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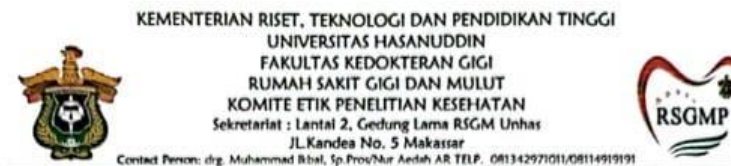
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LAMPIRAN

1. Surat Etik Penelitian



REKOMENDASI PERSETUJUAN ETIK
Nomor: 0062/PL.09/KEPK FRG-RSGM UNHAS/2022

Tanggal: 10 Mei 2022

Dengan ini menyatakan bahwa protokol dan dokumen yang berhubungan dengan protokol berikut ini telah mendapatkan persetujuan etik:

No. Protokol	UH 17120646	No Protokol Sponsor	
Peneliti Utama	drg. Shinta Rahma Mansyur	Sponsor	Pribadi
Judul Peneliti	Efektivitas Kombinasi Kitosan Sisi Ikan Bandeng (Chanos Chanos) Sulawesi Selatan dengan Hidroksiapatit terhadap Ekspresi Bone Morphogenetic Protein (BMP)-2 pada Tindakan Socket Preservation		
No. Versi Protokol	1	Tanggal Versi	13 April 2022
No. Versi Protokol		Tanggal Versi	
Tempat Penelitian	1. Laboratorion Biokimia TPHP Politani Poltek Pangkep 2. Laboratorium Terpadu Kimia, Fak.MIPA Unhas 3. Klinis Hewan La Costae 4. Laboratorium Patologi Anatomi RSP Unhas 5. Laboratorium Biokimia-Biomolekuler Fakultas Kedokteran Universitas Brawijaya		
Dokumen Lain			
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard	Masa Berlaku 10 Mei 2022-10 Mei 2023	Frekuensi Review Lanjutan
Ketua Komisi Etik Penelitian	Nama: Dr. drg. Marhamah, M.Kes	Tanda Tangan 	Tanggal
Sekretaris Komisi Etik Penelitian	Nama: drg. Muhammad Iqbal, Sp.Prov	Tanda Tangan 	Tanggal

Kewajiban peneliti utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum diimplementasikan
- 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 protokol yang disetujui (*protocol deviation/violation*)
- Mematuhi semua aturan yang berlaku.

2. Preparasi Sampel Sisik Ikan Bandeng



Sisik dipisahkan dari bagian tubuh ikan kemudian dibersihkan, ditiriskan dan ditempatkan dalam aluminium foil untuk pengeringan menggunakan oven pada suhu 50-55 °C selama tujuh hari.

3. Proses Pembuatan Sisik Ikan Bandeng menjadi Kitosan



Proses deproteinase dilakukan dengan pengadukan larutan NaOH 3,5 N pada suhu 90°C selama 1 jam pada 50 rpm, kemudian disaring. Padatan yang diperoleh dibilas dengan akuades dan dikeringkan pada oven dengan suhu 70°C selama 24 jam (20 Mei 2021). Hasil deproteinasi kemudian dilakukan demineralisasi dengan mencampur larutan HCl 1,5 N pada suhu 90 derajat selama 1 jam. Padatan kemudian dibilas dengan air, disaring, dan didinginkan sehingga diperoleh kitin, kitin kemudian di masukkan dalam larutan NaOH 40% dengan suhu 90°C selama 1,5 jam hingga diperoleh kitosan yang berwarna putih dan tidak berbau menyengat. Uji derajat asetilasi menunjukkan kitosan dengan derajat asetilasi 92%. Serbuk kitosan kemudian dicampurkan dengan gliserin, akuades, dan metil paraben untuk menghasilkan gel kitosan

4. Perlakuan pada Hewan Coba



Setelah marmut diadaptasikan selama 7 hari, marmut dibagi menjadi 3 kelompok. Gigi insisivus kanan mandibula dicabut menggunakan *needle holder*. Soket diirigasi dengan larutan saline. Prosedur *socket preservation* dilakukan sesuai dengan kelompok perlakuan masing-masing yaitu kelompok 1 (soket diisi dengan kombinasi kitosan sisik ikan bandeng dengan hidroksiapatit *xenograft bovine* (BATAN) sebagai perlakuan), kelompok 2 (soket diisi hidroksiapatit *xenograft bovine* (BATAN) sebagai kontrol positif) dan kelompok 3 (soket diisi gel placebo sebagai kontrol negatif)

5. Pengambilan Jaringan Tulang



Sacrificed marmut pada hari ke 7, 14, dan 28 untuk pengambilan jaringan pada rahang mandibula dan difiksasi menggunakan larutan *buffer* formalin 10% sebagai sampel penelitian

6. Pembuatan Slide



Preparat sampel diolah dilaboratorium patologi anatomi, dan selanjutnya dikirim ke laboratorium biokimia untuk dilakukan pembacaan ekspresi BMP-2.

7. Analisis Data

ONEWAY osteocyte osteocalcin bmp2 BY KELOMPOK
 /MISSING ANALYSIS
 /POSTHOC=TUKEY ALPHA(0.05).

Oneway

Notes

Output Created	02-AUG-2022 09:03:57	
Comments		
Input	Data	C:\Users\Panasonic\Documents\Shinta Rahma Mansyur\MAKASAR BMP.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	9
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.

Syntax	ONEWAY osteocyte osteocalcin bmp2 BY KELOMPOK /MISSING ANALYSIS /POSTHOC=TUKEY ALPHA(0.05).		
Resources	Processor Time		00:00:00.08
	Elapsed Time		00:00:00.09

[DataSet1] C:\Users\Panasonic\Documents\Shinta Rahma Mansyur\MAKASAR BMP.sav

ANOVA

Nilai

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	309,917	8	38,740	10,447	,000
Within Groups	66,750	18	3,708		
Total	376,667	26			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Nilai

Tukey HSD

(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
KLPperlakuan	KLPperlakuan				Lower Bound	Upper Bound
HA+C7	HA7	,667	1,572	1,000	-4,84	6,18
	KN7	4,000	1,572	,275	-1,51	9,51
	HA+C14	-4,000	1,572	,275	-9,51	1,51
	HA14	,083	1,471	1,000	-5,07	5,24
	KN14	2,333	1,758	,910	-3,83	8,49
	HA+C28	-7,667*	1,572	,003	-13,18	-2,16
	HA28	-3,333	1,572	,491	-8,84	2,18
	KN28	1,667	1,572	,973	-3,84	7,18
HA7	HA+C7	-,667	1,572	1,000	-6,18	4,84
	KN7	3,333	1,572	,491	-2,18	8,84
	HA+C14	-4,667	1,572	,136	-10,18	,84

	HA14	-,583	1,471	1,000	-5,74	4,57
	KN14	1,667	1,758	,986	-4,49	7,83
	HA+C28	-8,333*	1,572	,001	-13,84	-2,82
	HA28	-4,000	1,572	,275	-9,51	1,51
	KN28	1,000	1,572	,999	-4,51	6,51
KN7	HA+C7	-4,000	1,572	,275	-9,51	1,51
	HA7	-3,333	1,572	,491	-8,84	2,18
	HA+C14	-8,000*	1,572	,002	-13,51	-2,49
	HA14	-3,917	1,471	,228	-9,07	1,24
	KN14	-1,667	1,758	,986	-7,83	4,49
	HA+C28	-11,667*	1,572	,000	-17,18	-6,16
	HA28	-7,333*	1,572	,005	-12,84	-1,82
	KN28	-2,333	1,572	,849	-7,84	3,18
HA+C14	HA+C7	4,000	1,572	,275	-1,51	9,51
	HA7	4,667	1,572	,136	-,84	10,18
	KN7	8,000*	1,572	,002	2,49	13,51
	HA14	4,083	1,471	,189	-1,07	9,24
	KN14	6,333*	1,758	,041	,17	12,49
	HA+C28	-3,667	1,572	,374	-9,18	1,84
	HA28	,667	1,572	1,000	-4,84	6,18
	KN28	5,667*	1,572	,041	,16	11,18
HA14	HA+C7	-,083	1,471	1,000	-5,24	5,07
	HA7	,583	1,471	1,000	-4,57	5,74
	KN7	3,917	1,471	,228	-1,24	9,07
	HA+C14	-4,083	1,471	,189	-9,24	1,07
	KN14	2,250	1,668	,903	-3,59	8,09
	HA+C28	-7,750*	1,471	,001	-12,90	-2,60
	HA28	-3,417	1,471	,379	-8,57	1,74
	KN28	1,583	1,471	,971	-3,57	6,74
KN14	HA+C7	-2,333	1,758	,910	-8,49	3,83
	HA7	-1,667	1,758	,986	-7,83	4,49
	KN7	1,667	1,758	,986	-4,49	7,83
	HA+C14	-6,333*	1,758	,041	-12,49	-,17
	HA14	-2,250	1,668	,903	-8,09	3,59
	HA+C28	-10,000*	1,758	,001	-16,16	-3,84
	HA28	-5,667	1,758	,086	-11,83	,49
	KN28	-,667	1,758	1,000	-6,83	5,49

HA+C28	HA+C7	7,667*	1,572	,003	2,16	13,18
	HA7	8,333*	1,572	,001	2,82	13,84
	KN7	11,667*	1,572	,000	6,16	17,18
	HA+C14	3,667	1,572	,374	-1,84	9,18
	HA14	7,750*	1,471	,001	2,60	12,90
	KN14	10,000*	1,758	,001	3,84	16,16
	HA28	4,333	1,572	,196	-1,18	9,84
	KN28	9,333*	1,572	,000	3,82	14,84
HA28	HA+C7	3,333	1,572	,491	-2,18	8,84
	HA7	4,000	1,572	,275	-1,51	9,51
	KN7	7,333*	1,572	,005	1,82	12,84
	HA+C14	-.667	1,572	1,000	-6,18	4,84
	HA14	3,417	1,471	,379	-1,74	8,57
	KN14	5,667	1,758	,086	-.49	11,83
	HA+C28	-4,333	1,572	,196	-9,84	1,18
	KN28	5,000	1,572	,093	-.51	10,51
KN28	HA+C7	-1,667	1,572	,973	-7,18	3,84
	HA7	-1,000	1,572	,999	-6,51	4,51
	KN7	2,333	1,572	,849	-3,18	7,84
	HA+C14	-5,667*	1,572	,041	-11,18	-.16
	HA14	-1,583	1,471	,971	-6,74	3,57
	KN14	,667	1,758	1,000	-5,49	6,83
	HA+C28	-9,333*	1,572	,000	-14,84	-3,82
	HA28	-5,000	1,572	,093	-10,51	,51

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

Homogeneous Subsets

bmp2

Tukey HSD^a

KELOMPOK	N	Subset for alpha = 0.05	
		1	2
HA + C (7)	3	7,33	
HA + C (14)	3	11,33	11,33
HA + C (28)	3		15,00

Sig.		,063	,085
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Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

