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DAFTAR LAMPIRAN

Lampiran 1. Surat Izin Penelitian



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,
RISET, DAN TEKNOLOGI
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Laman www.unhas.ac.id Email fdhu@unhas.ac.id

Nomor : 01815/UN4.13/PT.01.04/2024

2 April 2024

Hal : **Izin Penelitian**

Yth. Kepala Laboratorium Terpadu Universitas Lambung Mangkurat
di -

Tempat

Dengan hormat kami sampaikan bahwa mahasiswa **Program Studi Magister (S2) Ilmu Kedokteran Gigi** Fakultas Kedokteran Gigi Universitas Hasanuddin bermaksud untuk melakukan penelitian.

Sehubungan dengan hal tersebut, mohon kiranya dapat diberikan **izin penelitian** kepada peneliti di bawah ini:

Nama / NIM : **Kurnia Fatwati / J012222001**
Waktu Penelitian : April s.d. Mei 2024
Tempat Penelitian : Laboratorium Terpadu Universitas Lambung Mangkurat
Pembimbing : 1. Prof. Dr. Asmawati, drg., M.Kes., PBO.
2. Dr. Lenni Indriani, drg., M.Kes.
Judul Penelitian : **Uji *In Silico* Tingkat Afinitas Senyawa Aktif Ekstrak Teripang Emas (*Stichopus Hermani*) terhadap Protein Kinase C- β sebagai Antiinflamasi**

Demikian permohonan kami, atas perhatian dan kerjasama yang baik diucapkan terima kasih.

a.n. Dekan,
Wakil Dekan Bidang Akademik dan Kemahasiswaan



Acing Habibie Mude, drg., Ph.D., Sp.Pro., Subsp. OGST(K).
NIP 198102072008121002

Tembusan:

1. Dekan FKG Unhas;
2. Kepala Bagian Tata Usaha FKG Unhas.



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Lampiran 2. Surat Izin Pembuatan Ekstrak



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Nomor : 01906/UN4.13/PT.01.04/2024

17 April 2024

Hal : **Izin Penelitian**

Yth. **Dekan Fakultas Farmasi**
Universitas Hasanuddin
Makassar

Dengan hormat kami sampaikan bahwa mahasiswa **Program Studi Magister (S2) Ilmu Kedokteran Gigi** Fakultas Kedokteran Gigi Universitas Hasanuddin bermaksud untuk melakukan penelitian.

Sehubungan dengan hal tersebut, mohon kiranya dapat diberikan **izin penelitian** kepada peneliti di bawah ini:

Nama / NIM : **Kurnia Fatwati / J012222001**
Waktu Penelitian : April s.d. Mei 2024
Tempat Penelitian : Laboratorium Fitokimia Fakultas Farmasi Universitas Hasanuddin
Pembimbing : Prof. Dr. drg. Asmawati., M. Kes., PBO
Judul Penelitian : Uji In Silico Tingkat Afinitas Senyawa Aktif Ekstrak Teripang Emas terhadap Protein Kinase C- β sebagai Antiinflamasi

Demikian permohonan kami, atas perhatian dan kerjasama yang baik diucapkan terima kasih.

a.n. Dekan,
Wakil Dekan Bidang Akademik dan Kemahasiswaan



Acing Habibie Mude, drg., Ph.D., Sp.Pro., Subsp. OGST(K).
NIP 198102072008121002

Tembusan:

1. Dekan FKG Unhas;
2. Kepala Bagian Tata Usaha FKG Unhas;
3. Kepala Laboratorium Fitokimia Fakultas Farmasi Unhas.



Lampiran 3. Surat Permohonan Rekomendasi Etik



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,
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Laman www.unhas.ac.id Email fdhu@unhas.ac.id

Nomor : 01819/UN4.13/TP.02.02/2024

2 April 2024

Hal : **Permohonan Rekomendasi Etik**

Yth. **Direktur Rumah Sakit Gigi dan Mulut Pendidikan (RSGMP)**

Universitas Hasanuddin

Makassar

Dengan hormat kami sampaikan bahwa mahasiswa **Program Studi Magister (S2) Ilmu Kedokteran Gigi** Fakultas Kedokteran Gigi Universitas Hasanuddin di bawah ini:

Nama / NIM : **Kurnia Fatwati / J012222001**

Pembimbing : 1. Prof. Dr. Asmawati, drg., M.Kes., PBO.
2. Dr. Lenni Indriani, drg., M.Kes.

Judul Penelitian : **Uji *In Silico* Tingkat Afinitas Senyawa Aktif Ekstrak Teripang Emas (*Stichopus Hermanii*) terhadap Protein Kinase C- β sebagai Antiinflamasi**

bermaksud melakukan penelitian di Laboratorium Terpadu Universitas Lambung Mangkurat pada bulan April s.d. Mei 2024.

Untuk maksud tersebut di atas, mohon kiranya yang bersangkutan dapat diberikan surat rekomendasi Etik dalam rangka pelaksanaan penelitiannya.

Demikian permohonan kami, atas perhatian dan kerjasama yang baik diucapkan terima kasih.

a.n. Dekan,
Wakil Dekan Bidang Akademik dan Kemahasiswaan



Acing Habibie Mude, drg., Ph.D., Sp.Pro., Subsp. OGST(K).

NIP 198102072008121002

Tembusan:

1. Dekan FKG Unhas;
2. Kepala Bagian Tata Usaha FKG Unhas.



Lampiran 4. Surat Etik Penelitian



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
 UNIVERSITAS HASANUDDIN
 FAKULTAS KEDOKTERAN GIGI
 RUMAH SAKIT GIGI DAN MULUT PENDIDIKAN
 KOMITE ETIK PENELITIAN KESEHATAN
 Sekretariat : Jl. Kandeo No. 5 Makassar Lantai 2, Gedung Lama RSGM Unhas
 Contact Person: drg. Muhammad Iqbal, Sp.Prost/ Nur Aedih AR, TELP. 081342971011/08114919191



REKOMENDASI PERSETUJUAN ETIK
 Nomor: 0112/FL.09/KEPK FKG-RSGM UNHAS/2024

Tanggal: 14 Mei 2024

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

No. Protokol	UH 17121122	No Protokol Sponsor	
Peneliti Utama	Kurnia Fatwati	Sponsor	Pribadi
Judul Penelitian	Uji In Silico Tingkat Afinitas Senyawa Aktif Ekstrak Teripang Emas (Stichopus hermannii) Terhadap Protein Kinase C- β Sebagai Antiinflamasi		
No. Versi Protokol	1	Tanggal Versi	6 Mei 2024
No. Versi Protokol		Tanggal Versi	
Tempat Penelitian	Fakultas Kedokteran Gigi Universitas Hasanuddin/ Biologi Oral dan Dental Material		
Dokumen Lain			
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard	Masa Berlaku 14 Mei 2024 - 14 Mei 2025	Frekuensi Review Lanjutan
Ketua Komisi Etik Penelitian	Nama: Dr. deg. Marhamah, M.Kes	Tanda Tangan 	Tanggal 14 Mei 2024
Sekretaris Komisi Etik Penelitian	Nama: drg. Muhammad Iqbal, Sp.Prost	Tanda Tangan 	Tanggal 14 Mei 2024

Kewajiban peneliti utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum diimplementasikan
- Menyerahkan laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dengan SUSAR dalam 72 jam setelah peneliti utama menerima laporan.
- Menyerahkan laporan kemajuan (*progress report*) setiap 6 bulan untuk penelitian rendah dan setiap setahun untuk penelitian resiko rendah.
- Menyerahkan laporan akhir setelah penelitian berakhir.
- Menyampaikan penyimpangan dari protokol yang disetujui (*protocol notation*)
- Mematuhi semua aturan yang berlaku.



Lampiran 5. Dokumentasi Pembuatan Ekstrak



Stichopus hermanii dari Kepulauan Sulawesi Selatan



Stichopus hermanii yang sudah dibersihkan dan dipotong kecil-kecil



Stichopus hermanii dikeringkan



Perendaman *Stichopus hermanii* dengan ethanol



Prosedur maserasi pembuatan ekstrak *Stichopus hermanii*



Hasil prosedur maserasi *Stichopus hermanii*



rasi pelarut untuk rak pekat *Stichopus manii*

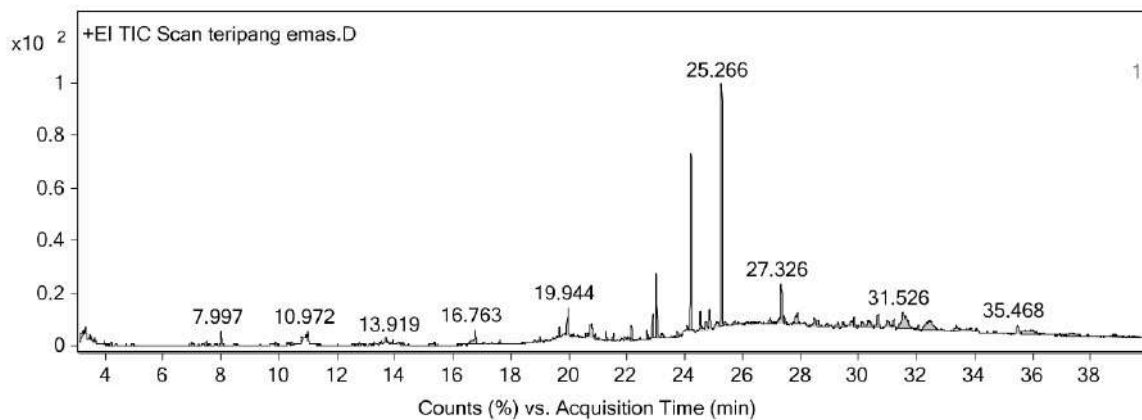


Hasil akhir ekstrak *Stichopus hermanii*

Lampiran 6. Hasil Uji GC-MS Ekstrak Etanol Teripang Emas

Qualitative Compound Identification Report

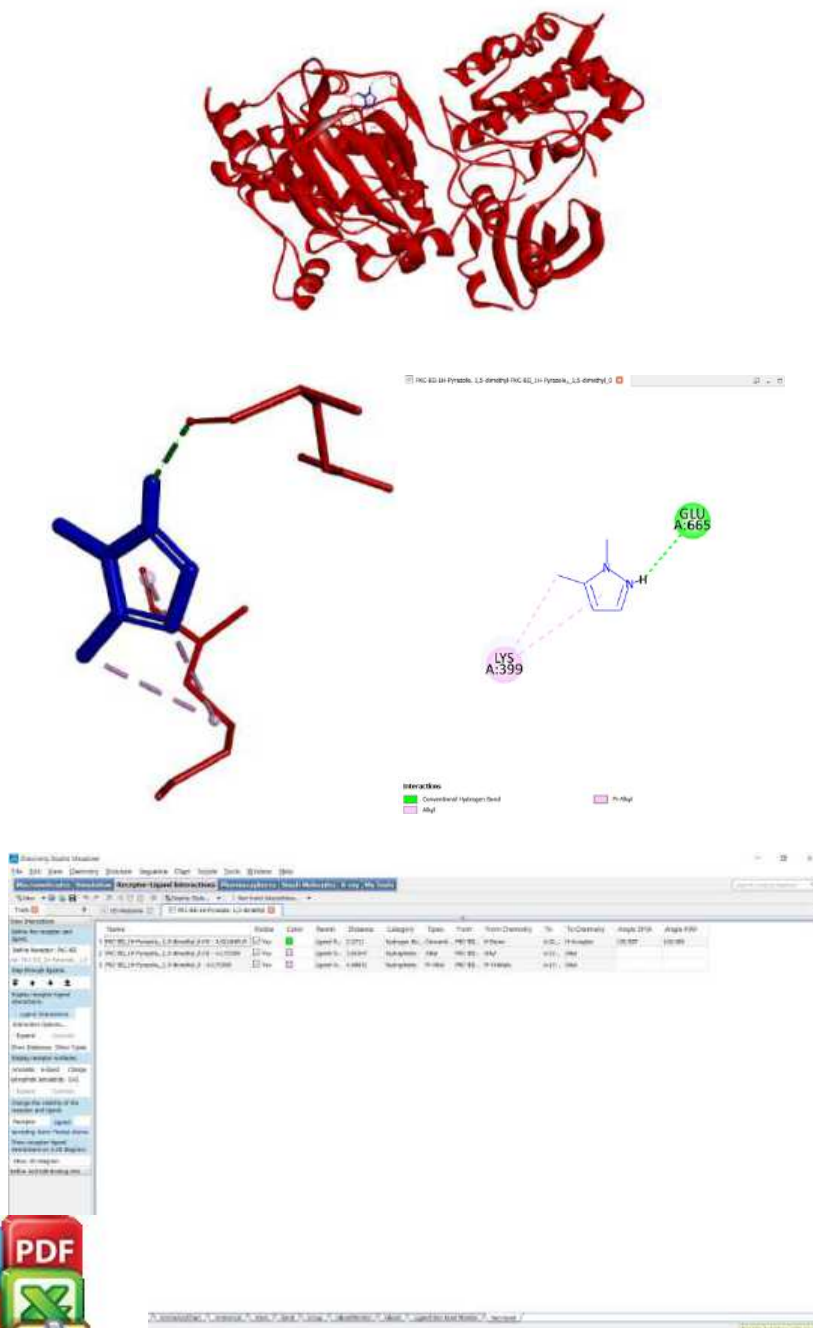
Data File	teripang emas.D	Sample Name	teripang emas
Sample Type		Position	1
Instrument Name	GCMS	User Name	ainda
Acq Method	ekstrak tumbuhan x4.M	Acquired Time	5/31/2024 1:55:40 PM (UTC+07:00)
IRM Calibration Status	Not Applicable	DA Method	test2.m
Comment			
Expected Barcode		Sample Amount	
Dual Inj Vol	1	TuneName	atune.u
TunePath	D:\MassHunter\GCMS\3\5977\	TuneDateStamp	2024-05-29T13:52:28+07:00
MSFirmwareVersion	6.00.34	OperatorName	ainda
RunCompletedFlag	True	Acquisition Time (Local)	5/31/2024 1:55:40 PM (UTC+07:00)
Acquisition SW Version	MassHunter GC/MS Acquisition 10.0.368 14-Feb-2019 Copyright © 1989-2018 Agilent Technologies, Inc.	SingleQuadrupole Driver Version	10.0.0.0
SingleQuadrupole Firmware Version	6.00.34		



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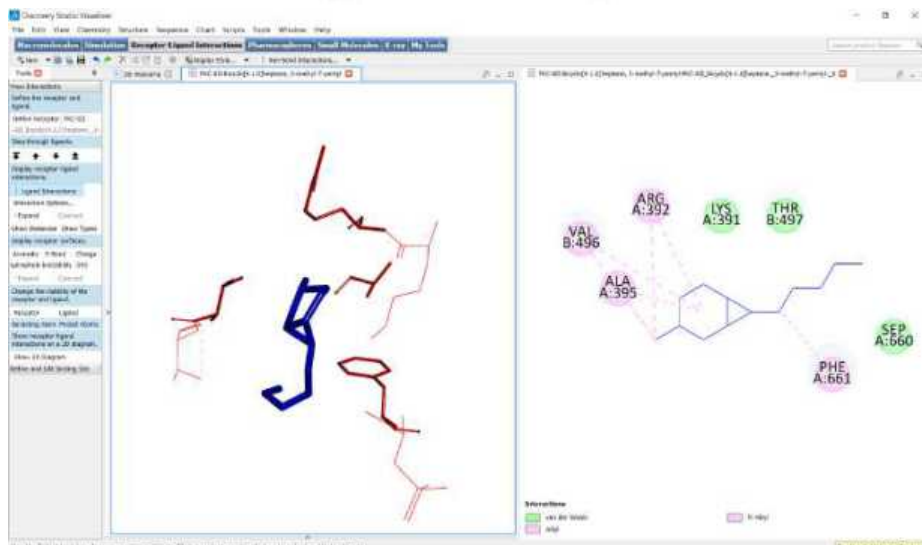
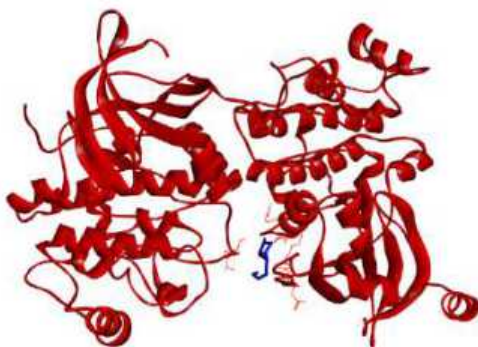
Lampiran 7. Visualisasi Hasil Docking dengan Software Biovia v21.1.0.20298

a. 1H-Pyrazole, 1,5-dimethyl-



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b. Bicyclo[4.1.0]heptane, 3-methyl-7-pentyl-;

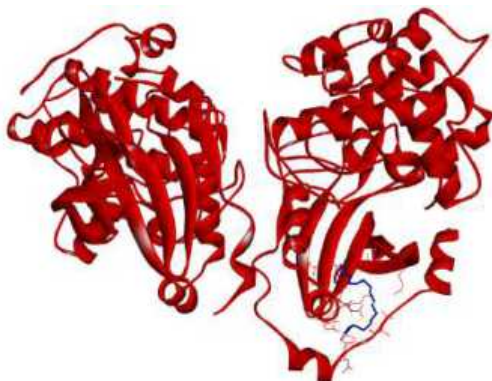


Residue	View	Color	Residue	Distance	Category	Type	Resort	From Chemistry	To	To Chemistry
1. ARG A:392	<input type="checkbox"/>	Blue	Ligand H, A:392	2.80	Hydrophobic	Arg	ARG292	ARG	ARG	ARG
2. LYS A:391	<input type="checkbox"/>	Blue	Ligand H, A:391	3.00	Hydrophobic	Arg	LYS391	LYS	LYS	LYS
3. THR B:497	<input type="checkbox"/>	Blue	Ligand H, B:497	3.50	Hydrophobic	Arg	THR497	THR	THR	THR
4. VAL B:496	<input type="checkbox"/>	Blue	Ligand H, B:496	3.80	Hydrophobic	Arg	VAL496	VAL	VAL	VAL
5. PHE A:661	<input type="checkbox"/>	Blue	Ligand H, A:661	4.20	Hydrophobic	Arg	PHE661	PHE	PHE	PHE
6. SER A:660	<input type="checkbox"/>	Blue	Ligand H, A:660	4.50	Hydrophobic	Arg	SER660	SER	SER	SER



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c. 9-Octadecenoic acid, (E)-;



The screenshot displays the Discovery Studio Visualizer interface. The main window shows a 3D ribbon representation of the protein (red) with a blue stick model of the ligand (9-Octadecenoic acid) bound to the active site. A detailed interaction diagram on the right highlights specific residues and their interactions with the ligand:

- ASP A:378
- VAL A:378
- LEU A:373
- PRO A:343
- ASP A:376
- ASP A:314
- PRO A:343
- ASP A:314
- GLY A:354
- LYS A:350
- LEU A:374
- VAL A:377

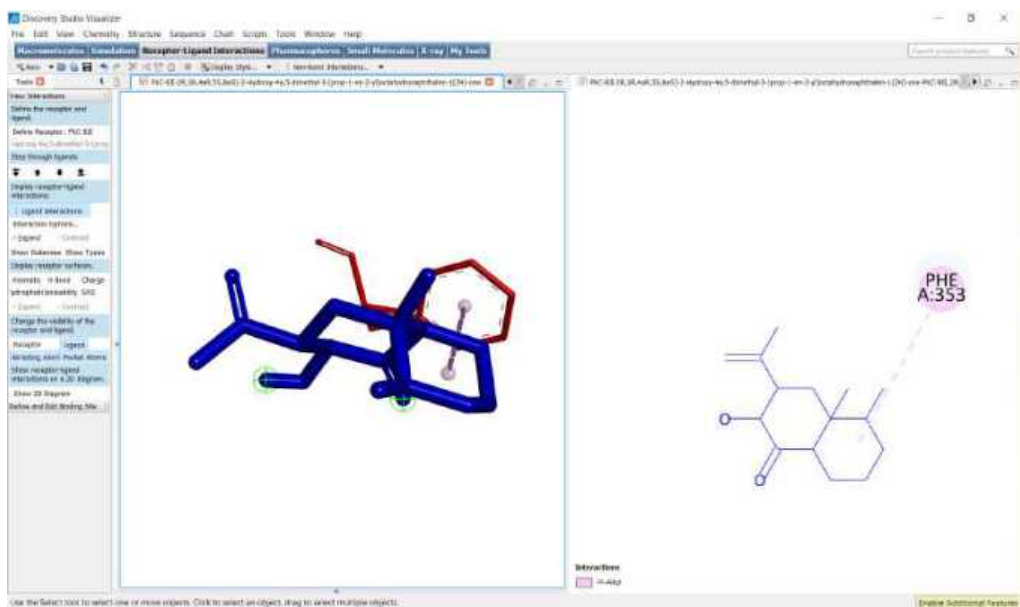
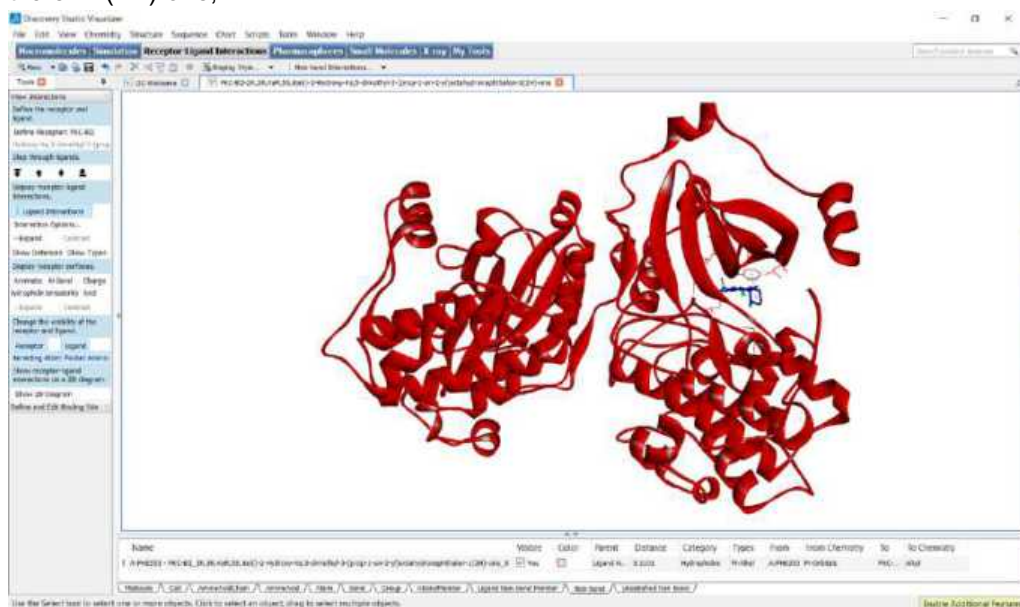
Below the 3D view is a table listing the residues and their interactions with the ligand:

Residue	Distance	Interaction
ASP A:378	2.520000	Hydrogen Bond
VAL A:378	2.520000	Hydrogen Bond
LEU A:373	3.082000	Hydrogen Bond
PRO A:343	4.200000	Hydrogen Bond
ASP A:376	3.500000	Hydrogen Bond
ASP A:314	3.500000	Hydrogen Bond
PRO A:343	4.200000	Hydrogen Bond
GLY A:354	3.500000	Hydrogen Bond
LYS A:350	3.500000	Hydrogen Bond
LEU A:374	3.500000	Hydrogen Bond
VAL A:377	3.500000	Hydrogen Bond



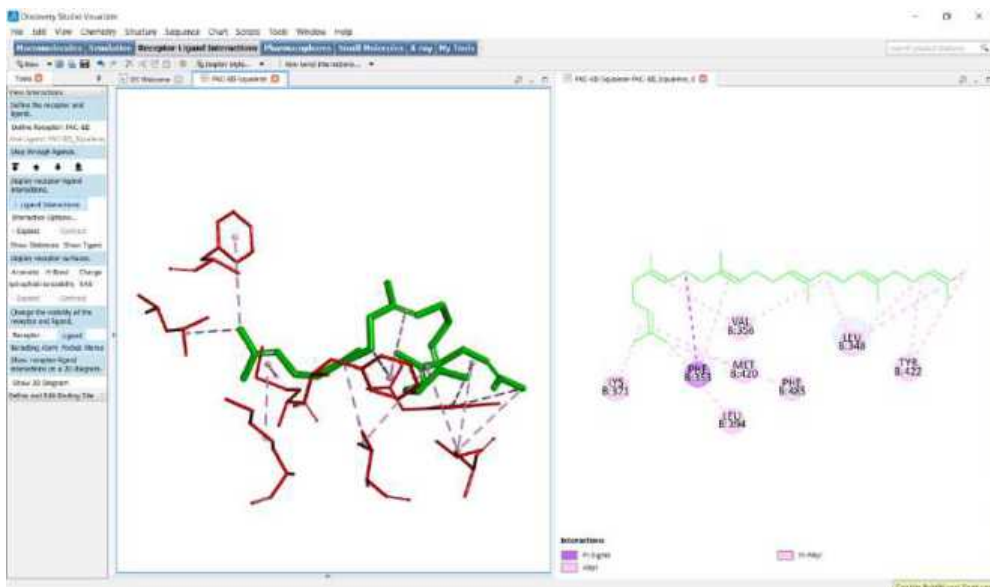
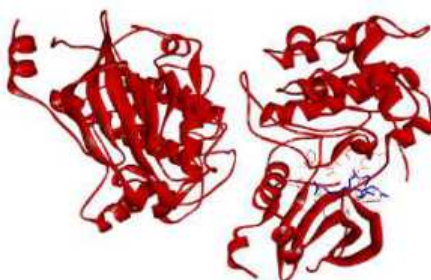
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- f. 2R,3R,4aR,5S,8aS)-2-Hydroxy-4a,5-dimethyl-3-(prop-1-en-2-yl)octahydronaphthalen-1(2H)-one;



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g. Squalene

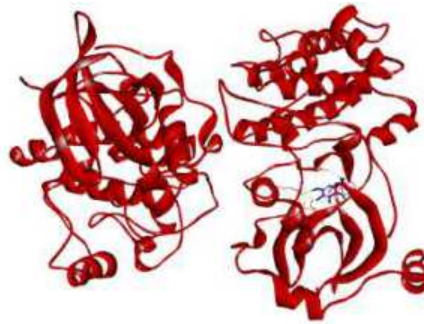


Name	VDW	Color	Atom	Distance	Category	Type	Point	Point Chemistry	to	% Chemistry	Angle	Deviation	Theta
1. INC-81_Squalene_B-021 - R-348O1	<input checked="" type="checkbox"/>		ligand N	3.87012	hydrophobic	H-Atom	INC-81	C14	ILE	100%	11.566	16.324	
2. R-320H4 - INC-81_Squalene_D	<input checked="" type="checkbox"/>		ligand N	4.46073	hydrophobic	H-Atom	INC-81	H41	INC	100%			
3. R-320H4 - INC-81_Squalene_D	<input checked="" type="checkbox"/>		ligand N	5.03034	hydrophobic	H-Atom	INC-81	H41	INC	100%			
4. R-341H39 - INC-81_Squalene_D	<input checked="" type="checkbox"/>		ligand N	5.03432	hydrophobic	H-Atom	INC-81	H41	INC	100%			
5. R-341H39 - INC-81_Squalene_D	<input checked="" type="checkbox"/>		ligand N	5.76289	hydrophobic	H-Atom	INC-81	H41	INC	100%			
6. R-320H4 - INC-81_Squalene_D	<input checked="" type="checkbox"/>		ligand N	3.82320	hydrophobic	H-Atom	INC-81	H41	INC	100%			
7. R-387H20 - INC-81_Squalene_D	<input checked="" type="checkbox"/>		ligand N	4.87791	hydrophobic	H-Atom	INC-81	H41	INC	100%			
8. INC-81_Squalene_B-021 - R-320H4	<input checked="" type="checkbox"/>		ligand N	3.23974	hydrophobic	H-Atom	INC-81	H41	ILE	100%			
9. INC-81_Squalene_B-021 - R-320H4	<input checked="" type="checkbox"/>		ligand N	4.01381	hydrophobic	H-Atom	INC-81	H41	ILE	100%			
10. R-387H20 - INC-81_Squalene_D	<input checked="" type="checkbox"/>		ligand N	5.24079	hydrophobic	H-Atom	INC-81	H41	INC	100%			
11. R-379H22 - INC-81_Squalene_D	<input checked="" type="checkbox"/>		ligand N	4.82340	hydrophobic	H-Atom	INC-81	H41	INC	100%			
12. R-379H22 - INC-81_Squalene_B-021	<input checked="" type="checkbox"/>		ligand N	5.03675	hydrophobic	H-Atom	INC-81	H41	INC	100%			
13. R-344H48 - INC-81_Squalene_B-021	<input checked="" type="checkbox"/>		ligand N	5.2524	hydrophobic	H-Atom	INC-81	H41	INC	100%			



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h. Phen-1,4-diol, 2,3-dimethyl-5-trifluoromethyl-



The screenshot displays the Discovery Studio Visualizer interface. The main window shows a 3D model of a protein (red ribbon) with a ligand (blue sticks) bound in its active site. The right-hand panel provides a detailed view of the interactions between the ligand and the protein, highlighting specific residues and their interactions with the ligand's functional groups.

Interactions:

- Green: Covalent hydrogen bond
- Blue: Carbon-hydrogen bond
- Red: Hydrogen bonding
- Pink: AAs (Metion, P-Allyl)

Residues Involved in Interactions:

- ASP A:484
- GLU A:390
- LYS A:371
- VAL A:356
- PHE A:353

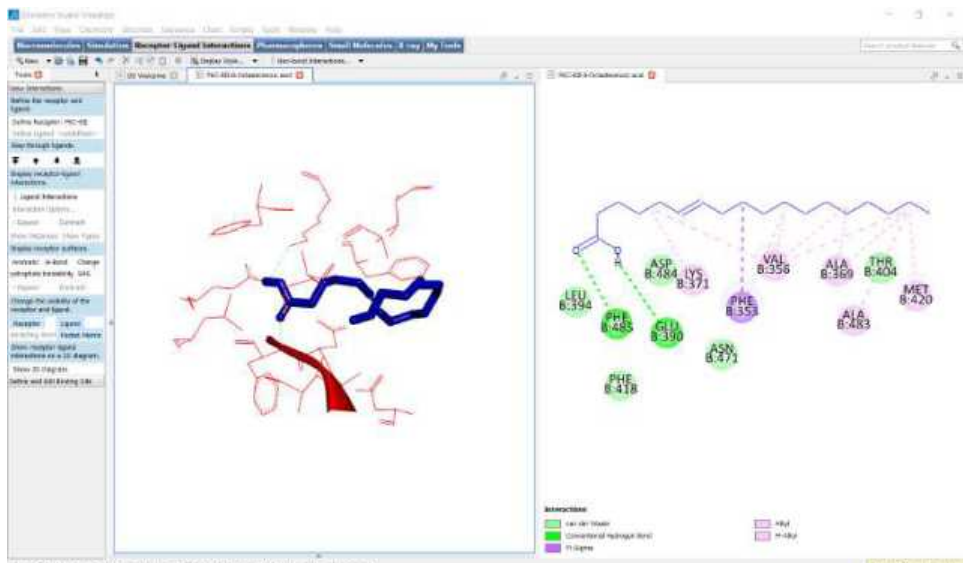
Table of Interactions:

Name	Visible	Color	Name	Distance	Category	Type	Force	Force Chemistry	To	To Chemistry	Angle DHA	Angle HAF	Angle NDA
1 ASP48_Phen-LA-88_2-dimethyl-5-trifluoromethyl-2,3-dimethyl-1,4-diol	No	Green	ligand N...	2.8070	hydrogen bo...	Covalent	PC-85	Hydroxyl	ASP...	Hydroxyl			
2 ASP390_GLU_Phen-LA-88_2-dimethyl-5-trifluoromethyl-2,3-dimethyl-1,4-diol	No	Blue	ligand N...	3.0462	hydrogen bo...	Covalent	PC-85	Hydroxyl	GLU...	Hydroxyl			
3 ASP371_LYS_Phen-LA-88_2-dimethyl-5-trifluoromethyl-2,3-dimethyl-1,4-diol	No	Red	ligand N...	3.2284	hydrogen bo...	Hydrogen	PC-85	Hydroxyl	LYS...	Hydroxyl			19.328
4 ASP356_VAL_Phen-LA-88_2-dimethyl-5-trifluoromethyl-2,3-dimethyl-1,4-diol	No	Blue	ligand N...	3.4378	hydrogen bo...	Hydrogen	PC-85	Hydroxyl	VAL...	Hydroxyl			
5 ASP353_PHE_Phen-LA-88_2-dimethyl-5-trifluoromethyl-2,3-dimethyl-1,4-diol	No	Red	ligand N...	3.5940	hydrogen bo...	Hydrogen	PC-85	Hydroxyl	PHE...	Hydroxyl			
6 ASP48_Phen-LA-88_2-dimethyl-5-trifluoromethyl-2,3-dimethyl-1,4-diol	No	Red	ligand N...	4.0074	hydrogen bo...	Hydrogen	PC-85	Hydroxyl	ASP...	Hydroxyl			
7 ASP353_PHE_Phen-LA-88_2-dimethyl-5-trifluoromethyl-2,3-dimethyl-1,4-diol	No	Red	ligand N...	5.2024	hydrogen bo...	Hydrogen	PC-85	Hydroxyl	PHE...	Hydroxyl			



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i. 6-Octadecenoic acid



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Lampiran 8. Daftar Riwayat Hidup

Curriculum Vitae

A. Data Pribadi

1. Nama : Kurnia Fatwati
2. Tempat, tgl. Lahir : Kotabaru, 27 Maret 1997
3. Alamat : Jl. Simp. Mufakat no. 15, kabupaten Banjar
4. Kewarganegaraan : Indonesia

B. Riwayat Pendidikan

6. Tamat SLTA tahun 2015 di SMAN 2 Kotabaru
7. Sarjana (S1) tahun 2019 di Universitas Lambung Mangkurat
8. Pend. Profesi drg tahun 2022 di Universitas Lambung Mangkurat

C. Pekerjaan dan Riwayat Pekerjaan

- Jenis pekerjaan : Dokter Gigi
- SIP : 503/0039-SIPD-G/I.23/DPMPSTSP
- Jabatan : General Practice

D. Karya ilmiah yang telah dipublikasikan:

1. Fatwati K, Puspitasari D, Apriasari ML. Effect Of *Musa acuminata* and *Ocimum basilicum* Mixed Extracts On Bioactive Resin's Fluoride Release. Dentino (Jur. Ked. Gigi) Maret 2020: V(1); 94 – 97; DOI: <http://dx.doi.org/10.20527/dentino.v5i1.8131.g6027>
2. Puspitasari D, Fatwati K, Marlina E , Apriasari ML, Stang, Tanumihardja M. The Effect Of Herbal Extracts Added To Calcium Hydroxyde As A Potential Direct Pulp Capping Material From A Biological Marker Perspective : A Systematic Review. Azerbaijan Medical Journal. 2023: 63(12); 11059-72; Volume 63, Issue 12, December, 2023

E. Makalah pada Seminar/Konferensi Ilmiah Nasional dan Internasional

1. Poster Presentation at the 4th Meeting of the International Association for Dental Research Asia-Pacific Region 2019. *Musa acuminata* and *Ocimum basilicum* Affecting Bioactive Resin Flouride Release. Brisbane-Australia, 28-30 November 2019.

