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LAMPIRAN



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Lampiran 1. Surat Izin Etik Penelitian



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
 UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
 KOMITE ETIK PENELITIAN UNIVERSITAS HASANUDDIN
 RSPTN UNIVERSITAS HASANUDDIN
 RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
 Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
 JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
 Contact Person: dr. Agusalm Bukhari, MMed,PhD, SpCK. Telp. 081241850858, 0411 5780103. Fax : 0411-581431



REKOMENDASI PERSETUJUAN ETIK

Nomor : 785/UN4.6.4.5.31/ PP36/ 2023

Tanggal: 13 Oktober 2023

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

No Protokol	UH23090688	No Sponsor	
Peneliti Utama	dr. Hanan Afifah	Sponsor	
Judul Peneliti	Efek Suplementasi Probiotik Lactobacillus Plantarum Dad-13 Terhadap Gambaran Histologi Hepar dan Kadar LPS-Binding Protein (LBP) Serum Pada Tikus Sprague Dawley Model NAFLD.		
No Versi Protokol	1	Tanggal Versi	12 September 2023
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Laboratorium Hewan FKUH dan RS Universitas Hasanuddin Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Nama Prof. dr. Muh Nasrum Massi, PhD, SpMK, Subsp. Bakt(K)	Tanda tangan	
Sekretaris KEP Universitas Hasanuddin	Nama dr. Firdaus Hamid, PhD, SpMK(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 protokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan



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Lampiran 2. Surat Izin Penelitian

 RUMAH SAKIT UNHAS	SURAT IZIN PENELITIAN	
	Nomor: 2443/UN4.24.1.1/PT.01.05/2024 (Perpanjangan 1)	Tanggal 8 Maret 2024
FORMULIR 03 PENDIDIKAN DAN PENELITIAN	Kepada Yth Laboratorium Penelitian	
<p>Dengan hormat,</p> <p>Dengan ini menerangkan bahwa peneliti/ mahasiswa berikut ini:</p> <p>Nama : dr. Hanan Afifah</p> <p>NIM / NIP : P062212021</p> <p>Institusi/Universitas : Universitas Hasanuddin, Makassar</p> <p>Kode penelitian : 231115_5</p> <p>Akan melakukan pengambilan data/ analisa bahan hayati:</p> <p>Terhitung : 8 Maret 2024 s/d 8 April 2024</p> <p>Jumlah Subjek/Sample : 25</p> <p>Jenis Data : Data primer : Hasil ELISA</p> <p>Untuk penelitian dengan judul:</p> <p>"Efek Suplementasi Probiotik Lactobacillus Plantarum Dad-13 Terhadap Gambaran Histologi Hepar dan Kadar LPS-Binding Protein (LBP) Serum Pada Tikus Sprague-Dawley Model NAFLD"</p> <p>Harap dilakukan pembimbingan dan pendampingan seperlunya.</p> <p>Manager Pendidikan dan Penelitian,</p> <div style="text-align: center;">  dr. Aslim Taslim, Sp.Onk.Rad, M.Kes NIP.198304252012121003 </div> <p><i>Catatan: Lembaran ini diarsipkan oleh Admin Penelitian</i></p>		



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Lampiran 3. Data Primer Pemeriksaan LBP

STD1	STD2	STD3	STD4	STD5	BLK	1	2	3	4	5	6	
320	160	80	40	20	0	35,8971	34,6875	26,5411	33,0851	25,5149	25,7069	Result
0,3793	0,2282	0,1224	0,0872	0,0441	0	0,0711	0,0693	0,0569	0,0669	0,0553	0,0556	OD Value
320	160	80	40	20	0	35,8971	34,6875	26,5411	33,0851	25,5149	25,7069	Cont
7	8	9	10	11	12	13	14	15	16	17	18	
42,5254	44,3326	37,4521	34,0184	57,6898	50,8269	39,9755	53,3371	59,5949	73,0909	62,7707	60,1834	Result
0,0808	0,0834	0,0734	0,0683	0,1021	0,0926	0,0771	0,0961	0,1047	0,1227	0,109	0,1055	OD Value
42,5254	44,3326	37,4521	34,0184	57,6898	50,8269	39,9755	53,3371	59,5949	73,0909	62,7707	60,1834	Cont
19	20	21	22	23	24	25	26	27	28	29	30	
87,8967	90,6051	81,4378	83,6316	65,6026	81,0473	76,9324	86,6283	33,8848	37,6557	36,8423	43,4274	Result
0,1417	0,1451	0,1335	0,1363	0,1128	0,133	0,1277	0,1401	0,0681	0,0737	0,0725	0,0821	OD Value
87,8967	90,6051	81,4378	83,6316	65,6026	81,0473	76,9324	86,6283	33,8848	37,6557	36,8423	43,4274	Cont
31	32	33	34	35	36	37	38	39	40	41	42	
36,4367	36,0993	35,0229	37,1131	26,5411	27,5733	43,9841	38,4719	41,5575	39,4961	45,451	45,451	Result
0,0719	0,0714	0,0698	0,0729	0,0569	0,0585	0,0829	0,0749	0,0794	0,0764	0,085	0,085	OD Value
36,4367	36,0993	35,0229	37,1131	26,5411	27,5733	43,9841	38,4719	41,5575	39,4961	45,451	45,451	Cont

Lampiran 4. Data Primer Pemeriksaan AST dan ALT

NORMAL		KONTROL		PERLAKUAN	
SGOT	SGPT	SGOT	SGPT	SGOT	SGPT
125	45	268	87	158	46
122	39	189	64	145	67
111	53	168	79	140	52
87	52	162	63	122	40
121	53	164	78	133	87
		188	76	155	93
		212	81	159	47
		768	40	156	61
113,2		264,875		146	



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Lampiran 5. Data Primer Pemeriksaan Histopatologi Hepar

Histopatologi Hepar								
Kode Sampel	Steatosis %	Stage Steatosis	Inflamasi Lobular (fokus)	Stage Inflamasi Lobular	Ballooning Hepatocyte	NAS SCORE	Diagnosa	Fibrosis Stadium
K+	20	1	6	3	2	6	NASH	0
K+	10	1	2	2	1	4	borderline	0
K+	15	1	19	3	2	6	NASH	0
K+	5	1	20	3	2	6	NASH	0
K+	45	2	3	2	2	6	NASH	1
K+	0	0	17	3	0	3	bukan NASH	1
K+	40	2	3	2	2	6	NASH	0
K+	0	0	5	3	0	3	bukan NASH	0
P	0	0	2	2	0	2	bukan NASH	0
P	3	0	2	2	0	2	bukan NASH	0
P	3	0	7	3	0	3	borderline	0
P	3	0	10	3	1	4	borderline	1
P	0	0	4	2	0	2	bukan NASH	0
P	3	0	9	3	1	4	borderline	0
P	0	0	3	2	0	2	bukan NASH	0
P	0	0	7	3	0	3	borderline	0
K-	0	0	4	2	0	2	bukan NASH	0
K-	0	0	6	3	0	3	borderline	0
K-	0	0	4	2	0	2	bukan NASH	0
K-	0	0	2	2	0	2	bukan NASH	0



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Lampiran 6. Surat Izin Penelitian

 RUMAH SAKIT UNHAS	SURAT IZIN PENELITIAN	
	Nomor: 2443/UN4.24.1.1/PT.01.05/2024 (Perpanjangan 1)	Tanggal 8 Maret 2024
FORMULIR 03 PENDIDIKAN DAN PENELITIAN	Kepada Yth Laboratorium Penelitian	
<p>Dengan hormat,</p> <p>Dengan ini menerangkan bahwa peneliti/ mahasiswa berikut ini:</p> <p>Nama : dr. Hanan Afifah</p> <p>NIM / NIP : P062212021</p> <p>Institusi/Universitas : Universitas Hasanuddin, Makassar</p> <p>Kode penelitian : 231115_5</p> <p>Akan melakukan pengambilan data/ analisa bahan hayati:</p> <p>Terhitung : 8 Maret 2024 s/d 8 April 2024</p> <p>Jumlah Subjek/Sample : 25</p> <p>Jenis Data : Data primer : Hasil ELISA</p> <p>Untuk penelitian dengan judul: "Efek Suplementasi Probiotik Lactobacillus Plantarum Dad-13 Terhadap Gambaran Histologi Hepar dan Kadar LPS-Binding Protein (LBP) Serum Pada Tikus Sprague-Dawley Model NAFLD"</p> <p>Harap dilakukan pembimbingan dan pendampingan seperfunya.</p> <p>Manager Pendidikan dan Penelitian,</p> <div style="text-align: center;">  dr. Aslim Taslim, Sp.Onk.Rad, M.Kes NIP.198304252012121003 </div> <p><i>Catatan: Lembaran ini diarsipkan oleh Admin Penelitian</i></p>		



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Lampiran 7. Data SPSS

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	GroupW19	Statistic	df	Sig.	Statistic	df	Sig.
BW-W1 (gr)	Standar	,176	7	,200*	,963	7	,848
	HFFr	,172	7	,200*	,934	7	,581
	HFFr+Probiotik	,186	6	,200*	,886	6	,300
BW-W2 (gr)	Standar	,150	7	,200*	,968	7	,881
	HFFr	,199	7	,200*	,917	7	,448
	HFFr+Probiotik	,124	6	,200*	,997	6	,999
BW-W3 (gr)	Standar	,305	7	,048	,796	7	,038
	HFFr	,208	7	,200*	,919	7	,465
	HFFr+Probiotik	,208	6	,200*	,880	6	,269
BW-W4 (gr)	Standar	,232	7	,200*	,887	7	,261
	HFFr	,183	7	,200*	,931	7	,556
	HFFr+Probiotik	,163	6	,200*	,959	6	,810
BW-W5 (gr)	Standar	,228	7	,200*	,932	7	,565
	HFFr	,254	7	,191	,895	7	,299
	HFFr+Probiotik	,209	6	,200*	,918	6	,488
BW-W6 (gr)	Standar	,169	7	,200*	,962	7	,833
	HFFr	,219	7	,200*	,912	7	,408
	HFFr+Probiotik	,186	6	,200*	,920	6	,507
BW-W7 (gr)	Standar	,137	7	,200*	,970	7	,902
	HFFr	,283	7	,094	,871	7	,189
	HFFr+Probiotik	,151	6	,200*	,965	6	,861
BW-W8 (gr)	Standar	,158	7	,200*	,949	7	,719
	HFFr	,228	7	,200*	,902	7	,340
	HFFr+Probiotik	,209	6	,200*	,956	6	,786
BW-W9 (gr)	Standar	,180	7	,200*	,950	7	,730
	HFFr	,186	7	,200*	,944	7	,673
	HFFr+Probiotik	,232	6	,200*	,919	6	,499
BW-W10 (gr)	Standar	,214	7	,200*	,922	7	,487
	HFFr	,208	7	,200*	,921	7	,480
	HFFr+Probiotik	,248	6	,200*	,927	6	,555
	Standar	,216	7	,200*	,890	7	,275
	HFFr	,225	7	,200*	,950	7	,726
	HFFr+Probiotik	,134	6	,200*	,993	6	,995
	Standar	,255	7	,188	,847	7	,116
	HFFr	,208	7	,200*	,968	7	,885



	HFFr+Probiotik	,154	6	,200*	,971	6	,901
BW-W13 (gr)	Standar	,220	7	,200*	,884	7	,243
	HFFr	,283	7	,095	,922	7	,485
	HFFr+Probiotik	,214	6	,200*	,961	6	,830
BW-W14 (gr)	Standar	,215	7	,200*	,902	7	,340
	HFFr	,170	7	,200*	,933	7	,576
	HFFr+Probiotik	,341	6	,028	,797	6	,055
BW-W15 (gr)	Standar	,212	7	,200*	,906	7	,366
	HFFr	,246	7	,200*	,860	7	,152
	HFFr+Probiotik	,174	6	,200*	,941	6	,666
BW-W16 (gr)	Standar	,211	7	,200*	,884	7	,243
	HFFr	,218	7	,200*	,902	7	,345
	HFFr+Probiotik	,195	6	,200*	,903	6	,394
BW-W17 (gr)	Standar	,215	7	,200*	,878	7	,219
	HFFr	,276	7	,115	,877	7	,214
	HFFr+Probiotik	,241	6	,200*	,864	6	,202
BW-W18 (gr)	Standar	,290	7	,076	,840	7	,099
	HFFr	,281	7	,100	,860	7	,152
	HFFr+Probiotik	,204	6	,200*	,963	6	,841
BW-W19 (gr)	Standar	,287	7	,084	,848	7	,117
	HFFr	,280	7	,104	,831	7	,082
	HFFr+Probiotik	,319	6	,057	,877	6	,254

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

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PakanW12	Standar	,213	12	,138	,868	12	,061
	HFFr	,256	12	,029	,785	12	,006
MinumW12	Standar	,160	12	,200*	,943	12	,543
	HFFr	,200	12	,200	,914	12	,237
	Standar	,213	12	,138	,868	12	,061
	HFFr	,156	12	,200*	,943	12	,538



Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PakanW19	Standar	,219	7	,200*	,915	7	,432
	HFFr	,243	7	,200*	,880	7	,228
	HFFr+Probiotik	,194	7	,200*	,897	7	,312
Minum19	Standar	,223	7	,200*	,922	7	,487
	HFFr	,185	7	,200*	,950	7	,727
	HFFr+Probiotik	,255	7	,189	,930	7	,550
KaloriW19	Standar	,219	7	,200*	,915	7	,432
	HFFr	,181	7	,200*	,938	7	,617
	HFFr+Probiotik	,202	7	,200*	,915	7	,432

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

a. Lilliefors Significance Correction

		Tests of Normality					
		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Liver weight (gr)	Standar	,351	7	,009	,697	7	,003
	HFFr	,131	7	,200*	,979	7	,956
	HFFr+Probiotik	,258	6	,200*	,861	6	,193
LBP (EU/L)	Standar	,207	7	,200*	,919	7	,461
	HFFr	,228	7	,200*	,857	7	,142
	HFFr+Probiotik	,227	6	,200*	,939	6	,651
AST (U/L)	Standar	,290	7	,076	,816	7	,059
	HFFr	,261	7	,162	,840	7	,099
	HFFr+Probiotik	,266	6	,200*	,897	6	,358
ALT (U/L)	Standar	,226	7	,200*	,933	7	,575
	HFFr	,194	7	,200*	,894	7	,297
	HFFr+Probiotik	,209	6	,200*	,891	6	,323
Steatosis (grade)	Standar	,360	7	,007	,664	7	,001
	HFFr	,345	7	,012	,732	7	,008
	HFFr+Probiotik	.	6	.	.	6	.
Lobular inflammation (grade)	Standar	,360	7	,007	,664	7	,001
	HFFr	,360	7	,007	,664	7	,001
	HFFr+Probiotik	,407	6	,002	,640	6	,001
E	Standar	,345	7	,012	,732	7	,008
	HFFr	,360	7	,007	,664	7	,001
	HFFr+Probiotik	,407	6	,002	,640	6	,001
M	Standar	,239	7	,200*	,914	7	,428
	HFFr	,221	7	,200*	,886	7	,256



HFFr+Probiotik	,209	6	,200*	,890	6	,319
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*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
NAS (total score)	Between Groups	76,581	2	38,290	,106	,900
	Within Groups	6141,619	17	361,272		
	Total	6218,200	19			
Balloning Degeneration (grade)	Between Groups	,931	2	,465	,581	,570
	Within Groups	13,619	17	,801		
	Total	14,550	19			
Steatosis (grade)	Between Groups	1,657	2	,829	1,972	,170
	Within Groups	7,143	17	,420		
	Total	8,800	19			
Liver weight (gr)	Between Groups	97,542	2	48,771	1,495	,252
	Within Groups	554,661	17	32,627		
	Total	652,203	19			
LBP (EU/L)	Between Groups	2390,546	2	1195,273	4,559	,026
	Within Groups	4457,196	17	262,188		
	Total	6847,742	19			
AST (U/L)	Between Groups	6156,224	2	3078,112	1,608	,229
	Within Groups	32537,976	17	1913,999		
	Total	38694,200	19			
ALT (U/L)	Between Groups	73,902	2	36,951	,108	,898
	Within Groups	5793,048	17	340,768		
	Total	5866,950	19			

Multiple Comparisons

Tukey HSD



Dependent Variable		(I) GroupW19	(J) GroupW19	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Standar	HFFr			-4,571	10,160	,895	-30,63	21,49
	HFFr+Probiotik			-3,190	10,575	,951	-30,32	23,94
	HFFr	Standar		4,571	10,160	,895	-21,49	30,63
	HFFr+Probiotik	Standar		1,381	10,575	,991	-25,75	28,51

	HFFr+Probiotik	Standar	3,190	10,575	,951	-23,94	30,32	
		HFFr	-1,381	10,575	,991	-28,51	25,75	
Balloning Degeneration (grade)	Standar	HFFr	-,143	,478	,952	-1,37	1,08	
		HFFr+Probiotik	,381	,498	,729	-,90	1,66	
	HFFr	Standar	,143	,478	,952	-1,08	1,37	
		HFFr+Probiotik	,524	,498	,556	-,75	1,80	
	HFFr+Probiotik	Standar	-,381	,498	,729	-1,66	,90	
		HFFr	-,524	,498	,556	-1,80	,75	
Steatosis (grade)	Standar	HFFr	-,286	,346	,693	-1,17	,60	
		HFFr+Probiotik	,429	,361	,476	-,50	1,35	
	HFFr	Standar	,286	,346	,693	-,60	1,17	
		HFFr+Probiotik	,714	,361	,147	-,21	1,64	
	HFFr+Probiotik	Standar	-,429	,361	,476	-1,35	,50	
		HFFr	-,714	,361	,147	-1,64	,21	
Liver weight (gr)	Standar	HFFr	-2,77857	3,05320	,641	-10,6111	5,0540	
		HFFr+Probiotik	2,70833	3,17787	,677	-5,4440	10,8607	
	HFFr	Standar	2,77857	3,05320	,641	-5,0540	10,6111	
		HFFr+Probiotik	5,48690	3,17787	,224	-2,6655	13,6393	
	HFFr+Probiotik	Standar	-2,70833	3,17787	,677	-10,8607	5,4440	
		HFFr	-5,48690	3,17787	,224	-13,6393	2,6655	
LBP (EU/L)	Standar	HFFr	-	8,655105561	,135	-	4,6171004544	
			17,586335714	685170		39,78977188	24922	
							2996355	
		HFFr+Probiotik	8,8546357142	9,008519484	,597	-	31,964704786	
			85720	775123		14,25543335	146477	
							7575036	
	HFFr	Standar	17,586335714	8,655105561	,135	-	39,789771882	
			285717	685170		4,617100454	996355	
						424922		
	HFFr+Probiotik	Standar	26,440971428	9,008519484	,024	3,330902356	49,551040500	
			571437	775123		710681	432194	
	HFFr+Probiotik	Standar	-	9,008519484	,597	-	14,255433357	
8,8546357142			775123		31,96470478	575036		
						6146477		
HFFr		-	9,008519484	,024	-	-		
		26,440971428	775123		49,55104050	3,3309023567		
						0432194	10681	
Standar	HFFr	-28,714	23,385	,454	-88,71	31,28		
	HFFr+Probiotik	13,548	24,340	,845	-48,89	75,99		
HFFr	Standar	28,714	23,385	,454	-31,28	88,71		



		HFFr+Probiotik	42,262	24,340	,221	-20,18	104,70
	HFFr+Probiotik	Standar	-13,548	24,340	,845	-75,99	48,89
		HFFr	-42,262	24,340	,221	-104,70	20,18
ALT (U/L)	Standar	HFFr	-4,429	9,867	,896	-29,74	20,88
		HFFr+Probiotik	-3,333	10,270	,944	-29,68	23,01
	HFFr	Standar	4,429	9,867	,896	-20,88	29,74
		HFFr+Probiotik	1,095	10,270	,994	-25,25	27,44
	HFFr+Probiotik	Standar	3,333	10,270	,944	-23,01	29,68
		HFFr	-1,095	10,270	,994	-27,44	25,25

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



Lampiran 8. Dokumentasi

	Hepar tikus kelompok diet standar
	Hepar tikus kelompok HFFr
	Hepar tikus kelompok HFFr+Probiotik
	Proses pembuatan larutan tinggi fruktosa
	Pakan standar
	Pakan tinggi lemak





Proses pemeriksaan kadar serum LBP dengan metode ELISA



Lampiran 5. Curriculum Vitae

a. Data Pribadi

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c. Riwayat Publikasi

