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LAMPIRAN

1. IZIN ETIK

KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
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, MMed,PhD, SpGK. TELP. 082241850858, 0411 5780103. Fax : 0411-585431

REKOMENDASI PERSETUJUAN ETIK

Nomor : 1238/UN4.6.4.5.31/ PP36/ 2019

Tanggal: 31 Desember 2019

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

No Protokol	UH19121067	No Sponsor Protokol	
Peneliti Utama	**Karlina Amir Tahir**	Sponsor	
Judul Peneliti	The Effect Of "Botto-Botto (Chromolaena Odorata L) " Cream Toward MMP-1 and TGF-β1 Expressions Induced By Photoaging With UV-Bof Albino Mice		
No Versi Protokol	**1**	Tanggal Versi	**4 Desember 2019**
No Versi PSP		Tanggal Versi	
Tempat Penelitian	**Laboratorium Animal FKUH, RS Universitas Hasanuddin, PKP UH dan UIN Alauiddin Makassar**		
Jenis Review	[ ] Exempted [x] Expedited [ ] Fullboard Tanggal	Masa Berlaku **31 Desember 2019** sampai **31 Desember 2020**	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian Kesehatan FKUH	Nama **Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)**	Tanda tangan	
Sekretaris Komisi Etik Penelitian Kesehatan FKUH	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 Lapor 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

2. Hewan Coba (Balb/c)

PT Biomedical Technology Indonesia
Jalan Burangrang Taman Kencana No. 3 RT.001/RW.003
Babakan, Bogor Tengah, Kota Bogor, Jawa Barat
0251-8384422 0251-8310044 www.bist.co.id

Nomor : 059/BMTI/Pn/VIII/2020 Bogor, 6 Agustus 2020
Lampiran : -
Perihal : Penawaran Hewan Laboratorium

Yth.
1. Maulita Indisari
2. Karlina Amir Tahir
Universitas Hasanuddin Makassar

Dengan hormat, berikut kami informasikan penawaran harga hewan laboratorium :

Unit	Jumlah	Harga	Total Harga	Keterangan
Mencit Balb/c	50 ekor	80.000 /ekor	4.000.000	Jantan ,15 -25 gr, 5 – 7 Minggu

Keterangan :
- Harga belum termasuk biaya pengiriman, Franco Bogor
- Waktu ketersedian hewan 2 minggu setelah konfirmasi order
- Mekanisme pembayaran :
  - DP 50% saat konfirmasi order
  - Harga belum termasuk biaya karantina dan ppn 10%
  - Pelunasan sebelum hewan di kirim
  - Pembayaran dilakukan secara transfer ke rekening
    Bank Syariah Mandiri
    a.n PT Biomedical Technology Indonesia
    7222333355

Demikian disampaikan, atas perhatian dan kerjasamanya diucapkan terima kasih.

Hormat Kami,

Dadan Ramdhan
Marketing Manager

3. Determinasi Tumbuhan

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

LIPI

mutu certification international

Cibinong, 16 Mei 2019

Nomor : 1009/IPH.1.01/If.07/V/2019
Lampiran : -
Perihal : *Hasil identifikasi/determinasi Tumbuhan*

Kepada Yth.
Bpk./Ibu/Sdr(i). **Karlina Amir Tahir**
NPM : C013181026
Mhs. Univ. Hasanudin
Fak. Kedokteran
Jl. Perintis Kemerdekaan Km.10
Makassar - 90245

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 :

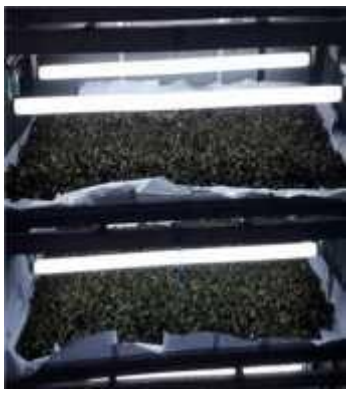
No.	No. Kol.	Jenis	Suku
1	Kirinyuh	*Chromolaena odorata* (L.) R.M.King & H.Rob.	Compositae/Asteraceae

Demikian, semoga berguna bagi Saudara.

Kepala Bidang Botani
Pusat Penelitian Biologi-LIPI,

Dr. Joeni Setijo Rahajoe
NIP. 196706241993032004

4. Ekstraksi, partisi dan freeze dryer sampel daun Botto-Botto

1	2	3
		
4	5	6
7	8	9

10	11	12
13	14	

Keterangan gambar :

1. Pengambilan sampel daun botto-botto
2. Sortasi basah
3. Sortasi kering
4. Pengeringan sampel
5. Pengayakan sampel
6. Sonikasi
7. Ekstraksi sampel dengan pelarut etanol 70%
8. Rotary vacum untuk evaporasi
9. Desikator untuk mempercepat pengeringan ekstrak
10. Proses partisi
11. Partisi cair-cair
12. Proses freeze dryer
13. Proses freeze dryer
14. Hasil freeze dryer

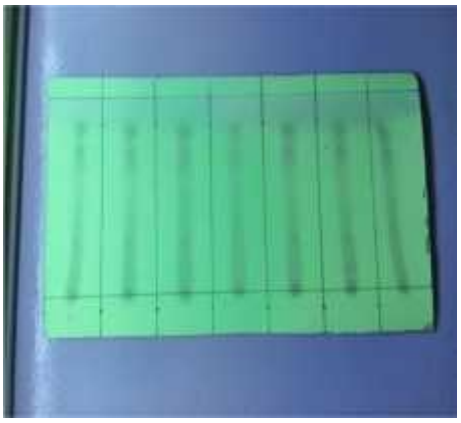
5. Identifikasi golongan senyawa

1. Proses Elusi

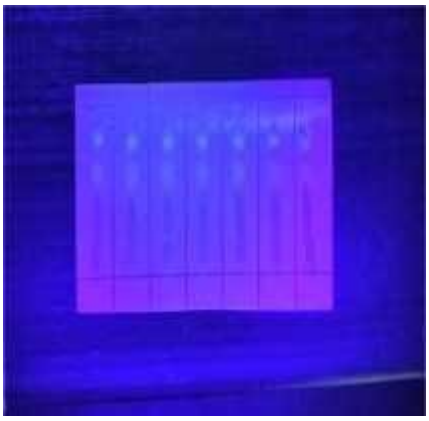
Proses elusi lempeng yang akan diidentifikasi golongan senyawa

2. Visualisasi Bercak/Noda

a. fraksi n-heksan

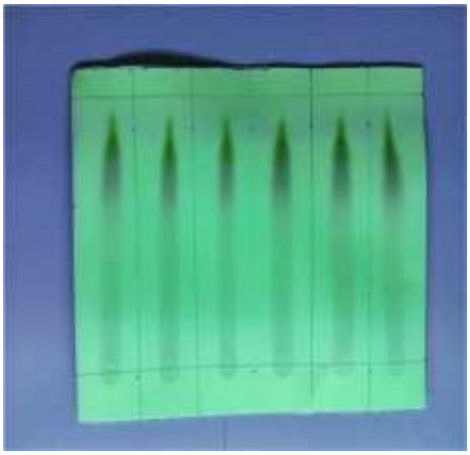


Penampakan uv 254 nm



Penampakan uv 366 nm

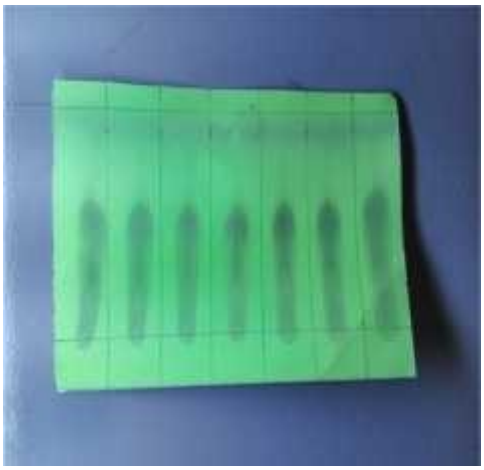
b. fraksi n-butanol



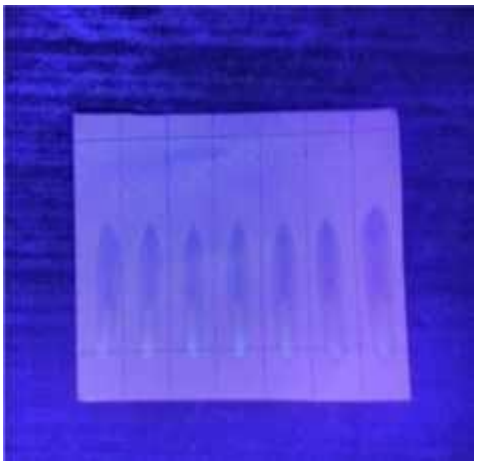
Penampakan uv 254 nm

Penampakan uv 366 nm

c. Fraksi Air



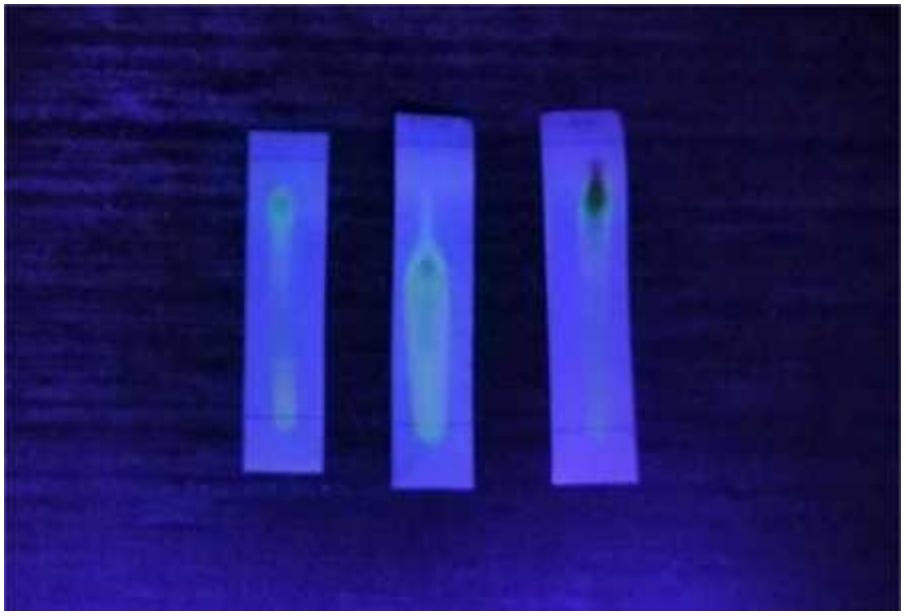
Penampakan uv 254 nm



Penampakan uv 366 nm

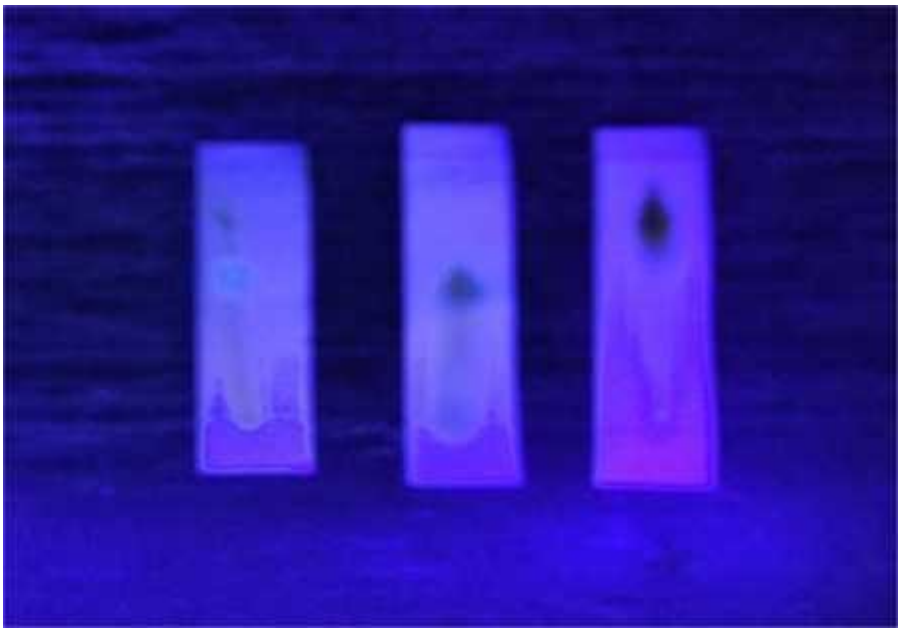
3. Identifikasi Golongan Senyawa

a. Senyawa Flavonoid/$AlCl_3$ (Penampakan UV 366 nm)



a. Fraksi n-heksan b. Fraksi air c. Fraksi n-butanol

b. Senyawa Fenolik/$FeCl_3$ (Penampakan UV 366 nm)



a. Fraksi n-heksan b. Fraksi air c. Fraksi n-butanol

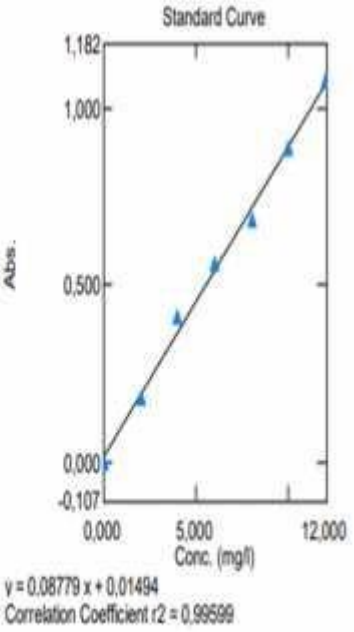
6. kurva baku asam gallat untuk uji polifenol total

LABORATORIUM BIOFARMAKA
FAKULTAS FARMASI UNIVERSITAS HASANUDDIN

Gedung Pusat Kegiatan Penelitian Lantai IV Wing B

Standard Table

	Sample ID	Type	Ex	Conc	WL717,5	Wgt.Factor	
1	blanko	Standard		0,000	-0,000	1,000	
2	asam galat 1	Standard		2,000	0,179	1,000	
3	asam galat 2	Standard		4,000	0,409	1,000	
4	asam galat 3	Standard		6,000	0,558	1,000	
5	asam galat 4	Standard		8,000	0,686	1,000	
6	asam galat 5	Standard		10,000	0,887	1,000	
7	asam galat 6	Standard		12,000	1,074	1,000	
8							



y = 0,08779 x + 0,01494
Correlation Coefficient r2 = 0,99599

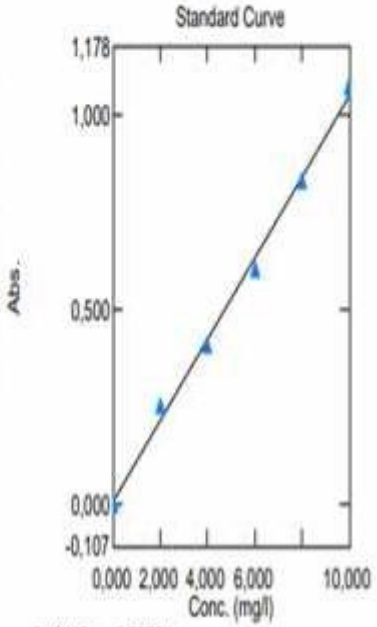
7. Kurva baku quersetin untuk uji flavonoid total

LABORATORIUM BIOFARMAKA
FAKULTAS FARMASI UNIVERSITAS HASANUDDIN

Gedung Pusat Kegiatan Penelitian Lantai IV Wing B

Standard Table

	Sample ID	Type	Ex	Conc	WL428,0	Wgt.Factor	
1	blanko	Standard		0,000	0,000	1,000	
2	quarsetin 1	Standard		2,000	0,251	1,000	
3	quarsetin 2	Standard		4,000	0,408	1,000	
4	quarsetin 3	Standard		6,000	0,606	1,000	
5	quarsetin 4	Standard		8,000	0,831	1,000	
6	quarsetin 5	Standard		10,000	1,071	1,000	
7							



y = 0,10419 x + 0,00701
Correlation Coefficient r2 = 0,99627

8. Persamaan regresi baku asam askorbat untuk uji antioksidan metode DPPH

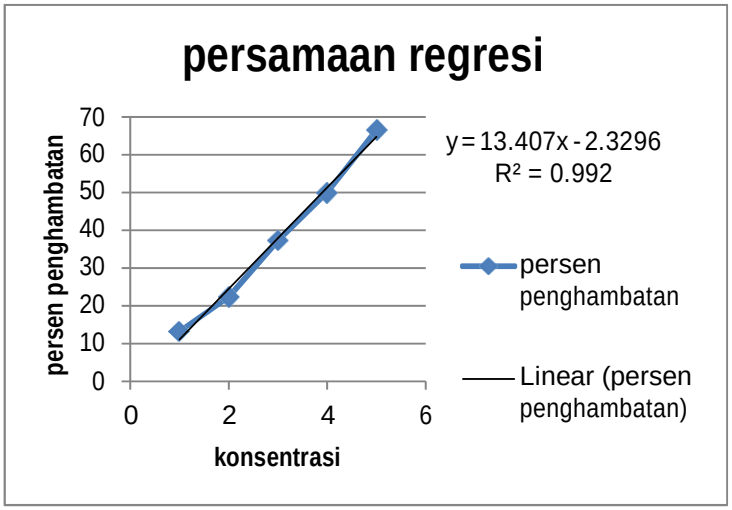
Konsentrasi sampel	persen penghambatan
1	13.248
2	22.402
3	37.350
4	49.942
5	66.512

Y = 13.40x - 2.329

50 = 13.40x - 2.329

x = (50 + 2.329) / 13.40

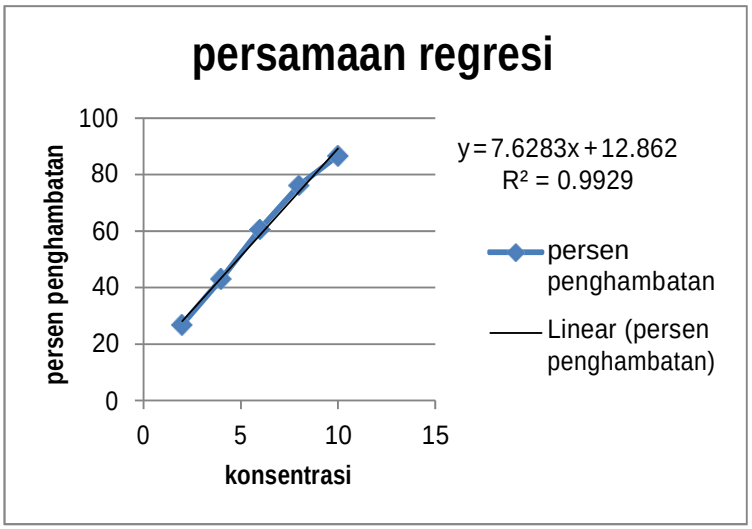
x = 3.905 ppm



9. Persamaan regresi asam askorbat untuk uji antioksidan metode ABTS

Konsentrasi sampel	persen penghambatan
2.0	26.872
4.0	42.987
6.0	60.623
8.0	76.055
10.0	86.621

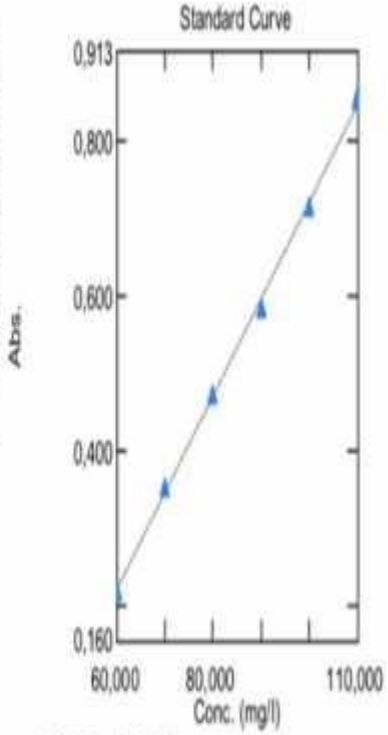
Y = 7.628 x + 12.86
50 = 7.628 x + 12.86
x = (50 -12.86) / 7.628
x = 4.869 ppm



10. kurva baku asam askorbat untuk uji antioksidan metode FRAP

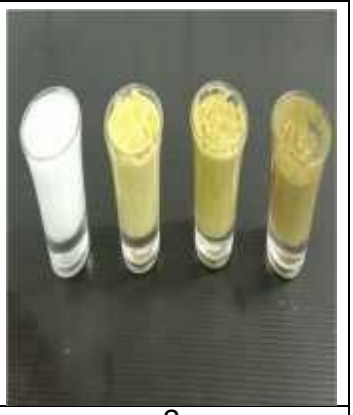
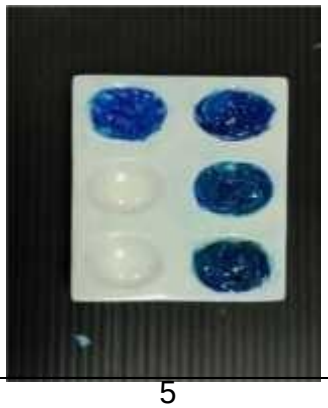
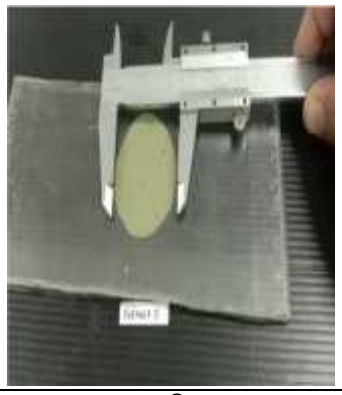
Standard Table

	Sample ID	Type	Ex	Conc	WL720,0	Wgt.Factc
1	asam askorbat 1	Standard		60,000	0,222	1,0
2	asam askorbat 2	Standard		70,000	0,354	1,0
3	asam askorbat 3	Standard		80,000	0,475	1,0
4	asam askorbat 4	Standard		90,000	0,584	1,0
5	asam askorbat 6	Standard		100,000	0,714	1,0
6	asam askorbat 7	Standard		110,000	0,851	1,0
7						



y = 0,01237 x - 0,51770
Correlation Coefficient r2 = 0,99898

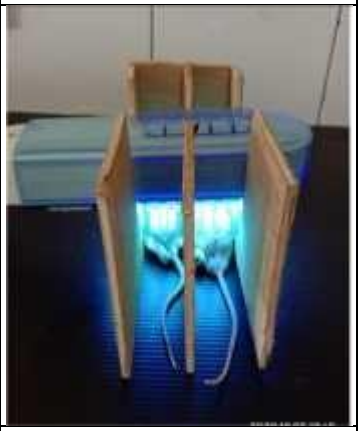
11. Pembuatan dan evaluasi stabilitas krim

		
p1	2	3
		
4	5	6
		
7	8	9

Keterangan gambar tahap pembuatan dan evaluasi stabilitas krim

1. Tahap penimbangan bahan
2. Pencampuran dan pembuatan krim
3. Sediaan krim botto-botto dan basis krim
4. Sediaan krim botto-botto 1%
5. Uji dispersi warna
6. Uji pH
7. Uji viskositas
8. Uji daya sebar
9. Uji konduktivitas

12. Intervensi sinar UVB pada hewan coba

1	2	3
		
4	5	6
7	8	9

Keterangan gambar :

1. Tahap karantina hewan coba
2. Alat sinar UVB
3. Pengolesan basis krim
4. Pengolesan krim botto-botto
5. Penyinaran sinar UVB
6. Proses insisi kulit hewan coba
7. Hasil insisi kulit hewan coba
8. Perendaman hasil insisi dalam formalin 10%
9. Sampel yang akan diuji

13. Prosedur IHK

PROSEDUR PEMBUATAN SEDIAAN JARINGAN HISTOPATOLOGI DAN KETERANGAN GAMBAR

1. Jaringan yang telah dipotong dimasukkan ke dalam kaset dan diproses di dalam mesin prosesing jaringan (Tissue Automatics Prosessor).(1)
2. Proses Embedding (jaringan yang telah diproses dalam mesin prosesingan diblok menggunakan parafin cair).(2,3,4)
3. Potong jaringan dalam blok paraffin menggunakan mikrotom dengan ketebalan 3-4µm.(5)
4. Pita jaringan yang terbentuk dicelupkan ke dalam Waterbath.(6)
5. Ambil potongan jaringan dengan slide lalu tiriskan.(7)
6. Tuliskan kode pada slide sesuai dengan kode yang tertera pada blok paraffin menggunakan pensil.(8)
7. Panaskan slide diatas Hot Plate selama 1 jam.(9)
8. Dinginkan slide lalu masukkan kedalam keranjang slide. (9)
9. Deparafinasi (Xylol I, Xylol II, Xylol III) masing-masing 5 menit (10)
10. Rehidrasi (Alkohol 96%, Alkohol 80%, Alkohol 70%), masing-masing selama 5 menit.(11)
11. Cuci air mengalir selama 5 menit (12)
12. Rendam dengan hematoxylin Meyer 7-10 menit (13)
13. Cuci air mengalir selama 5 menit (14)
14. Celup-celup kedalam larutan Eosin 10 detik (14)
15. Dehidrasi (Alkohol 70%, Alkohol 80%, Alkohol 96%) masing-masing 5 menit (15)
16. Clearing (Xylol I, Xylol II, Xylol III) masing-masing 5 menit.(16)
17. Keringkan slide lalu tetesi dengan entelan dan tutup dengan deck glass. (16)
18. Amati di Mikroskop. (16)

2. Prosedur Histologi

1	2	3
4	5	6
7	8	9

10

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14

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16

PROSEDUR PEMBUATAN SEDIAAN JARINGAN IMMUNOHISTOKIMIA DAN KETERANGAN GAMBAR

1. Potong blok paraffin dengan mikrotom pada ketebalan 3-4µ (1)
2. Celupkan kedalam Waterbath (2)
3. Ambil potongan jaringan dengan slide lalu tiriskan (3)
4. Tulis pada slide kode sesuai blok paraffin dengan pensil (4)
5. Panaskan slide diatas Hot Plate selama 1 jam (5)
6. Dinginkan slide lalu masukkan kedalam keranjang slide (5)
7. Deparafinasi (Xylol I, Xylol II, Xylol III) masing-masing 5 menit (6)
8. Rehidrasi (Alkohol 96%, Alkohol 80%, Alkohol 70%), masing-masing selama 5 menit (7)
9. Cuci air mengalir selama 5 menit (8)
10. Angkat dari air lalu masukkan slide kedalam larutan Blocking Endogen Peroksida, rendam selama 15 menit (9)
11. Cuci air mengalir selama 5 menit (10)
12. Masukkan keranjang berisi slide kedalam decloaking yang berisi larutan Antigen Retrival Decloaking Chamber, lalu letakkan slide pada rack holder(11)
13. Masukkan rack holder kedalam decloaking, lalu tutup (11)
14. Atur waktu yaitu selama 40 menit pada suhu 95 derajat. (12)
15. Dinginkan, dengan mengeluarkan slide dari decloaking dan disimpan pada suhu ruangan(14)
16. Setelah dingin , cuci dalam larutan PBS 2x masing-masing selama 5 menit(14)
17. Tandai slide dengan memberi lingkaran sekitar jaringan (14)
18. Atur slide pada baki slide (15)
19. Ambil satu per satu lalu tetesi Background Sniper lalu inkubasi selama 30 menit (16)
20. Buang larutan background sniper dengan cara ditiriskan pada tissu(16)
21. Tetesi Antibody Primer lalu inkubasi selama 1 jam pada suhu ruang(16)
22. Cuci PBS 2x selama 5 menit (17)
23. Tetesi Trekkie Universal lalu diamkan selama 30 menit(18)
24. Tiriskan pada tissue lalu tetesi Trekkkavidin-HRP lalu diamkan selama 30 menit
25. Cuci PBS 2x dengan cara merendam slide selama 5 menit
26. Sambil menunggu pencucian, buat larutan DAB dengan cara campurkan cromogen DAB 1 tetes + Substrat buffer 1 ml (dicampur dalam tabung bersih) lalu tetesi kejaringan
27. Amati jaringan jika sudah menunjukkan warna coklat, langsung direndam ke dalam air selama 5 menit (20)
28. Rendam dengan hematoxylin Meyer 5 menit (20)
29. Cuci air mengalir selama 5 menit (21)
30. Dehidrasi (Alkohol 70%, Alkohol 80%, Alkohol 96%) masing-masing 5 menit (22)

31. Clearing (Xylol I, Xylol II, Xylol III) (22)
32. Keringkan slide lalu tetesi dengan entelan lalu tutup dengan deck glass.(23)
33. Amati di Mikroskop (23)

3. TAHAPAN PROSEDUR IMMUNOHISTOKIMIA

1

2

3

4	5	6
7	8	9
10	11	12
13	14	15

16

17

18

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21

22

15. Berat Badan Mencit

Kelompok I	Kelompok II	Kelompok III	Kelompok IV
19,3	19,8	19,5	19,4
20,2	19,1	19,7	19,8
19,7	19,4	20,6	20,3
19,1	20,6	19,1	20,5
20,7	20,2	19,8	20,7
19,4	20,3	20,2	19,5

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
KLP1	6	25.0%	18	75.0%	24	100.0%
KLP2	6	25.0%	18	75.0%	24	100.0%
KLP3	6	25.0%	18	75.0%	24	100.0%
KLP4	6	25.0%	18	75.0%	24	100.0%

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KLP1	.208	6	.200*	.923	6	.527
KLP2	.200	6	.200*	.956	6	.792
KLP3	.179	6	.200*	.986	6	.976
KLP4	.188	6	.200*	.914	6	.466

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

a. Lilliefors Significance Correction

Descriptives								
BERAT								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
KLP1	6	19.7333	.60882	.24855	19.0944	20.3723	19.10	20.70
KLP2	6	19.9000	.57271	.23381	19.2990	20.5010	19.10	20.60
KLP3	6	19.8167	.52694	.21512	19.2637	20.3697	19.10	20.60
KLP4	6	20.0333	.54283	.22161	19.4637	20.6030	19.40	20.70
Total	24	19.8708	.53769	.10976	19.6438	20.0979	19.10	20.70

ANOVA					
BERAT					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.295	3	.098	.309	.819
Within Groups	6.355	20	.318		
Total	6.650	23			

Test of Homogeneity of Variances			
BERAT			
Levene Statistic	df1	df2	Sig.
.138	3	20	.936

16. Lampiran statistik usia mencit

Kelompok I	Kelompok II	Kelompok III	Kelompok IV
5	6	5	5
6	6	6	7
6	7	5	5
7	5	6	6
5	5	7	6
6	6	6	6

Descriptives

UMUR

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
KLP1	6	5.8333	.75277	.30732	5.0433	6.6233	5.00	7.00
KLP2	6	5.8333	.75277	.30732	5.0433	6.6233	5.00	7.00
KLP3	6	5.8333	.75277	.30732	5.0433	6.6233	5.00	7.00
KLP4	6	5.8333	.75277	.30732	5.0433	6.6233	5.00	7.00
Total	24	5.8333	.70196	.14329	5.5369	6.1297	5.00	7.00

Test of Homogeneity of Variances

UMUR

Levene Statistic	df1	df2	Sig.
.000	3	20	1.000

ANOVA

UMUR

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	3	.000	.000	1.000
Within Groups	11.333	20	.567		
Total	11.333	23			

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
KLP1	6	25.0%	18	75.0%	24	100.0%
KLP2	6	25.0%	18	75.0%	24	100.0%
KLP3	6	25.0%	18	75.0%	24	100.0%
KLP4	6	25.0%	18	75.0%	24	100.0%

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KLP1	.254	6	.200*	.866	6	.212
KLP2	.254	6	.200*	.866	6	.212
KLP3	.254	6	.200*	.866	6	.212
KLP4	.254	6	.200*	.866	6	.212

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

a. Lilliefors Significance Correction

16. Statistik MMP-1

NPar Test

Kruskal-Wallis Test

Ranks			
	KELOMPOK	N	Mean Rank
NILAI	KLP 1	6	5.83
	KLP 2	6	17.67
	KLP 3	6	19.33
	KLP 4	6	7.17
	Total	24	

Test Statistics[a,b]	
	NILAI
Chi-Square	17.754
Df	3
Asymp. Sig.	.000
a. Kruskal Wallis Test	
b. Grouping Variable: KELOMPOK	

POST HOC TEST

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.5067	.74989	1.33	3.50
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	3.50	21.00
	KLP 2	6	9.50	57.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.892
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.5067	.74989	1.33	3.50
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	3.50	21.00
	KLP 3	6	9.50	57.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.898
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.5067	.74989	1.33	3.50
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	5.83	35.00
	KLP 4	6	7.17	43.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	14.000
Wilcoxon W	35.000
Z	-.652
Asymp. Sig. (2-tailed)	.514
Exact Sig. [2*(1-tailed Sig.)]	.589[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.5067	.74989	1.33	3.50
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 2	6	5.67	34.00
	KLP 3	6	7.33	44.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	13.000
Wilcoxon W	34.000
Z	-.824
Asymp. Sig. (2-tailed)	.410
Exact Sig. [2*(1-tailed Sig.)]	.485[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.5067	.74989	1.33	3.50
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 2	6	9.50	57.00
	KLP 4	6	3.50	21.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.892
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.5067	.74989	1.33	3.50
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 3	6	9.50	57.00
	KLP 4	6	3.50	21.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.898
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

17. Statistik TGF BETA-1

KRUSKAL-WALLIS TEST

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.4296	.82515	1.33	3.67
KELOMPOK	24	2.50	1.142	1	4

Ranks			
	KELOMPOK	N	Mean Rank
NILAI	KLP 1	6	19.17
	KLP 2	6	7.58
	KLP 3	6	5.42
	KLP 4	6	17.83
	Total	24	

Test Statistics[a,b]	
	NILAI
Chi-Square	18.190
df	3
Asymp. Sig.	.000
a. Kruskal Wallis Test	
b. Grouping Variable: KELOMPOK	

POST HOC TEST

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.4296	.82515	1.33	3.67
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	9.50	57.00
	KLP 2	6	3.50	21.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.913
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.4296	.82515	1.33	3.67
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	9.50	57.00
	KLP 3	6	3.50	21.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.929
Asymp. Sig. (2-tailed)	.003
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.4296	.82515	1.33	3.67
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	7.17	43.00
	KLP 4	6	5.83	35.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	14.000
Wilcoxon W	35.000
Z	-.691
Asymp. Sig. (2-tailed)	.490
Exact Sig. [2*(1-tailed Sig.)]	.589[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.4296	.82515	1.33	3.67
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 2	6	7.58	45.50
	KLP 3	6	5.42	32.50
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	11.500
Wilcoxon W	32.500
Z	-1.092
Asymp. Sig. (2-tailed)	.275
Exact Sig. [2*(1-tailed Sig.)]	.310[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.4296	.82515	1.33	3.67
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 2	6	3.50	21.00
	KLP 4	6	9.50	57.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.918
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	2.4296	.82515	1.33	3.67
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 3	6	3.50	21.00
	KLP 4	6	9.50	57.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.934
Asymp. Sig. (2-tailed)	.003
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

18. Statistik Ketebalan Kolagen

Descriptives

NILAI

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
KLP1	6	5.3233	.43325	.17687	4.8687	5.7780	4.82	5.94
KLP2	6	3.1200	.46187	.18856	2.6353	3.6047	2.64	3.77
KLP3	6	3.0883	.74031	.30223	2.3114	3.8652	2.32	4.31
KLP4	6	4.9650	.71161	.29051	4.2182	5.7118	4.25	5.86
Total	24	4.1242	1.19118	.24315	3.6212	4.6272	2.32	5.94

Test of Homogeneity of Variances

NILAI

Levene Statistic	df1	df2	Sig.
1.140	3	20	.357

ANOVA

NILAI

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25.358	3	8.453	23.230	.000
Within Groups	7.277	20	.364		
Total	32.635	23			

POST HOC TEST

Multiple Comparisons

Dependent Variable: NILAI

	(I) KELOMPOK	(J) KELOMPOK	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	KLP1	KLP2	2.20333*	.34827	.000	1.2286	3.1781
		KLP3	2.23500*	.34827	.000	1.2602	3.2098
		KLP4	.35833	.34827	.735	-.6164	1.3331
	KLP2	KLP1	-2.20333*	.34827	.000	-3.1781	-1.2286
		KLP3	.03167	.34827	1.000	-.9431	1.0064
		KLP4	-1.84500*	.34827	.000	-2.8198	-.8702
	KLP3	KLP1	-2.23500*	.34827	.000	-3.2098	-1.2602
		KLP2	-.03167	.34827	1.000	-1.0064	.9431
		KLP4	-1.87667*	.34827	.000	-2.8514	-.9019
	KLP4	KLP1	-.35833	.34827	.735	-1.3331	.6164
		KLP2	1.84500*	.34827	.000	.8702	2.8198
		KLP3	1.87667*	.34827	.000	.9019	2.8514
LSD	KLP1	KLP2	2.20333*	.34827	.000	1.4769	2.9298
		KLP3	2.23500*	.34827	.000	1.5085	2.9615
		KLP4	.35833	.34827	.316	-.3681	1.0848
	KLP2	KLP1	-2.20333*	.34827	.000	-2.9298	-1.4769
		KLP3	.03167	.34827	.928	-.6948	.7581
		KLP4	-1.84500*	.34827	.000	-2.5715	-1.1185
	KLP3	KLP1	-2.23500*	.34827	.000	-2.9615	-1.5085
		KLP2	-.03167	.34827	.928	-.7581	.6948
		KLP4	-1.87667*	.34827	.000	-2.6031	-1.1502
	KLP4	KLP1	-.35833	.34827	.316	-1.0848	.3681
		KLP2	1.84500*	.34827	.000	1.1185	2.5715
		KLP3	1.87667*	.34827	.000	1.1502	2.6031

*. The mean difference is significant at the 0.05 level.

NILAI

	KELOMPOK	N	Subset for alpha = 0.05	
			1	2
Tukey HSD[a]	KLP3	6	3.0883	
	KLP2	6	3.1200	
	KLP4	6		4.9650
	KLP1	6		5.3233
	Sig.		1.000	.735
Duncan[a]	KLP3	6	3.0883	
	KLP2	6	3.1200	
	KLP4	6		4.9650
	KLP1	6		5.3233
	Sig.		.928	.316

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
KLP1	6	25.0%	18	75.0%	24	100.0%
KLP2	6	25.0%	18	75.0%	24	100.0%
KLP3	6	25.0%	18	75.0%	24	100.0%
KLP4	6	25.0%	18	75.0%	24	100.0%

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KLP1	.163	6	.200*	.957	6	.794
KLP2	.242	6	.200*	.903	6	.390
KLP3	.185	6	.200*	.925	6	.540
KLP4	.229	6	.200*	.867	6	.214

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

a. Lilliefors Significance Correction

19. Statistik Kerapatan Kolagen

NPar TEST

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	3.0550	.45604	1.89	3.67
KELOMPOK	24	2.50	1.142	1	4

KRUSKAL-WALLIS TEST

Ranks			
	KELOMPOK	N	Mean Rank
NILAI	KLP 1	6	18.67
	KLP 2	6	6.83
	KLP 3	6	7.00
	KLP 4	6	17.50
	Total	24	

Test Statistics[a,b]	
	NILAI
Chi-Square	15.561
df	3
Asymp. Sig.	.001
a. Kruskal Wallis Test	
b. Grouping Variable: KELOMPOK	

POST HOC TEST

Mann-Whitney Test

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	9.25	55.50
	KLP 2	6	3.75	22.50
	Total	12		

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	3.0550	.45604	1.89	3.67
KELOMPOK	24	2.50	1.142	1	4

Test Statistics[a]	
	NILAI
Mann-Whitney U	1.500
Wilcoxon W	22.500
Z	-2.699
Asymp. Sig. (2-tailed)	.007
Exact Sig. [2*(1-tailed Sig.)]	.004[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	9.33	56.00
	KLP 3	6	3.67	22.00
	Total	12		

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	3.0550	.45604	1.89	3.67
KELOMPOK	24	2.50	1.142	1	4

Test Statistics[a]	
	NILAI
Mann-Whitney U	1.000
Wilcoxon W	22.000
Z	-2.751
Asymp. Sig. (2-tailed)	.006
Exact Sig. [2*(1-tailed Sig.)]	.004[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	7.08	42.50
	KLP 4	6	5.92	35.50
	Total	12		

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	3.0550	.45604	1.89	3.67
KELOMPOK	24	2.50	1.142	1	4

Test Statistics[a]	
	NILAI
Mann-Whitney U	14.500
Wilcoxon W	35.500
Z	-.580
Asymp. Sig. (2-tailed)	.562
Exact Sig. [2*(1-tailed Sig.)]	.589[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	3.0550	.45604	1.89	3.67
KELOMPOK	24	2.50	1.142	1	4

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 2	6	6.33	38.00
	KLP 3	6	6.67	40.00
	Total	12		

Test Statistics[a]

	NILAI
Mann-Whitney U	17.000
Wilcoxon W	38.000
Z	-.167
Asymp. Sig. (2-tailed)	.868
Exact Sig. [2*(1-tailed Sig.)]	.937[b]

a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 2	6	3.75	22.50
	KLP 4	6	9.25	55.50
	Total	12		

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	3.0550	.45604	1.89	3.67
KELOMPOK	24	2.50	1.142	1	4

Test Statistics[a]

	NILAI
Mann-Whitney U	1.500
Wilcoxon W	22.500
Z	-2.699
Asymp. Sig. (2-tailed)	.007
Exact Sig. [2*(1-tailed Sig.)]	.004[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	3.0550	.45604	1.89	3.67
KELOMPOK	24	2.50	1.142	1	4

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 3	6	3.67	22.00
	KLP 4	6	9.33	56.00
	Total	12		

Test Statistics[a]

	NILAI
Mann-Whitney U	1.000
Wilcoxon W	22.000
Z	-2.751
Asymp. Sig. (2-tailed)	.006
Exact Sig. [2*(1-tailed Sig.)]	.004[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

20. Statistik mRNA MMP-1

NPar TEST

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	5.5670	6.83040	.05	22.45
KELOMPOK	24	2.50	1.142	1	4

KRUSKAL-WALLIS TEST

Ranks			
	KELOMPOK	N	Mean Rank
NILAI	KLP 1	6	6.83
	KLP 2	6	16.83
	KLP 3	6	20.17
	KLP 4	6	6.17
	Total	24	

Test Statistics[a,b]	
	NILAI
Chi-Square	17.973
df	3
Asymp. Sig.	.000
a. Kruskal Wallis Test	
b. Grouping Variable: KELOMPOK	

POST HOC TEST

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	5.5670	6.83040	.05	22.45
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	3.50	21.00
	KLP 2	6	9.50	57.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.882
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	5.5670	6.83040	.05	22.45
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	3.50	21.00
	KLP 3	6	9.50	57.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.882
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	5.5670	6.83040	.05	22.45
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 1	6	6.83	41.00
	KLP 4	6	6.17	37.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	16.000
Wilcoxon W	37.000
Z	-.320
Asymp. Sig. (2-tailed)	.749
Exact Sig. [2*(1-tailed Sig.)]	.818[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	5.5670	6.83040	.05	22.45
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 2	6	4.83	29.00
	KLP 3	6	8.17	49.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	8.000
Wilcoxon W	29.000
Z	-1.601
Asymp. Sig. (2-tailed)	.109
Exact Sig. [2*(1-tailed Sig.)]	.132[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	5.5670	6.83040	.05	22.45
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 2	6	9.50	57.00
	KLP 4	6	3.50	21.00
	Total	12		

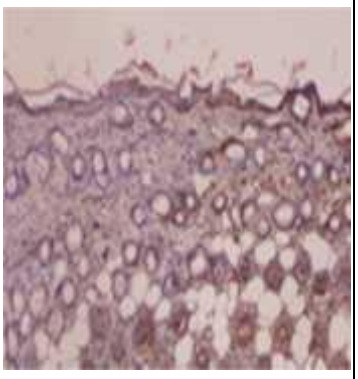
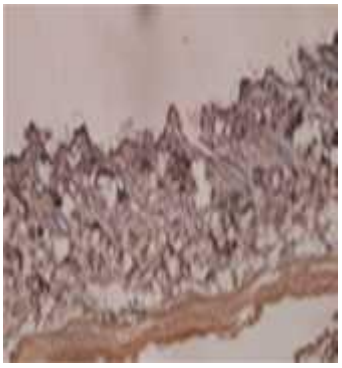
Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.882
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
NILAI	24	5.5670	6.83040	.05	22.45
KELOMPOK	24	2.50	1.142	1	4

Ranks				
	KELOMPOK	N	Mean Rank	Sum of Ranks
NILAI	KLP 3	6	9.50	57.00
	KLP 4	6	3.50	21.00
	Total	12		

Test Statistics[a]	
	NILAI
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.882
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002[b]
a. Grouping Variable: KELOMPOK	
b. Not corrected for ties.	

21. Gambar IHK MMP-1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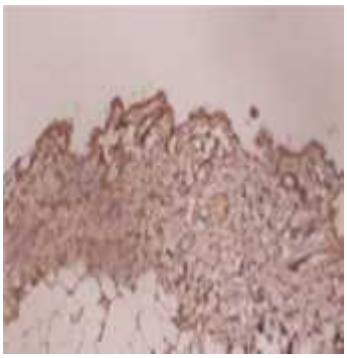	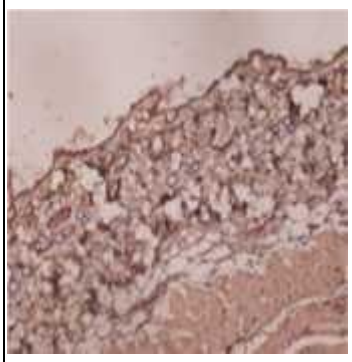	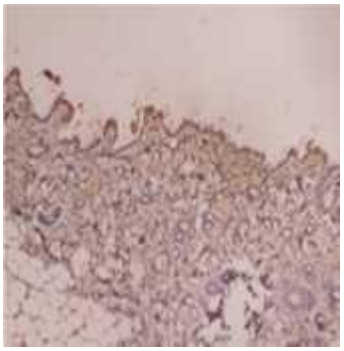
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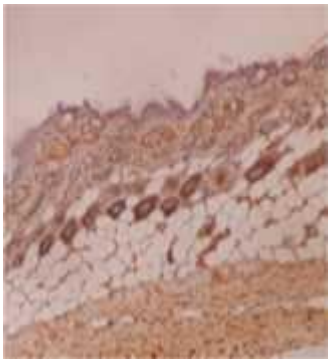	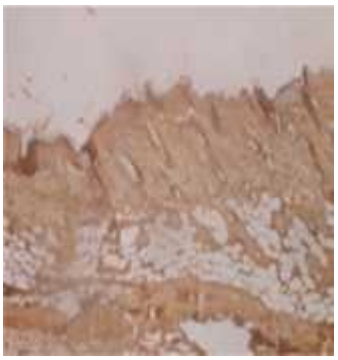	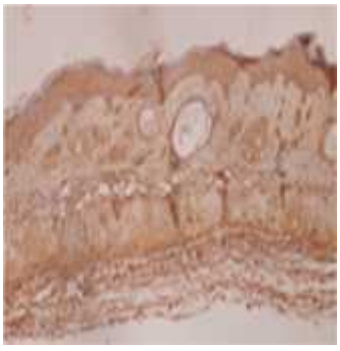
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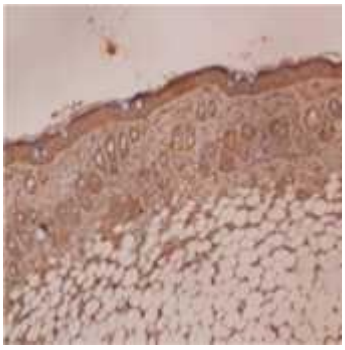	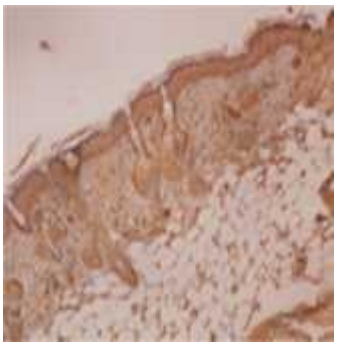	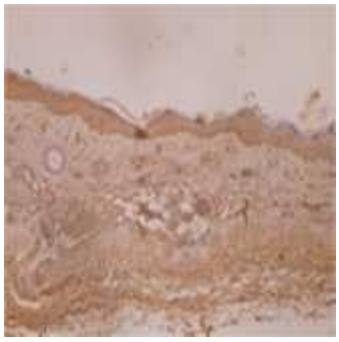
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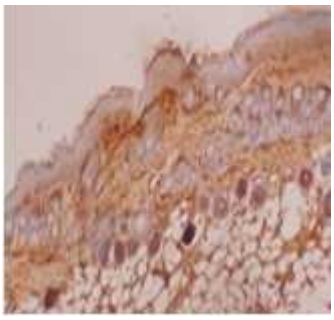	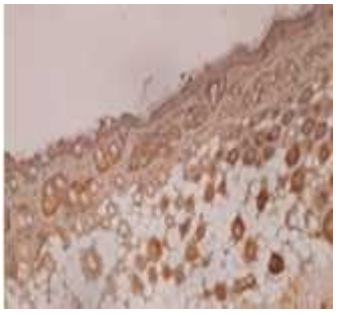	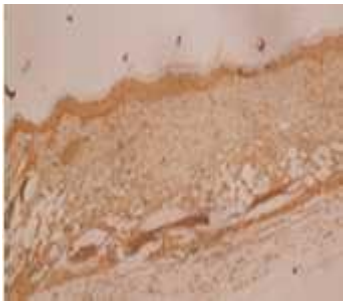
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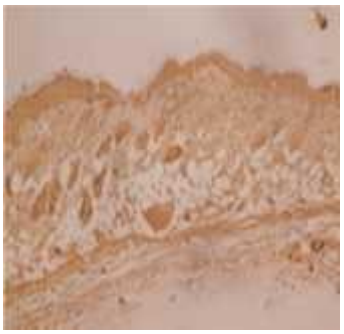
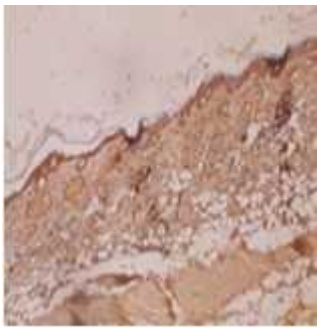
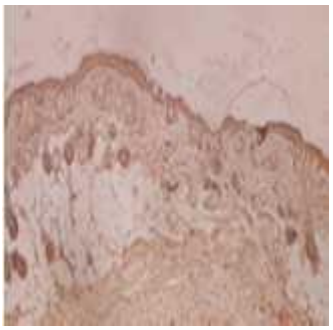
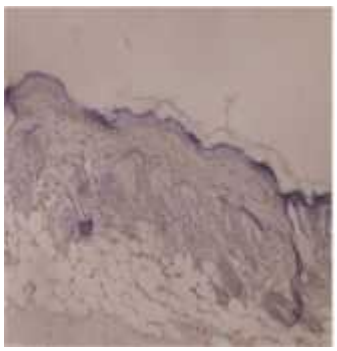
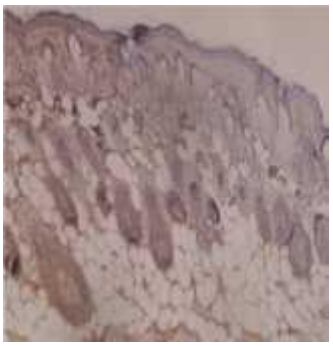
		
16 (Klp UVB)	17 (Klp UVB)	18 (Klp UVB)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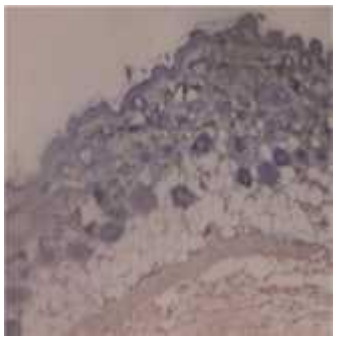	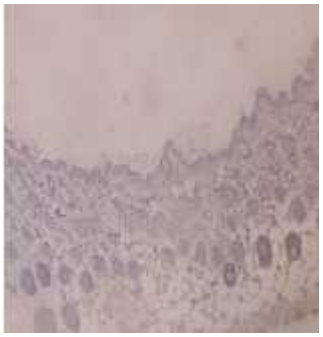	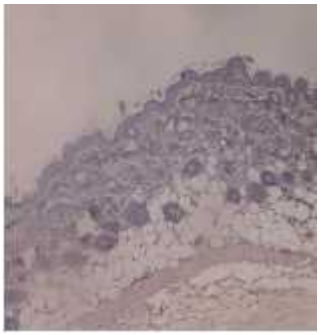
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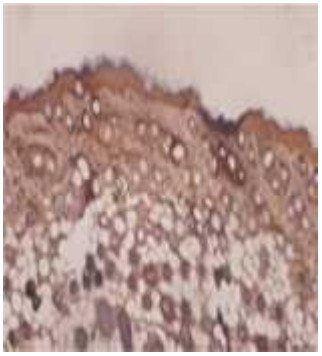
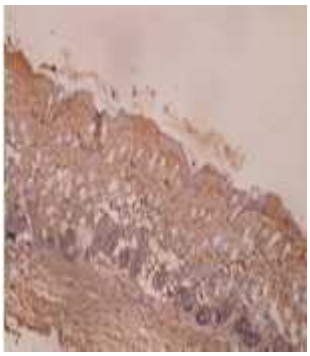
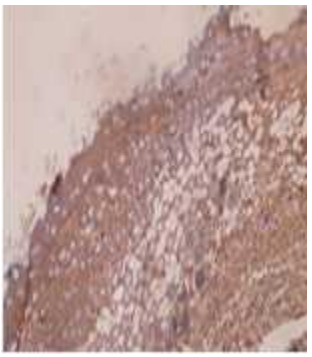
22. Gambar IHK TGF Beta-1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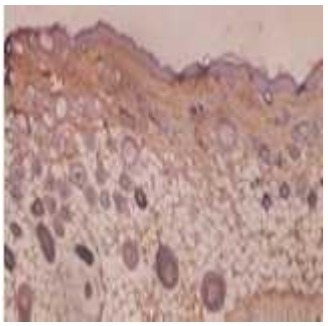	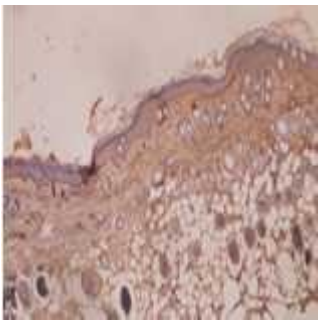	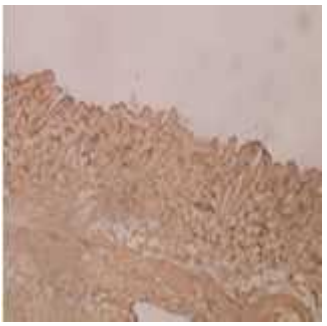
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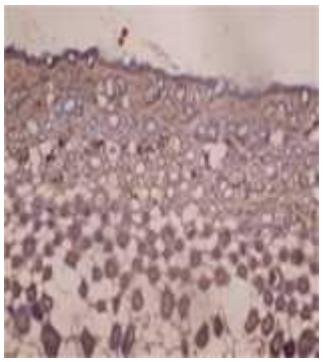		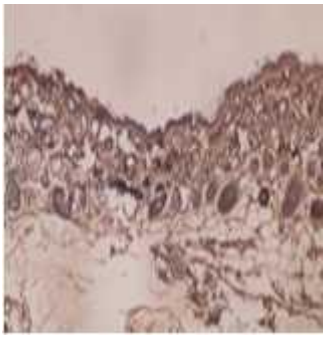
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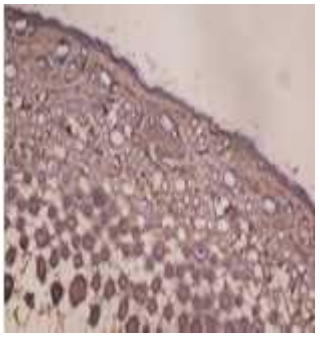	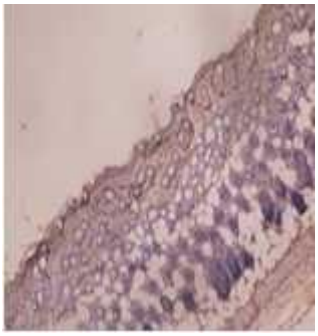	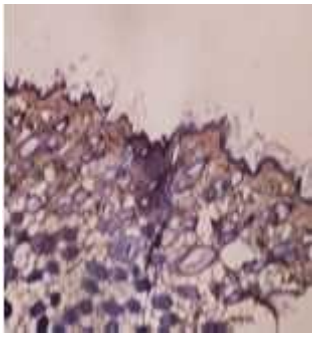
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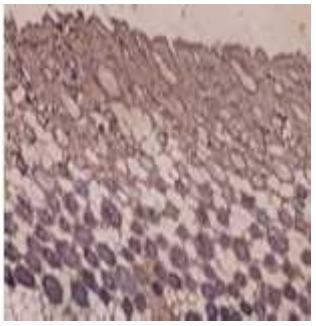	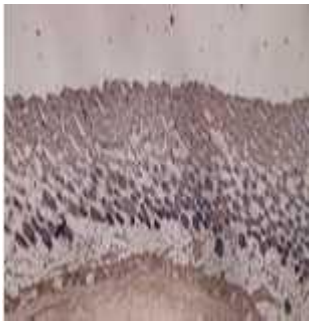	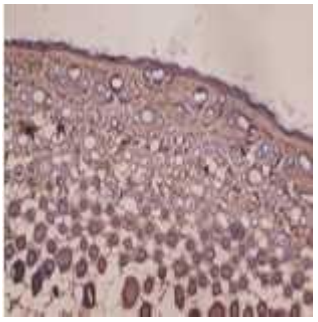
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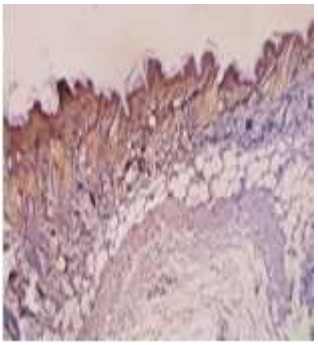
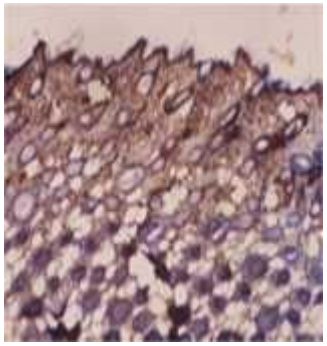
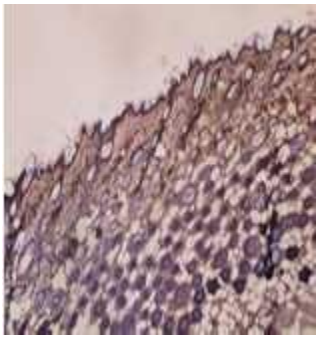
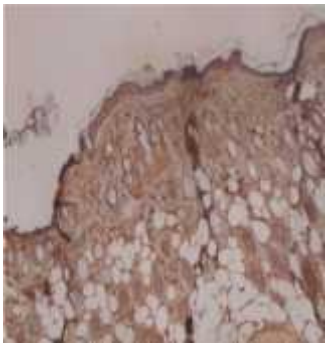
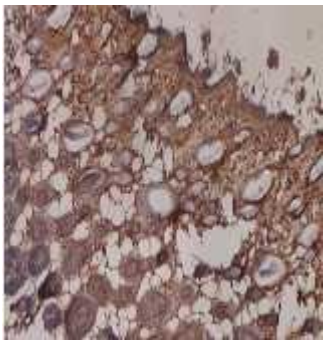
		
16 (Klp UVB)	17 (Klp UVB)	18 (Klp UVB)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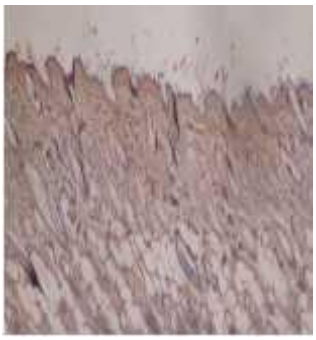
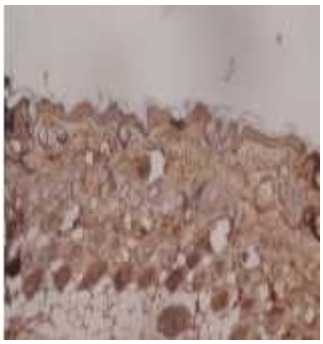
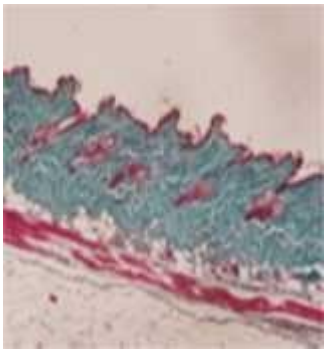
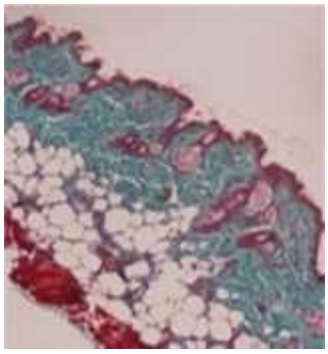
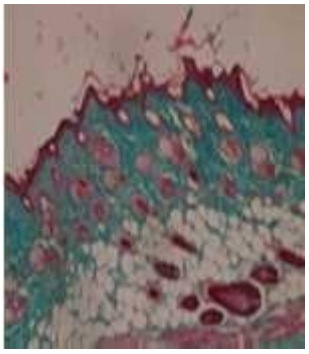
		
22 (Klp Krim Botto-Botto+ UVB)	23 (Klp Krim Botto-Botto+ UVB)	24 (Klp Krim Botto-Botto+ UVB)

23. Gambar Histopatologi Ketebalan Kolagen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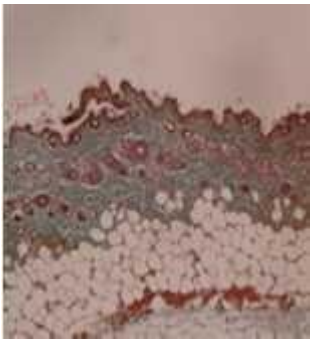	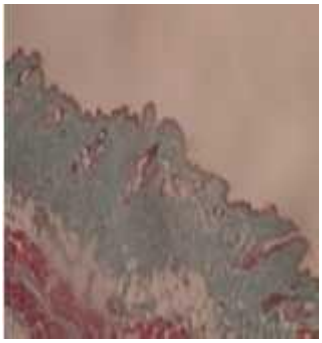	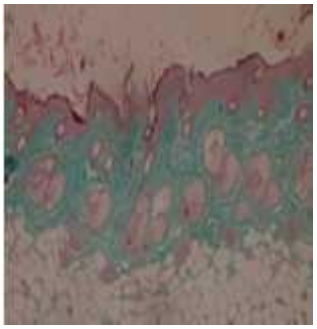
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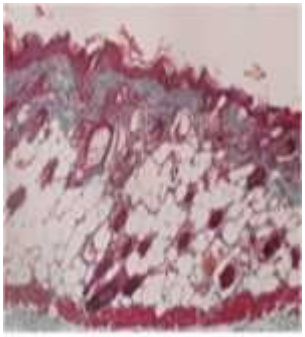	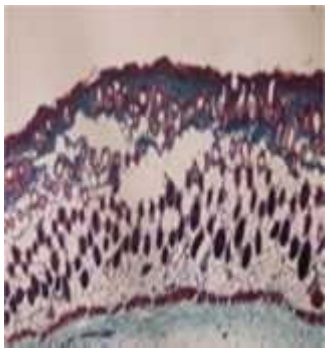	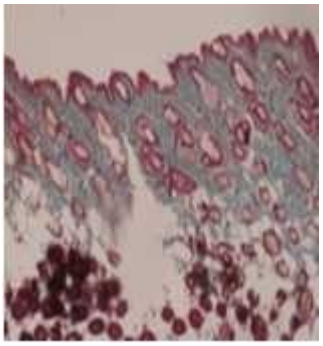
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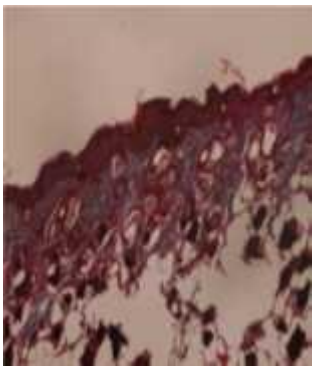		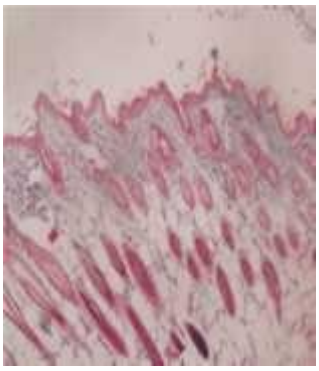
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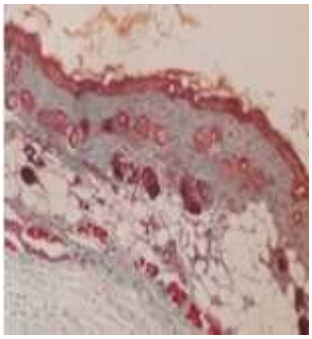	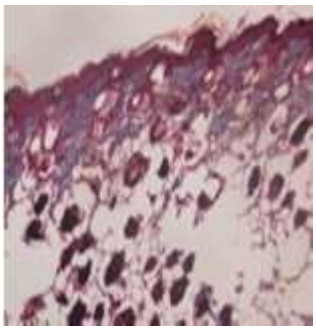	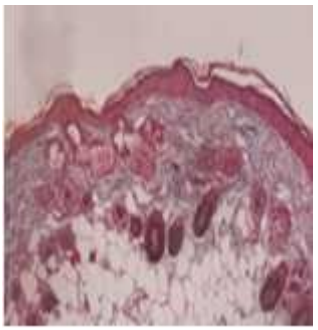
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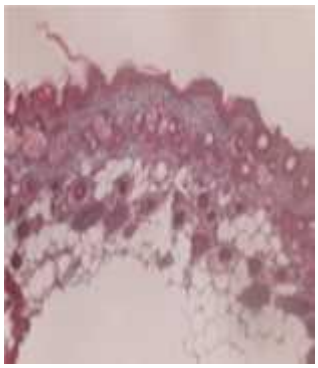	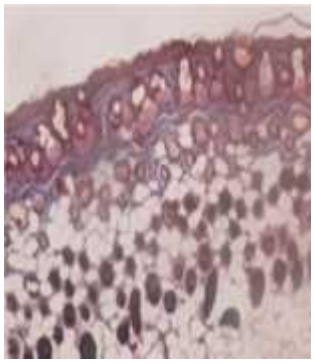	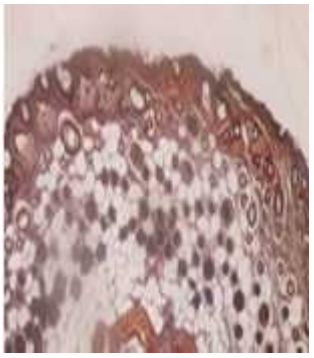
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	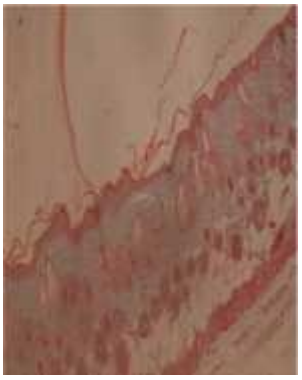	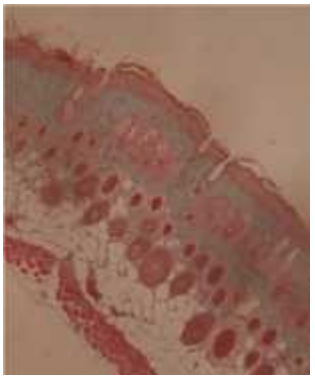
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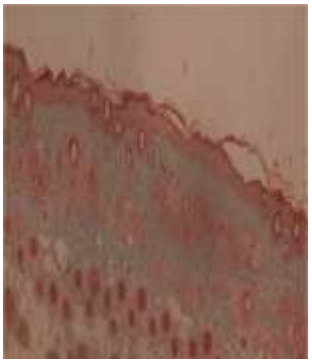	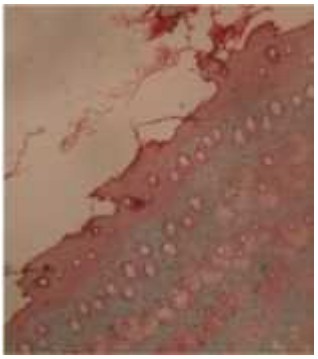	
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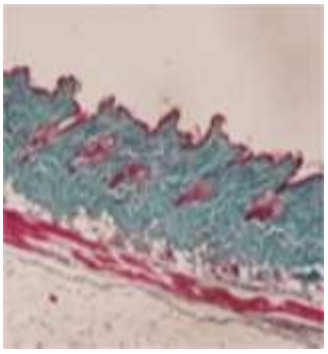
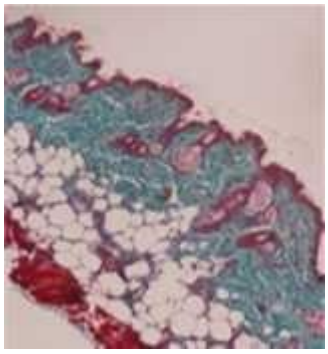
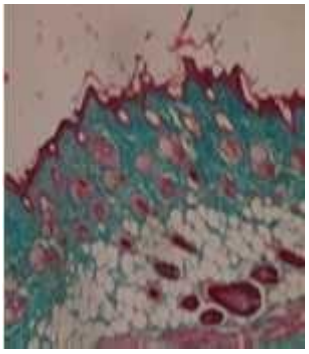
24. Gambar Histopatologi Kerapatan Kolagen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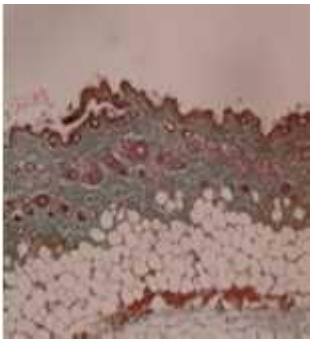	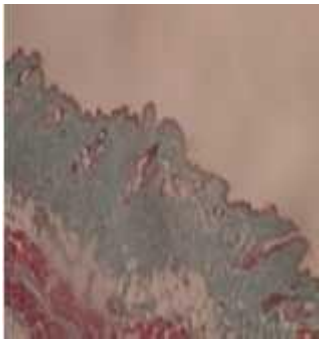	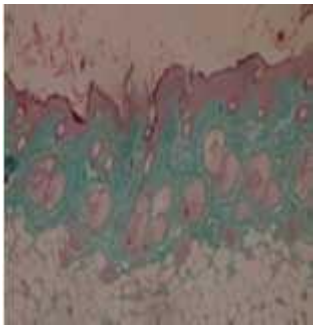
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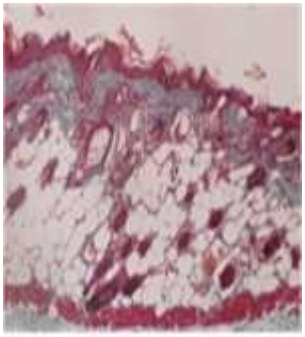	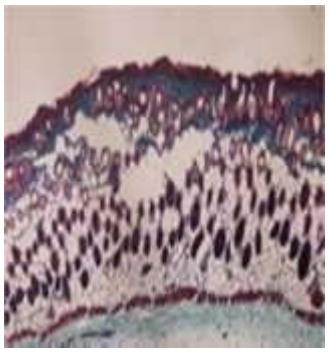	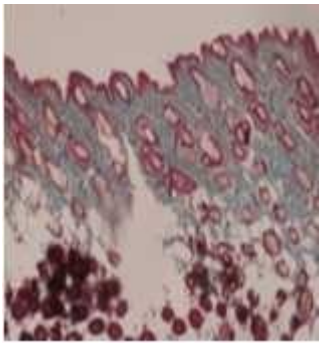
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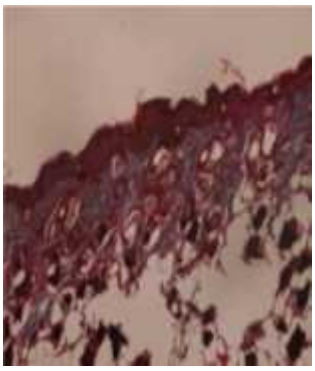
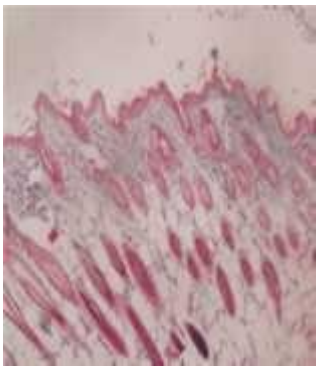
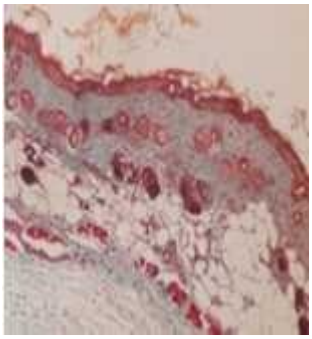
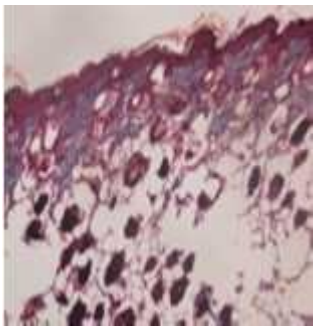
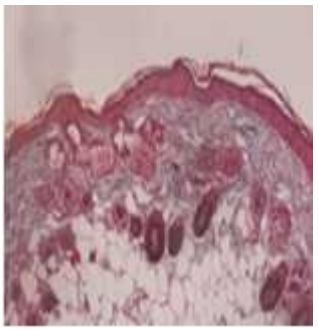
		
10 (Klp Basis Krim+ UVB)	11 (Klp Basis Krim+ UVB)	12 (Klp Basis Krim+ UVB)
		
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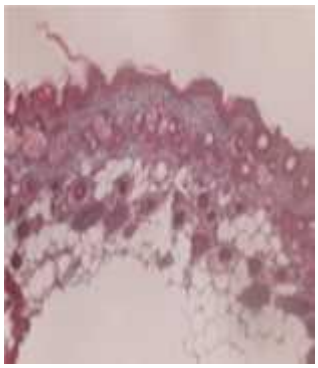
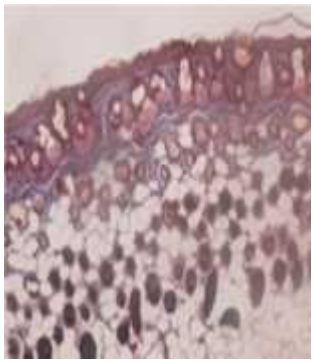
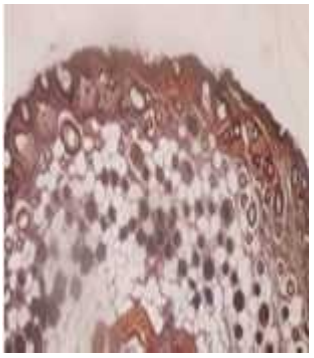
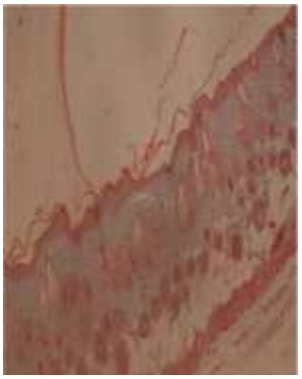
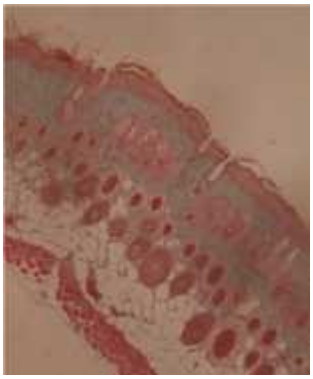
		
16 (Klp UVB)	17 (Klp UVB)	18 (Klp UVB)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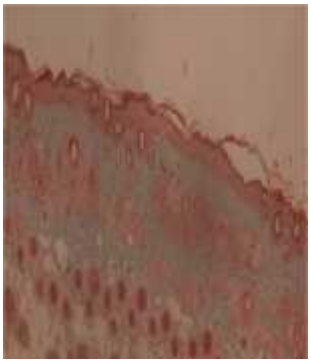
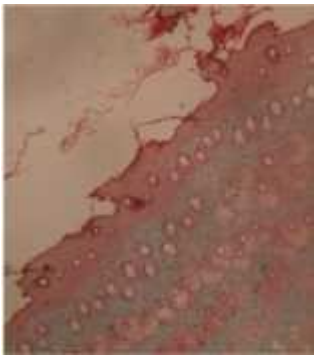
		
22 (Klp Krim Botto-Botto+ UVB)	23 (Klp Krim Botto-Botto+ UVB)	24 (Klp Krim Botto-Botto+ UVB)

25. Uji iritasi

1	2	3
4		

Keterangan gambar uji iritasi:

1. Pencukuran dan pengukuran area punggung kelinci
2. Pengolesan krim pada punggung kelinci
3. Penutupan area pengolesan pada punggung kelinci
4. Pengamatan setelah pengolesan krim

DAFTAR RIWAYAT HIDUP

A. Biodata

1. Nama	: Karlina Amir Tahir, S.Si., M.Si., Apt
2. NIP/NIDN	: 19860918 201503 2 005/ 0918098603
3. Alamat Lengkap	: Jl. A.R Hakim Blok H/6 Makassar
4. Email Aktif	: karlina.amir@uin-alauddin.ac.id / nilalfath@gmail.com
5. Hp Aktif	: 081 245 309 148
6. Universitas/Institusi/Lembaga	: Jurusan Farmasi, Fakultas Kedokteran dan Ilmu Kesehatan UIN Alauddin Makassar
7. No. KTP	7371075809860003
8. Suami	: Ahmad Lalo, S.Si., M.Si., Apt
9. Ayah	: Drs. Amir Tahir, DM
10. Ibu	: A. Mardiawati Razak A.P

B. Jenjang Pendidikan

1. S1 Farmasi UNHAS Tahun 2004 - 2008
2. Profesi Apoteker UNHAS Tahun 2008 - 2009
3. S2 Magister Sains di Fakultas Farmasi UNHAS Tahun 2012 – 2014

C. Pengalaman Publikasi

1. Publikasi :
   a. Uji Aktivitas Antiplasmodium dari Isolat Kulit Batang Kayu Tammate (*Lannea coromandelica* Houtt. Merr.) secara *In Vitro* (Jurnal Fitofarmaka Indonesia, SINTA 3, Penulis Pertama, 2020)
   b. Evaluation of Antioxidant Activity of Botto-Botto Leaf Fraction (*Chromolaena odorata* L.) using DPPH and ABTS Methods (Open Access Macedonian Journal Medical Science (OAMJMS) Scopus Q3, Penulis Pertama, 2021)

c. Photoprotective and Inhibitory Activity of Tirosinase in Extract and Fraction of *Terminalia catappa* L. (Open Access Macedonian Journal Medical Science (OAMJMS) Scopus Q3, co-author, 2021)

d. Thyrosinase Enzymes Activities and Sun Protection Factor of Ethanol Extract, Water Fraction, and N-Butanol Fraction of Chromolaena Odorata L. Leaves (Open Access Macedonian Journal Medical Science (OAMJMS) Scopus Q3, Penulis Pertama, Accepted)

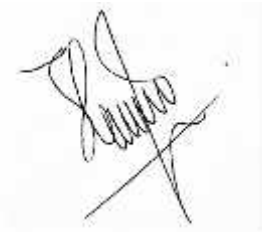
D. Beasiswa

a. Penerima beasiswa Bakrie Center Foundation / Bakrie Graduation Fellowship untuk jenjang S2 tahun 2013 - 2014

b. Penerima beasiswa Kemenag 5000 Doktor jenjang S3 tahun 2018 - 2021

Makassar, 1 Juli 2021

Yang menyatakan,



(Karlina Amir Tahir, S.Si., M.Si., Apt)
NIP. 19860918 201503 2 005