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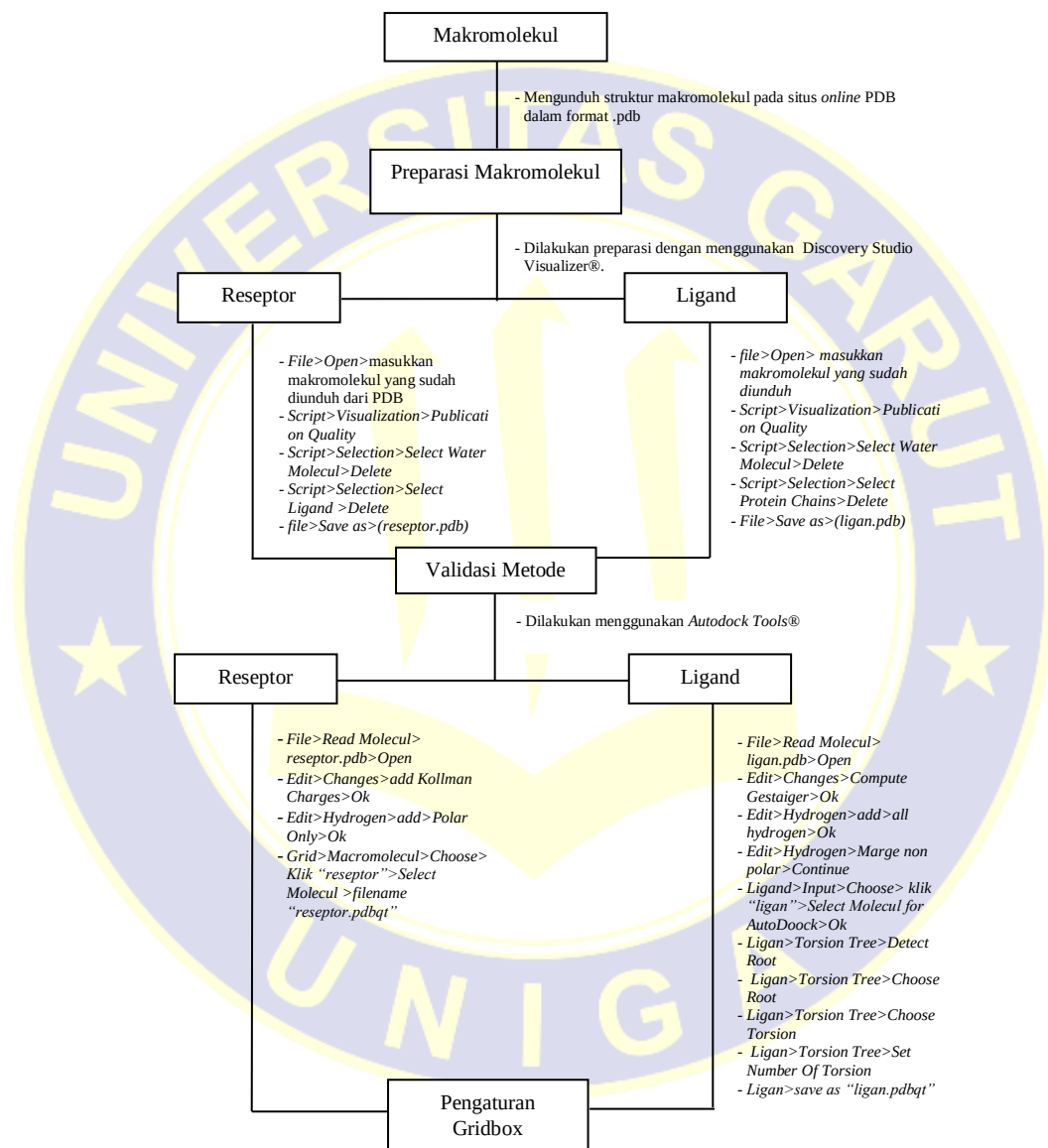
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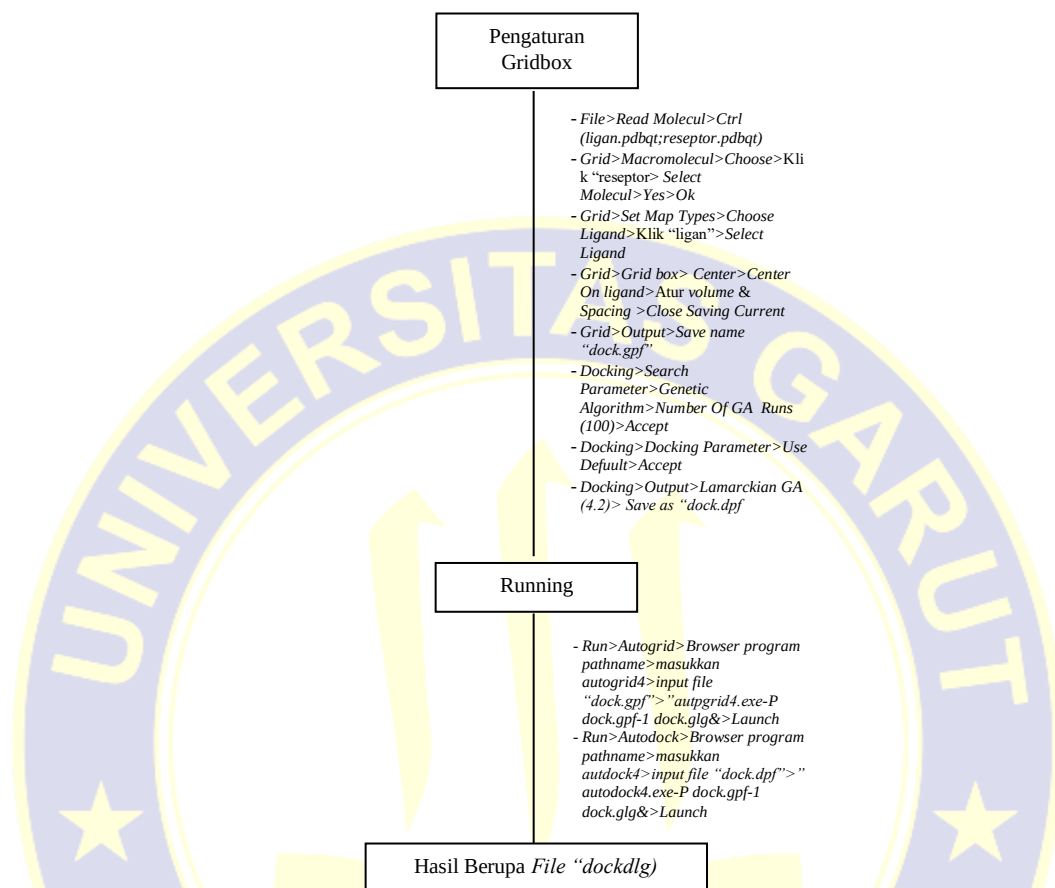
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LAMPIRAN 1

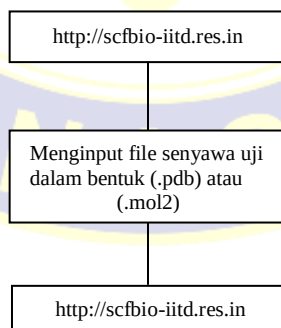
ALUR PENELITIAN VALIDASI METODE MOLECULAR DOCKING DAN PREDIKSI DRUGLIKENESS



LAMPIRAN 1 (LANJUTAN)



Gambar VII. 1 Alur penelitian validasi metode *molecular docking*



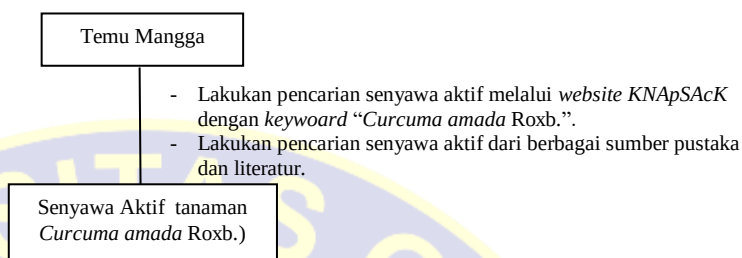
Gambar VII.2 Alur prediksi *Druglikeness* menggunakan situs online *Lipinski*

Rule'of Five

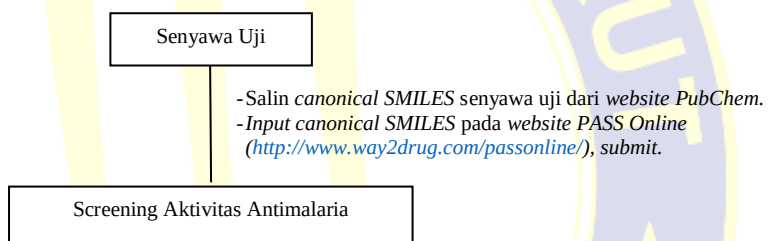
LAMPIRAN 2

ALUR PENELITIAN PREDIKSI TOKSISITAS DAN PREDIKSI

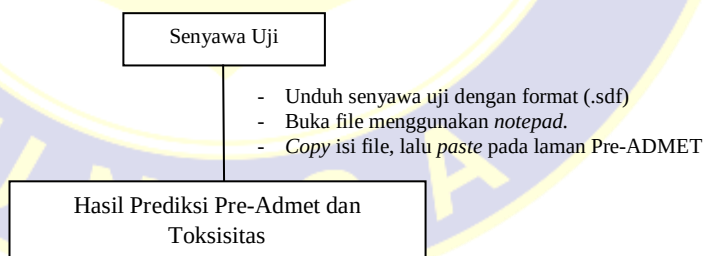
FARMAKOKINETIK



Gambar VII.3 Alur Penelitian Pencarian Senyawa Aktif Tanaman (*Curcuma amada. Roxb*)



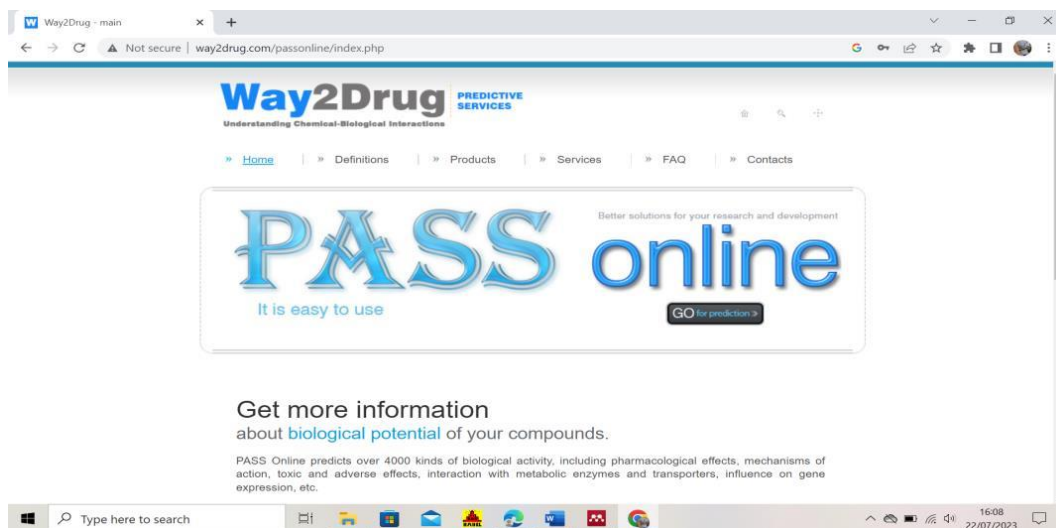
Gambar VII.4 Alur penelitian prediksi senyawa aktif tanaman (*Curcuma amada Roxb.*)



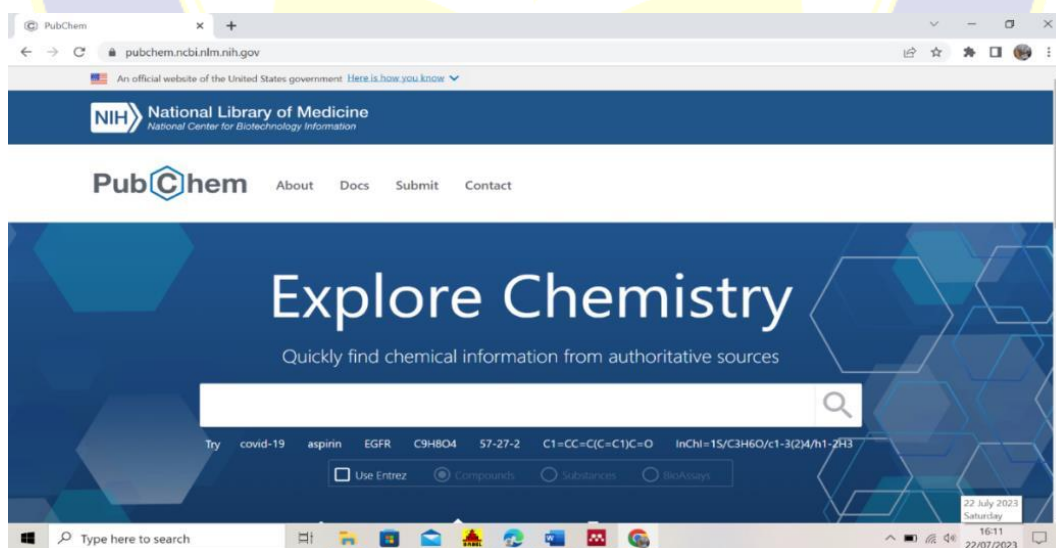
Gambar VII.5 Alur penelitian pre-ADMET dan toksisitas

LAMPIRAN 3

SITUS DAN APLIKASI

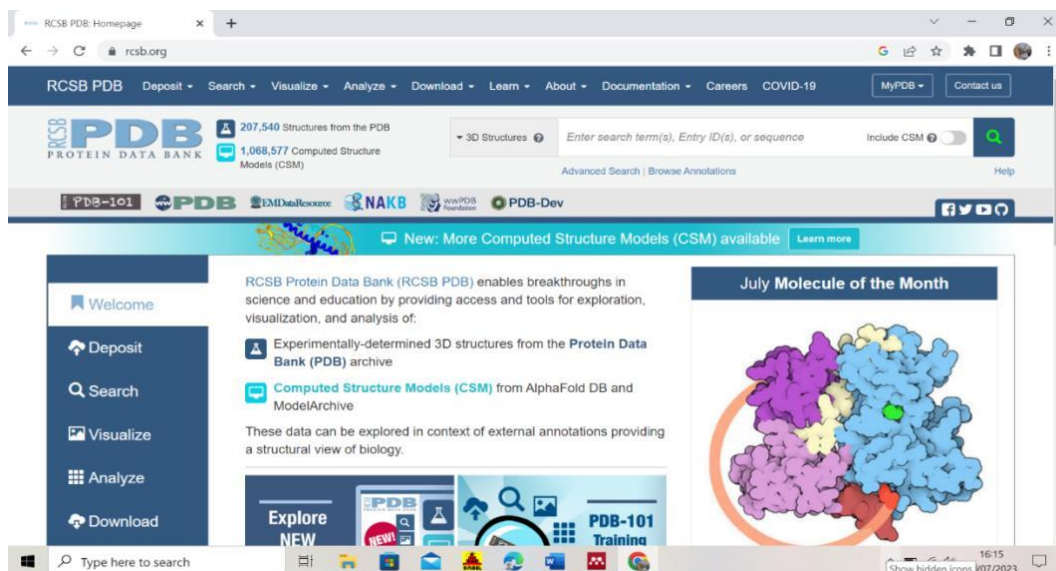


Gambar VII.6 Tampilan situs *PASS-Online*

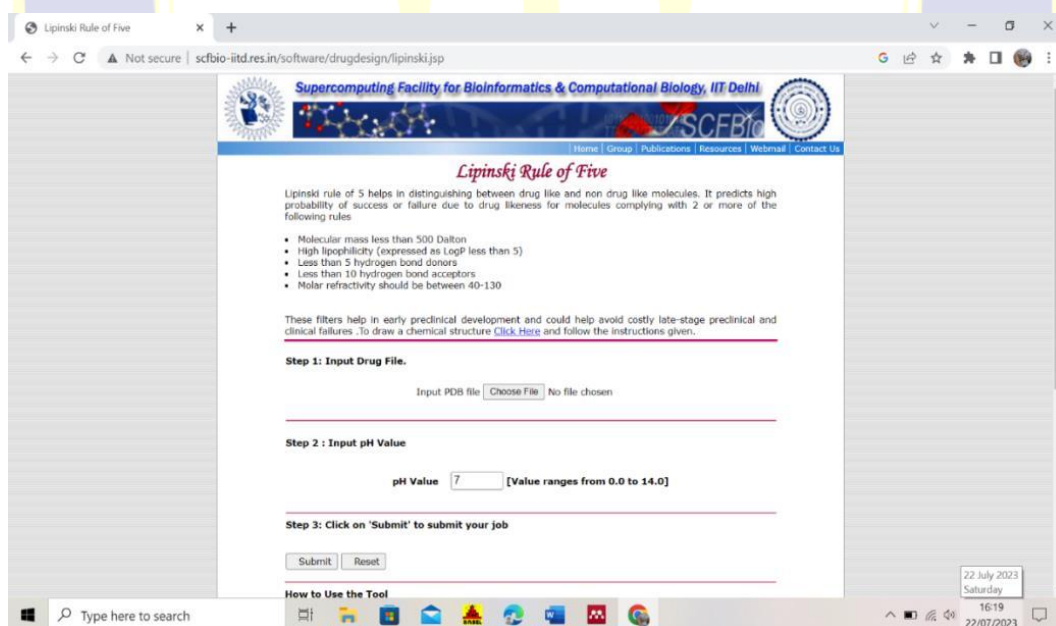


Gambar VII.7 Tampilan situs *Pubchem*

LAMPIRAN 3 (LANJUTAN)

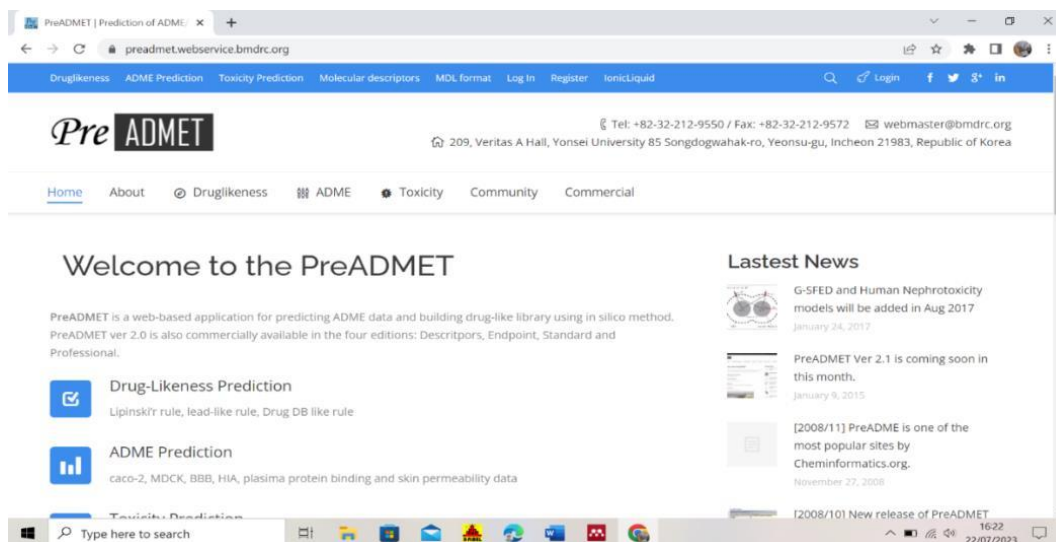


Gambar VII.8 Tampilan situs *Protein Data Bank*

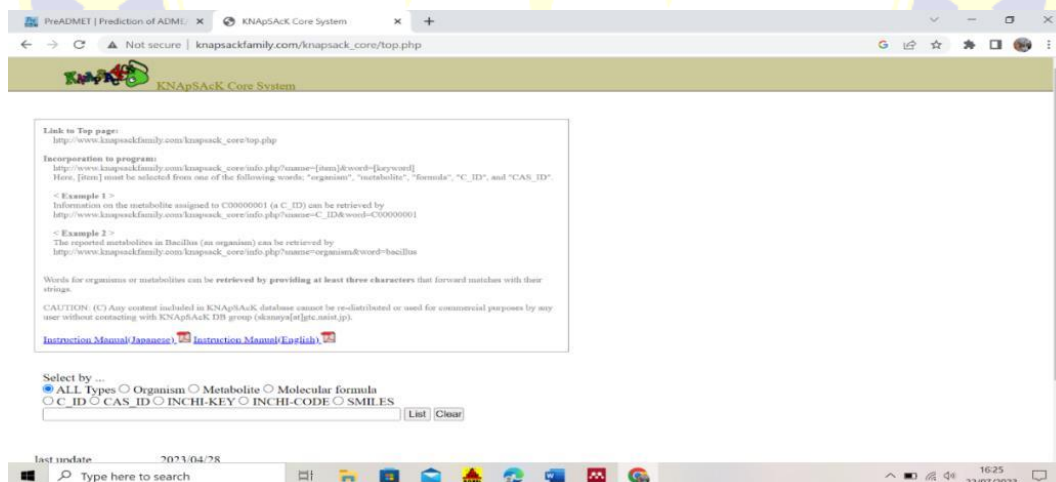


Gambar VII.9 Tampilan situs *Lipinski's Rule Of Five*

LAMPIRAN 3 (LANJUTAN)

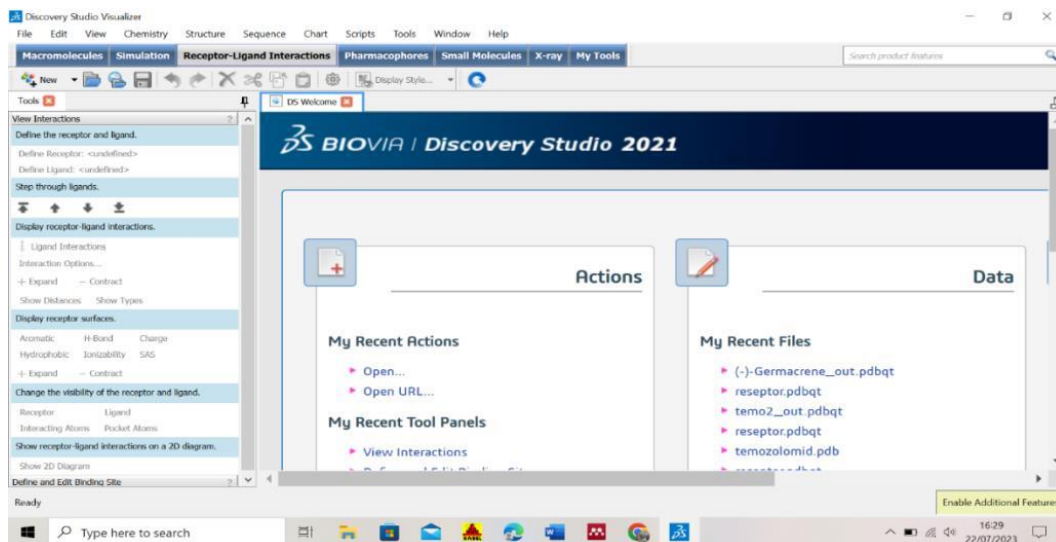


Gambar VII.10 Tampilan situs *Pre-ADMET*

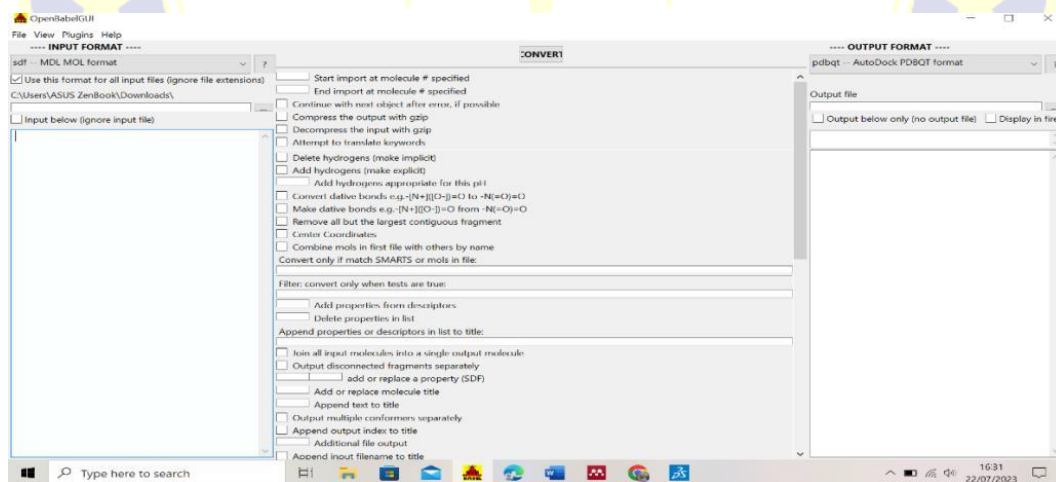


Gambar VII.11 Tampilan situs *KNApSACK*

LAMPIRAN 3 (LANJUTAN)

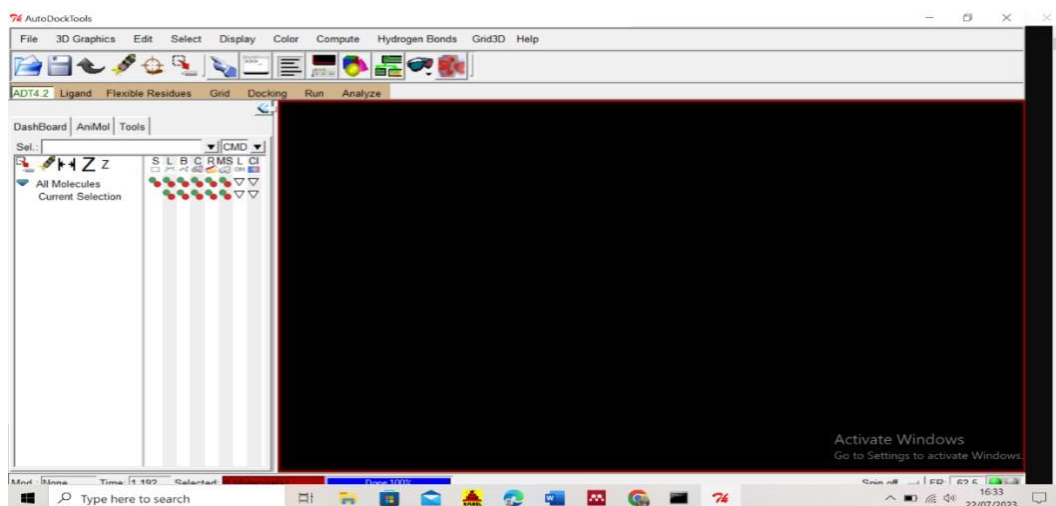


Gambar VII.12 Tampilan software *Discovery Studio Visualizer*

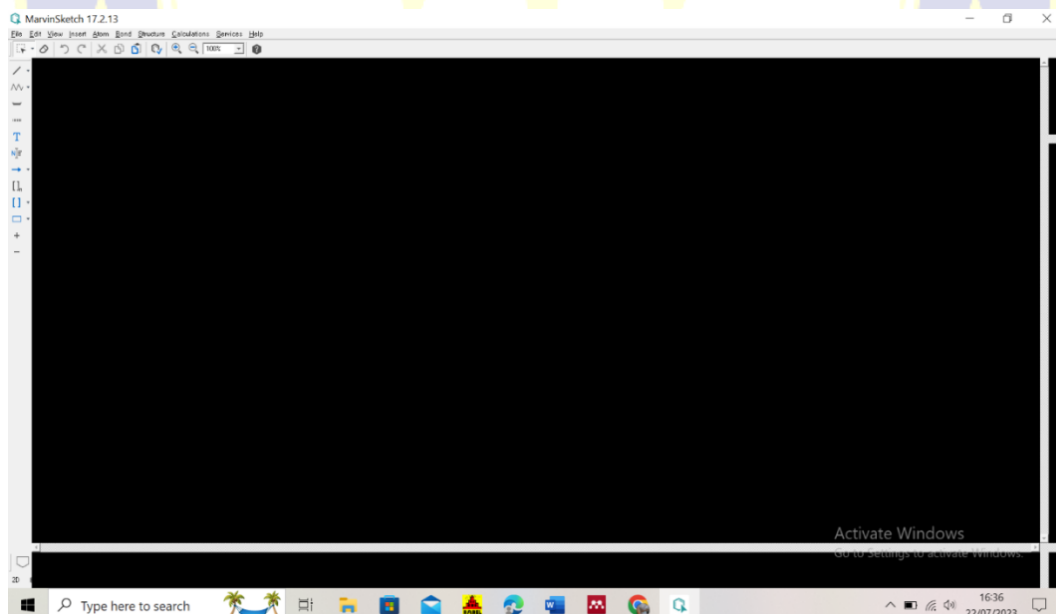


Gambar VII.13 Tampilan software *Openbabel GUI*

LAMPIRAN 3 (LANJUTAN)



Gambar VII.14 Tampilan software *Autodock Tools*



Gambar VII.15 Tampilan software *Marvin Sketch*

LAMPIRAN 4

HASIL SCREENING AKTIVITAS ANTIMALARIA

TABEL VII. 1

Hasil Screening Aktivitas Antimalaria Menggunakan *PASS-Online*

No	Nama senyawa	Pa	Pi	Aktivitas
1.	1,8-Cineole	0,243	0,029	Antiprotozoal (Plasmodium)
2.	beta-Eudesmol	0,215	0,046	Antiprotozoal (Plasmodium)
3.	alpha-Pinene	0,293	0,015	Antiprotozoal (Plasmodium)
4.	beta-Pinene	0,197	0,061	Antiprotozoal (Plasmodium)
5.	(+)-Camphor	0,164	0,099	Antiprotozoal (Plasmodium)
6.	Limonene	0,226	0,038	Antiprotozoal (Plasmodium)
7.	3-Carene	0,225	0,039	Antiprotozoal (Plasmodium)
8.	cis-beta-Ocimene	0,191	0,066	Antiprotozoal (Plasmodium)
9.	beta-Myrcene	0,218	0,043	Antiprotozoal (Plasmodium)
10.	trans-beta-Ocimene	0,191	0,066	Antiprotozoal (Plasmodium)
11.	Borneol	0,167	0,094	Antiprotozoal (Plasmodium)
12.	Camphene	0,191	0,066	Antiprotozoal (Plasmodium)
13.	cis-Citral	0,226	0,038	Antiprotozoal (Plasmodium)
14.	Linalool	0,209	0,051	Antiprotozoal (Plasmodium)
15.	beta-Caryophyllene	0,170	0,091	Antiprotozoal (Plasmodium)
16.	E-beta-farnesene	0,237	0,031	Antiprotozoal (Plasmodium)

**LAMPIRAN 4
(LANJUTAN)**

TABEL VII. 1
Lanjutan

No	Nama senyawa	Pa	Pi	Aktivitas
17.	Ledol	0,236	0,032	Antiprotozoal (Plasmodium)
18.	beta-Eudesmene	0,210	0,050	Antiprotozoal (Plasmodium)
19.	alpha-Zingiberene	0,162	0,101	Antiprotozoal (Plasmodium)
20.	beta-Elemene	0,368	0,007	Antiprotozoal (Plasmodium)
21.	Perillene	0,161	0,104	Antiprotozoal (Plasmodium)
22.	Teresantanane	0,167	0,095	Antiprotozoal (Plasmodium)
23.	(-)-Curcuphenol	0,225	0,039	Antiprotozoal (Plasmodium)
24.	(+)-ar-Turmerone	0,197	0,061	Antiprotozoal (Plasmodium)
25.	beta-Curcumene	0,181	0,076	Antiprotozoal (Plasmodium)
26.	Curzerenone	0,166	0,096	Antiprotozoal (Plasmodium)
27.	(-)-beta-Elemene	0,368	0,007	Antiprotozoal (Plasmodium)
28.	alpha-Curcumene	0,204	0,054	Antiprotozoal (Plasmodium)
29.	1-p-Menthene	0,147	0,128	Antiprotozoal (Plasmodium)
30.	2,6-Dimethyl-2,4,6-octatriene	0,161	0,103	Antiprotozoal (Plasmodium)
31.	alpha-Bergamotene	0,297	0,014	Antiprotozoal (Plasmodium)
32.	beta-Terpineol	0,259	0,022	Antiprotozoal (Plasmodium)
33.	Bisabolene	0,156	0,112	Antiprotozoal (Plasmodium)
34.	Isoborneol	0,167	0,094	Antiprotozoal (Plasmodium)
35.	(2E,6Z)-Farnesol	0,305	0,013	Antiprotozoal (Plasmodium)

**LAMPIRAN 4
(LANJUTAN)**

TABEL VII. 1
Lanjutan

No	Nama senyawa	Pa	Pi	Aktivitas
36.	beta-Elemenone	0,328	0,010	Antiprotozoal (Plasmodium)
37.	3-Methylcamphenilol	0,327	0,010	Antiprotozoal (Plasmodium)
38.	5-epi-Curzerenone	0,166	0,096	Antiprotozoal (Plasmodium)
39.	1-Pentadecanol	0,211	0,049	Antiprotozoal (Plasmodium)
40.	2,6-Dimethyl-5-heptenal	0,184	0,073	Antiprotozoal (Plasmodium)
41.	2-Methylheptan-3-ol	0,208	0,052	Antiprotozoal (Plasmodium)
42.	Patchoulane	0,267	0,020	Antiprotozoal (Plasmodium)
43.	Non-2-en-4-one	0,174	0,085	Antiprotozoal (Plasmodium)
44.	Norbornyl acetate	0,397	0,006	Antiprotozoal (Plasmodium)
45.	2-Methyl-6-methylene-1,7-octadien-3-one	0,171	0,089	Antiprotozoal (Plasmodium)
46.	Dihydromyrcenol	0,146	0,129	Antiprotozoal (Plasmodium)
47.	Ethyl benzyl ether	0,243	0,029	Antiprotozoal (Plasmodium)
48.	2-Nonanol	0,237	0,031	Antiprotozoal (Plasmodium)
49.	delta-Elemene	0,175	0,083	Antiprotozoal (Plasmodium)
50.	(-)-gamma-Elemene	0,230	0,035	Antiprotozoal (Plasmodium)
51.	Curzerene	0,207	0,052	Antiprotozoal (Plasmodium)
52.	(-)-beta-Caryophyllene epoxide	0,231	0,034	Antiprotozoal (Plasmodium)
53.	Curcumenol	0,214	0,046	Antiprotozoal (Plasmodium)
54.	Viridiflorol	0,236	0,032	Antiprotozoal (Plasmodium)

**LAMPIRAN 4
(LANJUTAN)**

TABEL VII. 1
Lanjutan

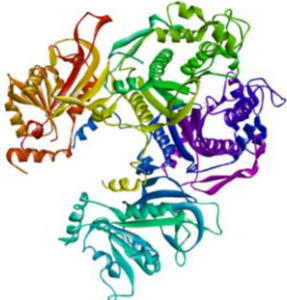
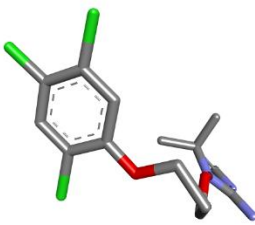
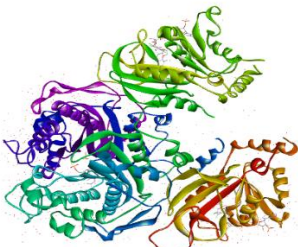
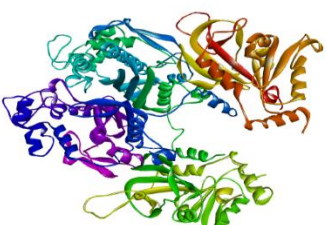
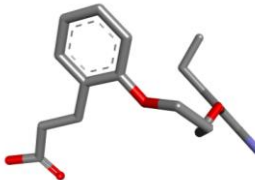
No	Nama senyawa	Pa	Pi	Aktivitas
55.	allo-Aromadendrene	0,167	0,095	Antiprotozoal (Plasmodium)
56.	2-Nonanone	0,170	0,090	Antiprotozoal (Plasmodium)
38.	5-epi-Curzerenone	0,166	0,096	Antiprotozoal (Plasmodium)
57.	(-)-alpha-Selinene	0,349	0,009	Antiprotozoal (Plasmodium)
58.	alpha-Terpineol	0,228	0,036	Antiprotozoal (Plasmodium)
59.	Farnesal	0,226	0,038	Antiprotozoal (Plasmodium)
60.	Heptadecane	0,232	0,034	Antiprotozoal (Plasmodium)
61.	2-Undecanone	0,170	0,090	Antiprotozoal (Plasmodium)
62.	Octadecane	0,232	0,034	Antiprotozoal (Plasmodium)
63.	Undecanal	0,218	0,043	Antiprotozoal (Plasmodium)
64.	beta-Gurjunene	0,212	0,048	Antiprotozoal (Plasmodium)
65.	Lavandulol	0,199	0,059	Antiprotozoal (Plasmodium)
66.	alpha-terpineol acetate	0,163	0,100	Antiprotozoal (Plasmodium)
67.	Hexadecane	0,232	0,034	Antiprotozoal (Plasmodium)
68.	Citral	0,226	0,038	Antiprotozoal (Plasmodium)
69.	Citronellal	0,201	0,057	Antiprotozoal (Plasmodium)

LAMPIRAN 5

STRUKTUR 3D RESEPTOR

Tabel VII. 2

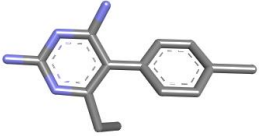
Struktur 3D Reseptor Antimalaria

Quadruple mutant (N51I+C59R+S108N+I164L) plasmodium falciparum dihydrofolate reductase-thymidylate synthase (PfDHFR-TS) complexed with P218 and NADPH (ID PDB 4DP3)			
ID PDB	Makromolekul Kompleks	Reseptor	Native Ligand
4DP3			
Wild-type Plasmodium falciparum dihydrofolate reductase-thymidylate synthase (PfDHFR-TS) complexed with WR99210, NADPH, and dUMP			
ID PDB	Makromolekul Kompleks	Reseptor	Native Ligand
1J3I			

LAMPIRAN 6

STRUKTUR 3D LIGAND PEMBANDING

Tabel VII. 3
Struktur 3D Ligan Pembanding Primetamin

Nama Ligand Pembanding	Struktur Senyawa 3D
Pyrimethamin	

LAMPIRAN 7

HASIL PENAMBATAN SIMULASI *MOLECULAR DOCKING* NATIVE

LIGAND

Tabel VII. 4

Hasil Penambatan Molekular Docking Native Ligand dan Ligand Pembanding ID
PDB 4DP3 dan 1J3I

No.	Nama Native Ligand	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
1.	3-(2-{3-[(2,4-diamino-6-ethylpyrimidin-5-yl)oxy]propoxy} phenyl)propanoic acid (4DP3)	-10.18 (kcal/mol)		ALA 16 LEU 164 ILE 112	ARG 59 (Conventional Hydrogen Bond), ARG 122 (Conventional Hydrogen Bond), ILE 14 (Conventional Hydrogen Bond) CYS 15 (Conventional Hydrogen Bond) THR 185 (Conventional Hydrogen Bond) ASP 54 (Conventional Hydrogen Bond) PHE 58 (Pi-Pi Stacked)

**LAMPIRAN 7
(LANJUTAN)**

Tabel VII. 4
Lanjutan

No.	Nama Native Ligand	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
2.	6,6-Dimethyl-1-[3-(2,4,5-Trichlorophenoxy)Propoxy]-1,6-Dihydro-1,3,5-Triazine-2,4-Diamine (1J3I)	-8.5 (kcal/mol)		LEU 46 VAL 45 PHE 116 MET 55 PRO 113 ILE 112	CYS 15 (Conventional Hydrogen Bond) THR 185 (Conventional Hydrogen Bond)
	Nama Ligan Pembanding	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
1.	Primethamin (4DP3)	-7.2 (kcal/mol)	PHE 116	LEU 164 PHE 58	LEU 112 (Pi-Sigma) LEU 119 (Pi-Sigma) ARG 122 (Conventional Hydrogen Bond) MET 55 (Pi-Sulfur) ARG 59 (Unfavorable Donor-Donor)
2.	Primethamin (1J3I)	-6.8 (kcal/mol)		ALA 16 PJE 58 ILE 14 ILE 164 ILE 112 LEU 119	TYR 170 (unfavorable Donor-Donor)

LAMPIRAN 8

HASIL PENAMBATAN SIMULASI *MOLECULAR DOCKING* SENYAWA

UJI TERHADAP RESEPTOR 4DP3 DAN 1J3I

Tabel VII. 5

Hasil Penambatan Molekular Docking Senyawa Uji Terhadap Reseptor
ID PDB 4DP3

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
1.	beta-Eudesmol	-7.7		ALA 16 ILE 14 LEU 164 PHE 58	ASN 108 (Conventional Hydrogen Bond)
2.	Ledol	-7.4		PHE 58 ILE 14	LEU 164 (Conventional Hydrogen Bond) ASN 108 (Conventional Hydrogen Bond)
3.	Patchoulane	-7.4		ALA 16	PHE 58 (Pi-Sigma)
4.	5-epi-Curzerenone	-7.2		LEU 119 ILE 112 ALA 16	PHE 58 (Pi-Pi Stacked) LEU 164 (Pi-Sigma) ASN 108 (Conventional Hydrogen Bond) MET 104 (Pi-Sulfur)
5.	Curzerenone	-7.2		LEU 119 ILE 112 ALA 16	PHE 58 (Pi-Pi Stacked) LEU 164 (Pi-Sigma) ASN 108 (Conventional Hydrogen Bond) MET 104 (Pi-Sulfur)
6.	(-)-Curcuphenol	-7.2		ILE 112 MET 55 LEU 119 LEU 164 ILE 14 ALA 16	PHE 58 (Pi-Pi Stacked) ASN 108 (Conventional Hydrogen Bond)

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 5
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
7.	beta-Eudesmene	-7.1		ALA 16, ILE 14, ILE 112, LEU 164, LEU 119, MET 104	PHE 58 (Pi-Sigma)
8.	Curcumenol	-7.1		ILE 112 MET 55 LEU 164 ILE 14 PHE 58	ASN 108 (Conventional Hydrogen Bond)
9.	Curzerene	-7.1		ALA 16 ILE 14 LEU 46 LEU 119 ILE 112	MET 104 (Pi-Sulfur) PHE 58 (Pi-Pi Stacked) LEU 164 (Pi-Sigma) ASN 108 (Conventional Hydrogen Bond)
10.	beta-Caryophyllene	-7.1		LEU 164	PHE 58 (Pi-Sigma)
11.	(-)-beta-Caryophyllene epoxide	-7.0			ALA 16 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
12.	beta-Gurjunene	-7.0		ALA 16 ILE 14 MET 55	
13.	+-ar-Turmerone	-7.0		ALA 16 ILE 14 PHE 58 LEU 119 ILE 112	
14.	(-)-alpha-Selinene	-6.9		ALA 16 PHE 58 MET 55 LEU 164	
15.	allo-Aromadendrene	-6.8		MET 55 PHE 58 ALA 16	

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 5
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
16.	Viridiflorol	-6.8		ILE 14 LEU 164 PHE 58 LEU 46 ALA 16	ASP 54 (Conventional Hydrogen Bond)
17.	beta-Elemenone	-6.7		ALA 16	ASN 108 (Conventional Hydrogen Bond)
18.	alpha-Zingiberene	-6.7		ILE 112 LEU 119 LEU 164 CYS 15 PHE 58 ALA 16 ILE 14	
19.	Bisabolene	-6.6		MET 55 ILE 112 LEU 119 LEU 164 PHE 58 ILE 14 ALA 16	
20.	alpha-Bergamotene	-6.6		ILE 14 ALA 16 PHE 58 LEU 164 MET 104 LEU 119 ILE 112	
21.	beta-Elemene	-6.6		ALA 16 LEU 164 ILE 112	PHE 58 (Pi-Sigma)
22.	delta-Elemene	-6.6		ALA 16 CYS 15 ILE 112	PHE 58 (Pi-Sigma)

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 5
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
23.	alpha-Curcumene	-6.5		ILE 14 ALA 16 LEU 164 ILE 112 MET 105 LEU 119	PHE 58 (Pi-Pi-Shaped) CYS 15 (Amide-Pi Stacked)
24.	Farsenal	-6.5		ILE 112 ILE 14 LEU 164 ALA 16	ARG 122 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
25.	(2E,6Z)-Farnesol	-6.4		ILE 51 TRP 48 LEU 46 LEU 164 MET 55 ALA 16 PHE 58	ASN 108 (Conventional Hydrogen Bond)
26.	(-)-gamma-Elemene	-6.4		LEU 164 PHE 58 ILE 112	
27	alpha-terpineol acetate	-6.3		ILE 14 ALA 16	PHE 58 (Pi-Sigma) ASN 108 (Conventional Hydrogen Bond)
28	beta-Curcumene	-6.3		LEU 119 ILE 112 LEU 164 ILE 14 ALA 16	MET 55 (Pi-Sulfur) PHE 58 (Pi-Pi Stacked)
29	Octadecane	-5.9		LEU 119 PHE 116 ILE 112 PHE 58 ALA 16 ILE 14 MET 55 LEU 164 TYR 57	

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 5
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
30	E-beta-farnesene	-5.8		LEU 119 LEU 164 ILE 112 TYR 57 ILE 14	PHE 58 (Pi-Sigma)
31	alpha-Terpineol	-5.7		ALA 16 ILE 14	PHE 58 (Pi-Sigma) ASN 108 (Conventional Hydrogen Bond) LEU 164 (Conventional Hydrogen Bond)
32	Norbornyl acetate	-5.5		ALA 16 ILE 114 PHE 58	
33	Isoborneol	-5.5		ALA 16	TYR 170 (Conventional Hydrogen Bond) LEU 164 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
34	(-)-beta-Elemene	-5.5		ALA 16 PHE 58	ASN 108 (Conventional Hydrogen Bond)
35	(+)-Camphor	-5.4		PHE 58 ALA 16	ILE 14 (Unfavorable Acceptor-Acceptor)
36	Hexadecane	-5.4		TYR 57 ARG 59 PHE 58 ILE 14 PHE 116 ILE 112 LEU 119 ALA 16 LEU 164	

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 5
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
37	Heptadecane	-5.3		LEU 119 ILE 112 PHE 58 ALA 16 ILE 14 TYR 57 PHE 116 MET 55 LEU 164	
38	3-Methylcamphenilol	-5.3		ALA 16	PHE 58 (Pi-Sigma) TYR 170 (Conventional Hydrogen Bond) LEU 164 (Conventional Hydrogen Bond)
39	Camphene	-5.3		LEU 164	PHE 58 (Pi-Sigma)
40	1-p-Menthene	-5.3		ALA 16 PHE 58 ILE 14	
41	1,8-Cineole	-5.3		ALA 16 PHE 58 ILE 14	
42	Borneol	-5.3			ASN 108 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
43	beta-Pinene	-5.3		ALA 16 ILE 14	PHE 58 (Pi-Sigma)
44	Linalool	-5.3		LEU 46 MET 55 ILE 112 LEU 119	PHE 116 (Pi-Sigma) ARG 122 (Conventional Hydrogen Bond)

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 5
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
45	Limonene	-5.2		ILE 14 ALA 16 PHE 58	
46	alpha-Pinene	-5.2		ILE 14 ALA 16	PHE 58 (Pi-Sigma)
47	2,6-Dimethyl-2,4,6-octatriene	-5.2		ILE 14 ALA 16 PHE 58 LEU 164 ILE 112	
48	cis-Citral	-5.1		ALA 16 PHE 58 MET 55 ILE 14	TRP 48 (Conventional Hydrogen Bond) ILE 51 (Conventional Hydrogen Bond)
49	trans-beta-Ocimene	-5.1		CYS 15 PHE 58 ILE 14 TYR 57	
50	Citral	-5.1		ALA 16 ILE 14 PHE 58 LEU 164	ASN 108 (Conventional Hydrogen Bond)
51	1-Pentadecanol	-5.1	LEU 119	ARG 59 MET 55 LEU 164 PHE 58 ILE 112 ALA 16 ILE 14	SER 120 (Conventional Hydrogen Bond) PHE 116 (Conventional Hydrogen Bond)
52	2-Undecanone	-5.1		TYR 57 PHE 58 ILE 14 ALA 16	ASN 108 (Conventional Hydrogen Bond)
53	beta-Terpineol	-5.1		LEU 164	PHE 58 (Pi-Sigma) ASP 54 (Conventional Hydrogen Bond)

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 5
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
56	3-Carene	-5.0		ILE 14 ALA 16 PHE 58	
57	2-Methyl-6-methylene-1,7-octadien-3-one	-5.0	CYS 15	TYR 57 PHE 558 ILE 14	TYR 170 (Conventional Hydrogen Bond)
58	Citronellal	-4.9	ASP 54	LEU 164	PHE 58 (Pi-Sigma)
59	Perillene	-4.9		ILE 112 PHE 58 LEU 164 MET 55	LEU 119 (Pi-Sigma) ARG 59 (Conventional Hydrogen Bond) ARG 122 (Conventional Hydrogen Bond)
60	beta-Myrcene	-4.8		LEU 164 PHE 58 ILE 14 ALA 16 TYR 57	
61	cis-beta-Ocimene	-4.8		ALA 16 ILE 14 PHE 58 LEU 164	
62	2,6-Dimethyl-5-heptenal	-4.8		PHE 58 ILE 14 LEU 164 ALA 16	ASN 108 (Conventional Hydrogen Bond)
63	Non-2-en-4-one	-4.7	CYS 15	TYR 57 ILE 14 ALA 16 PHE 58 LEU 164	TYR 170 (Conventional Hydrogen Bond)
64	Lavandulol	-4.7		TYR 57 PHE 58 ILE 14 ALA 16	ASP 54 (Conventional Hydrogen Bond)

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 5
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
65	Undecanal	-4.7	THR 185	LEU 119 ALA 16 PHE 58 ILE 112 ILE 14 LEU 164	
66	2-Nonanone	-4.6		ALA 16 ILE 14 TYRR 57	ASN 108 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
67	Ethyl benzyl ether	-4.5	ASP 54	ALA 16 ILE 14 TYR 57	CYS 15 (Amide-Pi Stacked)
68	2-Nonanol	-4.5	LEU 164	TYR 57 ALA 16 ILE 14 PHE 58	ASN 108 (Conventional Hydrogen Bond)
69	2-Methylheptan-3-ol	-4.4		TYR 57 PHE 58 ILE 14 CYS 15 ALA 16	ASP 54 (Conventional Hydrogen Bond)

LAMPIRAN 8
(LANJUTAN)

Tabel VII. 6
Hasil Penambatan Molekular Docking Senyawa Uji Terhadap Reseptor
ID PDB 1J3I

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
1.	Patchoulane	-7.2		ILE 14 LEU 46 ALA 16	PHE 58 (Pi-Sigma)
2.	Curcumenol	-7.0		PHE 58 LEU 46	TYR 170 (Conventional Hydrogen Bond) ILE 14 (Conventional Hydrogen Bond)
3.	beta-Eudesmol	-6.9		ALA 16 ILE 14 ILE 164	PHE 58 (Pi-Sigma)
4.	beta-Eudesmene	-6.9		LEU 46 ALA 16 CYS 15 ILE 14 TYR 57	PHE 58 (Pi-Sigma)
5.	beta-Gurjunene	-6.9		ALA 16 MET 55 ILE 14	PHE 58 (Pi-Sigma)
6.	beta-Caryophyllene	-6.9		ALA 16	PHE 58 (Pi-Sigma)
7.	Ledol	-6.9		LEU 46 PHE 58 CYS 15 ALA 16 ILE 14	TYR 170 (Conventional Hydrogen Bond) ILE 164 (Conventional Hydrogen Bond)
8.	(-)-alpha-Selinene	-6.9		TRP 48 PHE 58 ILE 14 TYR 57 ALA 16 LEY 46	

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 6
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
9.	(-)-beta-Caryophyllene epoxide	-6.8			ALA 16 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
10.	Viridiflorol	-6.8		LEU 46 PHE 58	ILE 164 (Conventional Hydrogen Bond)
11.	allo-Aromadendrene	-6.8		ALA 16 PHE 58	
12.	5-epi-Curzerenone	-6.7		LEU 46 ILE 164 ALA 16	PHE 58 (Pi-Pi Stacked)
13.	Curzerenone	-6.7		LEU 46 ALA 16 ILE 164	PHE 58 (Pi-Pi Stacked)
14.	alpha-Zingiberene	-6.7		MET 104 ILE 164 ALA 16 ILE 14	PHE 58 (Pi-Sigma)
15.	beta-Elemene	-6.6		PHE 58 ILE 164 LEU 119 ILE 112	
16.	alpha-Bergamotene	-6.6		ALA 16 ILE 14 PHE 58 ILE 164 ILE 112	
17.	+-ar-Turmerone	-6.5		ILE 14 ALA 16 MET 104 ILE 112 ILE 164	CYS 15 (Pi-Pi Shaped) PHE 58 (Amide-Pi Stacked)
18.	Bisabolene	-6.5		LEU 119 ILE 112 ILE 164 PHE 58 ALA 16 ILE 14	

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 6
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
19.	(-)-Curcuphenol	-6.4		ALA 16 PHE 58 LEU 119 ILE 112	ILE 14 (Conventional Hydrogen Bond) TYR 170 (Conventional Hydrogen Bond) ILE 164 (Conventional Hydrogen Bond)
20.	beta-Elemenone	-6.4		ILE 14 PHE 58 ALA 16	
21.	(-)-gamma-Elemene	-6.4		MET 55 PHE 58	
22.	alpha-Curcumene	-6.3		ILE 112 LEU 119 MET 104 ILE 164 ALA 16 ILE 14	PHE 58 (Pi-Pi T Shaped) CYS 15 (Amide-Pi Stacked)
23.	Farnesal	-6.2	ASP 54	PHE 58 ALA 16 ILE 14 ILE 164 CYS 15	ASN 51 (Conventional Hydrogen Bond) TRP 48 (Conventional Hydrogen Bond)
24.	delta-Elemene	-6.2			PHE 58 (Pi-Sigma)
25.	Curzerene	-6.2		ALA 16 LEU 46 ILE 14 ILE 112 ILE 164	PHE 58 (Pi-Pi Stacked) MET 55 (Pi-Sulfur)
26.	beta-Curcumene	-6.0		TRP 48 ALA 16 PHE 58 CYS 15 ILE 14	MET 55 (Pi-Sulfur) ASP 54 (Pi-Anion) LEU 46 (Pi_sigma)
27	alpha-terpineol acetate	-5.8		ALA 16 TYR 57 ILE 14	PHE 58 (Pi-Sigma) TYR 170 (Conventional Hydrogen Bond)

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 6
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
28	(2E,6Z)-Farnesol	-5.7		MET 55 PHE 58 ALA 16 LEU 119 ILE 112 ILE 164	TRP 48 (Conventional Hydrogen Bond) ASP 54 (Conventional Hydrogen Bond)
29	E-beta-farnesene	-5.5		TYR 57 ILE 14 PHE 58 ILE 164 MET 55	
30	(-)-beta-Elemene	-5.5		ALA 16 ILE 14	PHE 58 (Pi-Sigma) ASP 54 (Conventional Hydrogen Bond)
31	alpha-Terpineol	-5.5		ILE 14 PHE 58 ALA 16	ILE 164 (Conventional Hydrogen Bond) TYR 170 (Conventional Hydrogen Bond)
32	(+)-Camphor	-5.4		ALA 16	PHE 58 (Pi-Sigma) ILE 14 (Unfavorable Acceptor-Acceptor)
33	Isoborneol	-5.4		ALA 16	ILE 164 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
34	beta-Pinene	-5.4		ALA 16 ILE 14	PHE 58 (Pi-Sigma)
35	1,8-Cineole	-5.3		ALA 16 PHE 58	
36	Borneol	-5.3		ALA 16	PHE 58 (Pi-Sigma)
37	3-Methylcamphenilol	-5.3		ALA 16 LEU 46	PHE 58 (Pi-Sigma) ASP 54 (Conventional Hydrogen Bond)
38	alpha-Pinene	-5.3		ALA 16 ILE 14	PHE 58 (Pi-Sigma)
39	Camphene	-5.3		ILE 164	PHE 58 (Pi-Sigma)
40	Norbornyl acetate	-5.3		ALA 16 PHE 58	

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 6
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
41	beta-Terpineol	-5.3		ALA 16 ILE 14 PHE 58	THR 185 (Conventional Hydrogen Bond) ASP 54 (Conventional Hydrogen Bond)
42	Limonene	-5.2		LEU 46 ALA 16 LEU 40 ILE 14 PHE 58	
43	1-p-Menthene	-5.2		ALA 16 ILE 14 TYR 57	PHE 58 (Pi-Sigma)
44	2-Methyl-6-methylene-1,7-octadien-3-one	-5.2		ALA 16 PHE 58 ILE 14 ILE 164	
45	Citral	-5.1		ALA 16 LEU 46 PHE 58 ILE 14	ASN 51 (Conventional Hydrogen Bond) TRP 48 (Conventional Hydrogen Bond)
46	3-Carene	-5.1		ALA 16 ILE 14 PHE 58	
47	Lavandulol	-5.0		CYS 15 ALA 16 ILE 14 PHE 58 TYR 57	ASP 54 (Conventional Hydrogen Bond)
48	2,6-Dimethyl-2,4,6-octatriene	-5.0		PHE 58 ALA 16	
49	Teresantanane	-5.0		ALA 16	PHE 58 (Pi-Sigma)
50	trans-beta-Ocimene	-5.0		LEU 46 ALA 16 ILE 14 PHE 58 TYR 57	

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 6
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
51	cis-Citral	-4.9		PHE 58 ALA 16 MET 55 ILE 14	TRP 48 (Conventional Hydrogen Bond) ASN 51 (Conventional Hydrogen Bond)
52	Octadecane	-4.9		ALA 16 CYS 15 PHE 58 ILE 112 ILE 164 ILE 14 TYR 57 LEU 119	
53	Perillene	-4.9	ILE 164	TYR 57 PHE 58 ILE 14 ALA 16	CYS 15 (Pi-Sigma)
54	Linalool	-4.9	CYS 15	TYR 57 ILE 14 ALA 16 PHE 58 ILE 164	TYR 170 (Conventional Hydrogen Bond)
55	Citronellal	-4.9		ALA 16 PHE 58 ILE 14	TRP 48 (Conventional Hydrogen Bond)
56	cis-beta-Ocimene	-4.9		PHE 58 ALA 16 ILE 164 ILE 14 TYR 57	
57	beta-Myrcene	-4.8		ILE 164 PHE 58 ILE 14 ALA 16 TYR 57	

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 6
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
58	Heptadecane	-4.8		ILE 14 ALA 16 PHE 58 TYR 57 ILE 164 ILE 112 LEU 46	
59	Hexadecane	-4.8		ALA 16 ILE 14 PHE 58 ILE 164 ILE 112 TYR 57	
60	Dihydromyrcenol	-4.7		ILE 14 TYR 57	ILE 164 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
61	2,6-Dimethyl-5-heptenal	-4.6		PHE 58 ALA 16 ILE 14	TRP 48 (Conventional Hydrogen Bond)
62	Ethyl benzyl ether	-4.6	ASP 54	ALA 16 ILE 14 TYR 57	CYS 15 (Amide-Pi Stacked)
63	Undecanal	-4.5	ASP 54	TYR 57 ILE 14 ALA 16	TRP 48 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
64	2-Undecanone	-4.4		ALA 16 ILE 14 PHE 58 TYR 57	TRP 48 54 (Conventional Hydrogen Bond)
65	Non-2-en-4-one	-4.4	CYS 15	TYR 57 ILE 14 ALA 16 ILE 164	PHE 58 (Pi-Sigma) TYR 170 (Conventional Hydrogen Bond)
66	2-Methylheptan-3-ol	-4.4		TYR 57 PHE 58 ILE 14 ALA 16 CYS 15	ASP 54 (Conventional Hydrogen Bond)

**LAMPIRAN 8
(LANJUTAN)**

Tabel VII. 6
Lanjutan

No.	Nama Senyawa	Nilai ΔG	Ikatan Hidrogen	Interaksi Hidrofobik (Pi-Alkyl & Alkyl)	Interaksi Lain
67	1-Pentadecanol	-4.3		LEU 119 PHE 116 PRO 113 ILE 112 MET 55 ILE 164 PHE 58 ILE 14	ASP 54 (Conventional Hydrogen Bond) THR 185 (Conventional Hydrogen Bond)
68	2-Nonanol	-4.2		ALA 16 ILE 14 TYR 57	ILE 164 (Conventional Hydrogen Bond) PHE 58 (Pi-Sigma)
69	2-Nonanone	-4.2		ALA 16 PHE 58 ILE 14	TRP 48 Conventional Hydrogen Bond)

LAMPIRAN 9

HASIL PREDIKSI DRUGLIKENESS

Tabel VII. 7

Hasil Prediksi *Druglikeness* Senyawa Aktif Tanaman Temu Mangga (*Curcuma amada Roxb.*) Berdasarkan Aturan *Lipinski's Rule of Five*

No	Senyawa Aktif	BM (g/mol)	Donor H	Akseptor H	Log P	Molar Refractivity	Keterangan
1.	(-)-Curcuphenol	218	1	1	4.550519	69.923782	Memenuhi
2.	(+)-Camphor	152	0	1	2.401700	44.235989	Memenuhi
3.	+-ar-Turmerone	216	0	1	4.023919	68.648987	Memenuhi
4.	1,8-Cineole	154	0	1	2.744100	45.526985	Memenuhi
5.	3-Carene	136	0	0	2.998699	43.751991	Memenuhi
6.	alpha-Pinene	136	0	0	2.998699	43.751987	Memenuhi
7.	alpha-Zingiberene	204	0	0	4.891299	68.832977	Memenuhi
8.	beta-Caryophyllene	204	0	0	4.725199	66.742981	Memenuhi
9.	beta-Curcumene	204	0	0	5.035399	68.902977	Tidak Memenuhi
10.	beta-Elemene	204	0	0	4.747200	68.762985	Memenuhi
11.	beta-Eudesmene	204	0	0	4.725199	66.742981	Memenuhi
12.	beta-Eudesmol	222	1	1	3.919999	68.226776	Memenuhi
13.	beta-Myrcene	136	0	0	3.474999	48.001987	Memenuhi
14.	beta-Pinene	136	0	0	2.998699	43.751987	Memenuhi
15.	Borneol	154	1	1	2.193500	45.235790	Memenuhi
16.	Camphene	136	0	0	2.998699	43.751991	Memenuhi
17.	cis-beta-Ocimene	136	0	0	3.474999	48.001987	Memenuhi
18.	cis-Citral	152	0	1	2.877999	48.485989	Memenuhi
19.	Curzerenone	230	0	2	3.478719	67.154488	Memenuhi
20.	E-beta-farnesene	206	0	0	5.425500	71.086975	Tidak Memenuhi
21.	Ledol	222	1	1	3.465699	65.996773	Memenuhi
22.	Limonene	136	0	0	3.308899	45.911987	Memenuhi
23.	Linalool	154	1	1	2.669800	49.485786	Memenuhi
24.	Perillene	150	0	1	3.178399	46.459991	Memenuhi

**LAMPIRAN 9
(LANJUTAN)**

Tabel VII. 7
Lanjutan

No	Senyawa Aktif	BM (g/mol)	Donor H	Akseptor H	Log P	Molar Refractivity	Keterangan
25.	Teresantanane	136	0	0	2.688500	41.591988	Memenuhi
26.	trans-beta- Ocimene	136	0	0	3.474999	48.001987	Memenuhi
27.	(-)-beta-Elemene	204	0	0	4.747200	68.762985	Memenuhi
28.	alpha-Curcumene	202	0	0	4.844920	68.258987	Memenuhi
29.	1-p-Menthene	138	0	0	3.388799	45.935986	Memenuhi
30.	2,6-Dimethyl- 2,4,6-octatriene	136	0	0	3.474999	48.001987	Memenuhi
31.	alpha-Bergamotene	204	0	0	4.725199	66.742981	Memenuhi
32.	beta-Terpineol	154	1	1	2.503700	47.395790	Memenuhi
33.	Bisabolene	204	0	0	5.179500	68.972984	Memenuhi
34.	Isoborneol	154	1	1	2.193500	45.235790	Memenuhi
35.	(2E,6Z)-Farnesol	222	1	1	4.397899	72.498772	Memenuhi
36.	beta-Elementone	218	0	1	4.070299	69.222984	Memenuhi
37.	3- Methylcamphenilol	154	1	1	2.193500	45.235790	Memenuhi
38.	5-epi-Curzerenone	230	0	2	3.478719	67.154488	Memenuhi
39.	1-Pentadecanol	228	1	1	5.069900	72.780769	Memenuhi
40.	2,6-Dimethyl-5- heptenal	140	0	1	2.567800	43.892986	Memenuhi
41.	2-Methylheptan-3- ol	130	1	1	2.193500	40.369789	Memenuhi
42.	Patchoulane	206	0	0	4.494899	64.606979	Memenuhi
43.	Non-2-en-4-one	140	0	1	2.711900	43.962990	Memenuhi
44.	Norbornyl acetate	154	0	2	1.738100	41.001991	Memenuhi
45.	2-Methyl-6- methylene-1,7- octadien-3-one	154	0	1	2.654000	48.391991`	Memenuhi
46.	Dihydromyrcenol	156	1	1	2.749699	49.509785	Memenuhi
47.	Ethyl benzyl ether	136	0	1	2.223100	41.771992	Memenuhi
48.	2-Nonanol	144	1	1	2.727700	45.056786	Memenuhi
49.	(-)-alpha-Selinene	204	0	0	4.725199	66.742981	Memenuhi

**LAMPIRAN 9
(LANJUTAN)**

Tabel VII. 7
Lanjutan

No	Senyawa Aktif	BM (g/mol)	Donor H	Akseptor H	Log P	Molar Refractivity	Keterangan
50.	(-)-beta-Caryophyllene epoxide	220	0	1	3.936399	66.263985	Memenuhi
51.	(-)-gamma-Elemene	204	0	0	4.891299	68.832977	Memenuhi
52.	2-Nonanone	142	0	1	2.935899	44.056988	Memenuhi
53.	2-Undecanone	170	0	1	3.716099	53.290985	Memenuhi
54.	allo-Aromadendrene	204	0	0	4.270899	64.512985	Memenuhi
55.	alpha-terpineol acetate	196	0	2	3.074500	56.942986	Memenuhi
56.	alpha-Terpineol	154	1	1	2.503700	47.395790	Memenuhi
57.	beta-Gurjunene	204	0	0	4.270899	64.512985	Memenuhi
58.	Citral	152	0	1	2.877999	48.485989	Memenuhi
59.	Citronellal	154	0	1	2.957900	48.509987	Memenuhi
60.	Curcumenol	234	1	2	3.176499	67.401779	Memenuhi
61.	Curzerene	216	0	1	3.838519	66.527992	Memenuhi
62.	delta-Elemene	204	0	0	4.747200	68.762985	Memenuhi
63.	Farnesal	220	0	1	4.604499	71.476982	Memenuhi
64.	Heptadecane	240	0	0	6.877702	80.602966	Tidak memenuhi
65.	Hexadecane	266	0	0	6.487601	75.985970	Memenuhi
66.	Lavandulol	154	1	1	2.527300	49.437786	Memenuhi
67.	Octadecane	254	0	0	7.267802	85.219963	Tidak memenuhi
68.	Undecanal	170	0	1	3.716099	53.290985	Memenuhi
69.	Viridiflorol	222	1	1	3.465699	65.996773	Memenuhi

LAMPIRAN 10
HASIL PREDIKSI ADMET

Tabel VII. 8

Hasil Prediksi Profil Farmakokinetika dan Toksisitas Senyawa Aktif Tanaman
Temu Mangga (*Curcuma amada Roxb.*) Berdasarkan Pre-ADMET

No	Nama Senyawa Aktif	Absorpsi		Distribusi	Metabolisme	Toksisitas		
		HIA (%)	CaCo2	Plasma Protein Binding (%)	(Substrat CYP2DG)	Ames Test	Carcino Mouse	Carcino Rat
1.	1,8-Cineole	100.000000	21.895	100.000000	Non	Mutagen	+	+
2.	(-)-Curcuphenol	100.000000	52.3758	100.000000	Non	Mutagen	+	-
3.	(+)-Camphor	100.000000	26.8158	100.000000	Non	Mutagen	-	+
4.	+-ar-Turmerone	100.000000	55.5043	100.000000	Non	mutagen	-	-
5.	3-Carene	100.000000	23.6313	100.000000	Non	Mutagen	-	+
6.	alpha-Pinene	100.000000	23.6322	100.000000	Non	Mutagen	-	+
7.	alpha-Zingiberene	100.000000	23.4036*	100.000000	Non	Mutagen	+	+
8.	beta-Caryophyllene	100.000000	23.6315	100.000000	Non	Mutagen	-	+
9.	beta-Curcumene	100.000000	23.4127*	100.000000	Non	Mutagen	+	+
10.	beta-Elemene	100.000000	23.4917	100.000000	Non	mutagen	-	+
11.	beta-Eudesmene	100.000000	23.4924	100.000000	Non	mutagen	-	+
12.	beta-Eudesmol	100.000000	55.6857	92.753619	Non	Mutagen	-	+
13.	beta-Myrcene	100.000000	23.6306	100.000000	Non	Mutagen	-	+
14.	beta-Pinene	100.000000	23.4924	100.000000	Non	Mutagen	-	+
15.	Borneol	100.000000	24.2343	100.000000	Non	mutagen	-	+
16.	Camphene	100.000000	23.4938	100.000000	Non	Mutagen	-	+
17.	cis-beta-Ocimene	100.000000	23.6338	100.000000	Non	mutagen	+	+
18.	cis-Citral	100.000000	13.9671	100.000000	Non	Mutagen	-	+
19.	Curzerenone	100.000000	55.4857	100.000000	Non	mutagen	+	+
20.	E-beta-farnesene	100.000000	23.4049*	100.000000	Non	Mutagen	-	+
21.	Ledol	100.000000	54.5722	100.000000	Non	non-mutagen	-	+
22.	Limonene	100.000000	23.6317	100.000000	Non	Mutagen	-	+
23.	Linalool	100.000000	29.355	100.000000	Non	Mutagen	-	-
24.	Perillene	100.000000	57.7602	100.000000	Weakly	Mutagen	+	+
25.	Teresantanane	100.000000	22.3043	100.000000	Non	Mutagen	-	+
26.	trans-beta-Ocimene	100.000000	23.6338	100.000000	Non	Mutagen	+	+
27.	(-)-beta-Elemene	100.000000	23.4917	100.000000	Non	Mutagen	-	+
28.	alpha-Curcumene	100.000000	23.4036*	100.000000	Non	Mutagen	+	+
29.	1-p-Menthene	100.000000	23.4036*	100.000000	Non	Mutagen	+	+
30.	2,6-Dimethyl-2,4,6-octatriene	100.000000	23.453	98.874999	Non	Mutagen	+	+
31.	alpha-Bergamotene	100.000000	23.4054*	100.000000	Non	Non-mutagen	+	+
32.	beta-Terpineol	100.000000	50.8083	21.989862	Non	Mutagen	-	+
33.	Bisabolene	100.000000	23.4099*	99.577013	Non	Non-mutagen	-	+

**LAMPIRAN 10
(LANJUTAN)**

Tabel VII. 8
Lanjutan

No	Nama Senyawa Aktif	Absorpsi		Distribusi Plasma Protein Binding (%)	Metabolisme (Substrat CYP2DG)	Toksisitas		
		HIA (%)	CaCo2			Ames Test	Carcino Mouse	Carcino Rat
34	Isoborneol	100.000000	24.2343	100.000000	Non	Mutagen	-	+
35	(2E,6Z)-Farnesol	100.000000	31.9961	100.000000	Non	Non-mutagen	+	-
36	3-Methylcamphenilol	100.000000	40.4803	100.000000	Non	Mutagen	-	+
37	5-epi-Curzerenone	100.000000	55.4857	100.000000	Non	Mutagen	+	+
38	1-Pentadecanol	100.000000	42.1144	100.000000	Non	Non-mutagen	+	-
39	2,6-Dimethyl-5-heptenal	100.000000	29.9931	100.000000	Weakly	Mutagen	+	-
40	2-Methylheptan-3-ol	100.000000	21.1248	100.000000	Non	Mutagen	-	+
41	Patchoulane	100.000000	22.3042	100.000000	Non	Mutagen	-	+
42	Non-2-en-4-one	100.000000	53.4721	100.000000	Non	Mutagen		+
43	Norbornyl acetate	100.000000	31.2358	94.990109	Weakly	Mutagen	+	+
44	2-Methyl-6-methylene-1,7-octadien-3-one	100.000000	56.0707	66.890086	Weakly	Mutagen	+	+
45	Dihydromyrcenol	100.000000	29.3632	100.000000	Non	Mutagen	-	+
46	Ethyl benzyl ether	100.000000	57.3263	43.873097	Weakly	Mutagen	+	-
47	beta-Elementone	100.000000	52.8426	95.446609	Non	Mutagen		+
48	2-Nonanol	100.000000	22.1196	100.000000	Non	Non-mutagen	-	-
49	(-)-alpha-Selinene	100.000000	23.632	100.000000	Non	Mutagen	-	+
50	(-)-beta-Caryophyllene epoxide	100.000000	56.3475	90.849656	Non	Mutagen	+	+
51	(-)-gamma-Elementene	100.000000	23.4918	100.000000	Non	Mutagen	-	+
52	2-Nonanone	100.000000	26.7564	100.000000	Non	Mutagen	-	+
53	2-Undecanone	100.000000	44.8978	100.000000	Non	Non-Mutagen	-	-
54	allo-Aromadendrene	100.000000	23.4924	100.000000	Non	Mutagen	-	+
55	alpha-terpineol acetate	100.000000	37.7654	98.538119	Non	Mutagen	-	-
56	alpha-Terpineol	100.000000	50.8083	23.416307	Non	Mutagen	-	-
57	beta-Gurjunene	100.000000	23.4924	100.000000	Non	Mutagen	-	+
58	Citral	100.000000	13.9671	100.000000	Non	Mutagen	-	+
59	Citronellal	100.000000	13.7258	100.000000	Non	Non-Mutagen	+	-
60	Curcumenol	97.128752	52.9389	100.000000	Non	Non-Mutagen	+	-
61	Curzerene	100.000000	57.0247	100.000000	Non	Mutagen	+	+
62	delta-Elementene	100.000000	23.6409	100.000000	Non	Mutagen	-	+

**LAMPIRAN 10
(LANJUTAN)**

Tabel VII. 8
Lanjutan

No	Nama Senyawa Aktif	Absorpsi		Distribusi	Metabolisme	Toksistas		
		HIA (%)	CaCo2	Plasma Protein Binding (%)	(Substrat CYP2DG)	Ames Test	Carcino Mouse	Carcino Rat
63	Farnesal	100.000000	37.7465	100.000000	Non	Non-Mutagen	+	+
64	Heptadecane	100.000000	22.1927*	100.000000	Non	Non-Mutagen	-	+
65	Hexadecane	100.000000	22.1927*	100.000000	Non	Non-Mutagen	-	+
66	Lavandulol	100.000000	24.6217	100.000000	Non	Mutagen	-	-
67	Octadecane	100.000000	22.1927*	100.000000	Non	Non-Mutagen	-	+
68	Undecanal	100.000000	44.4145	100.000000	Non	Non-Mutagen	+	-
69	Viridiflorol	100.000000	54.5722	100.000000	Non	Non-Mutagen	-	+

DAFTAR RIWAYAT HIDUP



I. IDENTITAS DIRI

Nama : Asep Wildan
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II. RIWAYAT PENDIDIKAN

Jenjang Pendidikan	Nama Sekolah/Perguruan Tinggi	Tahun Masuk	Tahun Lulus
SD	SDN Rancanilem	2009	2015
SMP	SMP 4 Rancaekek	2015	2017
SMK	SMK Kesehatan Rancaekek	2017	2019
Perguruan Tinggi	Universitas Garut	2019	2023

III. PENGALAMAN ORGANISASI

Nama Organisasi	Jabatan	Lamanya
Majelis Permusyawaratan Mahasiswa (MPM)	Ketua	1 Tahun
Komisi Injurasi (MPM)	Anggota	1 Tahun
OSIS	Ketua	1 Tahun

IV. RIWAYAT PEKERJAAN

Nama Perusahaan	Jabatan	Lamanya
Klinik Amodia Pratama	Asisten Tenaga Kefarmasian	1 Tahun