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Nomor : 6177 /UN4.20/PT.01.04/2020 — 28 Desember 2020
Perihal : **Permohonan Izin Penelitian**

Yth. **Direktur Rumah Sakit PTN UNHAS**

Makassar

Dengan hormat disampaikan bahwa mahasiswa Sekolah Pascasarjana Universitas Hasanuddin yang tersebut dibawah ini :

Nama	: **Makkasau**
Nomor Pokok	: P062192025
Program Pendidikan	: Magister (S2)
Program Studi	: **Ilmu Biomedik**

Bermaksud melakukan penelitian dalam rangka persiapan penulisan tesis terkait dengan judul **"Potensi Peptida Melittin dari Racun Lebah (Apis Mellifera) sebagai Agen Kemoterapi pada Kultur Sel Kanker Payudara MCF-7".**

Sehubungan dengan hal tersebut, mohon kiranya yang bersangkutan diberikan izin untuk melakukan penelitian di instansi yang Bapak/Ibu pimpin. Waktu Penelitian Januari s/d Maret 2021

Atas perkenan dan kerjasamanya diucapkan terima kasih.

Dekan,

Prof. Dr. Ir. Jamaluddin Jompa, M.Sc.
NIP. 19670308 199003 1001

Tembusan Yth:
1. Mahasiswa yang bersangkutan
2. Pertinggal

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Nomor : 6478 /UN4.20/PT.01.04/2020 28 Desember 2020
Perihal : **Permintaan Izin Etik Penelitian**

Yth. **Ketua Komisi Etik Penelitian Fakultas Kedokteran Universitas Hasanuddin**

Makassar

Dengan hormat disampaikan bahwa mahasiswa Sekolah Pascasarjana Universitas Hasanuddin yang tersebut dibawah ini :

Nama	: **Makkasau**
Nomor Pokok	: P062192025
Program Pendidikan	: Magister (S2)
Program Studi	: Ilmu Biomedik

Bermaksud melakukan penelitian dalam rangka persiapan penulisan tesis terkait dengan judul **"Potensi Peptida Melittin dari Racun Lebah (Apis Mellifera) sebagai Agen Kemoterapi pada Kultur Sel Kanker Payudara MCF-7".**

Sehubungan dengan hal tersebut, mohon kiranya Saudara berkenan memberikan izin surat persetujuan etik penelitian dengan menggunakan subyek manusia.

Atas perkenan dan kerjasamanya diucapkan terima kasih.

Dekan,

Prof. Dr. Ir. Jamaluddin Jompa, M.Sc.
NIP. 19670308 199003 1001

Tembusan Yth:
1. Mahasiswa yang bersangkutan
2. Pertinggal

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. 081241850858, 0411 5780103, Fax : 0411-581431

REKOMENDASI PERSETUJUAN ETIK

Nomor : 14/UN4.6.4.5.31/ PP36/ 2021

Tanggal: 13 Januari 2021

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

No Protokol	UH21010012	No Sponsor Protokol	
Peneliti Utama	**Dr. Makkasau, S.Kep, Ns**	Sponsor	
Judul Peneliti	Potensi peptida meliitin dari racun lebah (Apis Mellifera) sebagai agen ke moterpi pada kultur sel kanker payudara (MCF-7) Kajian p53 mutant dan 8-OHdG pada MCF-7		
No Versi Protokol	**1**	Tanggal Versi	8 Januari 2021
No Versi PSP		Tanggal Versi	
Tempat Penelitian	**Laboratorium Hasanuddin University Medical Research Centre (HUMRC) RS Universitas Hasanuddin Makassar**		
Jenis Review	[x] Exempted [ ] Expedited [ ] Fullboard Tanggal	Masa Berlaku **13 Januari 2021** sampai **13 Januari 2022**	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

Lampiran 1. Hasil uji sitotoksik

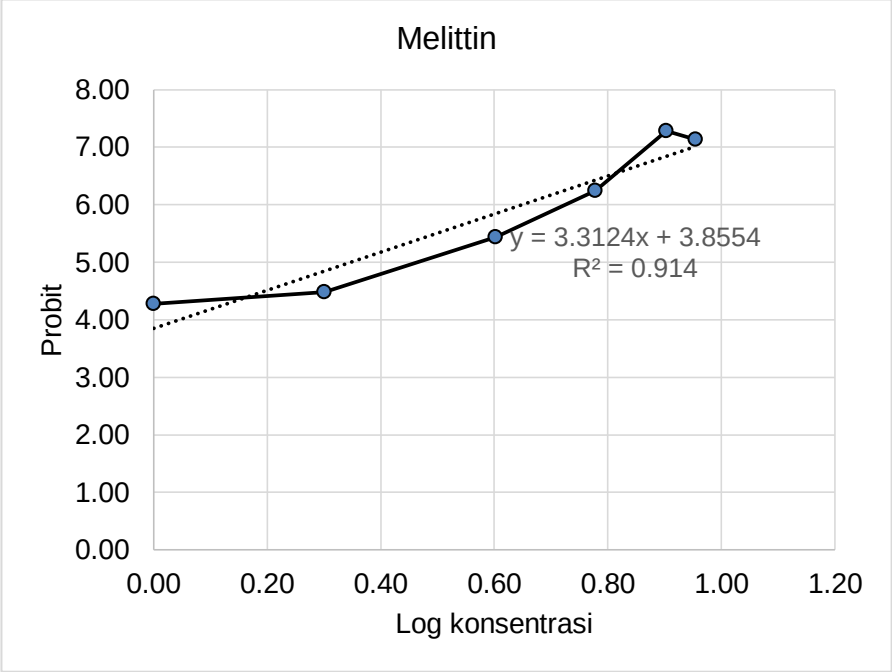
Melittin dan doxorubisin terhadap MCF-7 1x24 Jam

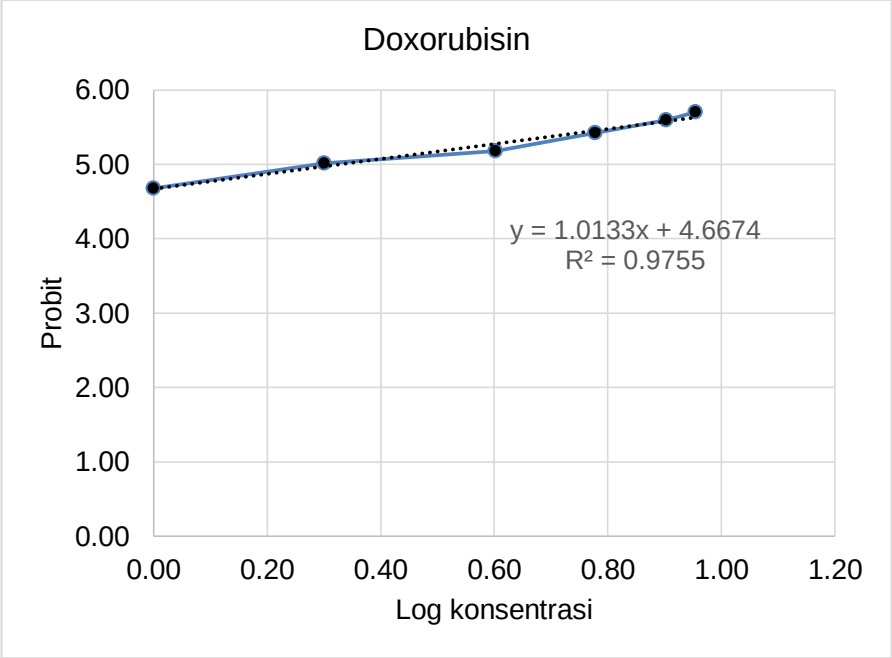
Absorbansi

	I	II	II	Rata-rata	
Kontrol medium	0.1008	0.1025	0.1020	0.1018	
Kontrol sel	1.1332	1.3994	0.9763	1.1696	1.0679

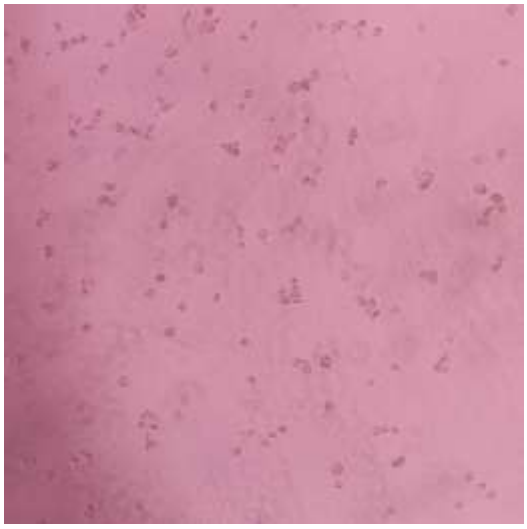
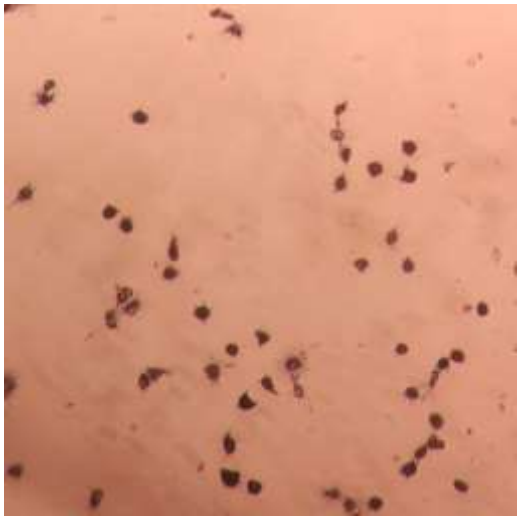
		Absorbansi		
		I	II	II
Melittin	9.0	0.1193	0.1147	0.1253
	8.0	0.1105	0.1149	0.1177
	6.0	0.2102	0.2232	0.2131
	4.0	0.5284	0.4540	0.3870
	2.0	0.8262	0.8746	0.8421
	1.0	0.9446	0.9113	0.9023
Doxorubisin	9.0	0.3482	0.3689	0.3638
	8.0	0.3659	0.4133	0.4102
	6.0	0.4918	0.4734	0.4150
	4.0	0.5277	0.5696	0.5894
	2.0	0.6116	0.6136	0.6638
	1.0	0.7631	0.7605	0.7843

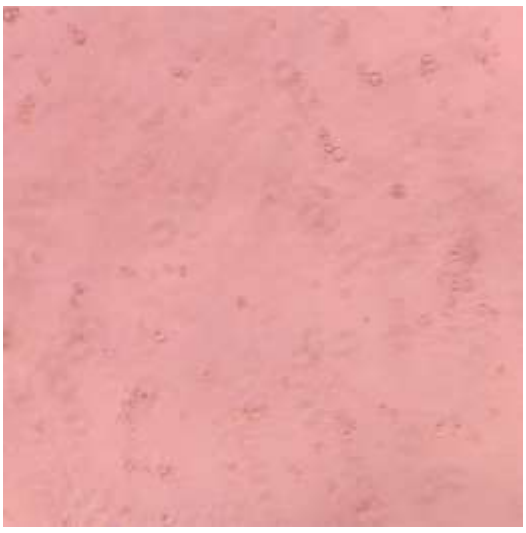
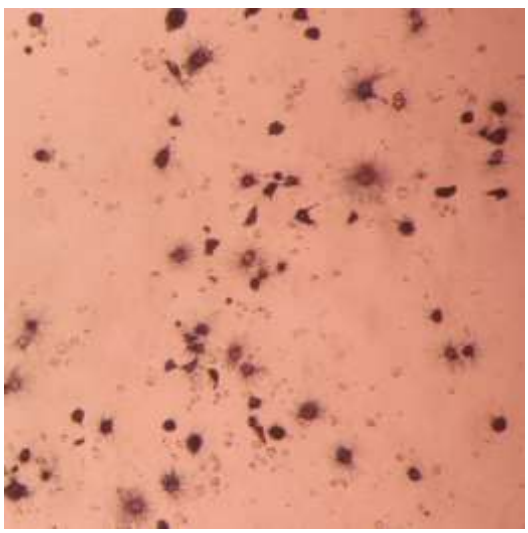
(Absorbansi) - (Kontrol medium)			Persen kematian sel			Rata-rata	SD
I	II	II	I	II	II		
0.0175	0.0129	0.0235	98.36	98.79	97.80	98.31	± 0.50
0.0087	0.0131	0.0159	99.18	98.77	98.51	98.82	± 0.34
0.1084	0.1214	0.1113	89.85	88.63	89.57	89.35	± 0.64
0.4266	0.3522	0.2852	60.05	67.02	73.29	66.78	± 6.62
0.7244	0.7728	0.7403	32.16	27.63	30.67	30.15	± 2.31
0.8428	0.8095	0.8005	21.07	24.19	25.03	23.43	± 2.09
0.2464	0.2671	0.2620	76.92	74.98	75.46	75.79	± 1.01
0.2641	0.3115	0.3084	75.27	70.83	71.12	72.40	± 2.48
0.3900	0.3716	0.3132	63.48	65.20	70.67	66.45	± 3.76
0.4259	0.4678	0.4876	60.11	56.19	54.34	56.88	± 2.95
0.5098	0.5118	0.5620	52.26	52.07	47.37	50.56	± 2.77
0.6613	0.6587	0.6825	38.07	38.31	36.08	37.49	± 1.22

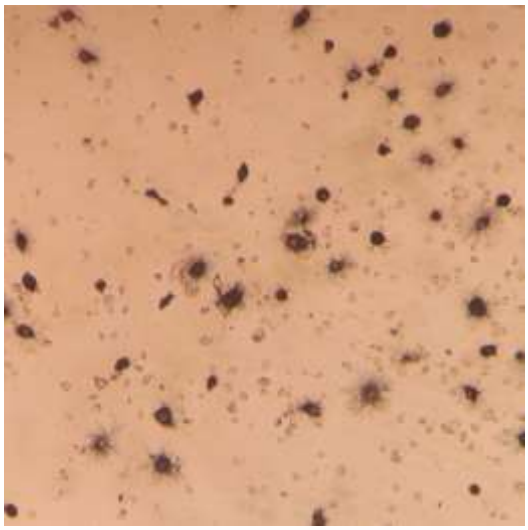

Melittin
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Probit
0.00
0.20
0.40
0.60
0.80
1.00
1.20
Log konsentrasi
y = 3.3124x + 3.8554
R² = 0.914

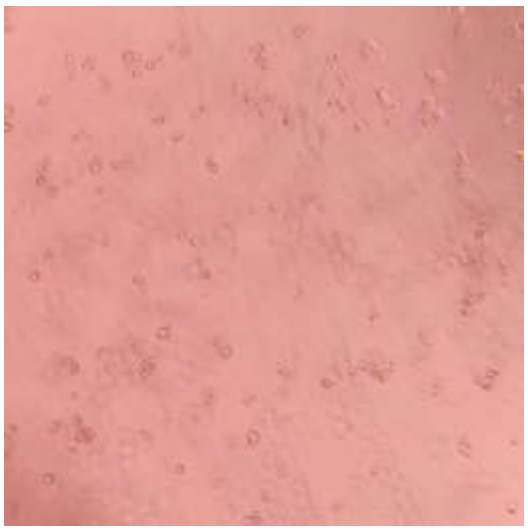
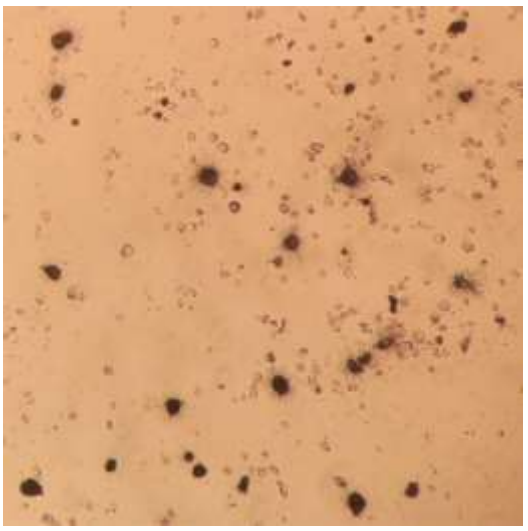

Doxorubisin
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Probit
0.00
0.20
0.40
0.60
0.80
1.00
1.20
Log konsentrasi
y = 1.0133x + 4.6674
R² = 0.9755

Lampiran Foto Uji Sitotoksik pada Sel MCF-7

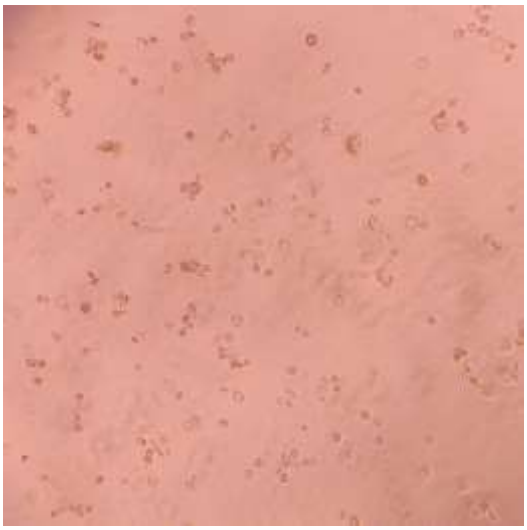
Melittin 1 µg/ml sebelum MTT	Melittin 1 µg/ml setelah MTT
	

Melittin 2 µg/ml sebelum MTT	Melittin 2 µg/ml setelah MTT
	

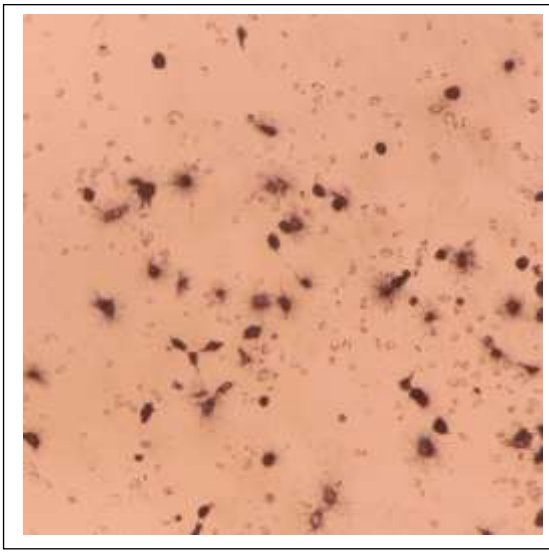
Melittin 4 µg/ml sebelum MTT	Melittin 4 µg/ml setelah MTT
	

Melittin 6 µg/ml sebelum MTT	Melittin 6 µg/ml setelah MTT
	

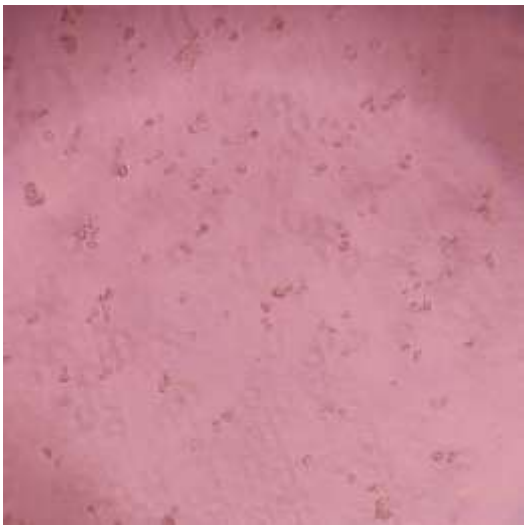
Melittin 8 µg/ml sebelum MTT



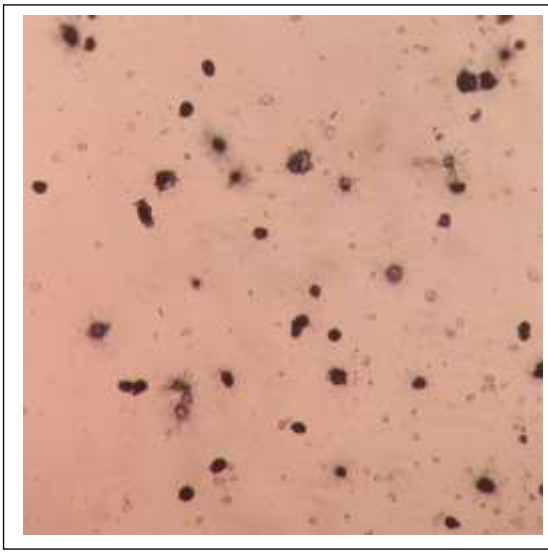
Melittin 8 µg/ml setelah MTT

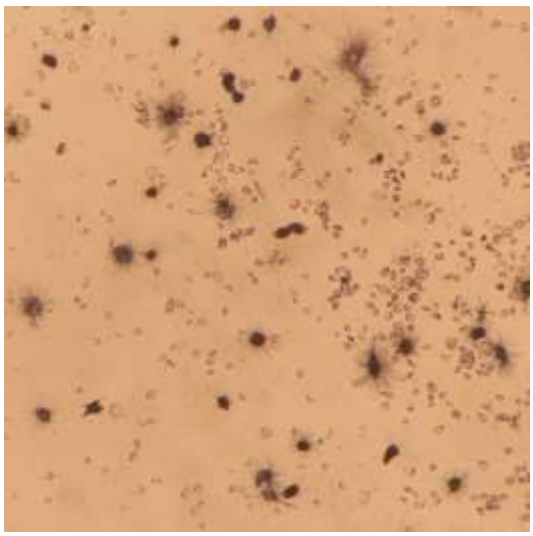


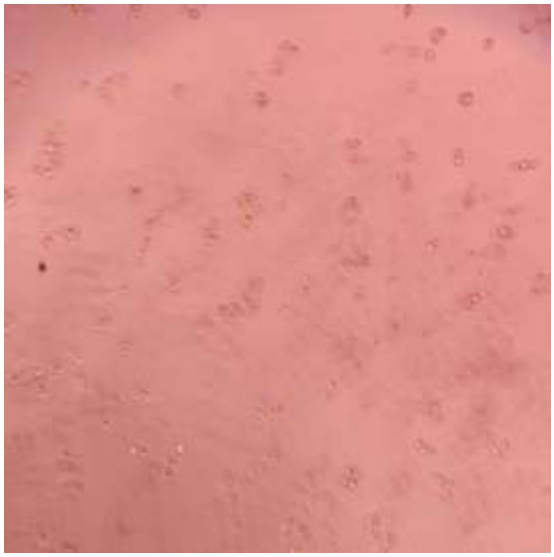
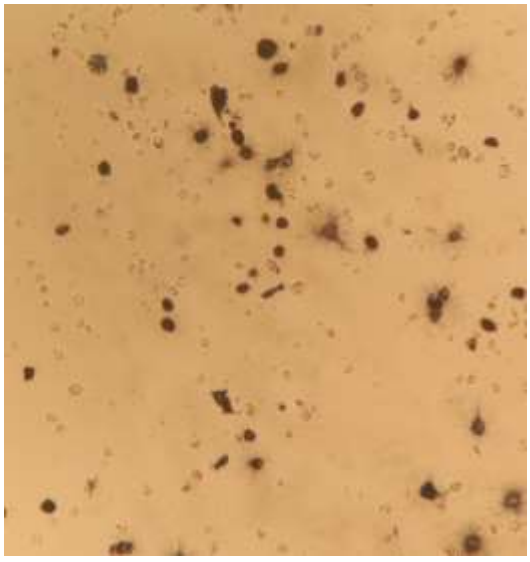
Melittin 9 µg/ml sebelum MTT

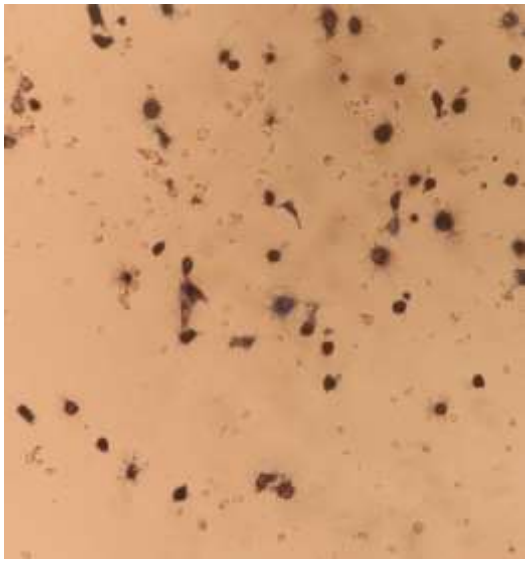


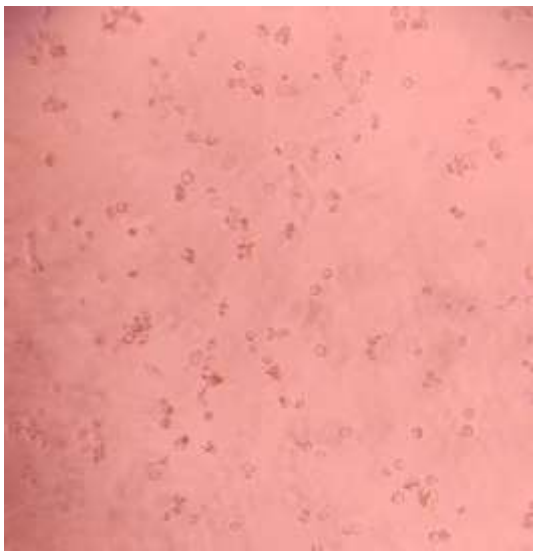
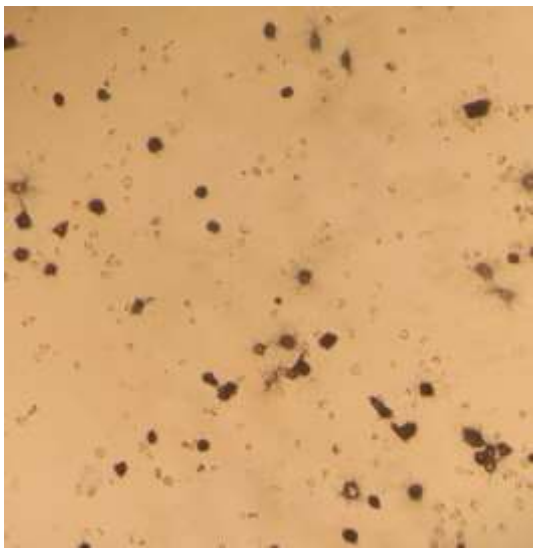
Melittin 9 µg/ml setelah MTT

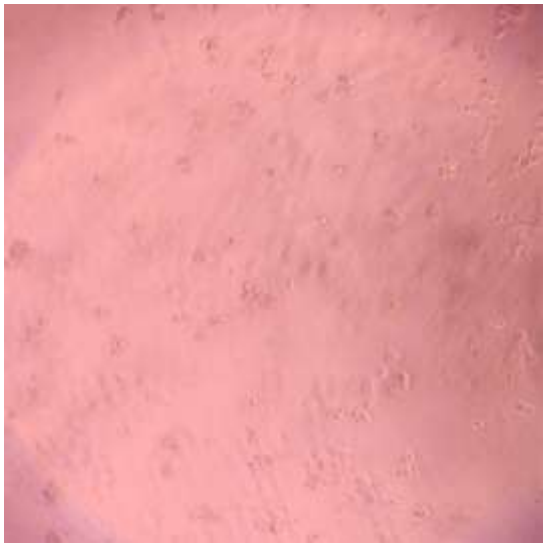
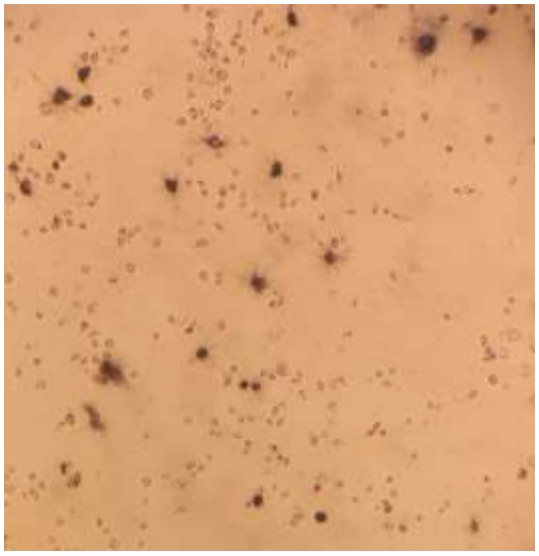


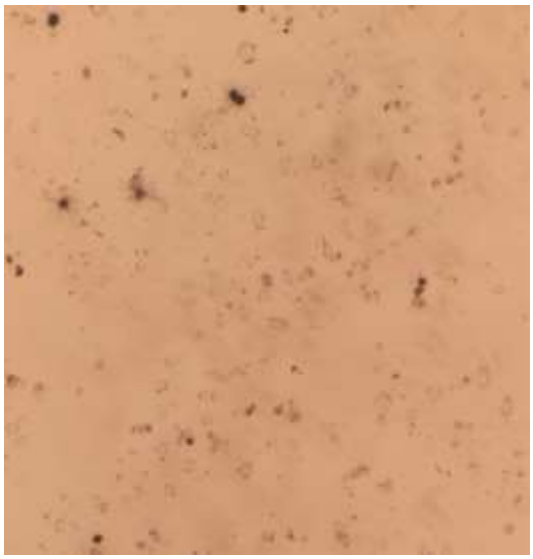
Doxorubicin 1 µg/ml sebelum MTT	Doxorubicin 1 µg/ml sebelum MTT
	

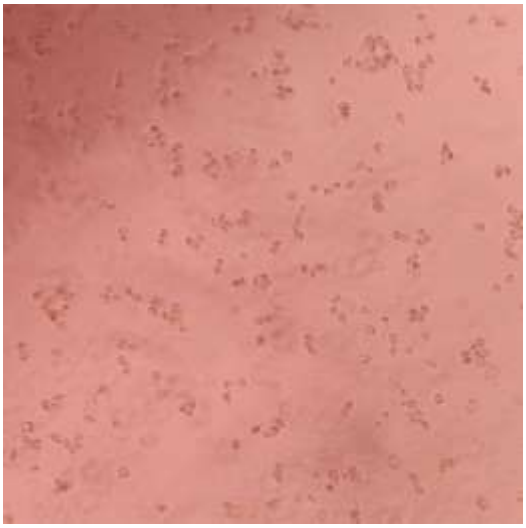
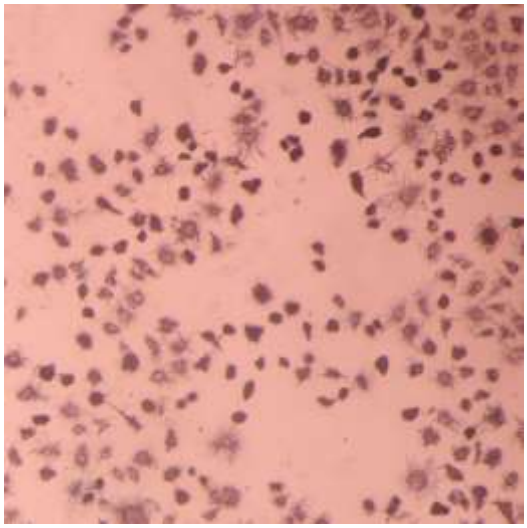
Doxorubicin 2 µg/ml sebelum MTT	Doxorubicin 2 µg/ml sebelum MTT
	

Doxorubicin 4 µg/ml sebelum MTT	Doxorubicin 4 µg/ml sebelum MTT
	

Doxorubicin 6 µg/ml sebelum MTT	Doxorubicin 6 µg/ml sebelum MTT
	

Doxorubicin 8 µg/ml sebelum MTT	Doxorubicin 8 µg/ml sebelum MTT
	

Doxorubicin 9 µg/ml sebelum MTT	Doxorubicin 9 µg/ml sebelum MTT
	

Kontrol sel sebelum MTT	Kontrol sel setelah MTT
	

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PROBIT Penghambatan OF Max WITH Konsentrasi
  /LOG 10
  /MODEL PROBIT
  /PRINT FREQ CI
  /CRITERIA P(0.15) ITERATE(20) STEPLIMIT(.1).
```

Probit Analysis

```
[DataSet0]
```

Data Information

		N of Cases
Valid		6
Rejected	Missing	0
	LOG Transform Cannot be Done	0
	Number of Responses > Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	11	Yes

Parameter Estimates

						95% Confidence Interval	
	Parameter	Estimate	Std. Error	Z	Sig.	Lower Bound	Upper Bound
PROBIT[a]	Konsentrasi	1.008	.155	6.487	.000	.704	1.313
	Intercept	-.332	.104	-3.192	.001	-.436	-.228

a. PROBIT model: PROBIT(p) = Intercept + BX (Covariates X are transformed using the base 10.000 logarithm.)

Chi-Square Tests

		Chi-Square	df[b]	Sig.
PROBIT	Pearson Goodness-of-Fit Test	1.097	4	.895[a]

a. Since the significance level is greater than .150, no heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	Konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	.954	100	76	73.582	2.208	.736
	2	.903	100	72	71.868	.532	.719
	3	.778	100	66	67.471	-1.021	.675
	4	.602	100	57	60.849	-3.969	.608
	5	.301	100	51	48.877	1.683	.489
	6	.000	100	37	37.006	.484	.370

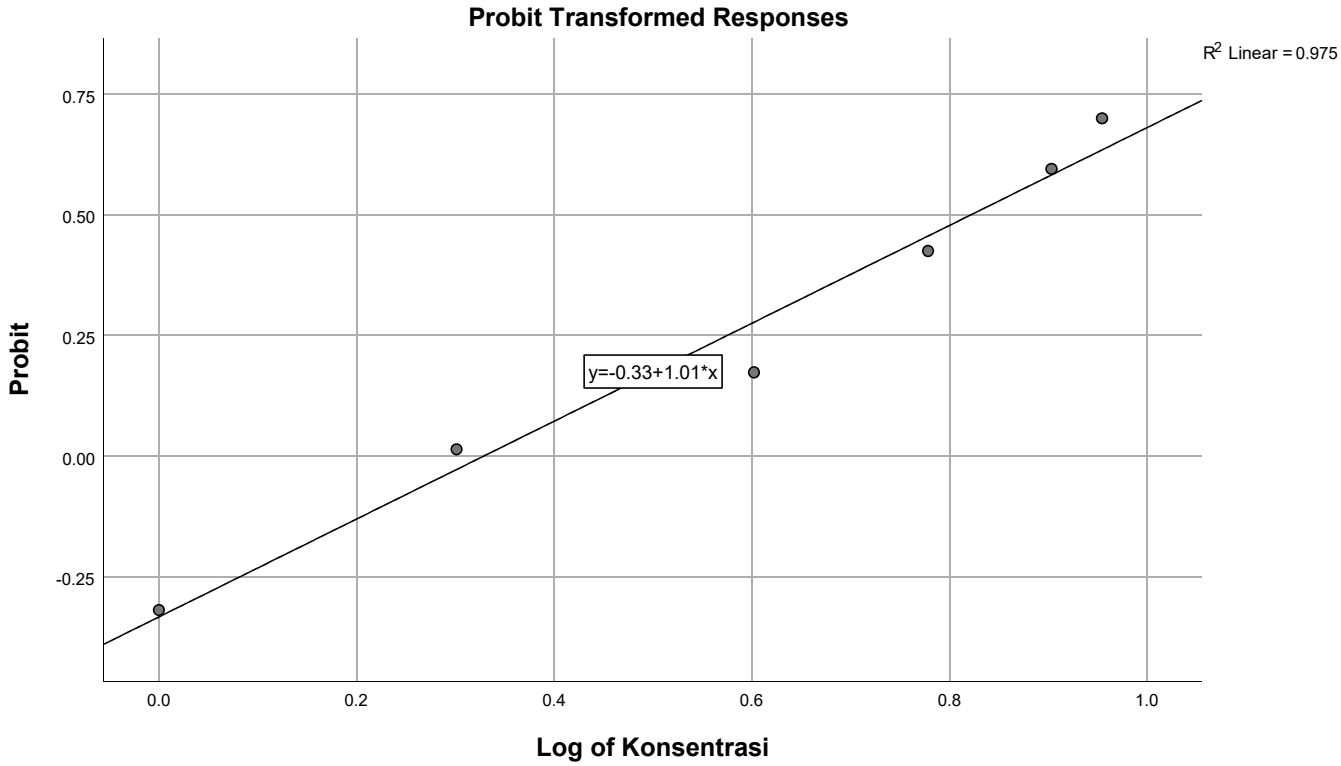
Confidence Limits

		95% Confidence Limits for Konsentrasi			95% Confidence Limits for log(Konsentrasi)[a]		
	Probability	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
PROBIT	.010	.011	.001	.042	-1.978	-3.091	-1.379
	.020	.020	.002	.068	-1.708	-2.704	-1.170
	.030	.029	.003	.092	-1.536	-2.459	-1.038
	.040	.039	.005	.115	-1.407	-2.274	-.938
	.050	.050	.008	.139	-1.302	-2.125	-.857
	.060	.061	.010	.163	-1.213	-1.997	-.788
	.070	.073	.013	.187	-1.135	-1.885	-.728
	.080	.086	.016	.212	-1.064	-1.785	-.673
	.090	.100	.020	.238	-1.001	-1.694	-.624
	.100	.114	.025	.264	-.942	-1.610	-.578
	.150	.200	.054	.408	-.699	-1.264	-.390
	.200	.312	.102	.577	-.506	-.990	-.239
	.250	.457	.176	.778	-.340	-.755	-.109
	.300	.644	.285	1.020	-.191	-.545	.009
	.350	.885	.445	1.315	-.053	-.352	.119
	.400	1.196	.676	1.680	.078	-.170	.225
	.450	1.601	1.007	2.143	.204	.003	.331
	.500	2.133	1.475	2.752	.329	.169	.440
	.550	2.842	2.119	3.602	.454	.326	.557
	.600	3.804	2.970	4.882	.580	.473	.689
	.650	5.141	4.053	6.945	.711	.608	.842
	.700	7.063	5.437	10.415	.849	.735	1.018
	.750	9.951	7.298	16.498	.998	.863	1.217
	.800	14.575	9.985	27.931	1.164	.999	1.446
	.850	22.741	14.256	52.078	1.357	1.154	1.717
	.900	39.802	22.156	114.858	1.600	1.346	2.060
	.910	45.564	24.629	139.133	1.659	1.391	2.143
	.920	52.772	27.624	171.391	1.722	1.441	2.234
	.930	62.021	31.331	215.603	1.793	1.496	2.334

Confidence Limits

Probability	95% Confidence Limits for Konsentrasi			95% Confidence Limits for log(Konsentrasi)[a]		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
.940	74.279	36.055	278.657	1.871	1.557	2.445
.950	91.243	42.306	373.464	1.960	1.626	2.572
.960	116.187	51.034	526.975	2.065	1.708	2.722
.970	156.382	64.248	804.972	2.194	1.808	2.906
.980	232.120	87.215	1414.365	2.366	1.941	3.151
.990	432.570	141.079	3441.120	2.636	2.149	3.537

a. Logarithm base = 10.

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PROBIT Penghambatan OF Max WITH Konsentrasi
  /LOG 10
  /MODEL PROBIT
  /PRINT FREQ CI
  /CRITERIA P(0.15) ITERATE(20) STEPLIMIT(.1).
```

Probit Analysis

Data Information

		N of Cases
Valid		6
Rejected	Missing	0
	LOG Transform Cannot be Done	0
	Number of Responses > Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	11	Yes

Parameter Estimates

						95% Confidence Interval	
	Parameter	Estimate	Std. Error	Z	Sig.	Lower Bound	Upper Bound
PROBIT[a]	Konsentrasi	2.961	.203	14.606	.000	2.564	3.358
	Intercept	-1.091	.119	-9.196	.000	-1.209	-.972

a. PROBIT model: PROBIT(p) = Intercept + BX (Covariates X are transformed using the base 10.000 logarithm.)

Chi-Square Tests

		Chi-Square	df[b]	Sig.
PROBIT	Pearson Goodness-of-Fit Test	23.195	4	.000[a]

a. Since the significance level is less than .150, a heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	Konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	.954	100	98	95.860	2.450	.959
	2	.903	100	99	94.332	4.488	.943
	3	.778	100	89	88.750	.600	.887
	4	.602	100	67	75.551	-8.771	.756
	5	.301	100	30	42.099	-11.949	.421
	6	.000	100	23	13.771	9.659	.138

Confidence Limits

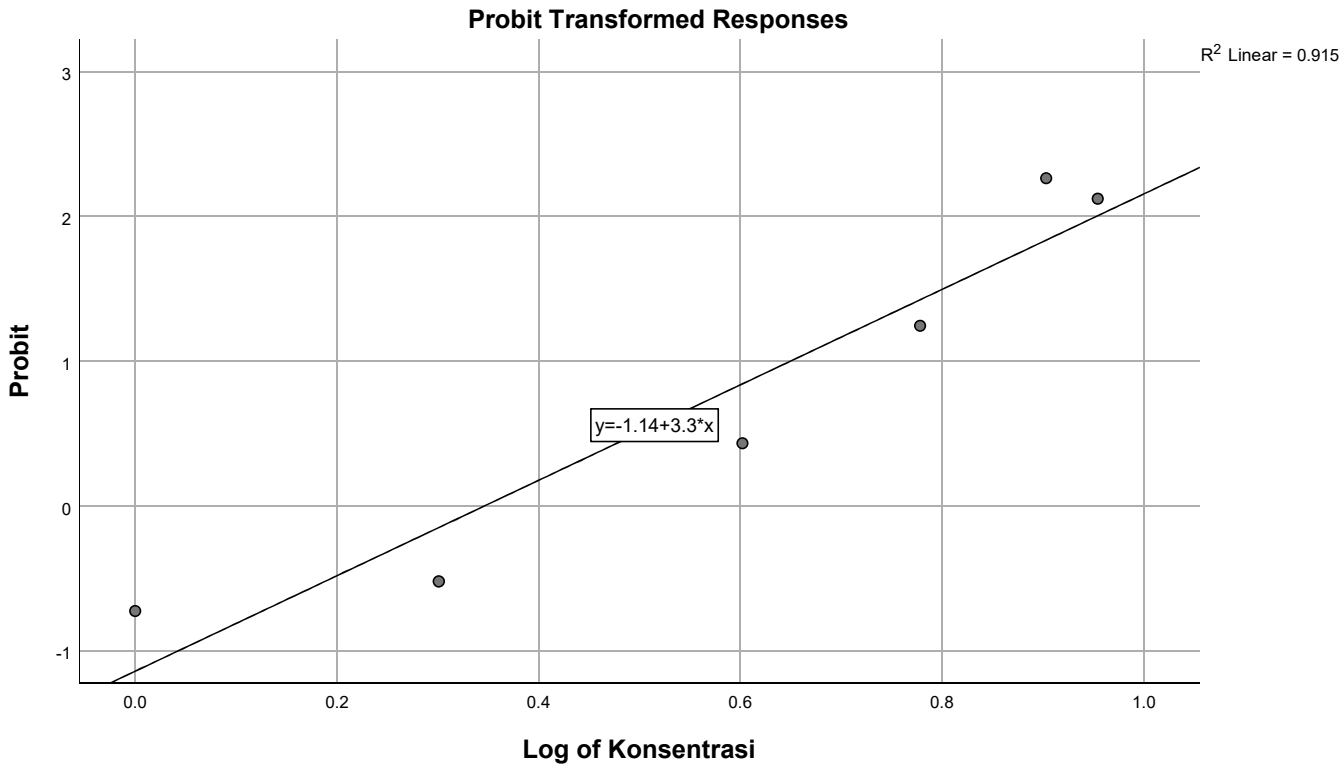
		95% Confidence Limits for Konsentrasi			95% Confidence Limits for log[b]...	
	Probability	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound
PROBIT[a]	.010	.383	.062	.781	-.417	-1.209
	.020	.473	.091	.909	-.325	-1.042
	.030	.541	.116	1.002	-.267	-.936
	.040	.599	.139	1.078	-.223	-.856
	.050	.650	.161	1.144	-.187	-.792
	.060	.697	.183	1.205	-.157	-.737
	.070	.741	.204	1.261	-.130	-.690
	.080	.783	.226	1.313	-.106	-.647
	.090	.823	.247	1.363	-.084	-.608
	.100	.862	.268	1.410	-.064	-.572
	.150	1.043	.375	1.630	.018	-.426
	.200	1.214	.489	1.834	.084	-.311
	.250	1.382	.612	2.036	.141	-.213
	.300	1.553	.747	2.243	.191	-.127
	.350	1.731	.894	2.462	.238	-.048
	.400	1.918	1.057	2.700	.283	.024
	.450	2.118	1.237	2.967	.326	.092
	.500	2.335	1.436	3.273	.368	.157
	.550	2.575	1.656	3.634	.411	.219
	.600	2.844	1.899	4.074	.454	.279
	.650	3.151	2.169	4.625	.499	.336
	.700	3.511	2.470	5.340	.545	.393
	.750	3.946	2.810	6.305	.596	.449
	.800	4.494	3.208	7.674	.653	.506
	.850	5.229	3.698	9.767	.718	.568
	.900	6.327	4.363	13.409	.801	.640
	.910	6.625	4.534	14.500	.821	.656
	.920	6.965	4.723	15.795	.843	.674
	.930	7.359	4.938	17.364	.867	.694
	.940	7.825	5.186	19.315	.893	.715
	.950	8.393	5.479	21.825	.924	.739
	.960	9.112	5.840	25.217	.960	.766
	.970	10.083	6.309	30.152	1.004	.800
	.980	11.534	6.981	38.298	1.062	.844
	.990	14.258	8.165	55.985	1.154	.912

Confidence Limits

		95% Confidence I
	Probability	Upper Bound
PROBIT[a]	.010	-.107
	.020	-.041
	.030	.001
	.040	.033
	.050	.059
	.060	.081
	.070	.101
	.080	.118
	.090	.134
	.100	.149
	.150	.212
	.200	.263
	.250	.309
	.300	.351
	.350	.391
	.400	.431
	.450	.472
	.500	.515
	.550	.560
	.600	.610
	.650	.665
	.700	.728
	.750	.800
	.800	.885
	.850	.990
	.900	1.127
	.910	1.161
	.920	1.199
	.930	1.240
	.940	1.286
	.950	1.339
	.960	1.402
	.970	1.479
	.980	1.583
	.990	1.748

a. A heterogeneity factor is used.

b. Logarithm base = 10.

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PROBIT Penghambatan OF Max WITH Konsentrasi
  /LOG 10
  /MODEL PROBIT
  /PRINT FREQ CI
  /CRITERIA P(0.15) ITERATE(20) STEPLIMIT(.1).
```

Probit Analysis

Data Information

		N of Cases
Valid		5
Rejected	Missing	0
	LOG Transform Cannot be Done	0
	Number of Responses > Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	10	Yes

Parameter Estimates

	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PROBIT[a]	Konsentrasi	2.828	.219	12.926	.000	2.399	3.257
	Intercept	-1.055	.120	-8.767	.000	-1.175	-.934

a. PROBIT model: PROBIT(p) = Intercept + BX (Covariates X are transformed using the base 10.000 logarithm.)

Chi-Square Tests

		Chi-Square	df[b]	Sig.
PROBIT	Pearson Goodness-of-Fit Test	20.040	3	.000[a]

a. Since the significance level is less than .150, a heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	Konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	.903	100	99	93.308	5.512	.933
	2	.778	100	89	87.407	1.943	.874
	3	.602	100	67	74.147	-7.367	.741
	4	.301	100	30	41.943	-11.793	.419
	5	.000	100	23	14.580	8.850	.146

Confidence Limits

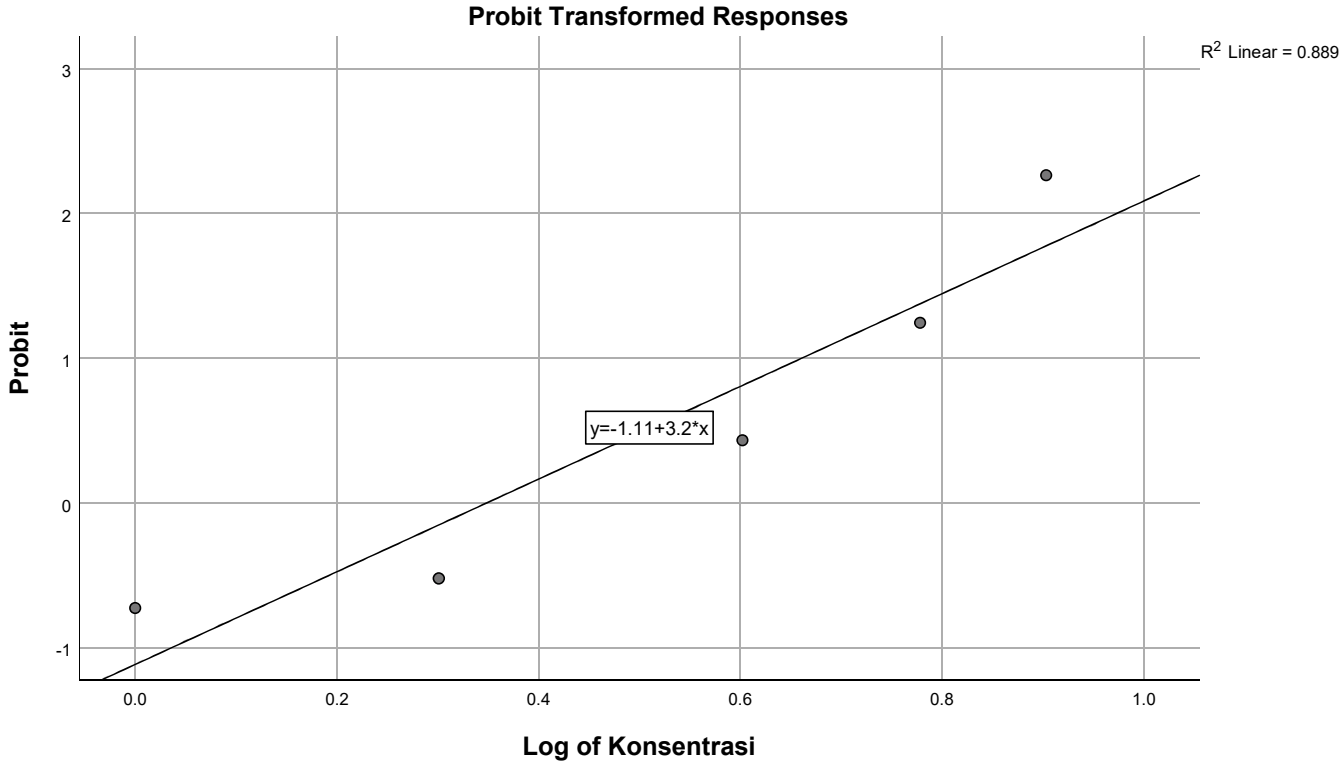
		95% Confidence Limits for Konsentrasi			95% Confidence Limits for log[b]...	
	Probability	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound
PROBIT[a]	.010	.355	.009	.861	-.450	-2.070
	.020	.443	.016	.995	-.353	-1.808
	.030	.510	.023	1.091	-.292	-1.643
	.040	.567	.030	1.171	-.246	-1.519
	.050	.618	.038	1.240	-.209	-1.418
	.060	.665	.046	1.303	-.177	-1.333
	.070	.710	.055	1.361	-.149	-1.258
	.080	.752	.064	1.416	-.124	-1.191
	.090	.792	.074	1.468	-.101	-1.130
	.100	.831	.084	1.518	-.080	-1.074
	.150	1.015	.143	1.751	.006	-.845
	.200	1.189	.216	1.972	.075	-.665
	.250	1.363	.307	2.196	.134	-.513
	.300	1.540	.417	2.434	.187	-.379
	.350	1.725	.551	2.698	.237	-.259
	.400	1.920	.711	3.001	.283	-.148
	.450	2.131	.899	3.365	.329	-.046
	.500	2.360	1.117	3.819	.373	.048
	.550	2.614	1.365	4.410	.417	.135
	.600	2.901	1.639	5.207	.463	.215
	.650	3.230	1.937	6.322	.509	.287
	.700	3.617	2.258	7.935	.558	.354
	.750	4.088	2.607	10.367	.611	.416
	.800	4.683	2.997	14.246	.671	.477
	.850	5.489	3.460	21.025	.739	.539
	.900	6.701	4.072	34.943	.826	.610
	.910	7.032	4.226	39.588	.847	.626
	.920	7.410	4.398	45.369	.870	.643
	.930	7.849	4.590	52.745	.895	.662
	.940	8.371	4.811	62.459	.923	.682
	.950	9.008	5.072	75.811	.955	.705
	.960	9.818	5.391	95.287	.992	.732
	.970	10.916	5.803	126.379	1.038	.764
	.980	12.567	6.389	184.282	1.099	.805
	.990	15.690	7.410	334.980	1.196	.870

Confidence Limits

		95% Confidence I
	Probability	Upper Bound
PROBIT[a]	.010	-.065
	.020	-.002
	.030	.038
	.040	.068
	.050	.093
	.060	.115
	.070	.134
	.080	.151
	.090	.167
	.100	.181
	.150	.243
	.200	.295
	.250	.342
	.300	.386
	.350	.431
	.400	.477
	.450	.527
	.500	.582
	.550	.644
	.600	.717
	.650	.801
	.700	.900
	.750	1.016
	.800	1.154
	.850	1.323
	.900	1.543
	.910	1.598
	.920	1.657
	.930	1.722
	.940	1.796
	.950	1.880
	.960	1.979
	.970	2.102
	.980	2.265
	.990	2.525

a. A heterogeneity factor is used.

b. Logarithm base = 10.


Probit Transformed Responses
R2 Linear = 0.889
Probit
3
2
1
0
-1
y=-1.11+3.2*x
0.0
0.2
0.4
0.6
0.8
1.0
Log of Konsentrasi

Lampiran 2. Hasil uji ELISA

1. Kadar p53

Standar (ng/mL)	OD	OD-blank
Blangko	0.1211	-
0.781	0.2418	0.1207
1.562	0.4029	0.2818
3.125	0.5627	0.4416
6.25	0.7427	0.6216
12.5	1.2643	1.1432
25	1.6325	1.5114
50	2.3458	2.2247

Sampel	OD		OD - blanko		Konsentrasi (ng/mL)		Rata-rata (ng/mL)
	1	2	1	2	1	2	
Mel IC_{50}	0.7384	0.7294	0.6173	0.6083	5.20	5.09	5.14
	0.8375	0.8472	0.7164	0.7261	6.56	6.71	6.64
	0.7845	0.7837	0.6634	0.6626	5.82	5.80	5.81
Mel IC_{25}	0.6384	0.6283	0.5173	0.5072	3.99	3.87	3.93
	0.6734	0.6745	0.5523	0.5534	4.39	4.41	4.40
	0.7450	0.7384	0.6239	0.6173	5.29	5.20	5.24
Mel IC_{10}	0.3740	0.3748	0.2529	0.2537	1.54	1.54	1.54
	0.4860	0.4857	0.3649	0.3646	2.44	2.44	2.44
	0.4855	0.4833	0.3644	0.3622	2.44	2.42	2.43
Dox IC_{50}	0.6374	0.6374	0.5163	0.5163	3.97	3.97	3.97
	0.4851	0.4958	0.3640	0.3747	2.43	2.53	2.48
	0.6047	0.5847	0.4836	0.4636	3.61	3.40	3.51
Dox IC_{25}	0.5374	0.5483	0.4163	0.4272	2.92	3.03	2.97
	0.5311	0.5283	0.4100	0.4072	2.86	2.83	2.85
	0.4758	0.4756	0.3547	0.3545	2.35	2.35	2.35
Dox IC_{10}	0.3748	0.3744	0.2537	0.2533	1.54	1.54	1.54
	0.3271	0.3333	0.2060	0.2122	1.22	1.26	1.24
	0.3266	0.3274	0.2055	0.2063	1.22	1.22	1.22
Kontrol sel	0.1394	0.1633	0.0183	0.0422	0.30	0.38	0.34
	0.1749	0.1736	0.0538	0.0525	0.43	0.42	0.42
	0.1453	0.1453	0.0242	0.0242	0.32	0.32	0.32

Lampiran Hasil Uji ELISA

2. Kadar 8-OHdG

Standar (ng/mL)	OD
64	0.9196
32	0.5757
16	0.3218
8	0.1545
4	0.0704
Blanko	0

Sampel	OD		Konsentrasi (ng/mL)		Rata-rata (ng/mL)
	1	2	1	2	
Mel IC_{10}	0.4951	0.6413	26.39	36.84	31.62
	0.5121	0.7426	27.51	45.41	36.46
	0.5157	0.7940	27.75	50.27	39.01
Mel IC_{25}	0.6031	0.7618	33.92	47.18	40.55
	0.6220	0.7791	35.34	48.82	42.08
	0.6281	0.7195	35.81	43.34	39.58
Mel IC_{50}	0.6891	0.7697	40.73	47.92	44.33
	0.6965	0.7158	41.35	43.02	42.18
	0.6976	0.6519	41.45	37.68	39.56
Dox IC_{10}	0.5249	0.5271	28.37	28.51	28.44
	0.5424	0.7712	29.56	48.07	38.81
	0.5822	0.5229	32.38	28.23	30.30
Dox IC_{25}	0.7023	0.6933	41.85	41.08	41.46
	0.7636	0.7509	47.35	46.17	46.76
	0.7899	0.6893	49.87	40.74	45.31
Dox IC_{50}	0.7899	0.6706	49.87	39.19	44.53
	0.8094	0.7074	51.81	42.29	47.05
	0.8155	0.8512	52.43	56.18	54.30
Kontrol sel	0.3142	0.2736	15.75	13.63	14.69
	0.3253	0.3524	16.35	17.83	17.09
	0.3645	0.3263	18.50	16.40	17.45

Lampiran 3. Uji statistik p53 dan 8-OHdG
Explore
Kelompok

Tests of Normality

	Kelompok	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Kadar P53	Kontrol	.314	3	.	.893	3	.363
	Mellitin IC_{10}	.195	3	.	.996	3	.883
	Mellitin IC_{25}	.240	3	.	.974	3	.691
	Mellitin IC_{50}	.382	3	.	.758	3	.018
	Doxorubicin IC_{10}	.265	3	.	.953	3	.585
	Doxorubicin IC_{25}	.317	3	.	.889	3	.350
	Doxorubicin IC_{50}	.365	3	.	.797	3	.107
Kadar 8-OHDG	Kontrol	.341	3	.	.846	3	.230
	Mellitin IC_{10}	.247	3	.	.969	3	.662
	Mellitin IC_{25}	.226	3	.	.984	3	.754
	Mellitin IC_{50}	.193	3	.	.997	3	.891
	Doxorubicin IC_{10}	.322	3	.	.879	3	.323
	Doxorubicin IC_{25}	.282	3	.	.936	3	.512
	Doxorubicin IC_{50}	.289	3	.	.928	3	.479

a. Lilliefors Significance Correction

Means

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Kadar p53 * Kelompok	21	100.0%	0	0.0%	21	100.0%
Kadar 8-OHdG * Kelompok	21	100.0%	0	0.0%	21	100.0%

Report

Kelompok		Kadar P53	Kadar 8-OHDG
Kontrol	Mean	.3600	16.4100
	N	3	3
	Std. Deviation	.05292	1.50040
	Median	.3400	17.0900
	Minimum	.32	14.69
	Maximum	.42	17.45
Mellitin IC_{10}	Mean	5.8633	35.6967
	N	3	3
	Std. Deviation	.75142	3.75367
	Median	5.8100	36.4600
	Minimum	5.14	31.62
	Maximum	6.64	39.01

Mellitin IC_{25}	Mean	4.5233	40.7367
	N	3	3
	Std. Deviation	.66365	1.26041
	Median	4.4000	40.5500
	Minimum	3.93	39.58
	Maximum	5.24	42.08
Mellitin IC_{50}	Mean	2.1367	42.0233
	N	3	3
	Std. Deviation	.51675	2.38886
	Median	2.4300	42.1800
	Minimum	1.54	39.56
	Maximum	2.44	44.33
Doxorubicin IC_{10}	Mean	3.3200	32.5167
	N	3	3
	Std. Deviation	.76295	5.52896
	Median	3.5100	30.3000
	Minimum	2.48	28.44
	Maximum	3.97	38.81
Doxorubicin IC_{25}	Mean	2.7233	44.5100
	N	3	3
	Std. Deviation	.32884	2.73907
	Median	2.8500	45.3100
	Minimum	2.35	41.46
	Maximum	2.97	46.76
Doxorubicin IC_{50}	Mean	1.3333	48.6267
	N	3	3
	Std. Deviation	.17926	5.07224
	Median	1.2400	47.0500
	Minimum	1.22	44.53
	Maximum	1.54	54.30
Total	Mean	2.8943	37.2171
	N	21	21
	Std. Deviation	1.83484	10.49631
	Median	2.4800	39.5800
	Minimum	.32	14.69
	Maximum	6.64	54.30

Oneway

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Kadar p53	Between Groups	63.338	6	10.556	36.998	.000
	Within Groups	3.995	14	.285		
	Total	67.333	20			
Kadar 8-OHdG	Between Groups	2028.579	6	338.097	27.067	.000
	Within Groups	174.872	14	12.491		
	Total	2203.451	20			

Post Hoc Tests

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Kadar p53	Kontrol	Mellitin IC_{10}	-5.50333*	.43614	.000	-6.9926	-4.0141
		Mellitin IC_{25}	-4.16333*	.43614	.000	-5.6526	-2.6741
		Mellitin IC_{50}	-1.77667*	.43614	.015	-3.2659	-.2874
		Doxorubicin IC_{10}	-2.96000*	.43614	.000	-4.4492	-1.4708
		Doxorubicin IC_{25}	-2.36333*	.43614	.001	-3.8526	-.8741
		Doxorubicin IC_{50}	-.97333	.43614	.339	-2.4626	.5159
	Mellitin IC_{10}	Kontrol	5.50333*	.43614	.000	4.0141	6.9926
		Mellitin IC_{25}	1.34000	.43614	.091	-.1492	2.8292
		Mellitin IC_{50}	3.72667*	.43614	.000	2.2374	5.2159
		Doxorubicin IC_{10}	2.54333*	.43614	.001	1.0541	4.0326
		Doxorubicin IC_{25}	3.14000*	.43614	.000	1.6508	4.6292
		Doxorubicin IC_{50}	4.53000*	.43614	.000	3.0408	6.0192
	Mellitin IC_{25}	Kontrol	4.16333*	.43614	.000	2.6741	5.6526
		Mellitin IC_{10}	-1.34000	.43614	.091	-2.8292	.1492
		Mellitin IC_{50}	2.38667*	.43614	.001	.8974	3.8759
		Doxorubicin IC_{10}	1.20333	.43614	.154	-.2859	2.6926
		Doxorubicin IC_{25}	1.80000*	.43614	.014	.3108	3.2892
		Doxorubicin IC_{50}	3.19000*	.43614	.000	1.7008	4.6792
	Mellitin IC_{50}	Kontrol	1.77667*	.43614	.015	.2874	3.2659
		Mellitin IC_{10}	-3.72667*	.43614	.000	-5.2159	-2.2374
		Mellitin IC_{25}	-2.38667*	.43614	.001	-3.8759	-.8974
		Doxorubicin IC_{10}	-1.18333	.43614	.165	-2.6726	.3059
		Doxorubicin IC_{25}	-.58667	.43614	.820	-2.0759	.9026
		Doxorubicin IC_{50}	.80333	.43614	.544	-.6859	2.2926

	Doxorubicin IC_{10}	Kontrol	2.96000*	.43614	.000	1.4708	4.4492
		Mellitin IC_{10}	-2.54333*	.43614	.001	-4.0326	-1.0541
		Mellitin IC_{25}	-1.20333	.43614	.154	-2.6926	.2859
		Mellitin IC_{50}	1.18333	.43614	.165	-.3059	2.6726
		Doxorubicin IC_{25}	.59667	.43614	.809	-.8926	2.0859
		Doxorubicin IC_{50}	1.98667*	.43614	.006	.4974	3.4759
	Doxorubicin IC_{25}	Kontrol	2.36333*	.43614	.001	.8741	3.8526
		Mellitin IC_{10}	-3.14000*	.43614	.000	-4.6292	-1.6508
		Mellitin IC_{25}	-1.80000*	.43614	.014	-3.2892	-.3108
		Mellitin IC_{50}	.58667	.43614	.820	-.9026	2.0759
		Doxorubicin IC_{10}	-.59667	.43614	.809	-2.0859	.8926
		Doxorubicin IC_{50}	1.39000	.43614	.075	-.0992	2.8792
	Doxorubicin IC_{50}	Kontrol	.97333	.43614	.339	-.5159	2.4626
		Mellitin IC_{10}	-4.53000*	.43614	.000	-6.0192	-3.0408
		Mellitin IC_{25}	-3.19000*	.43614	.000	-4.6792	-1.7008
		Mellitin IC_{50}	-.80333	.43614	.544	-2.2926	.6859
		Doxorubicin IC_{10}	-1.98667*	.43614	.006	-3.4759	-.4974
		Doxorubicin IC_{25}	-1.39000	.43614	.075	-2.8792	.0992
Kadar 8-OHdG	Kontrol	Mellitin IC_{10}	-19.28667*	2.88570	.000	-29.1401	-9.4332
		Mellitin IC_{25}	-24.32667*	2.88570	.000	-34.1801	-14.4732
		Mellitin IC_{50}	-25.61333*	2.88570	.000	-35.4668	-15.7599
		Doxorubicin IC_{10}	-16.10667*	2.88570	.001	-25.9601	-6.2532
		Doxorubicin IC_{25}	-28.10000*	2.88570	.000	-37.9535	-18.2465
		Doxorubicin IC_{50}	-32.21667*	2.88570	.000	-42.0701	-22.3632
	Mellitin IC_{10}	Kontrol	19.28667*	2.88570	.000	9.4332	29.1401
		Mellitin IC_{25}	-5.04000	2.88570	.600	-14.8935	4.8135
		Mellitin IC_{50}	-6.32667	2.88570	.357	-16.1801	3.5268
		Doxorubicin IC_{10}	3.18000	2.88570	.917	-6.6735	13.0335
		Doxorubicin IC_{25}	-8.81333	2.88570	.094	-18.6668	1.0401
		Doxorubicin IC_{50}	-12.93000*	2.88570	.007	-22.7835	-3.0765
	Mellitin IC_{25}	Kontrol	24.32667*	2.88570	.000	14.4732	34.1801
		Mellitin IC_{10}	5.04000	2.88570	.600	-4.8135	14.8935
		Mellitin IC_{50}	-1.28667	2.88570	.999	-11.1401	8.5668
		Doxorubicin IC_{10}	8.22000	2.88570	.133	-1.6335	18.0735
		Doxorubicin IC_{25}	-3.77333	2.88570	.838	-13.6268	6.0801
		Doxorubicin IC_{50}	-7.89000	2.88570	.160	-17.7435	1.9635
	Mellitin IC_{50}	Kontrol	25.61333*	2.88570	.000	15.7599	35.4668
		Mellitin IC_{10}	6.32667	2.88570	.357	-3.5268	16.1801
		Mellitin IC_{25}	1.28667	2.88570	.999	-8.5668	11.1401
		Doxorubicin IC_{10}	9.50667	2.88570	.062	-.3468	19.3601
		Doxorubicin IC_{25}	-2.48667	2.88570	.973	-12.3401	7.3668
		Doxorubicin IC_{50}	-6.60333	2.88570	.313	-16.4568	3.2501

	Doxorubicin IC_{10}	Kontrol	16.10667*	2.88570	.001	6.2532	25.9601
		Mellitin IC_{10}	-3.18000	2.88570	.917	-13.0335	6.6735
		Mellitin IC_{25}	-8.22000	2.88570	.133	-18.0735	1.6335
		Mellitin IC_{50}	-9.50667	2.88570	.062	-19.3601	.3468
		Doxorubicin IC_{25}	-11.99333*	2.88570	.013	-21.8468	-2.1399
		Doxorubicin IC_{50}	-16.11000*	2.88570	.001	-25.9635	-6.2565
	Doxorubicin IC_{25}	Kontrol	28.10000*	2.88570	.000	18.2465	37.9535
		Mellitin IC_{10}	8.81333	2.88570	.094	-1.0401	18.6668
		Mellitin IC_{25}	3.77333	2.88570	.838	-6.0801	13.6268
		Mellitin IC_{50}	2.48667	2.88570	.973	-7.3668	12.3401
		Doxorubicin IC_{10}	11.99333*	2.88570	.013	2.1399	21.8468
		Doxorubicin IC_{50}	-4.11667	2.88570	.780	-13.9701	5.7368
	Doxorubicin IC_{50}	Kontrol	32.21667*	2.88570	.000	22.3632	42.0701
		Mellitin IC_{10}	12.93000*	2.88570	.007	3.0765	22.7835
		Mellitin IC_{25}	7.89000	2.88570	.160	-1.9635	17.7435
		Mellitin IC_{50}	6.60333	2.88570	.313	-3.2501	16.4568
		Doxorubicin IC_{10}	16.11000*	2.88570	.001	6.2565	25.9635
		Doxorubicin IC_{25}	4.11667	2.88570	.780	-5.7368	13.9701

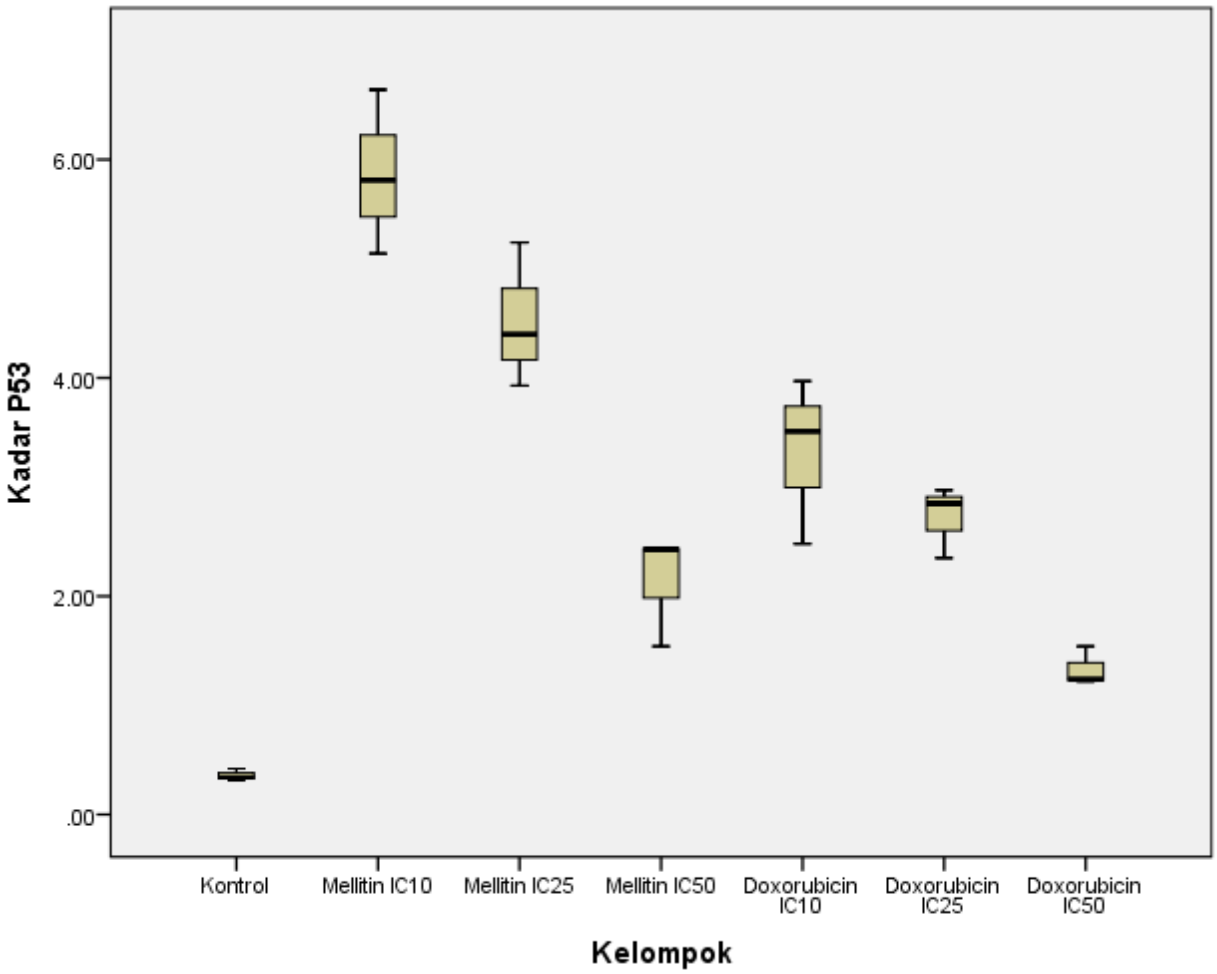
*. The mean difference is significant at the 0.05 level.

Correlations

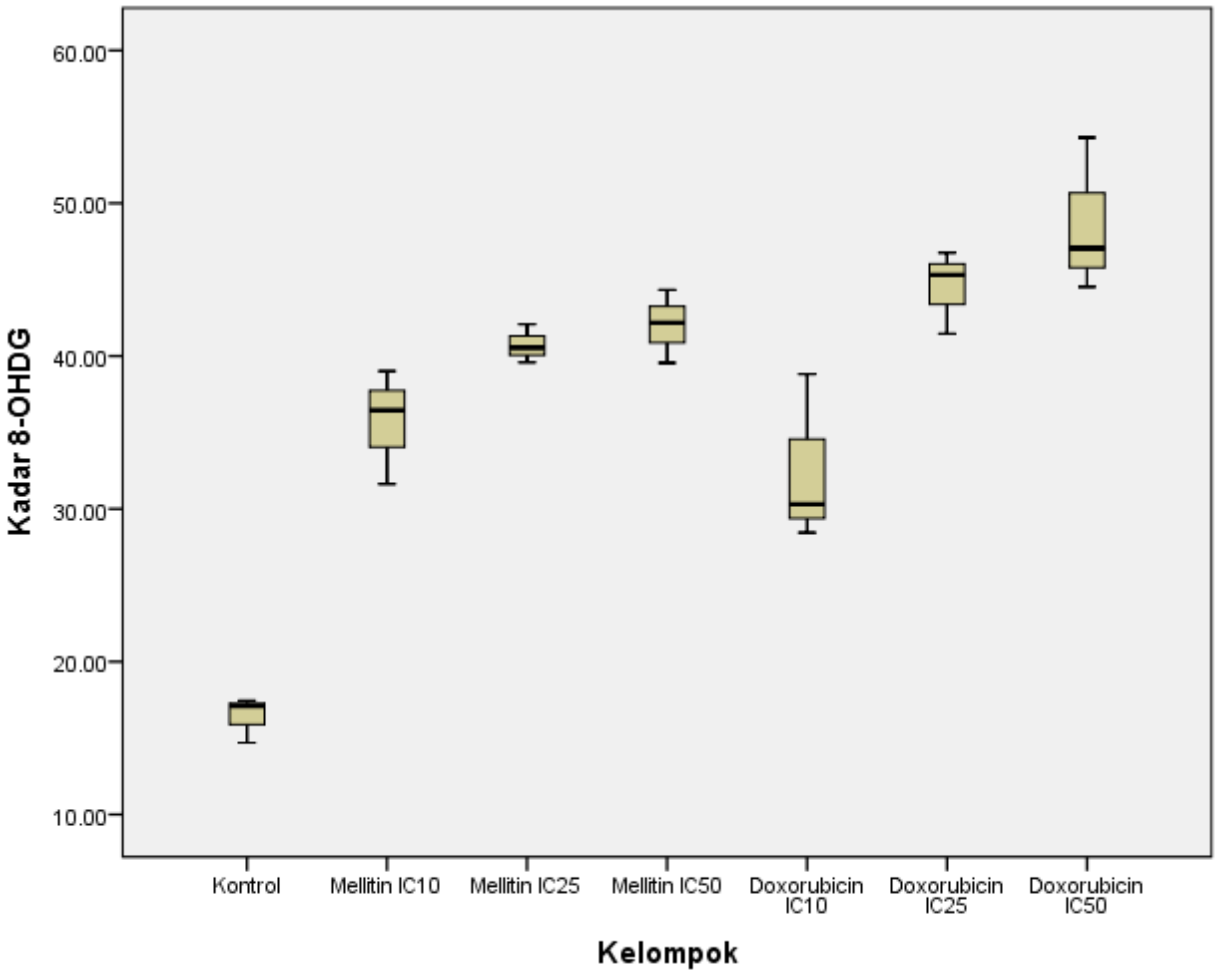
Correlations

		Kadar p53	Kadar 8-OHdG
Kadar p53	Pearson Correlation	1	.202
	Sig. (2-tailed)		.380
	N	21	21
Kadar 8-OHdG	Pearson Correlation	.202	1
	Sig. (2-tailed)	.380	
	N	21	21

Explore
Kadar p53



Explore
Kadar 8-OHDG



CURICULUM VITAE

A. Data Umum

1. Nama : Makkasau
2. Tempat, tgl, lahir : Soppeng, 19 Juli 1982
3. Alamat : Perumahan Graha Filiah Blok C.1 Mks
4. Kewarganegaraan : Warga Negara Indonesia

B. Riwayat Pendidikan

1. Tamat Sekolah Dasar Tahun 1993 di SDN 165 Asanae (Soppeng)
2. Tamat SLTP tahun 1996 di SMPN 2 Takalala (Soppeng)
3. Tamat SLTA tahun 1999 di SMAN 2 Watan Soppeng
4. Diploma (D3) tahun 2002 di Akper Panakkukang
5. Sarjana (S1) Keperawatan tahun 2005 di Universitas Hasanuddin
6. Profesi (Ners) tahun 2006 di Universitas Hasanuddin
7. Magister (S2) tahun 2008 Biomedik Farmakologi di Universitas Hasanuddin
8. Magister (S2) tahun 2014 Biomedik Emergency and Disaster Management di Universitas Hasanuddin
9. Doktor (S3) tahun 2016 Ilmu Kedokteran di Universitas Hasanuddin
10. Magister (S2) tahun 2022 Biomedik Biokimia dan Biologi Molekuler di Universitas Hasanuddin

C. Riwayat Pekerjaan

1. Jenis pekerjaan: Dosen
2. NIK : 093.152.02.03.021
3. Pangkat/Jabatan: Penata Tingkat I, golongan ruang III/d.

D. Karya ilmiah yang telah dipublikasikan pada jurnal

1. Plasay M et al. 2016. Selective cytotoxicity Assay in anticancer drug of Melittin Isolated from Bee Venom (*Apis cerana indica*) to several human cell lines: HeLa, WiDr and Vero. Journal of Chemical and Pharmaceutical Sciences. 9(4): 0974-2115.
2. Plasay M et al. 2016. Effect of melittin isolated from bee venom (Apis cerana indica) on antiproliferatif in human cancer cerviks HeLa Cells through activation of caspase-3 and p53 protein. Journal of Chemical and Pharmaceutical Research. 8(8): 1078-1080.
3. Plasay M et al. 2016. Relationship Beetwen Medical Emergency Management Time and Late Death of Major Traumatic Patients. JST Kesehatan. 6(2): 193-200.
4. Plasay M et al. 2022. Effect of Meliitin from Bee Venom (Apis mellifera) on p53 and 8-OHdG protein levels in Breast Cancer Cell Culture (MCF-7). Biomedical and Pharmacology. 15(2): 979-983; doi: https://dx.doi.org/10.13005/bpj/2433

E. Makalah pada Seminar/Konfrensi Ilmiah Nasional dan Iternasional

Plasay M et al. 2008. Uji Aktivitas Anti Mikobakterium Tuberkulosis dari Racun Lebah (Apis cerana indica). Makalah Bebas Oral PIB XVI & Reuni Alumni FK-UH. 28 Nov 2008. Makassar, Indonesia.