

DAFTAR PUSTAKA

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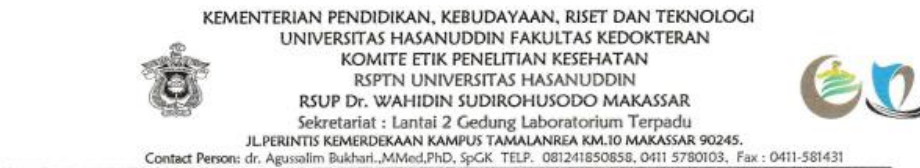
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LAMPIRAN

Lampiran 1. Rekomendasi Persetujuan Etik dari Komisi Etik Penelitian Kesehatan Fakultas Kedokteran Universitas Hasanuddin



REKOMENDASI PERSETUJUAN ETIK

Nomor : 620/UN4.6.4.5.31/ PP36/ 2021

Tanggal: 27 September 2021

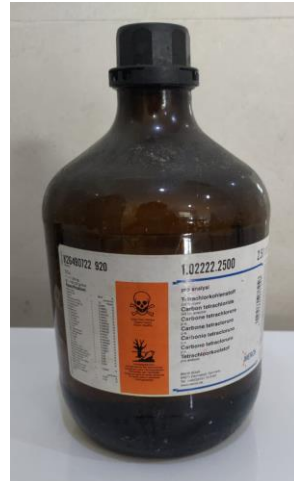
Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH21080531	No Sponsor	
Peneliti Utama	dr. Farid Amansyah, SpPD	Protokol	
Judul Peneliti	PERAN SECROTOME MESENCHYMAL STEM CELLS HYPOXIA DALAM MEMPERBAIKI FIBROSIS HATI (STUDI EKSPERIMEN ANALISIS TERHADAP IL-4, IL-13, IL-10, TGF-BETA, DAN SMA-SEL STELLA PADA HATI TIKUS FIBROSIS YANG DIINDUKSI CCL4)		
No Versi Protokol	1	Tanggal Versi	27 Agustus 2021
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Laboratorium Stem Cell and Cancer (SCCR), Fakultas Kedokteran Universitas Islam Sultan Agung, Semarang.		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 27 September 2021 sampai 27 September 2022	Frekuensi review lanjutan
Ketua KEPK FKUH RSUH dan RSWs	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan 	
Sekretaris KEPK FKUH RSUH dan RSWs	Nama dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)	Tanda tangan 	

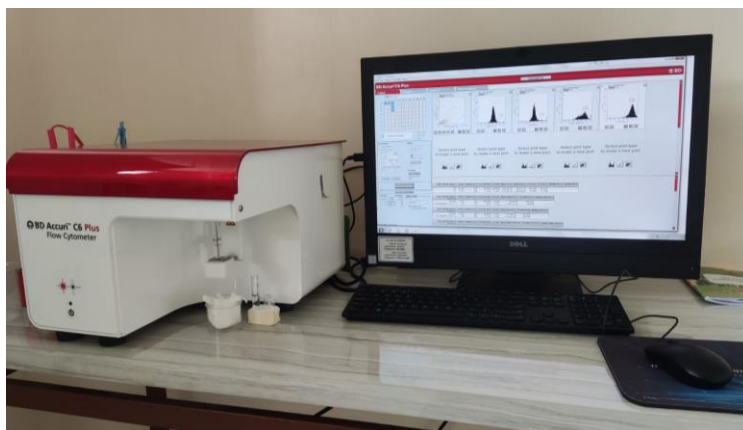
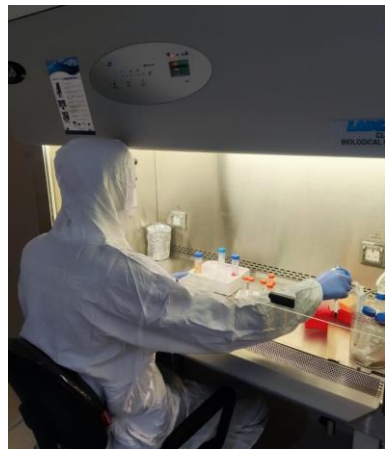
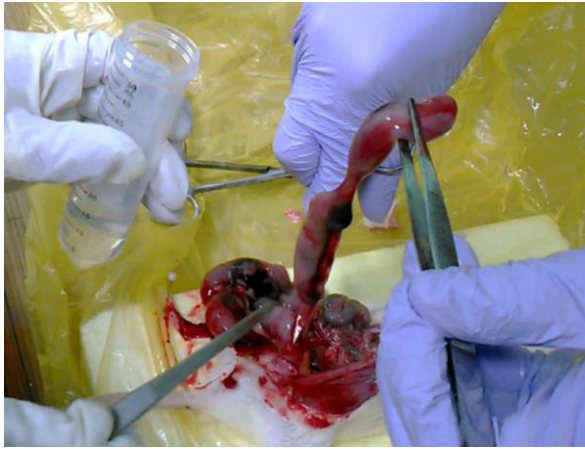
Kewajiban Peneliti Utama:

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

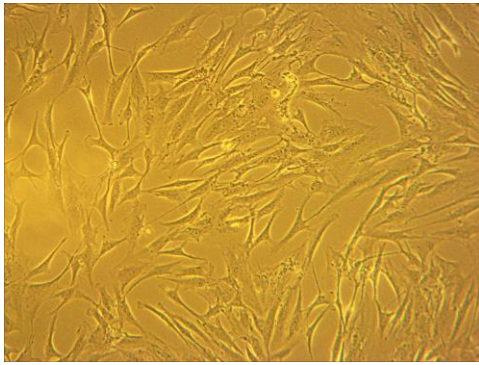
Lampiran 2. Dokumentasi Injeksi CCl₄ dan Olive Oil



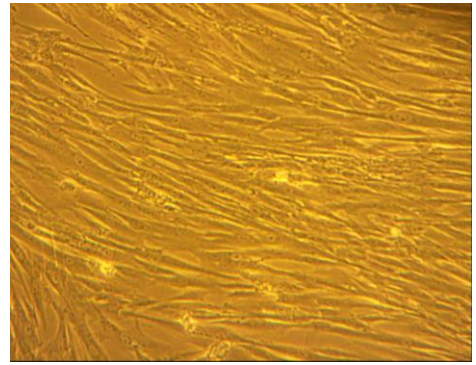
Lampiran 3. Dokumentasi Isolasi dan karakterisasi MSCs



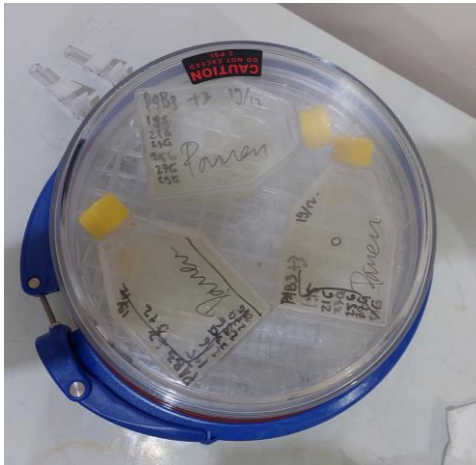
Lampiran 4. Dokumentasi Hypoxia MSCs dan Pembuatan Secretome



Before hypoxia (confluency 80%)



Post 24h hypoxia



PO

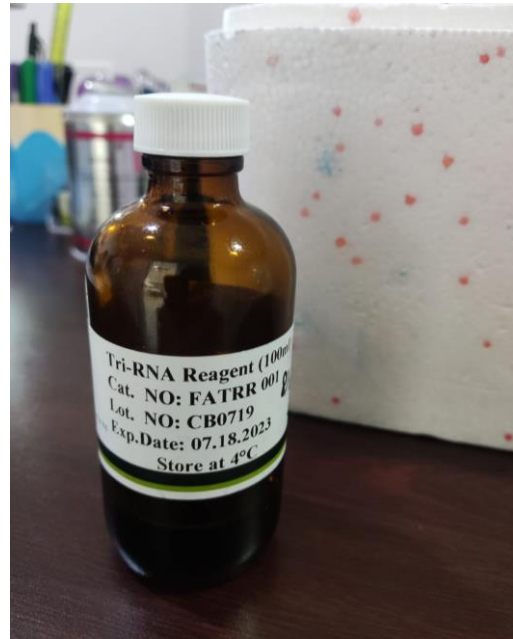
Lampiran 5. Dokumentasi Injeksi Secretome, Pengambilan Sample Serum dan Organ Hepar



Lampiran 6. Dokumentasi Staining Sirius Red



Lampiran 7. Isolasi RNA – cDNA Synthesis



Lampiran 8. Hasil Analisis SPSS

Data descriptive

		Descriptives							
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
IL4	Sham	6	1.0000	.00000	.00000	1.0000	1.0000	1.00	1.00
	Control	6	.3580	.18119	.07397	.1679	.5482	.19	.68
	Normoxia	6	.5060	.18728	.07646	.3095	.7026	.29	.82
	Hypoxia	6	.8673	.32959	.13455	.5215	1.2132	.51	1.42
	Total	24	.6829	.33041	.06745	.5433	.8224	.19	1.42
IL13	Sham	6	1.0000	.00000	.00000	1.0000	1.0000	1.00	1.00
	Control	6	.1669	.03921	.01601	.1258	.2081	.13	.24
	Normoxia	6	.4082	.23920	.09765	.1572	.6593	.15	.73
	Hypoxia	6	1.3642	.25849	.10553	1.0929	1.6355	.97	1.70
	Total	24	.7348	.51081	.10427	.5192	.9505	.13	1.70
IL10	Sham	6	1.0000	.00000	.00000	1.0000	1.0000	1.00	1.00
	Control	6	.0661	.04220	.01723	.0218	.1103	.02	.12
	Normoxia	6	.1160	.04550	.01857	.0682	.1637	.06	.16
	Hypoxia	6	1.5898	.67888	.27715	.8773	2.3022	.63	2.36
	Total	24	.6929	.72443	.14787	.3870	.9988	.02	2.36
TGFbeta	Sham	6	1.0000	.00000	.00000	1.0000	1.0000	1.00	1.00
	Control	6	.0472	.02110	.00861	.0251	.0694	.03	.08
	Normoxia	6	.2686	.11231	.04585	.1507	.3864	.14	.41
	Hypoxia	6	.7520	.40187	.16406	.3303	1.1738	.00	1.14
	Total	24	.5170	.43231	.08824	.3344	.6995	.00	1.14
Sirius_red	Sham	6	1.3665	.72977	.29793	.6007	2.1323	.68	2.68
	Control	6	17.4655	2.37890	.97118	14.9690	19.9620	15.24	20.40
	Normoxia	6	8.4599	.87019	.35525	7.5467	9.3731	7.14	9.22
	Hypoxia	6	4.0962	.95874	.39140	3.0900	5.1023	2.36	5.29
	Total	24	7.8470	6.36936	1.30014	5.1575	10.5366	.68	20.40
Alpha_SMA	Sham	6	2.4207	1.00964	.41219	1.3611	3.4802	1.21	4.03
	Control	6	15.5487	1.92602	.78629	13.5274	17.5699	12.69	17.96
	Normoxia	6	10.0719	1.28739	.52558	8.7209	11.4230	8.77	12.01
	Hypoxia	6	6.0183	.56376	.23015	5.4267	6.6100	5.50	7.01
	Total	24	8.5149	5.12939	1.04703	6.3489	10.6808	1.21	17.96

Data Uji Normalitas - Saphiro Wilk

Tests of Normality^{b,c,d,e}

Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
IL4	Control	.220	6	.200 [*]	.880	6	.270
	Normoxia	.168	6	.200 [*]	.961	6	.825
	Hypoxia	.280	6	.153	.906	6	.414
IL13	Control	.243	6	.200 [*]	.865	6	.206
	Normoxia	.220	6	.200 [*]	.897	6	.356
	Hypoxia	.195	6	.200 [*]	.955	6	.777
IL10	Control	.216	6	.200 [*]	.885	6	.295
	Normoxia	.236	6	.200 [*]	.856	6	.177
	Hypoxia	.156	6	.200 [*]	.946	6	.709
TGFbeta	Control	.278	6	.161	.862	6	.197
	Normoxia	.166	6	.200 [*]	.938	6	.646
	Hypoxia	.255	6	.200 [*]	.859	6	.185
Sirius_red	Sham	.322	6	.051	.842	6	.135
	Control	.282	6	.147	.827	6	.100
	Normoxia	.287	6	.134	.856	6	.176
	Hypoxia	.325	6	.047	.870	6	.225
Alpha_SMA	Sham	.183	6	.200 [*]	.966	6	.868
	Control	.209	6	.200 [*]	.964	6	.847
	Normoxia	.228	6	.200 [*]	.892	6	.330
	Hypoxia	.196	6	.200 [*]	.889	6	.314

P>0.05 terdistribusi normal

Data Uji Homogenitas - Levene

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
IL4	Based on Mean	5.099	3	20	.009
	Based on Median	2.328	3	20	.105
	Based on Median and with adjusted df	2.328	3	8.909	.144
	Based on trimmed mean	4.735	3	20	.012
IL13	Based on Mean	6.553	3	20	.003
	Based on Median	4.646	3	20	.013
	Based on Median and with adjusted df	4.646	3	10.099	.027
	Based on trimmed mean	6.545	3	20	.003
IL10	Based on Mean	12.416	3	20	.000
	Based on Median	11.334	3	20	.000
	Based on Median and with adjusted df	11.334	3	5.102	.011
	Based on trimmed mean	12.405	3	20	.000
TGFbeta	Based on Mean	6.372	3	20	.003
	Based on Median	5.553	3	20	.006
	Based on Median and with adjusted df	5.553	3	7.325	.027
	Based on trimmed mean	6.346	3	20	.003
Sirius_red	Based on Mean	8.144	3	20	.001
	Based on Median	5.500	3	20	.006
	Based on Median and with adjusted df	5.500	3	14.041	.010
	Based on trimmed mean	8.050	3	20	.001
Alpha_SMA	Based on Mean	3.780	3	20	.027
	Based on Median	2.721	3	20	.072
	Based on Median and with adjusted df	2.721	3	15.530	.080
	Based on trimmed mean	3.670	3	20	.030

Uji Beda Parametrik - ANOVA

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
IL4	Between Groups	1.628	3	.543	12.299	.000
	Within Groups	.883	20	.044		
	Total	2.511	23			
IL13	Between Groups	5.373	3	1.791	57.054	.000
	Within Groups	.628	20	.031		
	Total	6.001	23			
IL10	Between Groups	9.747	3	3.249	27.964	.000
	Within Groups	2.324	20	.116		
	Total	12.070	23			
TGFbeta	Between Groups	3.426	3	1.142	26.166	.000
	Within Groups	.873	20	.044		
	Total	4.298	23			
Sirius_red	Between Groups	893.741	3	297.914	151.453	.000
	Within Groups	39.341	20	1.967		
	Total	933.082	23			
Alpha_SMA	Between Groups	571.624	3	190.541	113.686	.000
	Within Groups	33.521	20	1.676		
	Total	605.145	23			

P<0.05 signifikan

Uji Post Hoc – *Tamhane*

Multiple Comparisons

Tamhane

Dependent Variable	(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
IL4	Sham	Control	.64196*	.07397	.002	.3315	.9524
		Normoxia	.49396*	.07646	.008	.1731	.8149
		Hypoxia	.13266	.13455	.937	-.4321	.6974
	Control	Sham	-.64196*	.07397	.002	-.9524	-.3315
		Normoxia	-.14800	.10638	.727	-.4953	.1993
		Hypoxia	-.50930	.15355	.064	-1.0461	.0275
	Normoxia	Sham	-.49396*	.07646	.008	-.8149	-.1731
		Control	.14800	.10638	.727	-.1993	.4953
		Hypoxia	-.36130	.15476	.256	-.8990	.1764
	Hypoxia	Sham	-.13266	.13455	.937	-.6974	.4321
		Control	.50930	.15355	.064	-.0275	1.0461
		Normoxia	.36130	.15476	.256	-.1764	.8990
IL13	Sham	Control	.83305*	.01601	.000	.7659	.9002
		Normoxia	.59176*	.09765	.011	.1819	1.0016
		Hypoxia	-.36420	.10553	.104	-.8071	.0787
	Control	Sham	-.83305*	.01601	.000	-.9002	-.7659
		Normoxia	-.24129	.09896	.293	-.6455	.1629
		Hypoxia	-1.19725*	.10674	.000	-1.6348	-.7597
	Normoxia	Sham	-.59176*	.09765	.011	-1.0016	-.1819
		Control	.24129	.09896	.293	-.1629	.6455
		Hypoxia	-.95596*	.14378	.000	-1.4260	-.4860
	Hypoxia	Sham	.36420	.10553	.104	-.0787	.8071
		Control	1.19725*	.10674	.000	.7597	1.6348
		Normoxia	.95596*	.14378	.000	.4860	1.4260
IL10	Sham	Control	.93394*	.01723	.000	.8616	1.0062
		Normoxia	.88403*	.01857	.000	.8061	.9620
		Hypoxia	-.58975	.27715	.419	-1.7530	.5735
	Control	Sham	-.93394*	.01723	.000	-1.0062	-.8616
		Normoxia	-.04991	.02533	.383	-.1327	.0329
		Hypoxia	-1.52369*	.27769	.016	-2.6844	-.3630
	Normoxia	Sham	-.88403*	.01857	.000	-.9620	-.8061
		Control	.04991	.02533	.383	-.0329	.1327
		Hypoxia	-1.47379*	.27777	.018	-2.6341	-.3135
	Hypoxia	Sham	.58975	.27715	.419	-.5735	1.7530
		Control	1.52369*	.27769	.016	.3630	2.6844
		Normoxia	1.47379*	.27777	.018	.3135	2.6341

P<0.05 signifikan

TGFbeta	Sham	Control	.95278*	.00861	.000	.9166	.9889
		Normoxia	.73143*	.04585	.000	.5390	.9239
		Hypoxia	.09962	.06556	.716	-.1755	.3748
	Control	Sham	-.95278*	.00861	.000	-.9889	-.9166
		Normoxia	-.22135*	.04665	.025	-.4104	-.0323
		Hypoxia	-.85316*	.06612	.000	-1.1258	-.5805
	Normoxia	Sham	-.73143*	.04585	.000	-.9239	-.5390
		Control	.22135*	.04665	.025	.0323	.4104
		Hypoxia	-.63180*	.08000	.000	-.9003	-.3633
	Hypoxia	Sham	-.09962	.06556	.716	-.3748	.1755
		Control	.85316*	.06612	.000	.5805	1.1258
		Normoxia	.63180*	.08000	.000	.3633	.9003
Sirius_red	Sham	Control	-16.09900*	1.01585	.000	-20.0237	-12.1743
		Normoxia	-7.09342*	.46364	.000	-8.6177	-5.5692
		Hypoxia	-2.72967*	.49189	.002	-4.3623	-1.0970
	Control	Sham	16.09900*	1.01585	.000	12.1743	20.0237
		Normoxia	9.00558*	1.03412	.001	5.1133	12.8979
		Hypoxia	13.36933*	1.04709	.000	9.4921	17.2466
	Normoxia	Sham	7.09342*	.46364	.000	5.5692	8.6177
		Control	-9.00558*	1.03412	.001	-12.8979	-5.1133
		Hypoxia	4.36375*	.52858	.000	2.6345	6.0930
	Hypoxia	Sham	2.72967*	.49189	.002	1.0970	4.3623
		Control	-13.36933*	1.04709	.000	-17.2466	-9.4921
		Normoxia	-4.36375*	.52858	.000	-6.0930	-2.6345
Alpha_SMA	Sham	Control	-13.12800*	.88778	.000	-16.2593	-9.9967
		Normoxia	-7.65125*	.66793	.000	-9.8608	-5.4417
		Hypoxia	-3.59767*	.47209	.000	-5.2432	-1.9521
	Control	Sham	13.12800*	.88778	.000	9.9967	16.2593
		Normoxia	5.47675*	.94577	.002	2.2810	8.6725
		Hypoxia	9.53033*	.81929	.000	6.3456	12.7150
	Normoxia	Sham	7.65125*	.66793	.000	5.4417	9.8608
		Control	-5.47675*	.94577	.002	-8.6725	-2.2810
		Hypoxia	4.05358*	.57376	.001	1.9604	6.1468
	Hypoxia	Sham	3.59767*	.47209	.000	1.9521	5.2432
		Control	-9.53033*	.81929	.000	-12.7150	-6.3456
		Normoxia	-4.05358*	.57376	.001	-6.1468	-1.9604

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