

LAMPIRAN**Lampiran 1. Pernyataan Keaslian Tulisan****PERTANYAAN KEASLIAN TULISAN**

Saya yang bertandatangan di bawah ini:

Nama : Bunga Agape Soebijakto

NIM : 125070400111013

Program Studi : Program Studi Pendidikan Dokter Gigi

Fakultas Kedokteran Gigi Universitas Brawijaya,

Menyatakan dengan sebenarnya bahwa Tugas Akhir yang saya tulis ini benar-benar hasil karya sendiri, bukan merupakan pengambilan tulisan atau pikiran orang lain yang saya akui sebagai tulisan atau pikiran saya sendiri. Apabila dikemudian hari dapat dibuktikan bahwa tugas akhir ini adalah jiplakan, maka saya bersedia menerima sanksi atas perbuatan tersebut.

Malang, 19 Januari 2016

Yang membuat pernyataan,

Bunga Agape Soebijakto

NIM. 125070400111013

Lampiran 2. Hasil Pengukuran Kadar LDL dan HDL Serum Darah Hewan Coba

Hasil Pengukuran Kadar LDL

| Sampel | Kontrol Negatif | Sampel | Perlakuan 1 (28 hari) | Sampel | Perlakuan 2 (60 hari) |
|---------------|-----------------|---------------|-----------------------|---------------|-----------------------|
| 1 | 17.162 | 1 | 21.416 | 1 | 23.442 |
| 2 | 33.544 | 2 | 32.452 | 2 | 30.856 |
| 3 | 31.455 | 3 | 27.531 | 3 | 26.344 |
| 4 | 14.421 | 4 | 23.919 | 4 | 22.642 |
| 5 | 28.111 | 5 | 22.204 | 5 | 34.476 |
| 6 | 23.405 | 6 | 30.982 | 6 | 20.608 |
| 7 | 7.691 | 7 | 35.585 | 7 | 64.554 |
| 8 | 32.629 | 8 | 19.253 | 8 | 25.711 |
| 9 | 24.628 | 9 | 16.961 | 9 | 19.590 |
| Jumlah | 213.046 | Jumlah | 230.303 | Jumlah | 268.223 |
| Rerata | 23.67178 | Rerata | 25.58922 | Rerata | 29.80256 |

Hasil Pengukuran Kadar HDL

| Sampel | Kontrol Negatif | Sampel | Perlakuan 1 (28 hari) | Sampel | Perlakuan 2 (60 hari) |
|---------------|-----------------|---------------|-----------------------|---------------|-----------------------|
| 1 | 5.169 | 1 | 8.847 | 1 | 11.071 |
| 2 | 14.811 | 2 | 11.729 | 2 | 11.071 |
| 3 | 11.431 | 3 | 10.736 | 3 | 11.548 |
| 4 | 9.742 | 4 | 13.718 | 4 | 7.619 |
| 5 | 12.127 | 5 | 11.531 | 5 | 11.428 |
| 6 | 13.519 | 6 | 20.278 | 6 | 12.262 |
| 7 | 12.227 | 7 | 7.853 | 7 | 14.286 |
| 8 | 15.010 | 8 | 8.151 | 8 | 13.214 |
| 9 | 11.829 | 9 | 11.729 | 9 | 10.952 |
| Jumlah | 105.865 | Jumlah | 104.572 | Jumlah | 103.451 |
| Rerata | 11.76278 | Rerata | 11.61911 | Rerata | 11.49456 |

Lampiran 3. Hasil Pengukuran Kedalaman Poket Periodontal Masing-masing Kelompok

| Sampel | Kelompok Kontrol (mm) | Sampel | Kelompok Perlakuan 28 hari (mm) | Sampel | Kelompok Perlakuan 60 hari (mm) |
|---------------|--------------------------|---------------|------------------------------------|---------------|------------------------------------|
| 1 | 0 | 1 | 1 | 1 | 3 |
| 2 | 0 | 2 | 1,5 | 2 | 3 |
| 3 | 0 | 3 | 1 | 3 | 3,5 |
| 4 | 0 | 4 | 2 | 4 | 3 |
| 5 | 0 | 5 | 2 | 5 | 3,5 |
| 6 | 0 | 6 | 2,5 | 6 | 3 |
| 7 | 0 | 7 | 2 | 7 | 2,5 |
| 8 | 0 | 8 | 1,5 | 8 | 3 |
| 9 | 0 | 9 | 2 | 9 | 2,5 |
| Jumlah | 0 | Jumlah | 15,5 | Jumlah | 27 |
| Rerata | 0 | Rerata | 1,722 | Rerata | 3 |

Lampiran 5. Uji Normalitas Data

Uji Normalitas Data LDL

Tests of Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|-----|---------------------------------|----|-------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| LDL | .114 | 27 | .200* | .977 | 27 | .776 |

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

a. Lilliefors Significance Correction

Uji Normalitas Data HDL

Tests of Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|-----|---------------------------------|----|------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| HDL | .156 | 27 | .092 | .933 | 27 | .081 |

a. Lilliefors Significance Correction



Lampiran 6. Uji Homogenitas Ragam

Uji Homogenitas Ragam LDL

Test of Homogeneity of Variances

LDL

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .665 | 2 | 24 | .524 |

Uji Homogenitas Ragam HDL

Test of Homogeneity of Variances

HDL

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .791 | 2 | 24 | .465 |



Lampiran 7. Analisis Oneway ANOVA

Analisis Oneway ANOVA LDL

Descriptives

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------|----|----------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | K Neg | 9 | | |
| 28 hr | 9 | 25.58922 | 6.384796 | 2.128265 | 20.68143 | 30.49701 | 16.961 | 35.585 |
| 60 hr | 9 | 29.80256 | 13.873908 | 4.624636 | 19.13813 | 40.46699 | 19.590 | 64.554 |
| Total | 27 | 26.35452 | 10.162820 | 1.955836 | 22.33424 | 30.37480 | 7.691 | 64.554 |

ANOVA

LDL

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | 177.046 | 2 | 88.523 | .847 | .441 |
| Within Groups | 2508.310 | 24 | 104.513 | | |
| Total | 2685.356 | 26 | | | |

Analisis Oneway ANOVA HDL

Descriptives

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------|----|----------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | K Neg | 9 | | |
| 28 hr | 9 | 11.61911 | 3.776398 | 1.258799 | 8.71631 | 14.52191 | 7.853 | 20.278 |
| 60 hr | 9 | 11.49456 | 1.837730 | .612577 | 10.08195 | 12.90716 | 7.619 | 14.286 |
| Total | 27 | 11.62548 | 2.858027 | .550028 | 10.49488 | 12.75608 | 5.169 | 20.278 |

ANOVA

HDL

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | .324 | 2 | .162 | .018 | .982 |
| Within Groups | 212.052 | 24 | 8.835 | | |
| Total | 212.376 | 26 | | | |



Lampiran 8. Uji Post Hoc Multiple Comparison

Uji Post Hoc Multiple Comparison LDL

Multiple Comparisons

Dependent Variable: LDL

Tukey HSD

| (I) Kelompok | (J) Kelompok | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------|--------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| K Neg | 28 hr | -1.917444 | 4.819242 | .917 | -13.95248 | 10.11759 |
| | 60 hr | -6.130778 | 4.819242 | .424 | -18.16581 | 5.90425 |
| 28 hr | K Neg | 1.917444 | 4.819242 | .917 | -10.11759 | 13.95248 |
| | 60 hr | -4.213333 | 4.819242 | .661 | -16.24836 | 7.82170 |
| 60 hr | K Neg | 6.130778 | 4.819242 | .424 | -5.90425 | 18.16581 |
| | 28 hr | 4.213333 | 4.819242 | .661 | -7.82170 | 16.24836 |

Uji Post Hoc Multiple Comparison HDL

Multiple Comparisons

Dependent Variable: HDL

Tukey HSD

| (I) Kelompok | (J) Kelompok | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------|--------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| K Neg | 28 hr | .143667 | 1.401230 | .994 | -3.35561 | 3.64294 |
| | 60 hr | .268222 | 1.401230 | .980 | -3.23105 | 3.76749 |
| 28 hr | K Neg | -.143667 | 1.401230 | .994 | -3.64294 | 3.35561 |
| | 60 hr | .124556 | 1.401230 | .996 | -3.37472 | 3.62383 |
| 60 hr | K Neg | -.268222 | 1.401230 | .980 | -3.76749 | 3.23105 |
| | 28 hr | -.124556 | 1.401230 | .996 | -3.62383 | 3.37472 |



Lampiran 9. Uji Korelasi

Pearson Correlation LDL

Correlations

| | | Hari | LDL |
|------|---------------------|------|------|
| Hari | Pearson Correlation | 1 | .253 |
| | Sig. (2-tailed) | . | .203 |
| | N | 27 | 27 |
| LDL | Pearson Correlation | .253 | 1 |
| | Sig. (2-tailed) | .203 | . |
| | N | 27 | 27 |

Pearson Correlation HDL

Correlations

| | | Hari | HDL |
|------|---------------------|-------|-------|
| Hari | Pearson Correlation | 1 | -.039 |
| | Sig. (2-tailed) | . | .847 |
| | N | 27 | 27 |
| HDL | Pearson Correlation | -.039 | 1 |
| | Sig. (2-tailed) | .847 | . |
| | N | 27 | 27 |



Lampiran 10. Homogenous Subsets dan Means Plot

Kadar LDL

Homogeneous Subsets

LDL

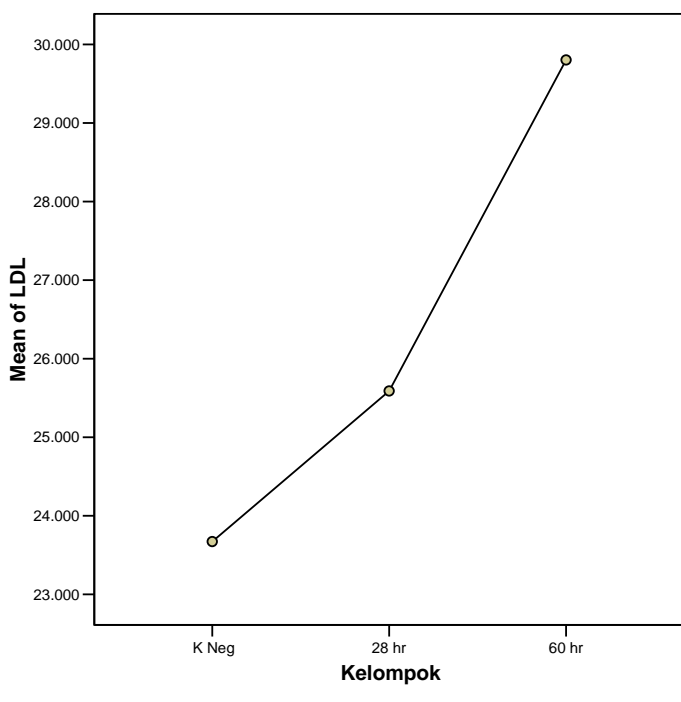
Tukey HSD^a

| Kelompok | N | Subset for alpha = .05 |
|----------|---|------------------------------|
| | | 1 |
| K Neg | 9 | 23.67178 |
| 28 hr | 9 | 25.58922 |
| 60 hr | 9 | 29.80256 |
| Sig. | | .424 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

Means Plots



**Kadar HDL
Homogeneous Subsets**

HDL

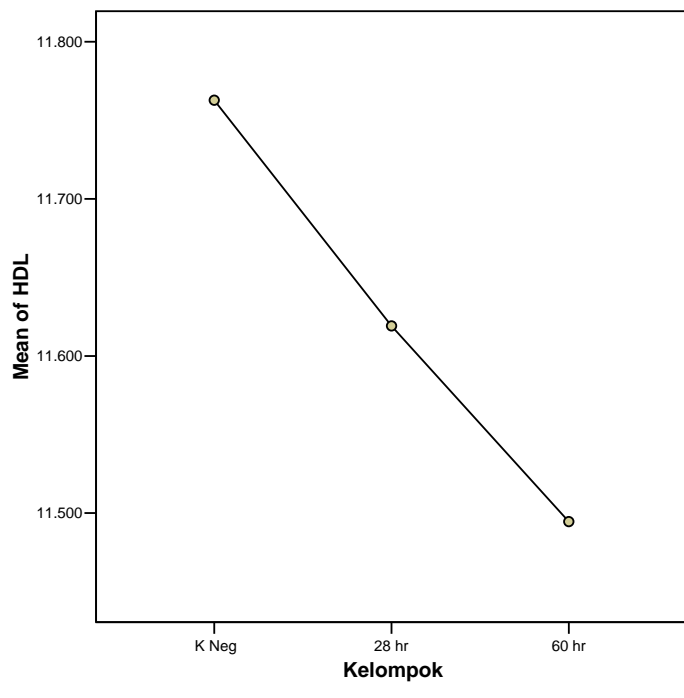
Tukey HSD^a

| Kelompok | N | Subset for alpha = .05 |
|----------|---|------------------------------|
| | | 1 |
| 60 hr | 9 | 11.49456 |
| 28 hr | 9 | 11.61911 |
| K Neg | 9 | 11.76278 |
| Sig. | | .980 |

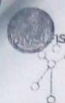
Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.


Means Plots



Lampiran 11. Surat Ijin Penelitian dan Pengambilan Data



LABORATORIUM ILMU FAAL DIVISI FISILOGI MOLEKULAR
FAKULTAS KEDOKTERAN UNIVERSITAS BRAWIJAYA
Jl. Veteran Malang - 65145
Telp. (0341) 568956 No. HP 082-335-226-200
E-mail : faal_ub@yahoo.com



UJI SAMPEL / PENELITIAN

**FORMULIR IJIN PENGGUNAAN
LABORATORIUM ILMU FAAL FAKULTAS KEDOKTERAN
UNIVERSITAS BRAWIJAYA MALANG**

Yang bertanda tangan di bawah ini bermaksud mengajukan permohonan ijin penggunaan Laboratorium Ilmu Faal Fakultas Kedokteran Universitas Brawijaya Malang untuk penelitian :

- Nama lengkap (beserta gelar) : Dunga Agare Soebijakto Telp/HP 08995983638
- NIM / NIP : 125070400111013
- Alamat : Jl. Ranu Grati I / 53 Malang
- Fakultas : Kedokteran
- Jurusan / Prog. Studi : Pendidikan Dokter Gigi
- Universitas / Instansi : Universitas Brawijaya
- Strata : S0 (S1) S2 / SP / S3 / Proyek *
- Tanggal Masuk Lab. : oktober 2015 → 2 bln
- Judul Penelitian : Lama Paparan LPS (Lipopolisakarida) Phorpyromonas gingivalis sebagai induksi periodontitis terhadap kadar HDL, LDL, Trigliserida, dan kolesterol total tikus wistar jantan.
- Pembimbing : 1.
2.
3.
- Bahan yang akan digunakan

| No | Bahan | No | Bahan | No | Bahan |
|----|-----------------------|----|-------|----|-------|
| 1 | Tikus Wistar Jantan | 8 | | 15 | |
| 2 | LPS P.gingivalis | 9 | | 16 | |
| 3 | Larutan PBS | 10 | | 17 | |
| 4 | Ketanin | 11 | | 18 | |
| 5 | Eter | 12 | | 19 | |
| 6 | Minuman standar tikus | 13 | | 20 | |
| 7 | Makanan standar tikus | 14 | | 21 | |

12. Alat yang akan digunakan

| No | Alat | No | Alat |
|----|--------------------|----|-------------------|
| 1 | Kandang | 8 | Tabung ependorf |
| 2 | Tempat minum tikus | 9 | Neraca analitik |
| 3 | Spuit | 10 | Probe periodontal |
| 4 | Jarum insulin | 11 | |
| 5 | Alat bedah minor | 12 | |
| 6 | Mikro pipet | 13 | |
| 7 | Tabung reaks. | 14 | |

13. Penggunaan Jasa Konsultan

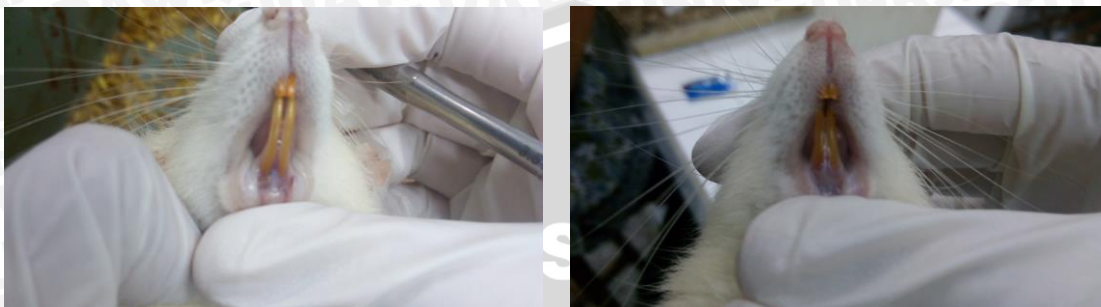
1.
2.
3.

*) pilih salah satu



Lampiran 12. Gambaran gingiva tikus wistar setiap kelompok

Kelompok kontrol



Kelompok Perlakuan 28 hari



Kelompok Perlakuan 60 hari



Lampiran 13. Dokumentasi**Dokumentasi**1. Pembuatan Sediaan LPS *Phorpyromonas gingivalis*

Persiapan alat dan bahan :

1. LPS *Phorpyromonas gingivalis* 1mg
2. Larutan *phosphate buffer saline* (PBS)
3. Tube 15 ml
4. Tabung *ependorf*
5. Sduit 1 ml



Pencampuran LPS *Phorpyromonas gingivalis* dengan larutan PBS



Penakaran sediaan LPS *Phorpyromonas gingivalis* pada tabung *ependorf* sesuai dosis

2. Aklimatisasi hewan coba selama 7 hari.



3. Penimbangan hewan coba dengan neraca analitik digital



4. Injeksi LPS *Phorpyromonas gingivalis* pada hewan coba



Hewan coba difiksasi dengan lembut menggunakan kain handuk.



Injeksi LPS *Phorpyromonas gingivalis* dengan dosis sebanyak 0,02 ml pada sulkus gingiva gigi incisivus pertama kanan rahang bawah bagian labial.

5. Pengukuran poket periodontal



Gingiva hewan coba diamati secara visual



Pengukuran kedalaman poket periodontal menggunakan alat *probe* periodontal.

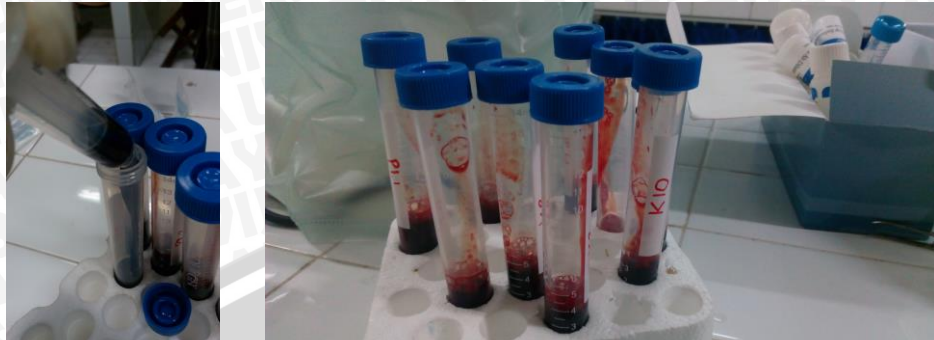
6. Pembedahan hewan coba



Setelah hewan coba diberi eter, kemudian hewan coba difiksasi dan dibedah menggunakan alat bedah minor.



Setelah hewan coba dibedah sampai terlihat organ jantungnya, kemudian darah diambil dari jantung (*intracardial*) dengan menggunakan spuit.



Kemudian darah hewan coba dimasukkan dalam tube.

7. Pengambilan serum darah hewan coba



Persiapan alat dan bahan :

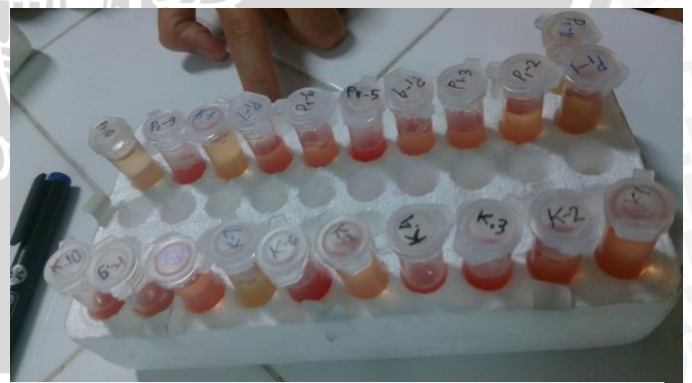
1. Mikropipet
2. Alat sentrifugasi
3. Darah hewan coba
4. Tabung endorf



Tabung berisi darah hewan coba disentrifugasi.



Serum darah dipisahkan dengan endapan menggunakan mikropipet.



Kemudian serum darah hewan coba dimasukkan dalam tabung endorf.

8. Pengukuran kadar LDL dan HDL serum darah hewan coba



Persiapan alat dan bahan :

1. Spektrofotometer
2. Vibrator
3. Serum darah hewan coba
4. HDL *Precipitant*
5. *Cholesterol standard* dan *reactant*
6. *Trigliseride standard* dan *reactant*
7. Mikropipet
8. Kuvet spektrofotometer
9. Alat sentrifugasi



Mencampur serum dengan HDL *precipitant*.



Campuran diaduk dengan vibrator agar homogen.



Kemudian campuran disentrifugasi.



HDL dan endapan terpisah.



Kuvet spektrofotometer diberi label.



Serum, *reactant*, dan *standard* dimasukkan dalam kuvet.



Kuvet spektrofotometer yang telah dimasukkan serum, *reactant*, dan *standard*.



Pembacaan dengan spektrofotometer.