

LAMPIRAN

Lampiran 1. Identifikasi Spesies Daun Stroberi Dari LIPI



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, 6 April 2018

Nomor : 865/IPH.1.01/If.07/IV/2018
Lampiran : -
Perihal : Hasil identifikasi/determinasi Tumbuhan

Kepada Yth.
Bpk./Ibu/Sdr(i). **Chindy Tjandra**
Mhs. Univ. Tarumanagara
Jl. Letjend 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	Strawberry	<i>Fragaria vesca</i> L.	Rosaceae
2	Raspberry	<i>Rubus idaeus</i> L.	Rosaceae
3	Blackberry	<i>Rubus</i> sp.	Rosaceae

Demikian, semoga berguna bagi Saudara.

Kepala Bidang Botani
Pusat Penelitian Biologi-LIPI,

Dr. Joeni Setijo Rahajoe
NIP. 196706241993032004

Lampiran 2. Persetujuan Etik Penelitian



**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: 143/KER/FK/I/2019**

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 STROBERI
(FRAGARIA VESCA) TERHADAP KADAR MALONDIALDEHID
(MDA) PADA ORGAN PARU DAN DARAH TIKUS SPRAGUE
DAWLEY SETELAH DIINDUKSI HIPOKSIA"**

Peneliti Utama : Olivia Margaretha

Lembaga/Tempat penelitian : FK Universitas Tarumanagara

Dinyatakan memenuhi persyaratan etik untuk dilaksanakan.

Jakarta, 17 Januari 2019

Ketua

Prof. DR. dr. Adi Hidayat, MS

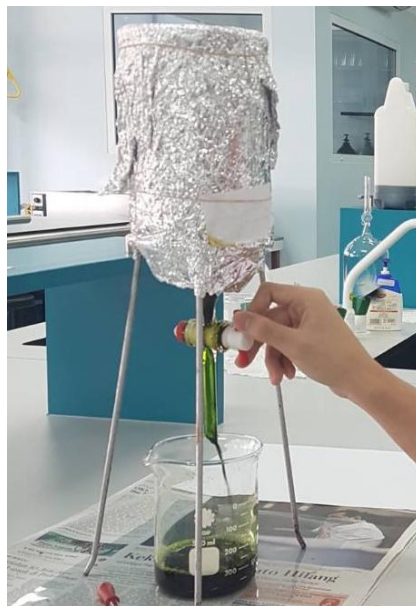
Sekretaris


dr. Alvina SpPK

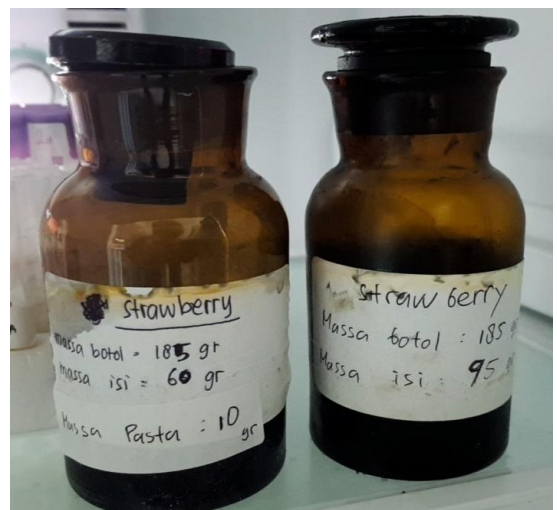
Lampiran 3. Pembuatan Ekstrak Daun Stroberi (*Fragaria vesca* L)



Pengeringan daun *Fragaria vesca* L hari pertama pada suhu ruangan



Proses Maserasi Daun Stroberi



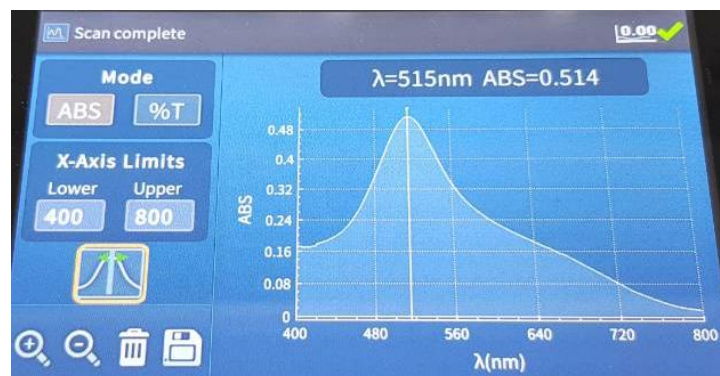
Hasil Ekstrak daun *Fragaria vesca* L dalam bentuk pasta

Lampiran 4. Uji Fitokimia Ekstrak Daun Stroberi (*Fragaria vesca* L)

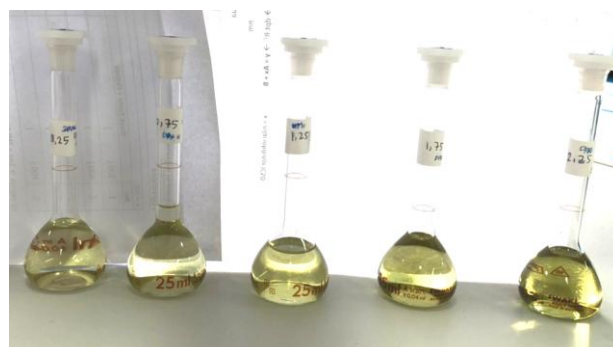


Pengujian Fitokimia pada Ekstrak Daun Stroberi

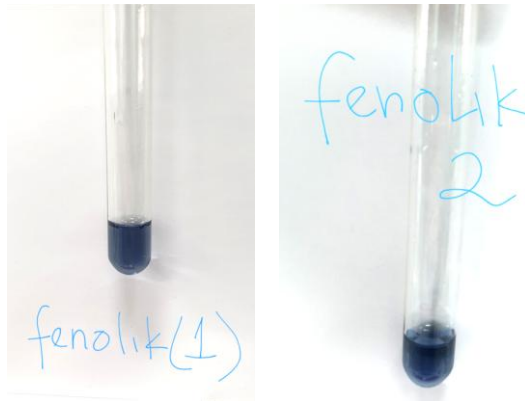
Lampiran 5. Uji DPPH, Total Phenolic Content (TPC), BSLT



Panjang Gelombang dan Absorbansi Maksimum DPPH



Hasil Pengujian DPPH Ekstrak Daun Stroberi (*Fragaria vesca* L)



Hasil Pengujian Fenolik Ekstrak Daun Stroberi (*Fragaria vesca* L)



Persiapan Larva Udang *Artemia salina* untuk dilakukan uji BSLT



Larva Udang *Artemia salina* yang diletakkan 24 jam pada ekstrak daun stroberi dengan berbagai konsentrasi

Lampiran 6. Dokumentasi di Laboratorium & Alat yang digunakan



Spektrofotometri *genesys 30*



Peralatan untuk melakukan pembedahan pada tikus *Sprague Dawley*

Lampiran 7. Hasil Regresi linier Vitamin C dan DPPH serta Absorbansinya

Tabel Regresi Linier Standar DPPH (Vitamin C)

Best-fit values		
Slope	-0.03280	6.382
Y-intercept	0.4138	19.49
X-intercept	12.62	-3.054
1/slope	-30.49	0.1567
Std. Error		
Slope	0.0006481	0.1261
Y-intercept	0.004299	0.8362
95% Confidence Intervals		
Slope	-0.03486 to -0.03074	5.981 to 6.783
Y-intercept	0.4001 to 0.4275	16.83 to 22.15
X-intercept	12.19 to 13.10	-3.688 to -2.491
Goodness of Fit		
R square	0.9988	0.9988
Sy.x	0.004099	0.7973
Is slope significantly non-zero?		
F	2562	2563
DFn, DFd	1, 3	1, 3
P value	<0.0001	<0.0001
Deviation from zero?	Significant	Significant
Equation	$Y = -0.03280 \cdot X + 0.4138$	$Y = 6.382 \cdot X + 19.49$
Data		
Number of X values	5	5
Maximum number of Y replicates	1	1
Total number of values	5	5
Number of missing values	0	0

Tabel Konsentrai Ekstrak daun stroberi, Nilai Absorbansi Pertama, Nilai Absorbansi Kedua dan % inhibisi

Konsentrat µg/mL	Absorbansi Pertama (A)	Absorbansi Kedua (A)	Rata-rata Absorbansi	% Inhibisi
10	0.400	0.360	0.380	26.070
30	0.367	0.333	0.350	31.907
50	0.443	0.237	0.340	33.852
70	0.317	0.307	0.312	39.300
90	0.314	0.282	0.298	42.023

Tabel Regresi Linear Uji Kapasistas Total DPPH

Best-fit values		
Slope	-0.001010	0.1965
Y-intercept	0.3865	24.81
X-intercept	382.7	-126.2
1/slope	-990.1	5.089
Std. Error		
Slope	8.544e-005	0.01663
Y-intercept	0.004908	0.9552
95% Confidence Intervals		
	-0.001282 to -	
Slope	0.0007381	0.1436 to 0.2494
Y-intercept	0.3709 to 0.4021	21.77 to 27.85
X-intercept	311.8 to 505.6	-191.8 to -88.24
Goodness of Fit		
R square	0.9790	0.9790
Sy.x	0.005404	1.052
Is slope significantly non-zero?		
F	139.7	139.6
DFn, DFd	1, 3	1, 3
P value	0.0013	0.0013
Deviation from zero?	Significant	Significant
Equation	Y = -0.001010*X + 0.3865 Y = 0.1965*X + 24.81	
Data		
Number of X values	5	5
Maximum number of Y replicates	1	1
Total number of values	5	5
Number of missing values	0	0

Lampiran 8. Tabel Konsentrasi dan Absorbansi Larutan Standar Tanin dan Tabel Regresi Linier Standar Tanin

Tabel Konsentrasi dan Absorbansi Larutan Standar Tanin

Konsentrasi µg/L	Absorbansi
300	0.344
400	0.421
500	0.469
600	0.531
700	0.654

Tabel Regresi Linier Standar Tanin

Best-fit values	
Slope	0.0007300
Y-intercept	0.1188
X-intercept	-162.7
1/slope	1370
Std. Error	
Slope	7.332e-005
Y-intercept	0.03810
95% Confidence Intervals	
Slope	0.0004967 to 0.0009633
Y-intercept	-0.002447 to 0.2400
X-intercept	-478.9 to 2.564
Goodness of Fit	
R square	0.9706
Sy.x	0.02319
Is slope significantly non-zero?	
F	99.13
DFn, DFd	1, 3
P value	0.0022
Deviation from zero?	Significant
Equation	$Y = 0.0007300 \cdot X + 0.1188$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

Tabel Absorbansi Kadar Fenolik

Sampel	Absorbansi Pertama (A)	Rata-rata Absorbansi
I	0.465	0.49
II	0.515	

Lampiran 9. Tabel Konsentrasi dan Absorbansi Larutan Standar Berberin dan Regresi Linier Standar Berberin

Tabel Konsentrasi dan Absorbansi Larutan Standar Berberin

Konsentrasi (µg/L)	Absorbansi Pertama (A)
20	0.088
40	0.123
60	0.134
80	0.178
100	0.232

Tabel Regresi Linier Standar Berberin

Best-fit values

Slope	0.001715
Y-intercept	0.04810
X-intercept	-28.05
1/slope	583.1
Std. Error	
Slope	0.0002174
Y-intercept	0.01442
95% Confidence Intervals	
Slope	0.001023 to 0.002407
Y-intercept	0.002209 to 0.09399
X-intercept	-89.38 to -0.9434
Goodness of Fit	
R square	0.9540
Sy.x	0.01375
Is slope significantly non-zero?	
F	62.24
DFn, DFd	1, 3
P value	0.0042
Deviation from zero?	Significant
Equation	$Y = 0.001715 \cdot X + 0.04810$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

Lampiran 10. Tabel Pengaruh Ekstrak Daun Stroberi terhadap Larva *A. Salina* dan Tabel Regresi Linear Uji Toksisitas BSLT Daun Stroberi

Tabel Pengaruh Ekstrak Daun Stroberi Terhadap Larva *A.salina*

Log Konsentrasi (µg/mL)	Jumlah Larva Hidup	Jumlah Larva Mati	Akumulasi Hidup	Akumulasi Mati	Akumulasi Mati/Totol	% Mortalitas
1	11	9	17	9	$\frac{9}{26}$	34.620
2	5	15	6	24	$\frac{24}{30}$	80.000
2.698	1	19	1	43	$\frac{43}{44}$	97.720
3	0	20	0	63	$\frac{63}{63}$	100.000

Tabel Regresi Linear Uji Toksisitas BSLT Daun Stroberi

Best-fit values	
Slope	33.43
Y-intercept	5.382
X-intercept	-0.1610
1/slope	0.02991
Std. Error	
Slope	4.920
Y-intercept	11.35
95% Confidence Intervals	
Slope	12.26 to 54.60
Y-intercept	-43.45 to 54.21
X-intercept	-4.271 to 0.8234
Goodness of Fit	
R square	0.9585
Sy.x	7.567
Is slope significantly non-zero?	
F	46.18
DFn, DFd	1, 2
P value	0.0210
Deviation from zero?	Significant
Equation	$Y = 33.43 * X + 5.382$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Lampiran 11. Tabel Kadar dan Rerata Absorbansi Standar MDA dan Tabel Regresi Linier Standar MDA

Tabel Kadar dan Rerata Absorbansi Standar MDA

Kadar MDA	Rata-rata Absorbansi
0.078	0.012
0.156	0.021
0.312	0.042
0.624	0.085
1.25	0.156
2.5	0.301

Tabel Regresi Linier Standar MDA

Best-fit values	
Slope	0.1192
Y-intercept	0.005104
X-intercept	-0.04282
1/slope	8.391
Std. Error	
Slope	0.001733
Y-intercept	0.002041
95% Confidence Intervals	
Slope	0.1144 to 0.1240
Y-intercept	-0.0005640 to 0.01077
X-intercept	-0.09307 to 0.004603
Goodness of Fit	
R square	0.9992
Sy.x	0.003591
Is slope significantly non-zero?	
F	4732
DFn, DFd	1, 4
P value	<0.0001
Deviation from zero?	Significant
Equation	$Y = 0.1192 \cdot X + 0.005104$
Data	
Number of X values	6
Maximum number of Y replicates	1
Total number of values	6
Number of missing values	0

Lampiran 12. Tabel Hasil Absorbansi dan Rerata Absorbansi MDA Otak

Tabel Otak Tikus Kontrol Normoksia

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.235	0.234	0.235	1.924
T2	0.230	0.235	0.233	1.907
T3	0.218	0.219	0.219	1.790
T4	0.190	0.194	0.192	1.567
Rata-rata			0.219	1.797

Tabel Otak Tikus Kontrol Hipoksia 1 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.286	0.288	0.287	2.058
T2	0.242	0.240	0.241	1.979
T3	0.235	0.239	0.237	1.945
T4	0.241	0.235	0.238	1.953
Rata-rata			0.252	2.067

Tabel Otak Tikus Kontrol Hipoksia 7 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.336	0.334	0.323	2.667
T2	0.280	0.282	0.305	2.516
T3	0.281	0.277	0.293	2.415
T4	0.277	0.276	0.301	2.482
Rata-rata			0.306	2.52

Tabel Otak Tikus Kontrol Hipoksia 14 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.333	0.337	0.335	2.768
T2	0.403	0.408	0.406	3.360
T3	0.311	0.309	0.310	2.558
T4	0.373	0.372	0.373	3.083
Rata-rata			0.356	0.294

Tabel Otak Tikus Uji Normoksia

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.103	0.095	0.099	0.786
T2	0.1260	0.122	0.124	0.996
T3	0.133	0.145	0.139	1.122
T4	1.141	0.127	0.134	1.080
Rata-rata			0.124	0.996

Tabel Otak Tikus Uji Hipoksia 1 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.212	0.218	0.215	1.760
T2	0.139	0.159	0.241	1.206
T3	0.225	0.201	0.213	1.744
T4	0.146	0.148	0.147	1.189
Rata-rata			0.181	1.475

Tabel Otak Tikus Uji Hipoksia 7 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.255	0.161	0.208	1.702
T2	0.187	0.209	0.198	1.618
T3	0.201	0.197	0.199	1.626
T4	0.141	0.279	0.210	1.718
Rata-rata			0.204	1.666

Tabel Otak Tikus Uji Hipoksia 14 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.211	0.239	0.225	1.844
T2	0.252	0.344	0.298	2.457
T3	0.285	0.317	0.301	2.484
T4	0.301	0.187	0.244	2.004
Rata-rata			0.290	2.386

Lampiran 13. Tabel Hasil Absorbansi dan Kadar MDA Darah

Tabel Darah Tikus Kontrol Normoksia

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.089	0.085	0.087	0.686
T2	0.069	0.073	0.071	0.551
T3	0.068	0.070	0.069	0.534
T4	0.085	0.080	0.083	0.648
Rata-rata			0.077	0.605

Tabel Darah Tikus Kontrol Hipoksia 1 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.106	0.104	0.105	0.837
T2	0.112	0.109	0.111	0.883
T3	0.107	0.105	0.106	0.845
T4	0.113	0.114	0.114	0.903
Rata-rata			0.109	0.868

Tabel Darah Tikus Kontrol Hipoksia 7 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.135	0.139	0.137	1.105
T2	0.151	0.147	0.149	1.206
T3	0.129	0.134	0.132	1.059
T4	0.144	0.143	0.144	1.160
Rata-rata				

Tabel Darah Tikus Kontrol Hipoksia 14 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.176	0.178	0.177	1.441
T2	0.192	0.193	0.193	1.571
T3	0.189	0.185	0.187	1.525
T4	0.181	0.177	0.179	1.458
Rata-rata			0.184	1.499

Tabel Darah Tikus Uji Normoksia

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.037	0.013	0.025	0.165
T2	0.040	0.023	0.032	0.220
T3	0.048	0.039	0.044	0.320
T4	0.043	0.040	0.042	0.304
Rata-rata			0.0358	0.2523

Tabel Darah Tikus Uji Hipoksia 1 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.051	0.055	0.053	0.402
T2	0.062	0.054	0.058	0.442
T3	0.069	0.063	0.066	0.510
T4	0.063	0.065	0.064	0.494
Rata-rata			0.0603	0.826

Tabel Darah Tikus Uji Hipoksia 7 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.094	0.107	0.101	0.799
T2	0.105	0.109	0.107	0.853
T3	0.107	0.111	0.109	0.873
T4	0.093	0.103	0.098	0.779
Rata-rata			0.1038	0.826

Tabel Darah Tikus Uji Hipoksia 14 Hari

	Duplo (Absorbansi)		Rata-rata Absorbansi	Kadar MDA (nmol/mL)
	I	II		
T1	0.116	0.119	0.117	0.939
T2	0.118	0.113	0.115	0.922
T3	0.121	0.114	0.118	0.942
T4	0.114	0.117	0.116	0.925
Rata-rata			0.1165	0.932

Lampiran 14. Uji Statistik Kadar MDA Otak dan Darah

Nilai Rata-rata dan Uji Mann-Whitney MDA Darah Kontrol dan Uji

	Uji- Nor	Kontrol - Nor	Uji H1	Kontrol -H1	Uji- H7	Kontrol -H7	Uji- H14	Kontrol -H14
Mean	0.252		0.461					
Std.Dev	3	0.6048	5	0.8683	0.826	1.133	0.8015	1.499
(SD)	0.072		0.050		0.044			
Std.Error	9	0.0739	2	0.0332	3	0.0641	0.2544	0.0603
(SEM)	0.036		0.025		0.022			
Passed normality test (alpha=0.05) ?	4	0.0369	1	0.0166	1	0.032	0.1272	0.0302
Number of values	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Mann Whitney test	4	4	4	4	4	4	4	4
P value	U/N vs U/H1	U/N vs U/H1	U/N vs U/H7			K/N vs K/H1	K/N vs K/H7	K/N vs K/H14
Significantly different (P < 0.05)?	0.0286	0.0286	0.0286			0.0286	0.0286	0.0286
One- or two- tailed P value?	Two- tailed	Two- tailed	Two- tailed			Two- tailed	Two- tailed	Two- tailed
Mann Whitney test		U/N vs K/N	U/H1 vs K/H1			U/H7 vs K/H7		U/H14 vs K/H14
P value		0.0286	0.0286			0.0286		0.0286
Significantly different (P < 0.05)?		Yes	Yes			Yes		Yes
One- or two- tailed P value?		Two- tailed	Two- tailed			Two- tailed		Two- tailed

Nilai Rata-rata dan Uji Mann-Whitney MDA Otak Kontrol dan Uji

	Uji - Nor	Kontrol - Nor	Uji - H1	Kontrol - H1	Uji - H7	Kontrol - H7	Uji - H14	Kontrol - H14
Mean	0.9960	1.797	1.475	2.061	1.666	2.520	2.324	2.942
Std.Dev (SD)	0.1495	0.1645	0.3203	0.2035	0.0513	0.1066	0.384	0.3523
Std.Error	0.0747	0.0823	0.1601	0.1018	0.0256	0.0533	0.192	0.1761

(SEM)								
Passed normality test (alpha=0.05)?	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Number of values	4	4	4	4	4	4	4	4
Mann Whitney test	U/N vs U/H1	U/N vs U/H1	U/N vs U/H7			K/N vs K/H1	K/N vs K/H7	K/N vs K/H14
P value	0.0286	0.0286	0.0286			0.0286	0.0286	0.0286
Significantly different (P < 0.05)?	Yes	Yes	Yes			Yes	Yes	Yes
One- or two-tailed P value?	Two-tailed	Two-tailed	Two-tailed			Two-tailed	Two-tailed	Two-tailed
Mann Whitney test		U/N vs K/N		U/H1 vs K/H1		U/H7 vs K/H7		U/H14 vs K/H14
P value		0.0286		0.0286		0.0286		0.0571
Significantly different (P < 0.05)?		Yes		Yes		Yes		No
One- or two-tailed P value?		Two-tailed		Two-tailed		Two-tailed		Two-tailed

Lampiran 15. Uji Korelasi Pearson Kadar MDA Otak dan Darah Kontrol

Tabel Kadar MDA Otak dan Darah Kontrol

Kelompok Perlakuan	Kadar MDA Kontrol (nmol/mL)	Kadar MDA Uji (nmol/mL)
Normoksia	1.797	0.996
Hipoksia 1 hari	2.067	1.475
Hipoksia 7 hari	2.414	2.020
Hipoksia 14 hari	2.942	2.197

Kurva Regresi Linier dan Uji Korelasi Pearson antara Kadar MDA Otak dan Darah Kontrol

Best-fit values	
Equation	$Y = 0.7708 * X - 0.7503$
Pearson r	
r	0.9973
95% confidence interval	0.8707 to 0.9999
R squared	0.9945
P value	
P (two-tailed)	0.0027
P value summary	**
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	4

Lampiran 16. Uji Korelasi Pearson Kadar MDA Otak dan Darah Uji

Tabel Kadar MDA Otak dan Darah Uji

Kelompok	Kadar MDA	Kadar MDA Uji
Perlakuan	Kontrol (nmol/mL)	(nmol/mL)
Normoksia	1.797	0.996
Hipoksia 1 hari	2.067	1.475
Hipoksia 7 hari	2.414	2.020
Hipoksia 14 hari	2.942	2.197

Kurva Regresi Linier dan Uji Korelasi Pearson antara Kadar MDA Otak dan Darah Uji

Best-fit values	
Equation	$Y = 0.7708 * X - 0.7503$
Pearson r	
R	0.9228
95% confidence interval	-0.3388 to 0.9984
R squared	0.8515
P value	
P (two-tailed)	0.0772
P value summary	ns
Significant? (alpha = 0.05)	No
Number of XY Pairs	4

DAFTAR RIWAYAT HIDUP

A. Data Pribadi

Nama Lengkap	: Elizabeth Novia
NIM	: 405160087
Jenis Kelamin	: Perempuan
Tempa/Tanggal Lahir	: Jakarta, 11 November 1998
Agama	: Katolik
Alamat	: Jalan Pondok Cipta B3 No.33, Bekasi
Kewarganegaraan	: Indonesia
Status	: Belum Menikah
Nomor Handphone	: 085887139660
E-mail	: elizabethnovia@gmail.com

B. Latar Belakang Pendidikan

1. 2004 – 2010 : SD Strada Bhakti Wiyata I, Bekasi Barat
2. 2010 – 2013 : SMP Tarakanita 4, Jakarta Timur
3. 2013 – 2016 : SMA Fons Vitae Marsudirini, Jakarta Timur
5. 2016 – sekarang : Fakultas Kedokteran Universitas Tarumanagara