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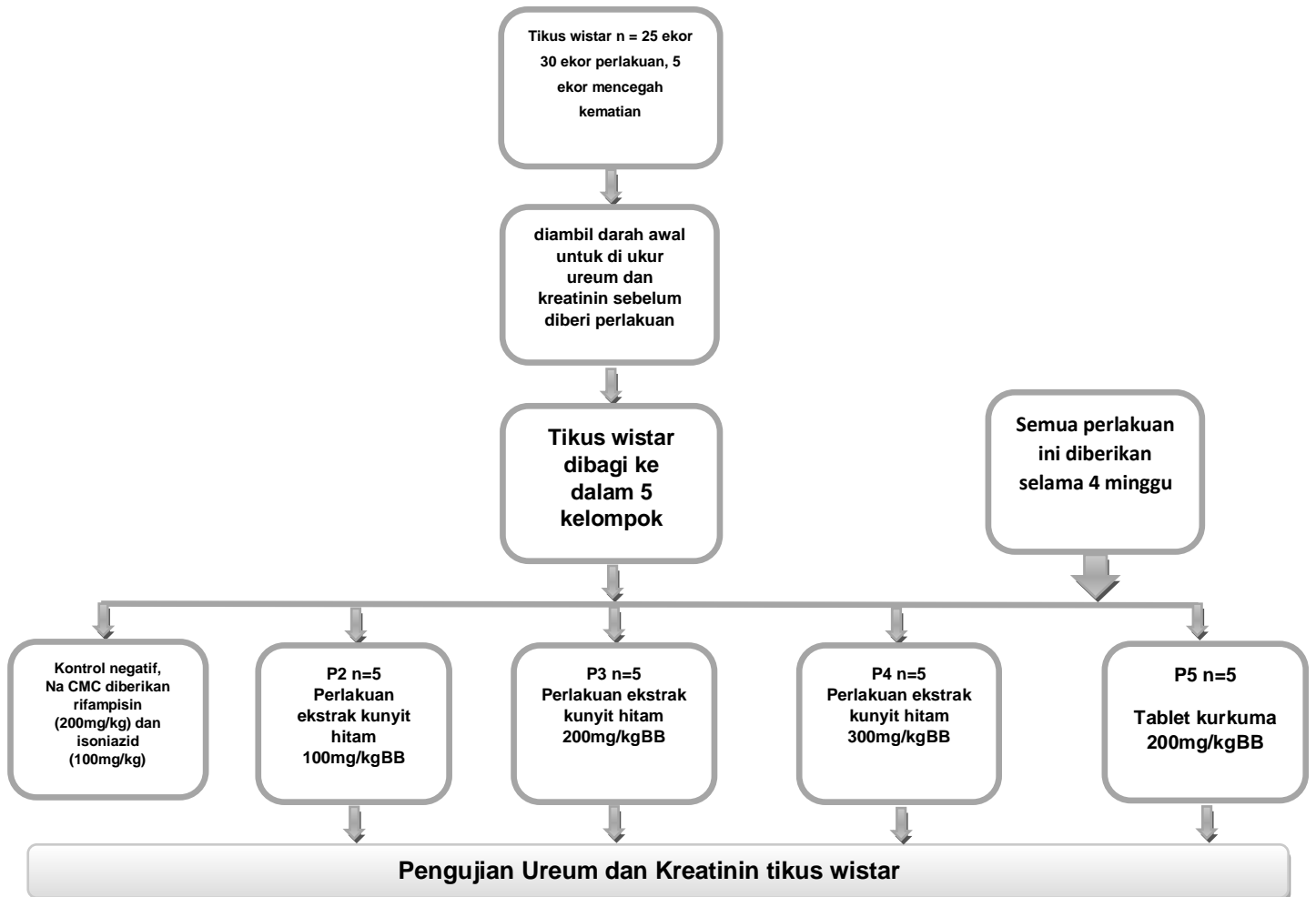
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LAMPIRAN 1

SKEMA KERJA



LAMPIRAN 2

PERHITUNGAN

Perhitungan dosis ekstrak kunyit hitam 100 mg/Kg terhadap Tikus wistar dengan bobot badan 200 gram :

$$\text{Dosis ekstrak kunyit hitam} = \frac{100 \text{ mg}}{\text{kg BB tikus}}$$

$$\text{Dosis ekstrak kunyit hitam} = \frac{0,1 \text{ g}}{1000 \text{ gram}} \times 200 \text{ g BB tikus}$$

$$\text{Dosis ekstrak kunyit hitam} = \frac{0,02 \text{ g}}{200 \text{ g BB tikus}}$$

Jadi untuk membuat dosis ekstrak kunyit hitam 0,02 gram pada tikus dengan bobot badan 200 gram dengan volume pemberian maksimum 5 ml secara per oral (Malole, 1989) dalam 100 ml Na. CMC 1 % sebagai berikut :

$$\begin{aligned} \text{Dosis ekstrak kunyit hitam} &= \frac{100 \text{ ml}}{5 \text{ ml}} \times 0,02 \text{ g BB tikus} \\ &= 0,4 \text{ gram} \end{aligned}$$

Perhitungan dosis ekstrak kunyit hitam 200 mg /kg BB terhadap tikus wistar dengan bobot badan 200 gram :

$$\text{Dosis ekstrak kunyit hitam} = \frac{200 \text{ mg}}{\text{kg BB tikus}}$$

$$\text{Dosis ekstrak kunyit hitam} = \frac{0,2 \text{ g}}{1000 \text{ g}} \times 200 \text{ g BB tikus}$$

$$\text{Dosis ekstrak kunyit hitam} = \frac{0,04 \text{ g}}{200 \text{ g BB Tikus}}$$

Jadi untuk membuat dosis ekstrak kunyit hitam 0,04 g pada tikus dengan bobot badan 200 g dengan volume pemberian maksimum 5 ml secara per oral (Malole, 1989) dalam 100 ml Na. CMC 1% sebagai berikut :

$$\begin{aligned} \text{Dosis ekstrak kunyit hitam} &= \frac{100 \text{ ml}}{5 \text{ ml}} \times 0,04 \text{ g BB Tikus} \\ &= 0,8 \text{ gram} \end{aligned}$$

Perhitungan dosis ekstrak kunyit hitam 300 mg/kg BB terhadap tikus wistar dengan bobot badan 200 gram :

$$\text{Dosis ekstrak kunyit hitam} = \frac{300 \text{ mg}}{\text{kg BB tikus}}$$

$$\text{Dosis ekstrak kunyit hitam} = \frac{0,3 \text{ g}}{1000 \text{ g}} \times 200 \text{ g BB Tikus}$$

$$\text{Dosis ekstrak kunyit hitam} = \frac{0,06 \text{ g}}{200 \text{ g BB Tikus}}$$

Jadi untuk membuat dosis ekstrak kunyit hitam 0,06 gram pada tikus dengan bobot badan 200 gram dengan volume pemberian maksimum 5 ml secara per oral (Malole, 1989) dalam 100 ml Na. CMC 1 % sebagai berikut :

$$\begin{aligned} \text{Dosis ekstrak kunyit hitam} &= \frac{100 \text{ ml}}{5 \text{ ml}} \times 0,06 \text{ g BB Tikus} \\ &= 1,2 \text{ gram} \end{aligned}$$

LAMPIRAN 3
GAMBAR PENELITIAN



Simplisia Kunyit Hitam



Ekstrak Kunyit Hitam



Pengambilan Darah



Serum darah



Pembedahan Tikus



Ginjal Tikus

LAMPIRAN 4

TABEL HASIL PENELITIAN

Tabel 4. Hasil pengukuran kadar ureum pada tikus yang diinduksi rifampicin dan isoniazid

Kelompok Perlakuan	Tikus	Kadar Plasma (U/L)		
		Pre Perlakuan	Post perlakuan	Selisih
Kelompok I	1	51.5	80	-28.6
	2	63.2	74	-10.5
	3	55.2	75	-19.8
	4	58.1	165	-106.9
Rata-rata±SD		57±4.93	99±44	-42±44.2
Kelompok II	1	57.5	45.7	11.8
	2	56.3	42.5	13.8
	3	58	47.8	10.2
	4	72.6	44	28.6
Rata-rata ±SD		61.1±7.69	45±2.27	16.1±8.46
Kelompok III	1	65.4	44.9	20.5
	2	63.6	44.2	19.4
	3	66.4	43.2	23.2
	4	65	43.4	21.6
Rata-rata ±SD		65.1±1.16	43.9±0.78	21.17±1.62
Kelompok IV	1	51.8	52	12.2
	2	52.1	46.3	21.9
	3	57.8	47.4	25.3
	4	58.2	51.5	5
Rata-rata ±SD		54.97±3.49	49.3±2.87	5.675±4.39
Kelompok V	1	52.9	44.6	8.3
	2	58.9	46.7	12.2
	3	65.9	44	21.9
	4	45.5	40.5	5
Rata-rata ±SD		55.8±8.68	43.95±2.57	11.85±7.31

Keterangan :

Kelompok I : Kontrol negatif Na CMC

Kelompok II : Ekstrak kunyit hitam 100 mg/kgBB

Kelompok III : Ekstrak kunyit hitam 200 mg/kgBB

Kelompok IV : Ekstrak kunyit hitam 300 mg/kgBB

Kelompok V : Kontrol positif tablet kurkumin

Tabel 5. Hasil pengukuran kadar kreatinin pada tikus yang diinduksi rifampicin dan isoniazid

Kelompok Perlakuan	Tikus	Kadar Plasma (U/L)		
		Pre Perlakuan	Post Perlakuan	Selisih
Kelompok I	1	0.272	0.363	-0.091
	2	0.545	0.454	0.091
	3	0.272	0.636	0.364
	4	0.545	0.454	0.091
Rata-rata±SD		0.4±15	0.614±0.087	0.2±0.2
Kelompok II	1	0.727	0.636	0.091
	2	0.636	0.545	0.091
	3	0.181	0.636	-0.455
	4	0.545	0.636	-0.091
Rata-rata ±SD		0.52±0.23	0.61±0.45	-0.09±0.25
Kelompok III	1	0.54	0.272	0.273
	3	0.454	0.454	0
	4	0.454	0.636	-0.182
	5	0.636	0.545	0.091
Rata-rata ±SD		0.52±0.87	0.47±0.15	0.04±0.18
Kelompok IV	1	0.727	0.363	0.364
	2	0.545	0.272	0.273
	3	0.272	0.636	-0.364
	4	0.636	0.636	0
Rata-rata ±SD		-0.54±0.19	0.47±0.18	0.06±0.32

Keterangan :

Kelompok I : Kontrol negatif Na CMC

Kelompok II : Ekstrak kunyit hitam 100 mg/kgBB

Kelompok III : Ekstrak kunyit hitam 200 mg/kgBB

Kelompok IV : Ekstrak kunyit hitam 300 mg/kgBB

Kelompok V : Kontrol positif tablet kurkuma

Tabel 6. Hasil Histopatologi Ginjal yang diinduksi Rifampisin dan Isoniazid

NO	KODE	DEGENERASI	HEMORAGIK	INFLAMASI	TOTAL
1	K1TKS1	+1	+2	-	3
2	K1TKS2	+3	+2	+1	6
3	K1TKS3	+2	+2	+1	5
4	K2TKS1	+2	+1	+1	4
5	K2TKS2	+2	+2	+2	6
6	K2TKS3	+1	+2	-	3
7	K3TKS1	+1	+1	+1	3
8	K3TKS2	-	+1	-	1
9	K3TKS3	+1	+1	-	2
10	K4TKS1	+2	+1	-	3
11	K4TKS2	+1	+1	-	2
12	K4TKS3	+2	+1	-	3
13	K5TKS1	+1	+2	-	3
14	K5TKS2	+1	+2	-	3
15	K5TKS3	+1	+1	+1	3

LAMPIRAN 5

ANALISIS STATISTIK KADAR UREUM DAN KREATININ

SPSS Urea Pre

Descriptive Statistics

Dependent Variable: Urea.pre

Perlakuan	Mean	Std. Deviation	N
Na.CMC	57.0000	4.93761	4
Eks. 100 mg/kgBB	61.1000	7.69978	4
Eks. 200 mg/kgBB	65.1000	1.16046	4
Eks. 300 mg/kgBB	54.9750	3.49893	4
kurkuma 200 mg/kgBB	55.8000	8.68178	4
Total	58.7950	6.51027	20

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual for Urea.pre	.118	20	.200 [*]	.955	20	.451

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

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Urea.pre	Based on Mean	2.665	4	15	.073
	Based on Median	1.162	4	15	.366
	Based on Median and with adjusted df	1.162	4	5.837	.415
	Based on trimmed mean	2.403	4	15	.096

ANOVA

Urea.pre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	287.402	4	71.850	2.081	.134
Within Groups	517.887	15	34.526		
Total	805.289	19			

SPSS Urea Post**Descriptive Statistics**

Dependent Variable: Urea.post

Perlakuan	Mean	Std. Deviation	N
Na.CMC	98.5000	44.41096	4
Eks. 100 mg/kgBB	45.0000	2.27889	4
Eks. 200 mg/kgBB	43.9250	.78049	4
Eks. 300 mg/kgBB	49.3000	2.87170	4
kurkuma 200 mg/kgBB	43.9500	2.57488	4
Total	56.1350	28.12684	20

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual for Urea.post	.387	20	.000	.603	20	.000

a. Lilliefors Significance Correction

NPar Tests

Kruskal-Wallis Test

		Ranks	
	Perlakuan	N	Mean Rank
Urea.post	Na.CMC	4	18.50
	Eks. 100 mg/kgBB	4	7.88
	Eks. 200 mg/kgBB	4	5.75
	Eks. 300 mg/kgBB	4	13.75
	Kurkuma 200 mg/kgBB	4	6.63
	Total	20	

Test Statistics^{a,b}

Urea.post	
Kruskal-Wallis H	13.614
df	4
Asymp. Sig.	.009

a. Kruskal Wallis Test

b. Grouping Variable: Perlakuan

Uji Lanjutan

NPar Tests

Mann-Whitney Test

		Ranks		
	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Na.CMC	4	6.50	26.00
	Eks. 100 mg/kgBB	4	2.50	10.00
	Total	8		

Test Statistics^a

	Urea.post
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Na.CMC	4	6.50	26.00
	Eks. 200 mg/kgBB	4	2.50	10.00
	Total	8		

Test Statistics^a

	Urea.post
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Na.CMC	4	6.50	26.00
	Eks. 300 mg/kgBB	4	2.50	10.00
	Total	8		

Test Statistics^a

	Urea.post
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Na.CMC	4	6.50	26.00
	Kurkuma 200 mg/kgBB	4	2.50	10.00
	Total	8		

Test Statistics^a

	Urea.post
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Eks. 100 mg/kgBB	4	5.00	20.00
	Eks. 200 mg/kgBB	4	4.00	16.00
	Total	8		

Test Statistics^a

Urea.post	
Mann-Whitney U	6.000
Wilcoxon W	16.000
Z	-.577
Asymp. Sig. (2-tailed)	.564
Exact Sig. [2*(1-tailed Sig.)]	.686 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Eks. 100 mg/kgBB	4	3.00	12.00
	Eks. 300 mg/kgBB	4	6.00	24.00
	Total	8		

Test Statistics^a

Urea.post	
Mann-Whitney U	2.000
Wilcoxon W	12.000
Z	-1.732
Asymp. Sig. (2-tailed)	.083
Exact Sig. [2*(1-tailed Sig.)]	.114 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Eks. 100 mg/kgBB	4	4.88	19.50
	Kurkuma 200 mg/kgBB	4	4.13	16.50
	Total	8		

Test Statistics^a

	Urea.post
Mann-Whitney U	6.500
Wilcoxon W	16.500
Z	-.436
Asymp. Sig. (2-tailed)	.663
Exact Sig. [2*(1-tailed Sig.)]	.686 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Eks. 200 mg/kgBB	4	2.50	10.00
	Eks. 300 mg/kgBB	4	6.50	26.00
	Total	8		

Test Statistics^a

	Urea.post
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Eks. 200 mg/kgBB	4	4.25	17.00
	Kurkuma 200 mg/kgBB	4	4.75	19.00
	Total	8		

Test Statistics^a

	Urea.post
Mann-Whitney U	7.000
Wilcoxon W	17.000
Z	-.289
Asymp. Sig. (2-tailed)	.773
Exact Sig. [2*(1-tailed Sig.)]	.886 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Urea.post	Eks. 300 mg/kgBB	4	6.25	25.00
	Kurkuma 200 mg/kgBB	4	2.75	11.00
	Total	8		

Test Statistics^a

	Urea.post
Mann-Whitney U	1.000
Wilcoxon W	11.000
Z	-2.021
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.057 ^b

a. Grouping Variable: Perlakuan

b. Not corrected for ties.

Kreatinin Pre

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual for Kreatinin.pre	.158	20	.200*	.938	20	.219

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

a. Lilliefors Significance Correction

Descriptive Statistics

Dependent Variable: Kreatinin.pre

Perlakuan	Mean	Std. Deviation	N
Na.CMC	.4085	.15762	4
Eks. 100 mg/kgBB	.5223	.23933	4
Eks. 200 mg/kgBB	.5223	.08713	4
Eks. 300 mg/kgBB	.5450	.19658	4
Kurkuma 200 mg/kgBB	.5905	.21662	4
Total	.5177	.17739	20

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Kreatinin.pre	Based on Mean	1.081	4	15	.401
	Based on Median	.709	4	15	.598
	Based on Median and with adjusted df	.709	4	6.705	.612
	Based on trimmed mean	.999	4	15	.439

ANOVA

Kreatinin.pre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.072	4	.018	.514	.727
Within Groups	.526	15	.035		

Total	.598	19			
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Kreatinin post

Descriptive Statistics

Dependent Variable: Kreatinin.post

Perlakuan	Mean	Std. Deviation	N
Na.CMC	.6133	.08713	4
Eks. 100 mg/kgBB	.6133	.04550	4
Eks. 200 mg/kgBB	.4768	.15541	4
Eks. 300 mg/kgBB	.4768	.18760	4
Kurkuma 200 mg/kgBB	.6813	.28245	4
Total	.5723	.17476	20

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual for Kreatinin.post	.141	20	.200*	.943	20	.268

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

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Kreatinin.post	Based on Mean	2.724	4	15	.069
	Based on Median	1.400	4	15	.282
	Based on Median and with adjusted df	1.400	4	4.877	.357
	Based on trimmed mean	2.416	4	15	.095

ANOVA

Kreatinin.post

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.134	4	.033	1.125	.382

Within Groups	.446	15	.030		
Total	.580	19			

SPSS Histo

Descriptive Statistics

Dependent Variable: Histo

Perlakuan	Mean	Std. Deviation	N
Na.CMC	4.6667	1.52753	3
Eks. 100 mg/kgBB	4.3333	1.52753	3
Eks. 200 mg/kgBB	2.0000	1.00000	3
Eks. 300 mg/kgBB	2.6667	.57735	3
Kurkuma 200 mg/kgBB	3.0000	.00000	3
Total	3.3333	1.39728	15

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Standardized Residual for Histo	.167	15	.200*	.966	15	.793

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

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Histo	Based on Mean	2.500	4	10	.109
	Based on Median	1.063	4	10	.424
	Based on Median and with adjusted df	1.063	4	6.400	.446
	Based on trimmed mean	2.386	4	10	.121

ANOVA

Histo

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.333	4	3.833	3.194	.062
Within Groups	12.000	10	1.200		
Total	27.333	14			

LAMPIRAN 6

REKOMENDASI PERSETUJUAN ETIK



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN UNIVERSITAS HASANUDDIN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
Contact Person: dr. Agussalim Bukhari, M.Med,Ph.D., SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431



REKOMENDASI PERSETUJUAN ETIK

Nomor : 466A/UN4.6.4.5.31/ PP36/ 2022

Tanggal: 26 Agustus 2022

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH22070377	No Sponsor Protokol	
Peneliti Utama	Andi Aprilyani Askinianti	Sponsor	
Judul Peneliti	Uji Efek Nefroprotektif Ekstrak Kunyit Hitam (Curcuma Caesia) Yang Diinduksi Rifampisin Dan Isoniazid Pada Tikus Wistar		
No Versi Protokol	1	Tanggal Versi	18 Juli 2022
No Versi PSP		Tanggal Versi	
Tempat Penelitian	RS Universitas Hasanuddin Dan Fakultas Farmasi Universitas Hasanuddin Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 26 Agustus 2022 sampai 26 Agustus 2023	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan	
Sekretaris KEP Universitas Hasanuddin	Nama dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)	Tanda tangan	

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Laporan SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

