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LAMPIRAN

Lampiran 1. *Ethical Clearance*

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. Agussalim Bukhari.,MMed,PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

REKOMENDASI PERSETUJUAN ETIK
Nomor : 36/UN4.6.4.5.31/ PP36/ 2024

Tanggal: 12 Januari 2024

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

No Protokol	UH24010001	No Sponsor	
Peneliti Utama	**dr. Didit Yudhanto, Sp.T.H.T.B.K.L., M.Sc.**	Sponsor	
Judul Peneliti	Hubungan Ambang Dengar, Signal To Noise Ratio Dengan Ekspresi mRNA Gen HSP70-1 Pekerja Terpapar Bising		
No Versi Protokol	**2**	Tanggal Versi	**12 Januari 2024**
No Versi PSP	**2**	Tanggal Versi	**12 Januari 2024**
Tempat Penelitian	Fakultas Kedokteran Universitas Hasanuddin, RS Universitas Hasanuddin, PT Wika Beton Indonesia Makassar dan Laboratorium PT. Genomik Solidaritas Indonesia Jakarta		
Jenis Review	[ ] Exempted [X] Expedited [ ] Fullboard Tanggal	Masa Berlaku **12 Januari 2024** sampai **12 Januari 2025**	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 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 2. Hasil pemeriksaan Subjek dan RT-PCR

1) Hasil Pemeiksaan SNR DPOAE pekerja terpapar dan tidak terpapar bising

Tabel lampiran Hasil pengukuraan DPOAE Pekerja tidak terpapar bising

LEFT (kHz)												RIGHT (kHz)											
1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10	11	12	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10	11	12
10	2	4	15	16	29	9	0	1	13	7	0	10	13	4	13	20	32	16	0	8	14	14	7
19	18	12	14	12	30	24	13	19	32	24	31	0	13	15	8	12	30	26	17	17	27	23	19
15	14	17	19	13	32	13	1	4	16	15	20	16	17	14	22	7	21	0	0	0	14	17	12
16	11	9	2	0	7	0	0	0	10	21	7	11	15	8	16	9	4	0	0	7	17	23	20
14	27	18	16	12	33	15	4	14	8	8	9	19	19	25	19	21	32	22	9	16	20	19	11
14	18	6	7	17	29	12	0	0	3	7	0	17	10	8	11	22	24	9	0	7	17	20	14
3	14	9	5	12	13	0	0	0	3	0	0	23	24	26	-7	20	33	17	1	8	8	3	9
23	10	6	16	20	30	19	0	6	9	12	9	22	9	10	13	13	21	14	0	1	10	12	9
8	14	22	23	5	19	6	0	0	0	-4	-4	8	14	23	14	0	1	0	0	0	0	4	0
15	15	19	18	21	27	0	0	0	4	-1	-2	16	13	18	13	21	32	6	0	0	3	6	3
9	-1	-3	-1	2	29	11	8	13	27	33	34	-2	4	2	7	1	25	17	11	15	20	22	27
-7	-12	8	-2	6	7	5	0	3	10	-14	8	-4	2	1	8	4	20	0	0	0	1	0	-1
11	12	1	2	1	21	8	0	0	0	5	2	-9	3	-2	4	10	25	7	0	0	1	0	1
-3	9	1	6	7	22	15	0	7	8	1	1	11	1	2	0	5	23	14	0	4	6	1	0
		2	0	6	22	1	0	0	15	8	8	21	10	12	4	6	17	14	0	3	13	10	8
17	19	4	0	3	9	5	0	0	0	11	1	18	14	0	6	8	9	2	0	0	0	0	-1
-1	8	0	3	6	14	0	0	0	4	0	0	21	26	8	2	1	12	0	0	0	3	3	4
10	8	1	0	7	17	1	0	0	0	5	2	2	19	18	16	20	26	18	0	0	6	2	4
20	17	13	-1	13	31	2	3	15	11	5	11	15	-2	15	6	7	29	12	0	14	15	10	16
16	13	0	0	5	29	12	0	0	2	0	3	23	23	5	14	16	30	9	0	1	8	0	0
1	11	9	10	15	23	15	0	0	0	0	0	-4	11	12	14	22	28	0	1	4	2	2	0
3	15	6	0	7	17	4	0	0	0	0	0	14	14	6	7	16	33	19	0	2	5	3	1
-3	-3	2	9	17	29	16	0	2	4	0	0	5	13	9	4	9	23	8	0	0	3	0	0
1	2	-3	2	1	12	0	0	0	4	3	-10	-2	-1	0	8	1	19	0	0	-1	1	2	6
-12	12	-3	-1	4	14	0	0	0	6	14	4	7	11	13	4	-1	8	0	0	0	2	1	4
2	-2	1	6	10	0	0	-1	4	-7	8	-3	3	3	16	-1	3	4	0	0	0	0	-3	2
23	17	17	16	2	21	0	0	0	-2	0	0	13	20	14	19	21	28	9	0	3	7	-5	4
14	16	11	16	15	32	21	7	15	19	10	-4	15	11	9	19	18	28	23	6	17	21	30	26
13	4	0	1	7	22	14	0	0	0	0	0	8	-3	11	9	16	17	0	0	0	2	2	1
9	5	-4	10	1	3	0	0	0	0	0	4	26	18	17	13	0	16	9	0	0	0	0	0

Tabel Lampiran Hasil pengukuraan DPOAE pekerja terpapar bising

LEFT (kHz/dB)												RIGHT (kHz/dB)											
1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10	11	12	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10	11	12
-10	-2	-3	0	0	3	0	0	0	0	1	0	9	0	0	3	0	7	0	0	0	0	0	5
16	12	19	6	2	20	16	0	0	2	0	3	21	25	20	1	4	14	0	0	0	10	5	0
9	15	18	17	17	27	25	4	15	23	16	12	24	22	10	13	14	29	24	1	11	14	15	13
1	8	5	1	16	28	9	0	4	0	0	0	-4	9	0	0	8	20	3	0	0	0	0	4
6	10	15	17	22	24	15	0	3	16	23	16	19	9	22	20	24	25	16	0	6	22	34	28
2	0	9	5	-7	14	0	0	0	3	8	-3	6	-1	-4	11	1	0	0	0	0	5	13	-1
3	19	17	11	10	26	12	0	7	12	4	-2	1	6	17	11	16	27	14	0	0	1	0	2
12	16	10	15	21	29	16	0	12	17	23	14	9	15	4	4	6	26	4	0	2	0	4	1
5	1	5	7	18	31	15	0	8	4	6	8	13	6	9	9	22	33	15	0	7	9	0	5
12	16	19	8	9	0	0	0	0	2	6	-2		9	6	-1	6	20	10	0	1	13	18	4
-2	4	6	-3	4	18	0	0	0	0	2	0	12	-2	6	4	0	5	0	0	0	5	3	6
13	4	7	3	15	27	4	0	0	6	3	-1	10	6	8	8	16	15	13	0	5	0	0	0
13	2	5	3	8	18	0	0	0	0	0	0	1	8	1	4	3	15	0	0	0	0	0	0
	8	0	0	0	20	2	0	0	0	0	0			13	12	9	20	3	0	0	1	4	2
-5	5	-4	0	5	18	11	0	12	20	14	5	3	-5	7	3	10	16	10	0	9	16	23	5
6	3	6	13	0	7	5	0	0	0	0	5	10	-4	-3	6	2	5	0	0	0	0	5	5
7	-4	-2	-2	5	0	0	0	0	0	0	7	-2	10	16	19	14	12	0	0	0	5	0	3
14	14	14	11	24	34	22	2	14	18	19	12	11	16	26	0	16	22	19	3	15	20	18	0
-2	-2	6	0	0	0	0	0	0	0	0	0	2	2	0	28	-4	0	0	0	0	1	0	0
0	13	6	-1	0	8	2	0	0	0	0	0	-1	12	3	1	0	14	0	0	0	0	0	0
-4	3	1	0	0	6	0	0	0	0	0	1		11	6	5	6	10	0	0	0	0	0	1
0	-4	9	3	0	7	0	0	0	0	0	0	11	7	11	0	5	18	0	0	0	0	1	1
24	23	14	-4	0	7	4	0	0	17	10	15	-9	5	2	2	2	-2	0	0	0	1	0	-1
15	22	11	9	2	20	14	0	10	20	21	7	17	11	8	6	0	11	12	0	0	4	-3	2
	17	14	18	21	33	17	0	12	18	8	1	11	14	7	7	1	22	13	0	0	8	13	22
1	2	6	10		-1	0	0	0	0	0	0	17	19	24	20	21	33	15	2	12	25	27	17
15	19	18	0	13	15	0	0	0	0	-1	0	1	12	9	15	11	20	1	0	0	0	0	0
8	6	2	0	0	0	0	0	0	0	0	0	7	8	8	0	1	0	0	0	0	0	0	0
-1	2	-2	1	0	3	0	0	0	0	10	0	-4	3	-4	0	0	13	0	0	0	0	0	3
	2	-6	-2	8	30	10	0	8	0	0	1	11	8	1	8	3	16	0	0	0	0	0	0

2) Hasil Pemeiksaan PTA pekerja terpapar dan tidak terpapar bising

Tabel lampiran Hasil pemeriksaan PTA kelmpok tidak terpapar bising

AC															
D (kHz/dB)								S (kHz/dB)							
0.25	**0.5**	**1.0**	**2.0**	**3.0**	**4.0**	**6.0**	**8.0**	**0.25**	**0.5**	**1.0**	**2.0**	**3.0**	**4.0**	**6.0**	**8.0**
20	20	25	25	25	25	35	35	20	30	30	30	30	40	40	40
15	15	20	15	20	25	20	20	20	20	20	20	15	20	20	25
5	10	10	10	15	20	25	30	10	10	10	15	20	20	25	30
10	15	15	10	15	20	20	20	15	10	15	20	20	15	20	20
10	10	10	10	10	15	10	10	10	10	15	10	10	10	10	10
10	10	15	10	10	10	5	5	15	10	10	10	10	15	10	5
10	10	15	10	10	10	5	5	15	10	10	10	10	15	10	5
15	15	20	15	20	25	20	20	20	20	20	20	15	20	20	25
15	15	15	20	25	20	20	20	20	20	10	15	20	20	25	25
5	5	0	15	10	10	30	15	5	5	10	5	10	10	20	20
10	10	15	20	15	20	20	30	5	5	10	10	10	15	15	20
30	30	30	20	30	40	55	45	25	40	25	25	45	65	70	65
25	25	20	15	25	20	10	25	25	20	25	15	25	20	20	30
25	25	20	15	25	25	10	10	25	25	20	20	25	25	10	10
20	25	20	10	20	25	25	20	25	25	25	15	20	20	10	15
20	25	25	20	25	25	25	25	25	25	25	20	25	25	25	20
15	20	20	5	15	20	10	0	15	15	20	5	15	20	20	20
10	15	15	15	10	20	20	15	15	20	20	25	25	25	25	25
10	10	15	5	10	10	-5	5	25	25	15	10	15	5	15	10
20	20	15	25	25	25	20	25	20	25	20	20	20	25	10	10
10	20	20	10	15	20	5	15	15	20	20	15	25	10	15	25
10	10	20	15	15	15	10	0	10	10	15	10	15	20	25	25
10	15	15	5	5	10	20	2-0	20	15	20	15	5	5	15	20
10	10	10	15	10	15	20	25	10	15	15	20	20	20	25	25
10	10	15	15	20	20	25	25	15	15	15	15	20	20	20	20
10	10	10	15	15	20	20	25	10	15	15	20	20	20	25	25
15	15	20	25	25	20	25	25	20	20	15	20	20	25	25	30
10	10	15	20	20	25	20	25	20	15	15	15	15	20	20	25
25	25	15	10	20	25	20	30	15	20	15	15	20	25	15	30
15	5	10	10	5	10	25	20	10	10	10	15	10	15	25	20

Tabel lampiran Hasil pemeriksaan PTA kelompok terpapar bising

AC															
D (kHz/dB)								S (kHz/dB)							
0.25	**0.5**	**1.0**	**2.0**	**3.0**	**4.0**	**6.0**	**8.0**	**0.25**	**0.5**	**1.0**	**2.0**	**3.0**	**4.0**	**6.0**	**8.0**
50	50	50	55	60	65	55	60	45	45	50	55	65	80	70	80
35	35	30	30	30	35	30	25	30	30	35	25	35	30	25	25
15	15	15	25	15	20	15	20	45	55	55	60	45	45	60	60
50	50	40	30	50	55	55	40	30	35	35	40	35	45	40	45
15	25	25	25	20	20	30	10	30	35	35	35	30	35	35	30
40	35	30	25	20	40	45	20	35	35	30	30	35	55	60	25
30	30	35	40	40	45	45	40	20	35	40	40	35	35	40	40
30	30	35	30	35	45	50	50	25	30	40	85	50	50	55	60
30	30	40	40	35	35	45	50	25	25	30	35	35	35	40	45
25	35	35	20	35	50	55	55	30	30	30	20	30	35	55	30
30	35	30	25	35	35	40	40	30	35	40	30	40	45	40	45
20	25	30	30	25	355	40	40	25	25	30	25	30	35	45	45
15	20	25	25	35	35	55	55	20	20	25	30	35	40	45	50
20	25	35	25	30	40	45	35	30	35	35	25	40	65	45	35
40	40	30	35	30	25	35	40	40	35	30	30	35	30	35	40
30	40	30	25	35	40	50	25	35	35	35	35	35	30	45	25
35	35	50	50	55	60	60	60	40	40	55	55	55	60	65	65
25	35	30	40	40	50	60	60	30	30	40	40	40	55	60	60
25	25	20	25	35	35	50	50	20	30	25	30	30	30	45	50
20	25	45	40	55	50	50	50	30	30	40	40	50	50	55	60
25	25	30	30	25	50	50	60	20	20	40	40	30	40	40	40
20	25	35	25	40	45	45	45	25	30	30	30	30	45	50	50
50	50	55	60	65	80	80	85	45	45	50	50	60	60	70	65
20	25	35	35	35	40	35	55	30	30	30	35	40	30	50	50
20	15	20	25	25	35	40	45	25	30	30	30	35	30	40	50
30	35	40	40	40	35	50	50	25	35	45	45	40	35	55	55
40	40	55	50	50	65	65	65	25	30	50	50	55	50	65	55
30	30	20	15	20	60	40	50	25	20	15	20	50	60	85	80
20	20	20	25	25	35	30	40	15	20	20	25	25	4	60	50
20	25	30	30	35	35	40	45	20	25	30	30	35	40	40	40

3) Rata ambang dengar dan diagnosis fungsi pendengaran pekerja terpapar dan tidak terpapar bising

Tabel lampiran Rerata ambang dengar 4 frekuensi dan diagnosis gangguan pendengarannya

Terpapar Bising				Tidak Terpapar Bising			
D		S		D		S	
Rerata (dB)	Diagnosis	Rerata (dB)	Diagnosis	Rerata (dB)	Diagnosis	Rerata (dB)	Diagnosis
55	Moderate SNHL	57.5	Moderate SNHL	23.75	Normal Hearing	32.5	Mild CHL
32.5	Mild SNHL	30	Mild SNHL	18.75	Normal Hearing	20	Normal Hearing
18.75	Normal Hearing	53.75	Moderate SNHL	12.5	Normal Hearing	13.75	Normal Hearing
43.75	Moderate SNHL	38.75	Mild SNHL	15	Normal Hearing	15	Normal Hearing
23.75	Normal Hearing	35	Mild SNHL	11.25	Normal Hearing	11.25	Normal Hearing
32.5	Mild SNHL	32.5	Mild SNHL	11.25	Normal Hearing	11.25	Normal Hearing
37.5	Mild SNHL	37.5	Mild SNHL	11.25	Normal Hearing	11.25	Normal Hearing
35	Mild SNHL	38.75	Mild SNHL	18.75	Normal Hearing	20	Normal Hearing
36.5	Mild SNHL	31.25	Mild SNHL	12.5	Normal Hearing	16.25	Normal Hearing
35	Mild SNHL	28.75	Mild SNHL	7.5	Normal Hearing	7.5	Normal Hearing
31.25	Mild SNHL	37.5	Mild SNHL	16.25	Normal Hearing	10	Normal Hearing
30	Mild SNHL	28.75	Mild SNHL	30	Mild CHL	38.75	Mild CHL
28.25	Mild SNHL	28.75	Mild SNHL	20	Normal Hearing	20	Normal Hearing
31.25	Mild SNHL	40	Mild SNHL	21.25	Normal Hearing	22.5	Normal Hearing
32.5	Mild SNHL	31.25	Mild SNHL	20	Normal Hearing	21.25	Normal Hearing
33.75	Mild SNHL	33.75	Mild SNHL	23.75	Normal Hearing	23.75	Normal Hearing
48.75	Moderate SNHL	52.5	Moderate SNHL	16.25	Normal Hearing	15	Normal Hearing
38.75	Mild SNHL	41.25	Moderate SNHL	16.25	Normal Hearing	22.5	Normal Hearing
26.25	Mild SNHL	28.75	Mild SNHL	10	Normal Hearing	13.75	Normal Hearing
45	Mild SNHL	40	Mild SNHL	21.25	Normal Hearing	22.5	Normal Hearing
33.75	Mild SNHL	35	Mild SNHL	17.5	Normal Hearing	16.25	Normal Hearing
32.5	Mild SNHL	33.75	Mild SNHL	15	Normal Hearing	13.75	Normal Hearing
61.25	Severe SNHL	51.25	Moderate SNHL	11.25	Normal Hearing	13.75	Normal Hearing
33.75	Mild SNHL	28.75	Mild SNHL	12.5	Normal Hearing	17.5	Normal Hearing
23.75	Normal Hearing	30	Mild SNHL	15	Normal Hearing	16.25	Normal Hearing
37.5	Mild SNHL	40	Mild SNHL	13.75	Normal Hearing	17.5	Normal Hearing
51.5	Moderate SNHL	45	Moderate SNHL	20	Normal Hearing	20	Normal Hearing
33.125	Mild SNHL	44.375	Moderate SNHL	17.5	Normal Hearing	16.25	Normal Hearing
26.8	Mild SNHL	31.25	Mild SNHL	18.75	Normal Hearing	18.75	Normal Hearing
30	Mild MHL	31.35	Mild MHL	8.75	Normal Hearing	12.5	Normal Hearing

4) Hasil Pemeiksaan RTPCR gen HSPA1A pekerja terpapar dan tidak terpapar bising

HASIL PEMERIKSAAN RTPCR GEN HSPA1A
dr. DIDIT YUDHANTO

Kontrol

NO	Sampel	Ekspresi (Fold change)
1	A4	9.922
2	A8	6.162
3	A9	8.849
4	A10	8.540
5	A11	6.977
6	A12	9.337
7	A13	9.857
8	A14	7.416
9	A15	7.593
10	A16	7.110
11	A17	6.728
12	A18	7.313
13	A19	8.266
14	A20	8.470
15	A21	9.067
16	A22	8.853
17	A23	7.743
18	A24	7.430
19	A25	6.836
20	A26	10.193
21	A27	7.371
22	A28	7.633
23	A29	7.370
24	A30	9.669
25	A31	7.922
26	A32	7.424
27	A33	8.569
28	A34	6.283
29	A35	9.831
30	A36	6.820

Terpapar Bising

NO	Sampel	Ekspresi (Fold change)
1	B01	10.262
2	B02	9.467
3	B03	10.385
4	B04	8.316
5	B06	9.790
6	B07	9.534
7	B08	11.433
8	B10	11.990
9	B11	8.861
10	B12	9.187
11	B13	8.107
12	B15	10.672
13	B16	8.107
14	B17	9.876
15	B18	8.789
16	B19	10.850
17	B20	8.653
18	B21	9.182
19	B23	8.681
20	B24	11.132
21	B28	8.505
22	B29	12.219
23	B30	10.073
24	B31	11.652
25	B32	11.737
26	B33	8.625
27	B34	9.212
28	B35	11.923
29	B36	12.042
30	B37	12.188

5) Hasil pemeriksaan PTA subjek yang diperiksa WES

Tabel Hasil pemeriksaan PTA subjek yang diperiksa WES

Subjek	Rata-rata ambang dengar (dB)		Diagnosis	
	AD	AS	AD	AS
K1	32.5	30	Mild SNHL	Mild SNHL
K2	43.75	38.75	Moderate SNHL	Mild SNHL
K3	32.5	32.5	Mild SNHL	Mild SNHL
K4	55	57.5	Moderate SNHL	Moderate SNHL

6) Hasil pemeriksaan NGS WES pekerja terpapar bising dengan GPAB

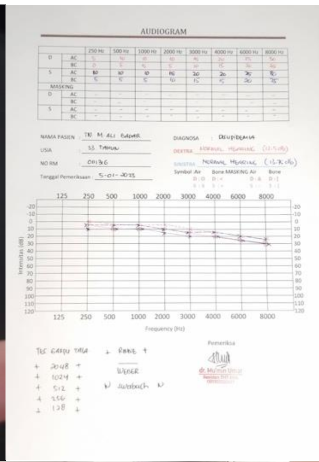
Tabel Data interpretasi varian

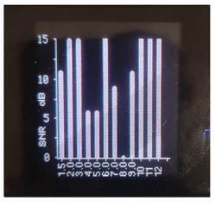
	K1	K2								K3	
Gene	**OGG1**	**GJB2**	**GJB2**	**CDH23**	**CDH23**	**CDH23**	**NOTCH1**	**SLC12A2**	**AUTS2**	**GDSME**	**NOTCH 1**
Transcript	NM_016820.4	NM_004004.6	NM_004004.6	NM_022124.6	NM_022124.6	NM_022124.6	NM_017617.5	NM_001046.3	N/A	NM_001127453.2	NM_017617.5
dbSNP, rsid	**rs551965289**	**rs72474224**	**rs111033222**	N/A	**rs952103854**	N/A	rs1440614235	rs71949635	N/A	N/A	**rs374453977**
Variants	chr3-9757113 C>T	chr13-20189473 C>T	chr13-20189571 C>T	chr10-71808006 G>C	chr10-71797124 C>T	chr10-71813332 A>C	chr9-136496583 G>A	chr5-128188289 CTT>C	chr7:70764747 G->A	chr7-24749698 T>C, p.Asn26Ser	chr9-136496802 G>A, p.Arg2313Trp
AA change	p.Gln340*	p.Val37Ile	p.Gly4Asp	p.Met2907Ile	p.Pro2245Ser	p.His3241Pro	p.Gln2386*				
Zygosity	Heterozygous	Heterozygous	Heterozygous	Heterozygous	Heterozygous	Heterozygous	Heterozygous	Heterozygous	Heterozygous	Heterozygous	Heterozygous
Mode of Inheritance	N/A	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD
HAF (highest allele frequency)	<0.01%	0,25%	<0.01%	<0.01%	<0.01%	<0.01%	N/A	<0.01%	<0.01%	N/A	<0.01%
In silico prediction	Benign	Deleterious	Uncertain	Benign	Uncertain	Uncertain	N/A	Benign	Benign	Uncertain	Uncertain
Classification	VUS	Likely Pathogenic	Likely Benign	VUS	VUS	VUS	VUS	VUS	Likely Benign	VUS	VUS
Variant type	Stop Gain	Missense	Missense	Missense	Missense	Missense	Stop Gain	UTR 3'	Splice Region Variantt	Missense	Missense

Note:

- *dbSNP rsid in green means that the variant matched with the gene and variant requested*
- *variants not listed in the table means that they are classified as Benign*
- *only VUS, LB, LP variants are included in this table*

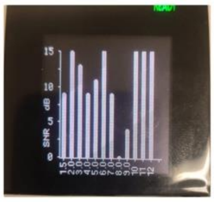
Lampiran 3. Dokumentasi Penelitian

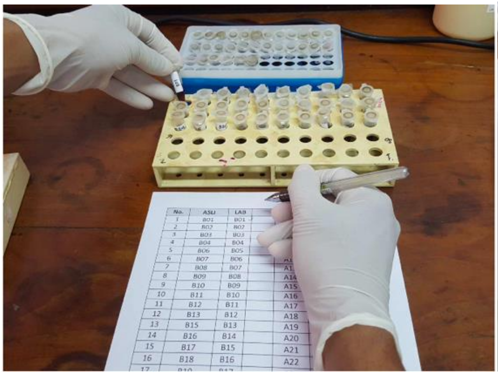




Dextra

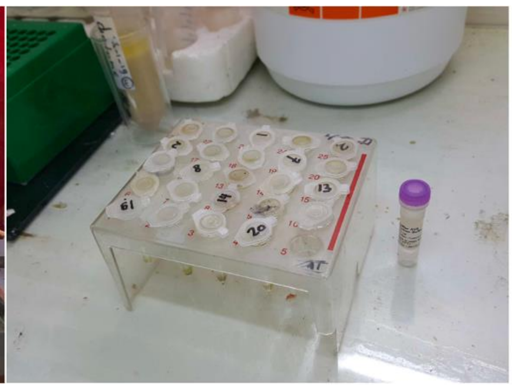
Sinistra

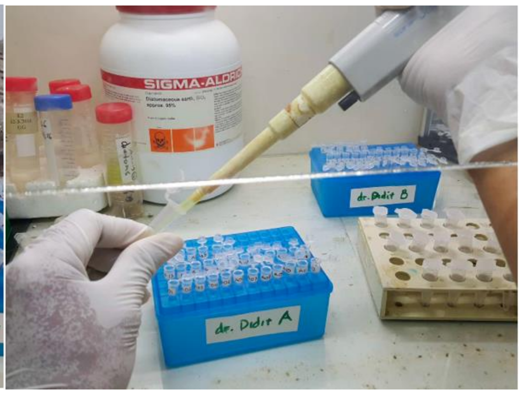


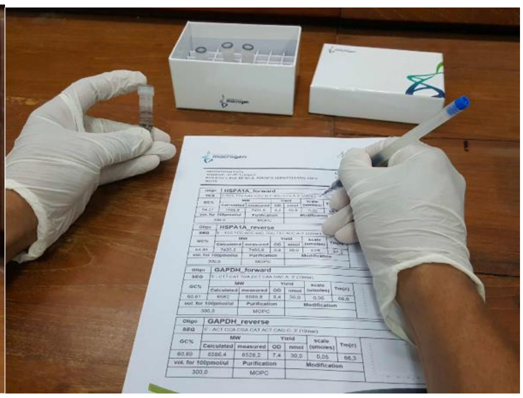



SIGMA-ALDRICH

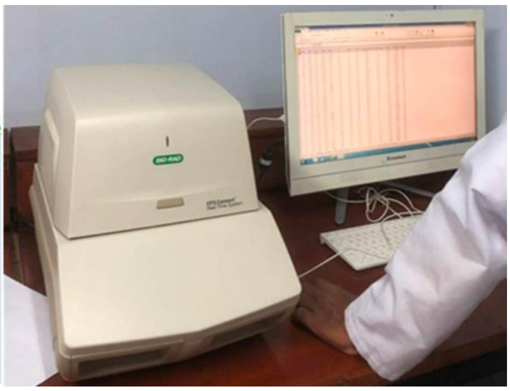

ACETONE




invitrogen
dr. Didit B

SIGMA-ALDRICH
dr. Didit B
dr. Didit A

macrogen

macrogen
HSPA1A_forward
HSPA1A_reverse
GAPDH_forward
GAPDH_reverse



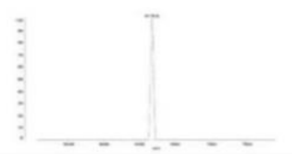

BIO-RAD

Humanizing Genomics
macrogen

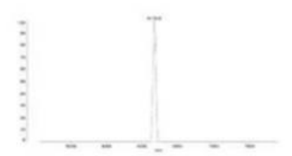
Mochammad Hatta
Makassar, South Sulawesi
BTN Antara Blok B6 NO.6, PERINTIS KEMERDEKAAN, KM 9
90245

OG20240115 - 325
Order date : 2024/01/15
Packing date : 2024/01/18
Page : 1/1

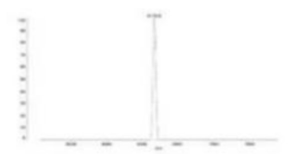
Oligo	HSPA1A_forward					
SEQ	5'-ACC TTC GAC GTG TCC ATC CTG A-3' (22mer)					
GC%	MW		Yield		scale (umoles)	Tm(c)
	Calculated	measured	OD	nmol		
54,27	7466,9	7401,5	8,8	30,0	0,05	65,3
vol. for 100pmol/ul		Purification	Modification			
300,0		MOPC				



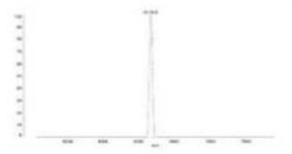
Oligo	HSPA1A_reverse					
SEQ	5' - TCC TCC ACG AAG TGG TTC ACC A-3' (22mer)					
GC%	MW		Yield		scale (umoles)	Tm(c)
	Calculated	measured	OD	nmol		
54,45	7420,2	7466,8	6,8	30,0	0,05	67,2
vol. for 100pmol/ul		Purification	Modification			
300,0		MOPC				



Oligo	GAPDH_forward					
SEQ	5' - CTT CAT TGA CCT CAA GAC A- 3' (19mer)					
GC%	MW		Yield		scale (umoles)	Tm(c)
	Calculated	measured	OD	nmol		
60,61	6582	6569,6	6,4	30,0	0,05	68,6
vol. for 100pmol/ul		Purification	Modification			
300,0		MOPC				



Oligo	GAPDH_reverse					
SEQ	5' - ACT CCA CGA CAT ACT CAG C- 3' (19mer)					
GC%	MW		Yield		scale (umoles)	Tm(c)
	Calculated	measured	OD	nmol		
60,89	6586,4	6528,2	7,4	30,0	0,05	66,3
vol. for 100pmol/ul		Purification	Modification			
300,0		MOPC				



OLIGO

Lampiran 4. Informed Consent dan kuesioner

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
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

LAMPIRAN 1

FORMULIR PERSETUJUAN SETELAH PENJELASAN (PSP) (INFORMED CONSENT)

Selamat pagi Bapak / Ibu /Saudara(i), saya **Didit Yudhanto**, bermaksud untuk melakukan penelitian **Hubungan Ambang Dengar, *Signal To Noise Ratio* Dengan Ekspresi mRNA Gen HSP70-1 Pekerja Terpapar Bising**

Penelitian ini bertujuan mengetahui hubungan ambang dengar (suara paling lemah yang masi dapat di dengar oleh subjek) dan SNR (signal to noise rasio yaitu rasio sinyal dan bising pada pemeriksaan saraf sensor pendengan dengan alat otoacoustic emission) dengan ekspresi mRNA gen HSP70-1 (ekspresi gen dari protein heat stroke 70-1 yang dihasilkan oleh tubuh manusia, yang diduga berpengaruh terhadap kerentanan individu terhadap tuli akibat bising). Penelitian ini juga bertujuan mengidentifikasi novel gen (gen baru, gen adalah informasi yang dimiliki setiap sel makhluk hidup yang dapat diwariskan kepada keturunannya) yang berkontribusi terhadap tuli akibat bising. Mengetahui individu yang secara genetik rentan terhadap gangguan pendengararan akibat bising, upaya pencegahan dan tatalaksana kejadian tuli akibat bising dan sebagai acuan dalam pengelolaan kesehatan yang dapat meringankan beban kesakitan tuli akibat bising.

Penelitian ini akan merekrut 32 pekerja yang terpapar bising dengan tuli akibat bising yang didiagnosis dengan pemeriksaan pendengaran audiometri nada murni dan 32 subjek kontol yaitu pekerja yang dengan ambang pendengaran dengar normal.

Semua subjek dalam penelitian ini akan dilakukan wawancara mengenai identitas, riwayat sosial dan riwayat kesehatan, pemeriksaan fisik oleh dokter THT/PPDS THT untuk memeriksa telinga hidung dan tenggorokan, kemudian jika memenuhi kriteria subjek penelitian maka akan dilanjutkan dengan pemeriksaan pendengaran dengan alat audiometri nada murni, pemeriksaan ada tidaknya gangguan saraf pendengaran pada telinga dalam dengan alat *otoacoustic emission* dan juga pengambilan darah vena untuk pemeriksaan laboratorium. Perlakuan yang mungkin berisiko adalah pengambilan darah berupa hematoma/bengkak disekitar pengambilan darah dan juga risiko syok anafilaktik (pingsan akibat gangguan darah dalam tubuh). Untuk menghindari hal tersebut pengambilan darah dilakukan oleh petugas yang sudah berpengalaman dan didampingi peneliti atau dokter yang dapat melakukan bantuan hidup dasar jika sewaktu-waktu terjadi komplikasi yang serius.

Partisipasi dalam penelitian ini bersifat sukarela, dapat menolak untuk tidak mengikuti penelitian ini dan dapat mengundurkan diri kapan saja tanpa adanya sanksi maupun konsekuensi dan tidak mengurangi hak mendapatkan pelayanan kesehatan.

Pada penelitian dilakukan pengambilan darah, yang akan dilakukan oleh petugas yang sudah berpengalaman, darah akan diambil pada lipatan siku sebanyak lebih kurang 2 sendok teh (8 ml). Sampel darah akan diperiksa di laboratoium untuk 1 sendok teh (4 ml) untuk pemeriksaan mRNA HSP70-1 dan 1 sendok teh (4ml) untuk pemeriksaan DNA diambil sebanyak 1 kali selama penelitian. Efek samping tindakan pengambilan sampel antara nyeri, hematom/bengakak dan syok anafilaktik/pingsan yang dapat membahayakan jiwa. Nyeri bersifat ringan sehingga tidak memerlukan pengobatan, jika terjadi hematom/bengkak dapat dikompres dingin dan hematom akan sembuh dalam beberapa hari, komplikasi syok anafilaktik/pingsan yang dapat membahyakan jiwa akan ditangangi oleh peneliti dan tim.

Setiap Subjek akan dilakukan wawancara, pemeriksaan fisik dan pemeriksaan penunjang yang membutuhkan waktu lebih kurang 2 jam.

Pembiayaan penelitian, prosedur, pengambilan sampel, pemeriksaan sampel, penanganan efek samping, sampai kepada biaya RS jika harus masuk rumah sakit, ganti rugi jika terjadi kecacatan, kematian, efek samping berat gratis dan ditanggung peneliti.

Partisipan yang mengikuti penelitian ini akan mendapatkan kompensasi berupa unag transport sebesar Rp.100.000,-

Data partisipan dalam penelitian ini dijamin kerahasiannya dan hanya digunakan untuk kepentingan penelitian.

Identitas Peneliti:
Nama : Didit Yudhanto
Alamat : BTP Blok AA Jl. Keindahan 10 No. 132
No Hp : 081917373738

Kuisioner Penelitian Pekerja Terpapar Bising

KODE SUBJEK				
NOMOR HP				
I. KARATERISTIK SUBJEK				
1.	Nama Subjek			
2.	Tempat/Tanggal Lahir			
3.	Usia	………… Tahun, ……….. Bulan		
4.	Jenis kelamin	1. Laki-laki	2. Perempuan	
5.	Alamat Lengkap			
6.	Suku bangsa			
	1. Bugis 2. Makassar 3. Toraja 4. Mandar 5. Jawa 6. Lainnya, sebutkan……………..			
7.	Pendidikan (pendidikan tertinggi yang dicapai):			
	1. Tidak sekolah 2. Tidak tamat SD 3. Tamat SD / Sederajat 4. Tamat SLTP / Sederajat 5. Tamat SLTA / Sederajat 6. Akademi / Diploma 7. Perguruan Tinggi			
8.	**Unit/Bagian Kerja/Seksi Area:**			
9.	**Lama Bekerja di Perusahaan ini :**	…………… Tahun, …………Bulan		
10	**Riwayat Pekerjaan**			
	A. Apakah sebelumnya pernah kerja di tempat bising 1. Ya 0. Tidak			
	B. Jika Ya, sudah berapa lama kerja ditempat bising?(tahun)			
II. RIWAYAT GANGGUAN PENDENGARAN DAN SAKIT TELINGA				
1.	Apakah Anda menderita gangguan pendengaran? 1. Ya 0. Tidak			
2.	Jika Ya, bagaimana perjalanan gangguan pendengaran tersebut dirasakan? 1. Perlaha-lahan (makin lama makin memburuk) 0. Mendadak (tiba-tiba)			
3.	Kapan gangguan pendengaran tersebut mulai dirasakan? 1. Setelah bekerja di perusahaan ini 0. Sebelum bekerja diperusahaan ini			
4.	Apakah Saudara pernah menderita sakit telinga ?			
	2. Ya 0. Tidak			
5	Jika Iya sebutkan sakitnya:			
6	Jika Iya, obat apa yang saudara minum? Sebutkan………………………………………			
7	Dari mana obat tersebut saudara peroleh?			
	1. Dokter 2. Perusahaan 3. Apotek/beli sendiri 4. Lain-lain, sebutkan……………………………………			
III. RIWAYAT MINUM OBAT				

1.	Apakah ada pada jenis obat yang pernah atau sedang anda konsumsi saat ini? 1. Ya 0. Tidak	
	Eryhromycin	
	Gentamycin	
	Streptomycin	
	Netilmycin	
	Amikacin	
	Neomycin (obat tetes telinga)	
	Kanamycin	
	Etiomycin	
IV.PERILAKU PEKERJA		
A.	**Penggunaan APT (alat Pelindung Telinga)**	
1.	Apakah di tempat kerja Saudara bekerja disediakan alat pelindung telinga ?	
	1. Ya 0. Tidak	
2.	Jika Ya, Apakah Saudara menggunakan/memakainya pada saat sedang bekerja ?	
	1. Selalu 2. Kadang-kadang 0. Tidak pernah	
3.	Bila Saudara menggunakan alat pelindung telinga, jenis apakah alat pelindung telinga yang sering Saudara gunakan? (pilih satu jawaban yang paling sering)	
	1. Ear Muff (tutup telinga) 0. Ear Plug (sumbat telinga)	
4.	Bila Saudara tidak memakainya, apakah alasan Saudara ?	
	1. Ya, sebutkan………. 0. Tidak Ada	
B	**Kebiasaan Merokok**	
1.	Apakah saudara merokok ?	
	1. Ya 0. Tidak	
2.	Jika Ya, Berapa batang saudara merokok per hari ?	
3.	Sudah berapa lama (Tahun) saudara merokok?	
4.	Jenis rokok apa yang biasa dikonsumsi ?	
	1. Kretek 0. Filter	
V. KAREKTERISTIK KERJA		
A	**Lama Pajanan**	
1	Berapa lamakah waktu saudara berkerja di perusahaan dalam sehari? (pilih satu jawaban)	
	1. 8 jam 2. >8 jam 0. < 8 jam	
B	**Pelatihan**	
1.	Apakah di tempat kerja Saudara pernah mendapatkan pelatihan Keselamatan & Kesehatan Kerja ?	
	1. Pernah 0. Tidak Pernah	
2.	Jika pernah, berapa kali ?	
3.	Apakah Saudara pernah mendapatkan pengetahuan tentang bahaya kebisingan di tempat kerja ?	
	1. Pernah 0. Tidak Pernah	

VI. GANGGUAN PENDENGARAN		
1.	Apakah Saudara merasa terganggu oleh bunyi (bising) di tempat Saudara bekerja saat ini ? (pilih satu jawaban)	
	1. Ya 0. Tidak	
2.	Apakah Saudara mengalami keluhan pendengaran setelah selesai bekerja ?	
	1. Ya 0. Tidak	
3.	Jika iya, apakah keluhan yang anda rasakan? 1. Ya 0. Tidak	
	Kurang mendengar	
	Berdenging/berdengung	
	Telinga terasa penuh	
	Lainnya, sebutkan………………………	
VII. GANGGUAN FISIOLOGIS		
1	Apakah jenis gangguan/keluhan yang dirasakan tersebut ? 1. Ya 0. Tidak	
	Pusing	
	Mual	
	Menjadi lekas marah	
	Menjadi mudah tersinggung	
	Sulit tidur	
	Lelah	
	Mata menjadi tidak enak	
	Dada terasa sakit	
	Sesak nafas	
	Lainnya, sebutkan………………	
VIII GANGGUAN PSIKOLOGIS		
1.	Apakah mengganggu saudara dalam beraktivitas ? 1. Ya 0. Tidak	
	Tidak bisa bekerja	
	Sulit berkonsentrasi	
	Sulit melakukan pekerjaan	
2.	Apakah bunyi (bising) yang tidak dikehendaki tersebut menganggu ketentraman Saudara bekerja ? 1. Ya 0. Tidak	
	Merasa tidak nyaman dalam bekerja	
	Tidak bisa bekerja	
	Sangat mengganggu	
IX. GANGGUAN KOMUNIKASI.		
1.	Apakah saudara mengalami gejala dibawah ini ? 1. Ya 0. Tidak	
	Sulit berkomunikasi	
	Tidak dapat mendengar suara lawan bicara	
	Harus berteriak	
	Harus memperkeras suara	

X. RIWAYAT PENYAKIT		
1.	Apakah Saudara sekarang menderita penyakit di bawah ini? 1. Ya 0. Tidak	
	Hipertensi/Tekanan darah tinggi	
	Diabetus melitus/Penyakit gula darah/Kencing manis	
	Penyakit jantung	
XI. RIWAYAT PENYAKIT KELUARGA		
1.	Apakah terdapat angg0ta keluarga Saudara yang sedarah yang menderita gangguan pendengaran?	
	1. Ya 0. Tidak	
2.	Jika Ya, apakah gangguan pendengaran anggota keluarga anda tersebut diderita sejak lahir?	
	1. Ya 0. Tidak	

Makassar, Januari 2024
Kolektor data

(________________________)

Lampiran 5. Hasil data statistik

1. Data Demografi Sampel

Report

Group Subjek		Usia Responden	Lama Bekerja	Lama merokok	Jumlah batang rokok perhari
Tidak Terpapar Bising	Mean	35.7667	9.4000	6.4667	5.7000
	N	30	30	30	30
	Std. Deviation	8.50835	6.66747	8.49232	6.74741
	Minimum	22.00	1.00	.00	.00
	Maximum	55.00	28.00	28.00	24.00
	Range	33.00	27.00	28.00	24.00
	Median	34.0000	8.0000	3.0000	4.5000
Terpapar Bising	Mean	37.4667	10.5333	5.5667	4.2000
	N	30	30	30	30
	Std. Deviation	7.23847	4.50083	7.22392	5.90966
	Minimum	24.00	5.00	.00	.00
	Maximum	51.00	23.00	20.00	24.00
	Range	27.00	18.00	20.00	24.00
	Median	39.0000	10.0000	1.0000	1.0000
Total	Mean	36.6167	9.9667	6.0167	4.9500
	N	60	60	60	60
	Std. Deviation	7.87851	5.66873	7.82974	6.33373
	Minimum	22.00	1.00	.00	.00
	Maximum	55.00	28.00	28.00	24.00
	Range	33.00	27.00	28.00	24.00
	Median	36.5000	10.0000	2.5000	1.5000

Crosstab

			Group Subjek		
			Tidak Terpapar Bising	Terpapar Bising	Total
Suku Subjek	Bugis	Count	11	11	22
		% within Suku Subjek	50.0%	50.0%	100.0%
		% within Group Subjek	36.7%	36.7%	36.7%
	Makassar	Count	7	15	22
		% within Suku Subjek	31.8%	68.2%	100.0%
		% within Group Subjek	23.3%	50.0%	36.7%
	Toraja	Count	3	1	4
		% within Suku Subjek	75.0%	25.0%	100.0%
		% within Group Subjek	10.0%	3.3%	6.7%
	Lainnya	Count	9	3	12
		% within Suku Subjek	75.0%	25.0%	100.0%
		% within Group Subjek	30.0%	10.0%	20.0%
Total		Count	30	30	60
		% within Suku Subjek	50.0%	50.0%	100.0%
		% within Group Subjek	100.0%	100.0%	100.0%

Pendidikan Subjek * Group Subjek

Crosstab

			Group Subjek		
			Tidak Terpapar Bising	Terpapar Bising	Total
Pendidikan Subjek	Tidak Tamat SD	Count	1	1	2
		% within Pendidikan Subjek	50.0%	50.0%	100.0%
		% within Group Subjek	3.3%	3.3%	3.3%
	Tamat SD/sederajat	Count	2	1	3
		% within Pendidikan Subjek	66.7%	33.3%	100.0%
		% within Group Subjek	6.7%	3.3%	5.0%
	Tamat SLTP/sederajat	Count	0	5	5
		% within Pendidikan Subjek	0.0%	100.0%	100.0%
		% within Group Subjek	0.0%	16.7%	8.3%
	Tamat SLTA/sederajat	Count	12	23	35
		% within Pendidikan Subjek	34.3%	65.7%	100.0%
		% within Group Subjek	40.0%	76.7%	58.3%
	Perguruan Tinggi	Count	15	0	15
		% within Pendidikan Subjek	100.0%	0.0%	100.0%
		% within Group Subjek	50.0%	0.0%	25.0%
Total		Count	30	30	60
		% within Pendidikan Subjek	50.0%	50.0%	100.0%
		% within Group Subjek	100.0%	100.0%	100.0%

Merokok * Group Subjek

Crosstab

			Group Subjek		
			Tidak Terpapar Bising	Terpapar Bising	Total
Merokok	Tidak	Count	14	10	24
		% within Merokok	58.3%	41.7%	100.0%
		% within Group Subjek	46.7%	33.3%	40.0%
	Ya	Count	16	20	36
		% within Merokok	44.4%	55.6%	100.0%
		% within Group Subjek	53.3%	66.7%	60.0%
Total		Count	30	30	60
		% within Merokok	50.0%	50.0%	100.0%
		% within Group Subjek	100.0%	100.0%	100.0%

Hipertensi * Group Subjek

Crosstab

			Group Subjek		
			Tidak Terpapar Bising	Terpapar Bising	Total
Hipertensi	Tidak	Count	30	29	59
		% within Hipertensi	50.8%	49.2%	100.0%
		% within Group Subjek	100.0%	96.7%	98.3%
	Ya	Count	0	1	1
		% within Hipertensi	0.0%	100.0%	100.0%
		% within Group Subjek	0.0%	3.3%	1.7%
Total		Count	30	30	60
		% within Hipertensi	50.0%	50.0%	100.0%
		% within Group Subjek	100.0%	100.0%	100.0%

Diabetus melitus * Group Subjek

Crosstab

			Group Subjek		
			Tidak Terpapar Bising	Terpapar Bising	Total
Diabetus melitus	Tidak	Count	30	30	60
		% within Diabetus melitus	50.0%	50.0%	100.0%
		% within Group Subjek	100.0%	100.0%	100.0%
Total		Count	30	30	60
		% within Diabetus melitus	50.0%	50.0%	100.0%
		% within Group Subjek	100.0%	100.0%	100.0%

Frequency Table

Ketersediaan APT di tempat kerja

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak	2	6.7	6.7	6.7
	Ya	28	93.3	93.3	100.0
	Total	30	100.0	100.0	

Jenis APT uang dipakai

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ear Plug	22	73.3	73.3	73.3
	Ear Muff	8	26.7	26.7	100.0
	Total	30	100.0	100.0	

Menggunakan APT saat bekerja

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak pernah	4	13.3	13.3	13.3
	Selalu	11	36.7	36.7	50.0
	Kadang-kadang	15	50.0	50.0	100.0
	Total	30	100.0	100.0	

Frequency Table

Kurang mendengar

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak pernah	27	90.0	90.0	90.0
	Pernah	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Berdenging/berdengung

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak pernah	26	86.7	86.7	86.7
	Pernah	4	13.3	13.3	100.0
	Total	30	100.0	100.0	

Telinga terasa penuh

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak pernah	27	90.0	90.0	90.0
	Pernah	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Sulit berkomunikasi

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak pernah	28	93.3	93.3	93.3
	Pernah	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Tidak dapat mendengar suara lawan bicara

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak pernah	28	93.3	93.3	93.3
	Pernah	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Harus berteriak

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak pernah	30	100.0	100.0	100.0

Harus memperkeras suara

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak pernah	27	90.0	90.0	90.0
	Pernah	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Uji normalitas data

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Usia Responden	.065	60	.200*	.981	60	.464
Lama Bekerja	.148	60	.002	.931	60	.002
Jumlah batang rokok perhari	.249	60	.000	.785	60	.000
Lama merokok	.262	60	.000	.776	60	.000

*. 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.
1.5 kHz (left)	.108	53	.183	.977	53	.390
2.0 kHz (left)	.093	53	.200*	.981	53	.548
3.0 kHz (left)	.106	53	.200*	.955	53	.046
4.0 kHz (left)	.178	53	.000	.908	53	.001
5.0 kHz (left)	.128	53	.031	.941	53	.011
6.0 kHz (left)	.131	53	.024	.930	53	.004
7.0 kHz (left)	.195	53	.000	.859	53	.000
8.0 kHz (left)	.476	53	.000	.411	53	.000
9.0 kHz (left)	.343	53	.000	.687	53	.000
10 kHz (left)	.218	53	.000	.851	53	.000
11 kHz (left)	.176	53	.000	.884	53	.000
12 kHz (left)	.207	53	.000	.810	53	.000
1.5 kHz (right)	.080	53	.200*	.974	53	.313
2.0 kHz (right)	.066	53	.200*	.980	53	.528
3.0 kHz (right)	.091	53	.200*	.966	53	.136
4.0 kHz (right)	.111	53	.131	.969	53	.192
5.0 kHz (right)	.122	53	.049	.919	53	.002
6.0 kHz (right)	.097	53	.200*	.945	53	.017
7.0 kHz (right)	.250	53	.000	.830	53	.000
8.0 kHz (right)	.467	53	.000	.345	53	.000
9.0 kHz (right)	.321	53	.000	.696	53	.000
10 kHz (right)	.192	53	.000	.825	53	.000
11 kHz (right)	.257	53	.000	.789	53	.000
12 kHz (right)	.231	53	.000	.759	53	.000

*. 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.
250Hz (AC-D)	.165	59	.000	.913	59	.000
500Hz (AC-D)	.135	59	.009	.941	59	.006
1 kHz (AC-D)	.188	59	.000	.938	59	.005
2 kHz (AC-D)	.171	59	.000	.922	59	.001
3 kHz (AC-D)	.163	59	.001	.931	59	.002
4 kHz (AC-D)	.273	59	.000	.392	59	.000
6 kHz (AC-D)	.125	59	.023	.971	59	.179
8 kHz (AC-D)	.155	59	.001	.968	59	.117
250Hz (AC-S)	.140	59	.006	.952	59	.021
500Hz (AC-S)	.117	59	.045	.966	59	.100
1 kHz (AC-S)	.141	59	.005	.933	59	.003
2 kHz (AC-S)	.150	59	.002	.904	59	.000
3 kHz (AC-S)	.129	59	.016	.950	59	.017
4 kHz (AC-S)	.135	59	.009	.949	59	.015
6 kHz (AC-S)	.193	59	.000	.938	59	.005
8 kHzHz (AC-S)	.164	59	.000	.952	59	.021

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
250Hz (BC-D)	.209	60	.000	.900	60	.000
500Hz (BC-D)	.176	60	.000	.904	60	.000
1 kHz (BC-D)	.178	60	.000	.916	60	.001
2 kHz (BC-D)	.197	60	.000	.891	60	.000
3 kHz (BC-D)	.169	60	.000	.940	60	.006
4 kHz (BC-D)	.191	60	.000	.924	60	.001
6 kHz (BC-D)	.176	60	.000	.950	60	.015
8 kHz(BC-D)	.135	60	.008	.937	60	.004
250Hz (BC-S)	.166	60	.000	.942	60	.007
500Hz (BC-S)	.216	60	.000	.855	60	.000
1 kHz (BC-S)	.187	60	.000	.899	60	.000
2 kHz (BC-S)	.195	60	.000	.887	60	.000
3 kHz (BC-S)	.130	60	.014	.938	60	.004
4 kHz (BC-S)	.143	60	.004	.918	60	.001
6 kHz (BC-S)	.181	60	.000	.925	60	.001
8 kHz (BC-S)	.161	60	.001	.927	60	.001

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Ekspresi mRNA Gen HSP70-1A	.080	60	.200*	.965	60	.082
Rerata SNR DPOAE Left	.124	60	.023	.940	60	.005
Rerata SNR DPOAE Right	.107	60	.085	.939	60	.005
Rerata ambang dengar (AC-D)	.142	60	.004	.928	60	.002
Rerata ambang dengar (AC-S)	.158	60	.001	.943	60	.007
Rerata ambang dengar (BC-S)	.120	60	.030	.923	60	.001
Rerata ambang dengar (BC-D)	.110	60	.067	.933	60	.003
Interaksi EkspxMDPOAE_L	.122	60	.026	.929	60	.002
Interaksi EkspxMDPOAE_R	.098	60	.200*	.951	60	.017
Interaksi EkspxMAC_D	.126	60	.019	.923	60	.001
Interaksi EkspxMAC_S	.161	60	.001	.935	60	.003
Interaksi EkspxMBC_D	.149	60	.002	.921	60	.001
Interaksi EkspxMBC_S	.110	60	.069	.921	60	.001

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

a. Lilliefors Significance Correction

Uji komparatif data demografi

1. Usia

T-Test

Group Statistics

	Group Subjek	N	Mean	Std. Deviation	Std. Error Mean
Usia Responden	Tidak Terpapar Bising	30	35.7667	8.50835	1.55340
	Terpapar Bising	30	37.4667	7.23847	1.32156

Independent Samples Test

		Levene's Test for Equality of ...		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Usia Responden	Equal variances assumed	.686	.4	-.83	58	.408	-1.70000	2.03950	-5.7825	2.38251
	Equal variances not assumed			-.83	56.548	.408	-1.70000	2.03950	-5.7847	2.38474

2. Lama bekerja

NPar Tests

Mann-Whitney Test

Ranks

	Group Subjek	N	Mean Rank	Sum of Ranks
Lama Bekerja	Tidak Terpapar Bising	30	27.58	827.50
	Terpapar Bising	30	33.42	1002.50
	Total	60		
Jumlah batang rokok perhari	Tidak Terpapar Bising	30	31.90	957.00
	Terpapar Bising	30	29.10	873.00
	Total	60		
Lama merokok	Tidak Terpapar Bising	30	31.32	939.50
	Terpapar Bising	30	29.68	890.50
	Total	60		

Test Statistics[a]

	Lama Bekerja	Jumlah batang rokok perhari	Lama merokok
Mann-Whitney U	362.500	408.000	425.500
Wilcoxon W	827.500	873.000	890.500
Z	-1.301	-.656	-.385
Asymp. Sig. (2-tailed)	.193	.512	.700

a. Grouping Variable: Group Subjek

3. Kebiasaan merokok

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.111[a]	1	.292		
Continuity Correction[b]	.625	1	.429		
Likelihood Ratio	1.115	1	.291		
Fisher's Exact Test				.430	.215
Linear-by-Linear Association	1.093	1	.296		
N of Valid Cases	60				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.00.

b. Computed only for a 2x2 table

4. Suku, pendidikan, lama merokok dan jumlah batang rokok perhari

NPar Tests

Mann-Whitney Test

Ranks

	Group Subjek	N	Mean Rank	Sum of Ranks
Suku Subjek	Tidak Terpapar Bising	30	33.03	991.00
	Terpapar Bising	30	27.97	839.00
	Total	60		
Pendidikan Subjek	Tidak Terpapar Bising	30	38.02	1140.50
	Terpapar Bising	30	22.98	689.50
	Total	60		
Jumlah batang rokok perhari	Tidak Terpapar Bising	30	31.90	957.00
	Terpapar Bising	30	29.10	873.00
	Total	60		
Lama merokok	Tidak Terpapar Bising	30	31.32	939.50
	Terpapar Bising	30	29.68	890.50
	Total	60		

Test Statistics[a]

	Suku Subjek	Pendidikan Subjek	Jumlah batang rokok perhari	Lama merokok
Mann-Whitney U	374.000	224.500	408.000	425.500
Wilcoxon W	839.000	689.500	873.000	890.500
Z	-1.189	-3.762	-.656	-.385
Asymp. Sig. (2-tailed)	.235	.000	.512	.700

a. Grouping Variable: Group Subjek

5. Uji komparatif ekspresi mRNA gen HSP70-1A

T-Test

Group Statistics

	Group Subjek	N	Mean	Std. Deviation	Std. Error Mean
Ekspresi mRNA Gen HSP70-1A	Tidak Terpapar Bising	30	8.0518	1.15155	.21024
	Terpapar Bising	30	10.0483	1.37596	.25121

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Ekspresi mRNA Gen HSP70-1A	Equal variances assumed	1.746	.192	-6.095	58	.000	-1.99653	.32758	-2.65226	-1.34080
	Equal variances not assumed			-6.095	56.25	.000	-1.99653	.32758	-2.65270	-1.34037

6. Uji Komparai SNR DPOAE

NPar Tests

Mann-Whitney Test

Ranks

	Group Subjek	N	Mean Rank	Sum of Ranks
1.5 kHz (left)	Tidak Terpapar Bising	29	31.79	922.00
	Terpapar Bising	27	24.96	674.00
	Total	56		
2.0 kHz (left)	Tidak Terpapar Bising	29	32.72	949.00
	Terpapar Bising	30	27.37	821.00
	Total	59		
3.0 kHz (left)	Tidak Terpapar Bising	30	28.62	858.50
	Terpapar Bising	30	32.38	971.50
	Total	60		
4.0 kHz (left)	Tidak Terpapar Bising	30	32.83	985.00
	Terpapar Bising	30	28.17	845.00
	Total	60		
5.0 kHz (left)	Tidak Terpapar Bising	30	32.68	980.50
	Terpapar Bising	29	27.22	789.50
	Total	59		
6.0 kHz (left)	Tidak Terpapar Bising	30	34.48	1034.50
	Terpapar Bising	30	26.52	795.50
	Total	60		
7.0 kHz (left)	Tidak Terpapar Bising	30	32.00	960.00
	Terpapar Bising	30	29.00	870.00
	Total	60		
8.0 kHz (left)	Tidak Terpapar Bising	30	32.12	963.50
	Terpapar Bising	30	28.88	866.50
	Total	60		
9.0 kHz (left)	Tidak Terpapar Bising	30	30.75	922.50
	Terpapar Bising	30	30.25	907.50
	Total	60		
10 kHz (left)	Tidak Terpapar Bising	30	32.03	961.00
	Terpapar Bising	30	28.97	869.00
	Total	60		
11 kHz (left)	Tidak Terpapar Bising	30	30.97	929.00
	Terpapar Bising	30	30.03	901.00
	Total	60		
12 kHz (left)	Tidak Terpapar Bising	30	30.90	927.00
	Terpapar Bising	30	30.10	903.00
	Total	60		

Test Statistics[a]

	1.5 kHz (left)	2.0 kHz (left)	3.0 kHz (left)	4.0 kHz (left)
Mann-Whitney U	296.000	356.000	393.500	380.000
Wilcoxon W	674.000	821.000	858.500	845.000
Z	-1.567	-1.199	-.837	-1.040
Asymp. Sig. (2-tailed)	.117	.230	.402	.298

Test Statistics[a]

	5.0 kHz (left)	6.0 kHz (left)	7.0 kHz (left)	8.0 kHz (left)
Mann-Whitney U	354.500	330.500	405.000	401.500
Wilcoxon W	789.500	795.500	870.000	866.500
Z	-1.226	-1.769	-.683	-1.154
Asymp. Sig. (2-tailed)	.220	.077	.495	.248

Test Statistics[a]

	9.0 kHz (left)	10 kHz (left)	11 kHz (left)	12 kHz (left)
Mann-Whitney U	442.500	404.000	436.000	438.000
Wilcoxon W	907.500	869.000	901.000	903.000
Z	-.127	-.703	-.212	-.181
Asymp. Sig. (2-tailed)	.899	.482	.832	.856

a. Grouping Variable: Group Subjek

NPar Tests

Mann-Whitney Test

Ranks

	Group Subjek	N	Mean Rank	Sum of Ranks
1.5 kHz (right)	Tidak Terpapar Bising	30	31.83	955.00
	Terpapar Bising	27	25.85	698.00
	Total	57		
2.0 kHz (right)	Tidak Terpapar Bising	30	34.03	1021.00
	Terpapar Bising	29	25.83	749.00
	Total	59		
3.0 kHz (right)	Tidak Terpapar Bising	30	34.18	1025.50
	Terpapar Bising	30	26.82	804.50
	Total	60		
4.0 kHz (right)	Tidak Terpapar Bising	30	34.25	1027.50
	Terpapar Bising	30	26.75	802.50
	Total	60		
5.0 kHz (right)	Tidak Terpapar Bising	30	34.47	1034.00
	Terpapar Bising	30	26.53	796.00
	Total	60		
6.0 kHz (right)	Tidak Terpapar Bising	30	36.18	1085.50
	Terpapar Bising	30	24.82	744.50
	Total	60		
7.0 kHz (right)	Tidak Terpapar Bising	30	33.73	1012.00
	Terpapar Bising	30	27.27	818.00
	Total	60		
8.0 kHz (right)	Tidak Terpapar Bising	30	32.13	964.00
	Terpapar Bising	30	28.87	866.00
	Total	60		
9.0 kHz (right)	Tidak Terpapar Bising	30	33.68	1010.50
	Terpapar Bising	30	27.32	819.50
	Total	60		
10 kHz (right)	Tidak Terpapar Bising	30	35.18	1055.50
	Terpapar Bising	30	25.82	774.50
	Total	60		
11 kHz (right)	Tidak Terpapar Bising	30	33.03	991.00
	Terpapar Bising	30	27.97	839.00
	Total	60		
12 kHz (right)	Tidak Terpapar Bising	30	33.55	1006.50
	Terpapar Bising	30	27.45	823.50
	Total	60		

Test Statistics[a]

	1.5 kHz (right)	2.0 kHz (right)	3.0 kHz (right)	4.0 kHz (right)
Mann-Whitney U	320.000	314.000	339.500	337.500
Wilcoxon W	698.000	749.000	804.500	802.500
Z	-1.360	-1.837	-1.636	-1.667
Asymp. Sig. (2-tailed)	.174	.066	.102	.095

Test Statistics[a]

	5.0 kHz (right)	6.0 kHz (right)	7.0 kHz (right)	8.0 kHz (right)
Mann-Whitney U	331.000	279.500	353.000	401.000
Wilcoxon W	796.000	744.500	818.000	866.000
Z	-1.763	-2.523	-1.490	-1.166
Asymp. Sig. (2-tailed)	.078	.012	.136	.244

Test Statistics[a]

	9.0 kHz (right)	10 kHz (right)	11 kHz (right)	12 kHz (right)
Mann-Whitney U	354.500	309.500	374.000	358.500
Wilcoxon W	819.500	774.500	839.000	823.500
Z	-1.561	-2.104	-1.149	-1.365
Asymp. Sig. (2-tailed)	.118	.035	.251	.172

a. Grouping Variable: Group Subjek

Mann-Whitney Test

Ranks

	Group Subjek	N	Mean Rank	Sum of Ranks
Rerata SNR DPOAE Left	Tidak Terpapar Bising	30	33.35	1000.50
	Terpapar Bising	30	27.65	829.50
	Total	60		
Rerata SNR DPOAE Right	Tidak Terpapar Bising	30	36.38	1091.50
	Terpapar Bising	30	24.62	738.50
	Total	60		

Test Statistics[a]

	Rerata SNR DPOAE Left	Rerata SNR DPOAE Right
Mann-Whitney U	364.500	273.500
Wilcoxon W	829.500	738.500
Z	-1.264	-2.610
Asymp. Sig. (2-tailed)	.206	.009

a. Grouping Variable: Group Subjek

7. Uji Komparai Ambang Dengar AC

NPar Tests

Mann-Whitney Test

Ranks

	Group Subjek	N	Mean Rank	Sum of Ranks
250Hz (AC-D)	Tidak Terpapar Bising	30	18.65	559.50
	Terpapar Bising	30	42.35	1270.50
	Total	60		
500Hz (AC-D)	Tidak Terpapar Bising	30	18.05	541.50
	Terpapar Bising	30	42.95	1288.50
	Total	60		
1 kHz (AC-D)	Tidak Terpapar Bising	30	17.38	521.50
	Terpapar Bising	30	43.62	1308.50
	Total	60		
2 kHz (AC-D)	Tidak Terpapar Bising	30	16.67	500.00
	Terpapar Bising	30	44.33	1330.00
	Total	60		
3 kHz (AC-D)	Tidak Terpapar Bising	30	17.83	535.00
	Terpapar Bising	30	43.17	1295.00
	Total	60		
4 kHz (AC-D)	Tidak Terpapar Bising	30	17.08	512.50
	Terpapar Bising	30	43.92	1317.50
	Total	60		
6 kHz (AC-D)	Tidak Terpapar Bising	30	17.15	514.50
	Terpapar Bising	30	43.85	1315.50
	Total	60		
8 kHz (AC-D)	Tidak Terpapar Bising	29	17.83	517.00
	Terpapar Bising	30	41.77	1253.00
	Total	59		

Test Statistics[a]

	250Hz (AC-D)	500Hz (AC-D)	1 kHz (AC-D)	2 kHz (AC-D)
Mann-Whitney U	94.500	76.500	56.500	35.000
Wilcoxon W	559.500	541.500	521.500	500.000
Z	-5.331	-5.594	-5.897	-6.213
Asymp. Sig. (2-tailed)	.000	.000	.000	.000
Z	-5.331	-5.594	-5.897	-6.213
Asymp. Sig. (2-tailed)	.000	.000	.000	.000

Test Statistics[a]

	3 kHz (AC-D)	4 kHz (AC-D)	6 kHz (AC-D)	8 kHz (AC-D)
Mann-Whitney U	70.000	47.500	49.500	82.000
Wilcoxon W	535.000	512.500	514.500	517.000
Z	-5.667	-6.012	-5.959	-5.381
Asymp. Sig. (2-tailed)	.000	.000	.000	.000

a. Grouping Variable: Group Subjek

NPar Tests

Mann-Whitney Test

Ranks

	Group Subjek	N	Mean Rank	Sum of Ranks
250Hz (AC-S)	Tidak Terpapar Bising	30	18.57	557.00
	Terpapar Bising	30	42.43	1273.00
	Total	60		
500Hz (AC-S)	Tidak Terpapar Bising	30	18.23	547.00
	Terpapar Bising	30	42.77	1283.00
	Total	60		
1 kHz (AC-S)	Tidak Terpapar Bising	30	16.75	502.50
	Terpapar Bising	30	44.25	1327.50
	Total	60		
2 kHz (AC-S)	Tidak Terpapar Bising	30	16.40	492.00
	Terpapar Bising	30	44.60	1338.00
	Total	60		
3 kHz (AC-S)	Tidak Terpapar Bising	30	16.47	494.00
	Terpapar Bising	30	44.53	1336.00
	Total	60		
4 kHz (AC-S)	Tidak Terpapar Bising	30	17.87	536.00
	Terpapar Bising	30	43.13	1294.00
	Total	60		
6 kHz (AC-S)	Tidak Terpapar Bising	30	16.80	504.00
	Terpapar Bising	30	44.20	1326.00
	Total	60		
8 kHzHz (AC-S)	Tidak Terpapar Bising	30	17.65	529.50
	Terpapar Bising	30	43.35	1300.50
	Total	60		

Test Statistics[a]

	250Hz (AC-S)	500Hz (AC-S)	1 kHz (AC-S)	2 kHz (AC-S)
Mann-Whitney U	92.000	82.000	37.500	27.000
Wilcoxon W	557.000	547.000	502.500	492.000
Z	-5.376	-5.502	-6.155	-6.307
Asymp. Sig. (2-tailed)	.000	.000	.000	.000

Test Statistics[a]

	3 kHz (AC-S)	4 kHz (AC-S)	6 kHz (AC-S)	8 kHzHz (AC-S)
Mann-Whitney U	29.000	71.000	39.000	64.500
Wilcoxon W	494.000	536.000	504.000	529.500
Z	-6.269	-5.638	-6.113	-5.739
Asymp. Sig. (2-tailed)	.000	.000	.000	.000

a. Grouping Variable: Group Subjek

8. Uji Komparasi Ambang Dengar BC

Mann-Whitney Test

Ranks

	Group Subjek	N	Mean Rank	Sum of Ranks
250Hz (BC-D)	Tidak Terpapar Bising	30	21.15	634.50
	Terpapar Bising	30	39.85	1195.50
	Total	60		
500Hz (BC-D)	Tidak Terpapar Bising	30	20.40	612.00
	Terpapar Bising	30	40.60	1218.00
	Total	60		
1 kHz (BC-D)	Tidak Terpapar Bising	30	18.40	552.00
	Terpapar Bising	30	42.60	1278.00
	Total	60		
2 kHz (BC-D)	Tidak Terpapar Bising	30	18.12	543.50
	Terpapar Bising	30	42.88	1286.50
	Total	60		
3 kHz (BC-D)	Tidak Terpapar Bising	30	19.67	590.00
	Terpapar Bising	30	41.33	1240.00
	Total	60		
4 kHz (BC-D)	Tidak Terpapar Bising	30	18.80	564.00
	Terpapar Bising	30	42.20	1266.00
	Total	60		
6 kHz (BC-D)	Tidak Terpapar Bising	30	17.97	539.00
	Terpapar Bising	30	43.03	1291.00
	Total	60		
8 kHz(BC-D)	Tidak Terpapar Bising	30	18.58	557.50
	Terpapar Bising	30	42.42	1272.50
	Total	60		

Test Statistics[a]

	250Hz (BC-D)	500Hz (BC-D)	1 kHz (BC-D)	2 kHz (BC-D)
Mann-Whitney U	169.500	147.000	87.000	78.500
Wilcoxon W	634.500	612.000	552.000	543.500
Z	-4.247	-4.600	-5.456	-5.586
Asymp. Sig. (2-tailed)	.000	.000	.000	.000

Test Statistics[a]

	3 kHz (BC-D)	4 kHz (BC-D)	6 kHz (BC-D)	8 kHz(BC-D)
Mann-Whitney U	125.000	99.000	74.000	92.500
Wilcoxon W	590.000	564.000	539.000	557.500
Z	-4.861	-5.246	-5.606	-5.319
Asymp. Sig. (2-tailed)	.000	.000	.000	.000

a. Grouping Variable: Group Subjek

NPar Tests

Mann-Whitney Test

Ranks

	Group Subjek	N	Mean Rank	Sum of Ranks
250Hz (BC-S)	Tidak Terpapar Bising	30	19.38	581.50
	Terpapar Bising	30	41.62	1248.50
	Total	60		
500Hz (BC-S)	Tidak Terpapar Bising	30	19.38	581.50
	Terpapar Bising	30	41.62	1248.50
	Total	60		
1 kHz (BC-S)	Tidak Terpapar Bising	30	17.15	514.50
	Terpapar Bising	30	43.85	1315.50
	Total	60		
2 kHz (BC-S)	Tidak Terpapar Bising	30	16.43	493.00
	Terpapar Bising	30	44.57	1337.00
	Total	60		
3 kHz (BC-S)	Tidak Terpapar Bising	30	16.85	505.50
	Terpapar Bising	30	44.15	1324.50
	Total	60		
4 kHz (BC-S)	Tidak Terpapar Bising	30	16.10	483.00
	Terpapar Bising	30	44.90	1347.00
	Total	60		
6 kHz (BC-S)	Tidak Terpapar Bising	30	16.05	481.50
	Terpapar Bising	30	44.95	1348.50
	Total	60		
8 kHz (BC-S)	Tidak Terpapar Bising	30	17.15	514.50
	Terpapar Bising	30	43.85	1315.50
	Total	60		

Test Statistics[a]

	250Hz (BC-S)	500Hz (BC-S)	1 kHz (BC-S)	2 kHz (BC-S)
Mann-Whitney U	116.500	116.500	49.500	28.000
Wilcoxon W	581.500	581.500	514.500	493.000
Z	-5.022	-5.051	-6.017	-6.325
Asymp. Sig. (2-tailed)	.000	.000	.000	.000

Test Statistics[a]

	3 kHz (BC-S)	4 kHz (BC-S)	6 kHz (BC-S)	8 kHz (BC-S)
Mann-Whitney U	40.500	18.000	16.500	49.500
Wilcoxon W	505.500	483.000	481.500	514.500
Z	-6.109	-6.447	-6.471	-5.983
Asymp. Sig. (2-tailed)	.000	.000	.000	.000

a. Grouping Variable: Group Subjek

9. Uji Korelasi ambang dengar dan SNR DPOAE dengan dengan HSP70-1A

Nonparametric Correlations

Correlations

			Group Subjek
Spearman's rho	Group Subjek	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	60
	Interaksi EkspxMDPOAE_L	Correlation Coefficient	-.046
		Sig. (2-tailed)	.726
		N	60
	Interaksi EkspxMDPOAE_R	Correlation Coefficient	-.202
		Sig. (2-tailed)	.121
		N	60
	Interaksi EkspxMAC_D	Correlation Coefficient	.843**
		Sig. (2-tailed)	.000
		N	60
	Interaksi EkspxMAC_S	Correlation Coefficient	.830**
		Sig. (2-tailed)	.000
		N	60
	Interaksi EkspxMBC_D	Correlation Coefficient	.735**
		Sig. (2-tailed)	.000
		N	60
	Interaksi EkspxMBC_S	Correlation Coefficient	.862**
		Sig. (2-tailed)	.000
		N	60

10. Uji Korelasi Parsial

Partial Corr

Correlations

Control Variables			Group Subjek
Usia Responden & Lama Bekerja & Suku Subjek & Pendidikan Subjek & Merokok & Jumlah batang rokok perhari & Lama merokok & Hipertensi & Menggunakan APT saat bekerja & Jenis APT uang dipakai	Group Subjek	Correlation	1.000
		Significance (2-tailed)	.
		df	0
	Interaksi EkspxMDPOAE_L	Correlation	.225
		Significance (2-tailed)	.241
		df	27
	Interaksi EkspxMDPOAE_R	Correlation	.106
		Significance (2-tailed)	.584
		df	27
	Interaksi EkspxMAC_D	Correlation	.631
		Significance (2-tailed)	.000
		df	27
	Interaksi EkspxMAC_S	Correlation	.680
		Significance (2-tailed)	.000
		df	27
	Interaksi EkspxMBC_D	Correlation	.523
		Significance (2-tailed)	.004
		df	27
	Interaksi EkspxMBC_S	Correlation	.721
		Significance (2-tailed)	.000
		df	27

11. Uji korelas SNR perdfrekuensi dengan exprese mRNA gen HSP70

Nonparametric Correlations

Correlations

			Ekspresi mRNA Gen HSP70-1A
Spearman's rho	Ekspresi mRNA Gen HSP70-1A	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	60
	1.5 kHz (left)	Correlation Coefficient	-.043
		Sig. (2-tailed)	.753
		N	56
	2.0 kHz (left)	Correlation Coefficient	-.001
		Sig. (2-tailed)	.994
		N	59
	3.0 kHz (left)	Correlation Coefficient	.009
		Sig. (2-tailed)	.944
		N	60
	4.0 kHz (left)	Correlation Coefficient	-.054
		Sig. (2-tailed)	.684
		N	60
	5.0 kHz (left)	Correlation Coefficient	-.188
		Sig. (2-tailed)	.153
		N	59
	6.0 kHz (left)	Correlation Coefficient	-.126
		Sig. (2-tailed)	.338
		N	60
	7.0 kHz (left)	Correlation Coefficient	-.011
		Sig. (2-tailed)	.932
		N	60
	8.0 kHz (left)	Correlation Coefficient	-.274*
		Sig. (2-tailed)	.034
		N	60
	9.0 kHz (left)	Correlation Coefficient	-.146
		Sig. (2-tailed)	.266
		N	60
	10 kHz (left)	Correlation Coefficient	-.025
		Sig. (2-tailed)	.849
		N	60
	11 kHz (left)	Correlation Coefficient	.043
		Sig. (2-tailed)	.744
		N	60
	12 kHz (left)	Correlation Coefficient	-.081
		Sig. (2-tailed)	.540
		N	60

Nonparametric Correlations

Correlations

			Ekspresi mRNA Gen HSP70-1A
Spearman's rho	Ekspresi mRNA Gen HSP70-1A	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	60
	1.5 kHz (right)	Correlation Coefficient	.015
		Sig. (2-tailed)	.912
		N	57
	2.0 kHz (right)	Correlation Coefficient	-.104
		Sig. (2-tailed)	.432
		N	59
	3.0 kHz (right)	Correlation Coefficient	-.272*
		Sig. (2-tailed)	.035
		N	60
	4.0 kHz (right)	Correlation Coefficient	-.229
		Sig. (2-tailed)	.078
		N	60
	5.0 kHz (right)	Correlation Coefficient	-.150
		Sig. (2-tailed)	.254
		N	60
	6.0 kHz (right)	Correlation Coefficient	-.216
		Sig. (2-tailed)	.098
		N	60
	7.0 kHz (right)	Correlation Coefficient	-.192
		Sig. (2-tailed)	.142
		N	60
	8.0 kHz (right)	Correlation Coefficient	-.297*
		Sig. (2-tailed)	.021
		N	60
	9.0 kHz (right)	Correlation Coefficient	-.230
		Sig. (2-tailed)	.077
		N	60
	10 kHz (right)	Correlation Coefficient	-.297*
		Sig. (2-tailed)	.021
		N	60
	11 kHz (right)	Correlation Coefficient	-.187
		Sig. (2-tailed)	.153
		N	60
	12 kHz (right)	Correlation Coefficient	-.154
		Sig. (2-tailed)	.240
		N	60