593
3	0,026	0,022	0.024	1.9745
4	0,027	0,023	0.025	2.0169
Rata-rata			0.026	2.0486

Hipoks 14 hari uji	1	2	RATA	Kadar GSH
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1	0,026	0,022	0.024	1.9745
2	0,022	0,018	0.020	1.8050
3	0,020	0,016	0.018	1.7203
4	0,021	0,017	0.019	1.7627
Rata-rata	0,020	0,018	0.019	1.8156

LAMPIRAN 4. Tabel Hasil Absorbansi dan Kadar GSH Darah Kontrol

Normoksia	1	2	Rata''	Kadar GSH
1	0,145	0,149	0.147	7.186441
2	0,153	0,157	0.155	7.525424
3	0,162	0,158	0.160	7.737288
4	0,151	0,155	0.153	7.440678
Rata''			0.154	7.472458

Hipoksia 3	1	2	Rata''	Kadar GSH
1	0,030	0,034	0.032	2.313559
2	0,029	0,033	0.031	2.271186
3	0,033	0,037	0.035	2.440678
4	0,030	0,034	0.035	2.440678
Rata''			0.033	2.366525

Hipoksia 7	1	2	Rata''	Kadar GSH
1	0,028	0,032	0.030	2.228814
2	0,023	0,027	0.025	2.016949
3	0,023	0,019	0.021	1.847458
4	0,017	0,021	0.019	1.762712
Rata''			0.024	1.963983

Hipoksia 14	1	2	Rata''	Kadar GSH
1	0,026	0,030	0.026	2.059322
2	0,020	0,016	0.018	1.720339

3	0,014	0,018	0.016	1.635593
4	0,020	0,016	0.018	1.720339
Rata''			0.020	1.783898

Uji

Normoksia	1	2	Rata''	Kadar GSH
1	0.182	0.184	0.183	8.711864
2	0.165	0.169	0.167	8.033898
3	0.154	0.15	0.152	7.398305
4	0.172	0.17	0.171	8.20339
Rata''			0.168	8.086864

Hipoksia 3	1	2	Rata''	Kadar GSH
1	0.086	0.088	0.087	4.644068
2	0.062	0.058	0.060	3.5
3	0.053	0.055	0.054	3.245763
4	0.058	0.062	0.060	3.5
Rata''			0.065	3.722458

Hipoksia 7	1	2	Rata''	Kadar GSH
1	0.027	0.031	0.029	2.186441
2	0.04	0.042	0.041	2.694915
3	0.032	0.028	0.03	2.228814
4	0.051	0.055	0.053	3.20339
Rata''			0.038	2.57839

Hipoksia 14	1	2	Rata''	Kadar GSH
1	0.029	0.025	0.027	2.101695
2	0.028	0.03	0.029	2.186441
3	0.021	0.025	0.023	1.932203
4	0.02	0.016	0.018	1.720339
Rata''			0.024	1.985169

LAMPIRAN 5. Regresi Linear DPPH Vitamin C

Best-fit values \pm SE	
Slope	15.07 ± 0.5829
Y-intercept	-6.266 ± 2.473
X-intercept	0.4157
1/slope	0.06634
95% Confidence Intervals	
Slope	13.22 to 16.93
Y-intercept	-14.14 to 1.604
X-intercept	-0.1204 to 0.8416
Goodness of Fit	
R square	0.9955
Sy.x	1.843
Is slope significantly non-zero?	
F	668.7
DFn, DFd	1, 3
P value	0.0001
Deviation from zero?	Significant
Equation	$Y = 15.07 * X - 6.266$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

LAMPIRAN 6. Regresi Linear DPPH ekstrak daun berenuk

Best-fit values \pm SE	
Slope	0.349 ± 0.03886
Y-intercept	-5.302 ± 4.762
X-intercept	15.19
1/slope	2.865
95% Confidence Intervals	
Slope	0.2254 to 0.4727
Y-intercept	-20.46 to 9.854
X-intercept	-40.86 to 46.32
Goodness of Fit	

R square	0.9641
Sy.x	5.904
Is slope significantly non-zero?	
F	80.67
DFn, DFd	1, 3
P value	0.0029
Deviation from zero?	Significant
Equation	$Y = 0.349 * X - 5.302$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

LAMPIRAN 7. Regresi Linear Standar Fenolik Tannin

Best-fit values \pm SE	
Slope	$0.000728 \pm 4.881e-005$
Y-intercept	0.1254 ± 0.02536
X-intercept	-172.3
1/slope	1374
95% Confidence Intervals	
Slope	0.0005727 to 0.0008833
Y-intercept	0.04468 to 0.2061
X-intercept	-357.8 to -50.89
Goodness of Fit	
R square	0.9867
Sy.x	0.01544
Is slope significantly non-zero?	
F	222.4
DFn, DFd	1, 3
P value	0.0007
Deviation from zero?	Significant
Equation	$Y = 0.000728 * X + 0.1254$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

LAMPIRAN 8. Regresi Linear Standar Flavanoid Kuersetin

Best-fit values \pm SE	
Slope	0.738 \pm 0.04812
Y-intercept	0.1214 \pm 0.02501
X-intercept	-0.1645
1/slope	1.355
95% Confidence Intervals	
Slope	0.5848 to 0.8912
Y-intercept	0.04182 to 0.201
X-intercept	-0.3416 to -0.04721
Goodness of Fit	
R square	0.9874
Sy.x	0.01522
Is slope significantly non-zero?	
F	235.2
DFn, DFd	1, 3
P value	0.0006
Deviation from zero?	Significant
Equation	$Y = 0.738 * X + 0.1214$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

LAMPIRAN 9. Regresi Linear BSLT

Best-fit values ± SE	
Slope	0.0007911 ± 7.249e-005
Y-intercept	0.2028 ± 0.04068
X-intercept	-256.3
1/slope	1264
95% Confidence Intervals	
Slope	0.0004792 to 0.001103
Y-intercept	0.02774 to 0.3778
X-intercept	-727.9 to -27.24
Goodness of Fit	
R square	0.9835
Sy.x	0.05671
Is slope significantly non-zero?	
F	119.1
DFn, DFd	1, 2
P value	0.0083
Deviation from zero?	Significant
Equation	$Y = 0.0007911 * X + 0.2028$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

LAMPRAN 10. Hasil Uji Mann-Whitney

Mann-Whitney Jantung yang diberi ekstrak normoksia & hipoksia 3 hari

Table Analyzed	Jantung Berenuk
Column B	3 Hari
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	2.398, n=4
Median of column B	2.186, n=4
Difference: Actual	-0.2119
Difference: Hodges-Lehmann	-0.2119

Mann-Whitney Jantung yang diberi ekstrak normoksia & hipoksia 7 hari

Table Analyzed	Jantung Berenuk
Column C	7 Hari
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,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	2.398, n=4
Median of column C	2.038, n=4
Difference: Actual	-0.3602
Difference: Hodges-Lehmann	-0.339

Mann-Whitney Jantung yang diberi ekstrak normoksia & hipoksia 14 hari

Table Analyzed	Jantung Berenek
Column D	14 Hari
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,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	2.398, n=4
Median of column D	1.784, n=4
Difference: Actual	-0.6144
Difference: Hodges-Lehmann	-0.5932

Mann-Whitney Jantung Kontrol normoksia & hipoksia 3 hari

Table Analyzed	Jantung Kontrol
Column B	3 Hari
vs.	vs.
Column A	Normoksia
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	2.25, n=4
Median of column B	1.996, n=4
Difference: Actual	-0.2543
Difference: Hodges-Lehmann	-0.2542

Jantung Kontrol normoksia & hipoksia 7 hari

Table Analyzed	Jantung Kontrol
Column C	7 Hari
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,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	2.25, n=4
Median of column C	1.742, n=4
Difference: Actual	-0.5085
Difference: Hodges-Lehmann	-0.5084

Mann-Whitney Jantung Kontrol normoksia & hipoksia 14 hari

Table Analyzed	Jantung Kontrol
Column D	14 Hari
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,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	2.25, n=4
Median of column D	1.699, n=4
Difference: Actual	-0.5509
Difference: Hodges-Lehmann	-0.5508

Mann-Whitney Darah Kontrol normoksia & hipoksia 3 hari

Table Analyzed	Darah kontrol
Column B	Hipoksia 3 Hari
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	7.483, n=4
Median of column B	2.377, n=4
Difference: Actual	-5.106
Difference: Hodges-Lehmann	-5.106

Mann-Whitney Darah Kontrol normoksia & hipoksia 7 hari

Table Analyzed	Darah kontrol
Column C	Hipoksia 7 hari
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,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	7.483, n=4
Median of column C	1.932, n=4
Difference: Actual	-5.551
Difference: Hodges-Lehmann	-5.508

Mann-Whitney Darah Kontrol normoksia & hipoksia 14 hari

Table Analyzed	Darah kontrol
Column D	Hipoksia 14 hari
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,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	7.483, n=4
Median of column D	1.72, n=4
Difference: Actual	-5.763
Difference: Hodges-Lehmann	-5.72

Mann-Whitney Darah Uji normoksia & hipoksia 3 hari

Table Analyzed	Darah uji
Column B	Hipoksia 3 Hari
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	8.119, n=4
Median of column B	3.5, n=4
Difference: Actual	-4.619
Difference: Hodges-Lehmann	-4.534

Mann-Whitney Darah Uji normoksia & hipoksia 7 hari

Table Analyzed	Darah uji
Column C	Hipoksia 7 hari
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,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	8.119, n=4
Median of column C	2.462, n=4
Difference: Actual	-5.657
Difference: Hodges-Lehmann	-5.508

Mann-Whitney Darah Uji normoksia & hipoksia 14 hari

Table Analyzed	Darah uji
Column D	Hipoksia 14 hari
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,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	8.119, n=4
Median of column D	2.017, n=4
Difference: Actual	-6.102
Difference: Hodges-Lehmann	-6.102

LAMPIRAN 11 . Dokumentasi dan alat dan proses pengerjaan.



Tanaman & Buah Berenuk
(*Crescentia Cujete*)



Tikus Sprague Dawley &
Chamber Tikus



Pemberian Ekstrak Daun Berenuk



Pembelekan Tikus



Pewarnaan H.E



Alat Sentrifudge



Alat Vortex



Micropipet



Mikroskop



Blender



Tip Micropipet



Spectofotometer



Timbangan



Alat Grinder



Tabung Oksigen

DAFTAR RIWAYAT HIDUP

A. Identitas diri

- | | |
|-------------------------|-----------------------------------|
| 1. Nama Lengkap | Daniel Filemon Poso |
| 2. Jenis Kelamin | Laki Laki |
| 3. Program Studi | Fakultas Kedokteran |
| 4. NIM | 415150006 |
| 5. Tempat tanggal lahir | Bekasi, 19 Desember 1997 |
| 6. Email | danielfilemonposo191297@gmail.com |
| 7. No. Telp / hp | 087776652229 |

B. Riwayat Pendidikan

- | | |
|--------------|---------------------------------|
| 1. 2003-2009 | SD Dian Harapan [2003-2009] |
| 2. 2009-2011 | SMP Dian Harapan [2009-2011] |
| 3. 2011-2014 | PKBM 32 Duren Sawit [2011-2014] |