

## LAMPIRAN

Lampiran 1. *Ethical Clearance*

**KOMISI BIOETIKA PENELITIAN KEDOKTERAN/KESEHATAN  
FAKULTAS KEDOKTERAN**

**UNIVERSITAS ISLAM SULTAN AGUNG SEMARANG**

Sekretariat : Gedung C Lantai I Fakultas Kedokteran Unissula  
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## Ethical Clearance

**No. 342/X/2020/Komisi Bioetik**

Komisi Bioetika Penelitian Kedokteran/Kesehatan Fakultas Kedokteran Universitas Islam Sultan Agung Semarang, setelah melakukan pengkajian atas usulan penelitian yang berjudul :

**EFEKTIVITAS SEKRETOME SEL PUNCA MESENKIMAL TERHADAP JUMLAH  
MELAMIN DAN KOLAGEN**  
(Studi In Vivo Pada Tikus Galur Wistar Model Hiperpigmentasi Yang Dipapar Sinar UV-B)

Peneliti Utama : Novia Kartikasari  
Pembimbing : Dr. dr. Agung Putra, M.Si, Med  
dr. Nur Anna Chalimah Sa'dyah, Sp.PD., KEMD., FINASIM  
Tempat Penelitian : Laboratorium SCCR Universitas Sultan Agung Semarang

dengan ini menyatakan bahwa usulan penelitian diatas telah memenuhi prasyarat etik penelitian. Oleh karena itu Komisi Bioetika merekomendasikan agar penelitian ini dapat dilaksanakan dengan mempertimbangkan prinsip-prinsip yang dinyatakan dalam Deklarasi Helsinki dan panduan yang tertuang dalam Pedoman Nasional Etik Penelitian Kesehatan (PNEPK) Departemen Kesehatan RI tahun 2004.

Semarang, 30 Oktober 2020

Komisi Bioetika Penelitian Kedokteran/Kesehatan  
Fakultas Kedokteran Unissula

Ketua,

(dr. Sofwan Dahlan, Sp.F(K))

## Lampiran 2. Analisis Statistik

### Descriptives

IL10

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
UV-	3	1.0000	.20000	.11547	.5032	1.4968	.80	1.20
UV+	3	.1689	.01985	.01146	.1196	.2182	.15	.18
BaseGel	3	.9933	.06215	.03588	.8389	1.1477	.93	1.06
Secretome100	3	1.3386	.30127	.17394	.5902	2.0870	1.05	1.65
Secretome200	3	25.3304	2.90851	1.67923	18.1052	32.5555	22.37	28.18
Total	15	5.7662	10.19367	2.63199	.1212	11.4113	.15	28.18

### Test of Homogeneity of Variances

IL10

Levene Statistic	df1	df2	Sig.
4.018	4	10	.084

### Tests of Normality

Perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
IL10 UV-	.175	3	.	1.000	3	1.000
UV+	.294	3	.	.921	3	.456
BaseGel	.197	3	.	.996	3	.873
Secretome100	.192	3	.	.997	3	.895
Secretome200	.182	3	.	.999	3	.936

a. Lilliefors Significance Correction

### ANOVA

IL10

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1437.564	4	359.391	209.083	.000
Within Groups	17.189	10	1.719		
Total	1454.753	14			

## Multiple Comparisons

IL10  
LSD

(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
UV-	UV+	.83112	1.07048	.455	-1.5541	3.2163
	BaseGel	.00671	1.07048	.995	-2.3785	2.3919
	Secretome100	-.33858	1.07048	.758	-2.7238	2.0466
	Secretome200	-24.33037*	1.07048	.000	-26.7155	-21.9452
UV+	UV-	-.83112	1.07048	.455	-3.2163	1.5541
	BaseGel	-.82441	1.07048	.459	-3.2096	1.5608
	Secretome100	-1.16970	1.07048	.300	-3.5549	1.2155
	Secretome200	-25.16149*	1.07048	.000	-27.5467	-22.7763
BaseGel	UV-	-.00671	1.07048	.995	-2.3919	2.3785
	UV+	.82441	1.07048	.459	-1.5608	3.2096
	Secretome100	-.34529	1.07048	.754	-2.7305	2.0399
	Secretome200	-24.33708*	1.07048	.000	-26.7223	-21.9519
Secretome100	UV-	.33858	1.07048	.758	-2.0466	2.7238
	UV+	1.16970	1.07048	.300	-1.2155	3.5549
	BaseGel	.34529	1.07048	.754	-2.0399	2.7305
	Secretome200	-23.99179*	1.07048	.000	-26.3770	-21.6066
Secretome200	UV-	24.33037*	1.07048	.000	21.9452	26.7155
	UV+	25.16149*	1.07048	.000	22.7763	27.5467
	BaseGel	24.33708*	1.07048	.000	21.9519	26.7223
	Secretome100	23.99179*	1.07048	.000	21.6066	26.3770

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



## Descriptives

Perlakuan			Statistic	Std. Error	
IL10	UV-	Mean	1.0000	.11547	
		95% Confidence Interval for Mean	Lower Bound Upper Bound	.5032 1.4968	
		5% Trimmed Mean	.		
		Median	1.0000		
		Variance	.040		
		Std. Deviation	.20000		
		Minimum	.80		
		Maximum	1.20		
		Range	.40		
		Interquartile Range	.		
		Skewness	.000	1.225	
		Kurtosis	.		
			UV+	Mean	.1689
95% Confidence Interval for Mean	Lower Bound Upper Bound			.1196 .2182	
5% Trimmed Mean	.				
Median	.1753				
Variance	.000				
Std. Deviation	.01985				
Minimum	.15				
Maximum	.18				
Range	.04				
Interquartile Range	.				
Skewness	-1.307			1.225	
Kurtosis	.				
	BaseGel			Mean	.9933
		95% Confidence Interval for Mean	Lower Bound Upper Bound	.8389 1.1477	
		5% Trimmed Mean	.		
		Median	.9885		
		Variance	.004		
		Std. Deviation	.06215		
		Minimum	.93		
		Maximum	1.06		
		Range	.12		
		Interquartile Range	.		
		Skewness	.344	1.225	
		Kurtosis	.		

Secretome100	Mean		1.3386	.17394
	95% Confidence Interval for Mean	Lower Bound	.5902	
		Upper Bound	2.0870	
	5% Trimmed Mean			
	Median		1.3195	
	Variance		.091	
	Std. Deviation		.30127	
	Minimum		1.05	
	Maximum		1.65	
	Range		.60	
	Interquartile Range			
	Skewness		.284	1.225
	Kurtosis			
Secretome200	Mean		25.3304	1.67923
	95% Confidence Interval for Mean	Lower Bound	18.1052	
		Upper Bound	32.5555	
	5% Trimmed Mean			
	Median		25.4423	
	Variance		8.459	
	Std. Deviation		2.90851	
	Minimum		22.37	
	Maximum		28.18	
	Range		5.81	
	Interquartile Range			
	Skewness		-.173	1.225
	Kurtosis			



## Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Kolagen	Sham	3	2.8333	.60277	.34801	1.3360	4.3307	2.20	3.40
	Kontrol	3	36.6000	2.62107	1.51327	30.0889	43.1111	33.70	38.80
	Basis gel	3	32.3667	1.35769	.78387	28.9940	35.7394	30.80	33.20
	P1	3	22.9233	.51520	.29745	21.6435	24.2032	22.40	23.43
	P2	3	15.9333	2.35018	1.35688	10.0952	21.7715	13.60	18.30
	Total	15	22.1313	12.55391	3.24141	15.1792	29.0835	2.20	38.80
Melanin	Sham	3	1.5000	.50000	.28868	.2579	2.7421	1.00	2.00
	Kontrol	3	58.3333	5.85947	3.38296	43.7776	72.8891	54.00	65.00
	Basis gel	3	50.6667	3.21455	1.85592	42.6813	58.6521	47.00	53.00
	P1	3	6.3333	1.52753	.88192	2.5388	10.1279	5.00	8.00
	P2	3	1.5000	.50000	.28868	.2579	2.7421	1.00	2.00
	Total	15	23.6667	26.37211	6.80925	9.0623	38.2711	1.00	65.00
Tyrosinase	Sham	3	.0000	.00000	.00000	.0000	.0000	.00	.00
	Kontrol	3	29.3333	2.08167	1.20185	24.1622	34.5045	27.00	31.00
	Basis gel	3	4.3333	1.52753	.88192	.5388	8.1279	3.00	6.00
	P1	3	.0000	.00000	.00000	.0000	.0000	.00	.00
	P2	3	.0000	.00000	.00000	.0000	.0000	.00	.00
	Total	15	6.7333	11.86511	3.06356	.1627	13.3040	.00	31.00

## Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Kolagen	2.119	4	10	.153
Melanin	6.785	4	10	.077
Tyrosinase	7.063	4	10	.056

Tests of Normality<sup>b,c,d</sup>

	Perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Kolagen	Sham	.211	3	.	.991	3	.817
	Kontrol	.272	3	.	.947	3	.554
	Basis gel	.372	3	.	.781	3	.070
	P1	.180	3	.	.999	3	.946
	P2	.176	3	.	1.000	3	.977
Melanin	Sham	.175	3	.	1.000	3	1.000
	Kontrol	.321	3	.	.881	3	.328
	Basis gel	.328	3	.	.871	3	.298
	P1	.253	3	.	.964	3	.637
	P2	.175	3	.	1.000	3	1.000

Tyrosinase	Kontrol	.292	3	.	.923	3	.463
	Basis gel	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

b. Tyrosinase is constant when Perlakuan = Sham. It has been omitted.

c. Tyrosinase is constant when Perlakuan = P1. It has been omitted.

d. Tyrosinase is constant when Perlakuan = P2. It has been omitted.

#### ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Kolagen	Between Groups	2176.679	4	544.170	183.032	.000
	Within Groups	29.731	10	2.973		
	Total	2206.410	14			
Melanin	Between Groups	9641.833	4	2410.458	253.732	.000
	Within Groups	95.000	10	9.500		
	Total	9736.833	14			
Tyrosinase	Between Groups	1957.600	4	489.400	367.050	.000
	Within Groups	13.333	10	1.333		
	Total	1970.933	14			



## Multiple Comparisons

Dependent Variable		(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Kolagen	LSD	Sham	Kontrol	-33.76667 <sup>a</sup>	1.40786	.000	-36.9036	-30.6298
			Basis gel	-29.53333 <sup>a</sup>	1.40786	.000	-32.6702	-26.3964
			P1	-20.09000 <sup>a</sup>	1.40786	.000	-23.2269	-16.9531
			P2	-13.10000 <sup>a</sup>	1.40786	.000	-16.2369	-9.9631
		Kontrol	Sham	33.76667 <sup>a</sup>	1.40786	.000	30.6298	36.9036
			Basis gel	4.23333 <sup>a</sup>	1.40786	.013	1.0964	7.3702
			P1	13.67667 <sup>a</sup>	1.40786	.000	10.5398	16.8136
			P2	20.66667 <sup>a</sup>	1.40786	.000	17.5298	23.8036
		Basis gel	Sham	29.53333 <sup>a</sup>	1.40786	.000	26.3964	32.6702
			Kontrol	-4.23333 <sup>a</sup>	1.40786	.013	-7.3702	-1.0964
			P1	9.44333 <sup>a</sup>	1.40786	.000	6.3064	12.5802
			P2	16.43333 <sup>a</sup>	1.40786	.000	13.2964	19.5702
		P1	Sham	20.09000 <sup>a</sup>	1.40786	.000	16.9531	23.2269
			Kontrol	-13.67667 <sup>a</sup>	1.40786	.000	-16.8136	-10.5398
			Basis gel	-9.44333 <sup>a</sup>	1.40786	.000	-12.5802	-6.3064
			P2	6.99000 <sup>a</sup>	1.40786	.001	3.8531	10.1269
		P2	Sham	13.10000 <sup>a</sup>	1.40786	.000	9.9631	16.2369
			Kontrol	-20.66667 <sup>a</sup>	1.40786	.000	-23.8036	-17.5298
			Basis gel	-16.43333 <sup>a</sup>	1.40786	.000	-19.5702	-13.2964
			P1	-6.99000 <sup>a</sup>	1.40786	.001	-10.1269	-3.8531
Melanin	LSD	Sham	Kontrol	-56.83333 <sup>a</sup>	2.51661	.000	-62.4407	-51.2260
			Basis gel	-49.16667 <sup>a</sup>	2.51661	.000	-54.7740	-43.5593
			P1	-4.83333	2.51661	.084	-10.4407	.7740
			P2	.00000	2.51661	1.000	-5.6074	5.6074
		Kontrol	Sham	56.83333 <sup>a</sup>	2.51661	.000	51.2260	62.4407
			Basis gel	7.66667 <sup>a</sup>	2.51661	.012	2.0593	13.2740
			P1	52.00000 <sup>a</sup>	2.51661	.000	46.3926	57.6074
			P2	56.83333 <sup>a</sup>	2.51661	.000	51.2260	62.4407
		Basis gel	Sham	49.16667 <sup>a</sup>	2.51661	.000	43.5593	54.7740
			Kontrol	-7.66667 <sup>a</sup>	2.51661	.012	-13.2740	-2.0593
			P1	44.33333 <sup>a</sup>	2.51661	.000	38.7260	49.9407
			P2	49.16667 <sup>a</sup>	2.51661	.000	43.5593	54.7740
		P1	Sham	4.83333	2.51661	.084	-.7740	10.4407
			Kontrol	-52.00000 <sup>a</sup>	2.51661	.000	-57.6074	-46.3926
			Basis gel	-44.33333 <sup>a</sup>	2.51661	.000	-49.9407	-38.7260
			P2	4.83333	2.51661	.084	-.7740	10.4407
		P2	Sham	.00000	2.51661	1.000	-5.6074	5.6074
			Kontrol	-56.83333 <sup>a</sup>	2.51661	.000	-62.4407	-51.2260
			Basis gel	-49.16667 <sup>a</sup>	2.51661	.000	-54.7740	-43.5593
			P1	-4.83333	2.51661	.084	-10.4407	.7740



Tyrosinase	LSD	Sham	Kontrol	-29.33333'	.94281	.000	-31.4340	-27.2326
			Basis gel	-4.33333'	.94281	.001	-6.4340	-2.2326
			P1	.00000	.94281	1.000	-2.1007	2.1007
			P2	.00000	.94281	1.000	-2.1007	2.1007
		Kontrol	Sham	29.33333'	.94281	.000	27.2326	31.4340
			Basis gel	25.00000'	.94281	.000	22.8993	27.1007
			P1	29.33333'	.94281	.000	27.2326	31.4340
			P2	29.33333'	.94281	.000	27.2326	31.4340
		Basis gel	Sham	4.33333'	.94281	.001	2.2326	6.4340
			Kontrol	-25.00000'	.94281	.000	-27.1007	-22.8993
			P1	4.33333'	.94281	.001	2.2326	6.4340
			P2	4.33333'	.94281	.001	2.2326	6.4340
		P1	Sham	.00000	.94281	1.000	-2.1007	2.1007
			Kontrol	-29.33333'	.94281	.000	-31.4340	-27.2326
			Basis gel	-4.33333'	.94281	.001	-6.4340	-2.2326
			P2	.00000	.94281	1.000	-2.1007	2.1007
		P2	Sham	.00000	.94281	1.000	-2.1007	2.1007
			Kontrol	-29.33333'	.94281	.000	-31.4340	-27.2326
			Basis gel	-4.33333'	.94281	.001	-6.4340	-2.2326
			P1	.00000	.94281	1.000	-2.1007	2.1007

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

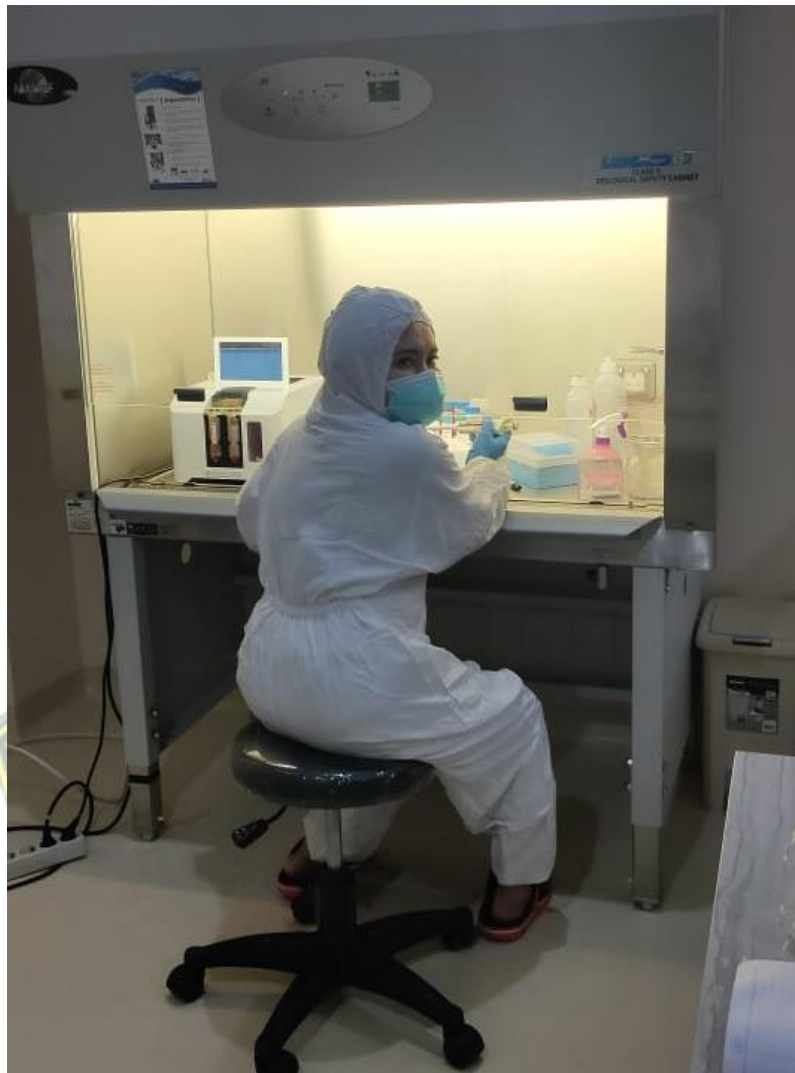


**Lampiran 3. Foto Kegiatan Penelitian**

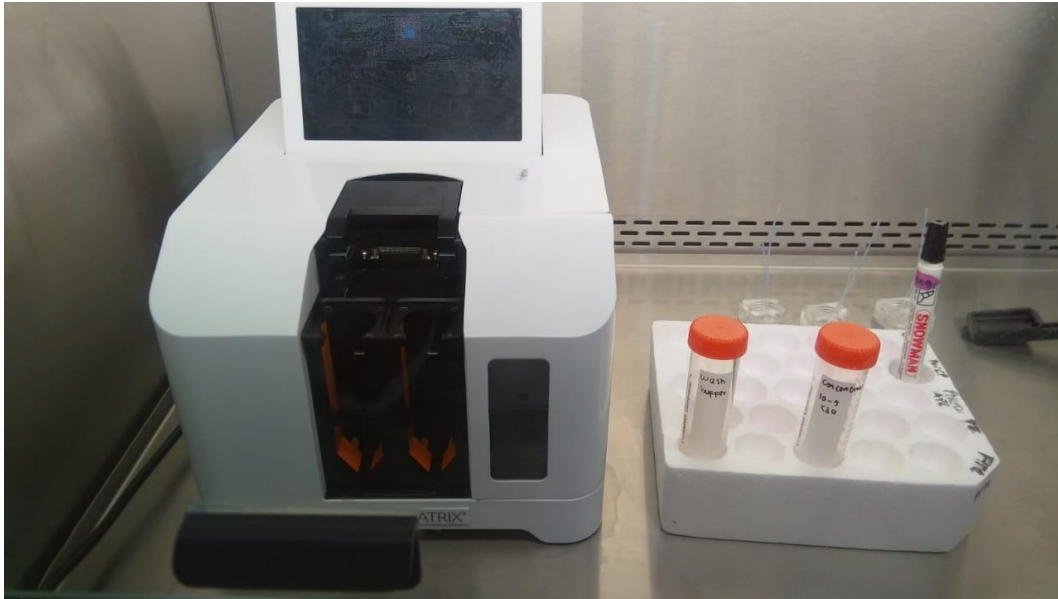


Isolasi umbilical cord tikus





Isolasi sekretom MSC



Alat Tangential Flow Filtration (TFF)



Pembacaan qRT-PCR

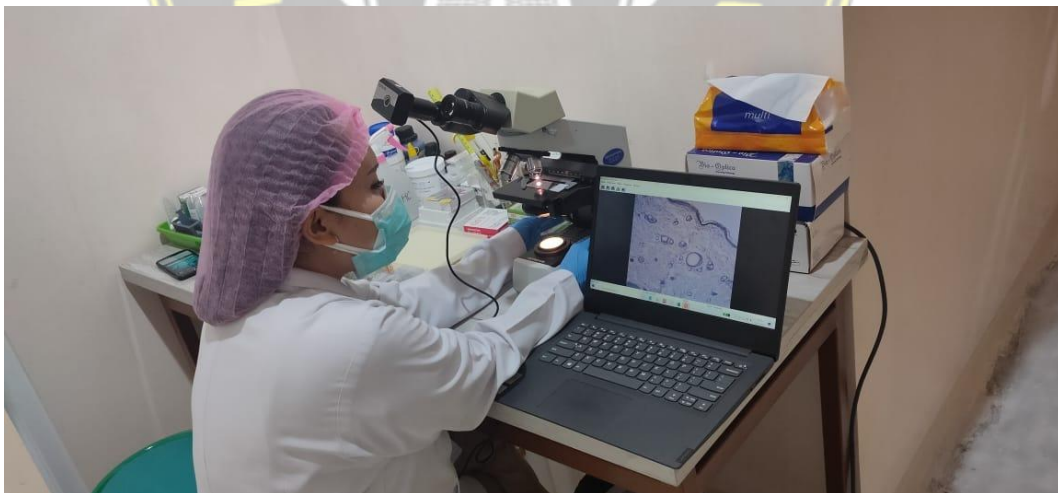


Analisa IL-10 dengan qRT-PCR

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Proses staining preparat



Proses pengamatan preparat histologi