

Article

Supplementary Material: A New Cytotoxic Dimeric Sesquiterpene Isolated from *Inula racemosa* Hook. f. (Root): *In Vitro* and *In Silico* Analyses

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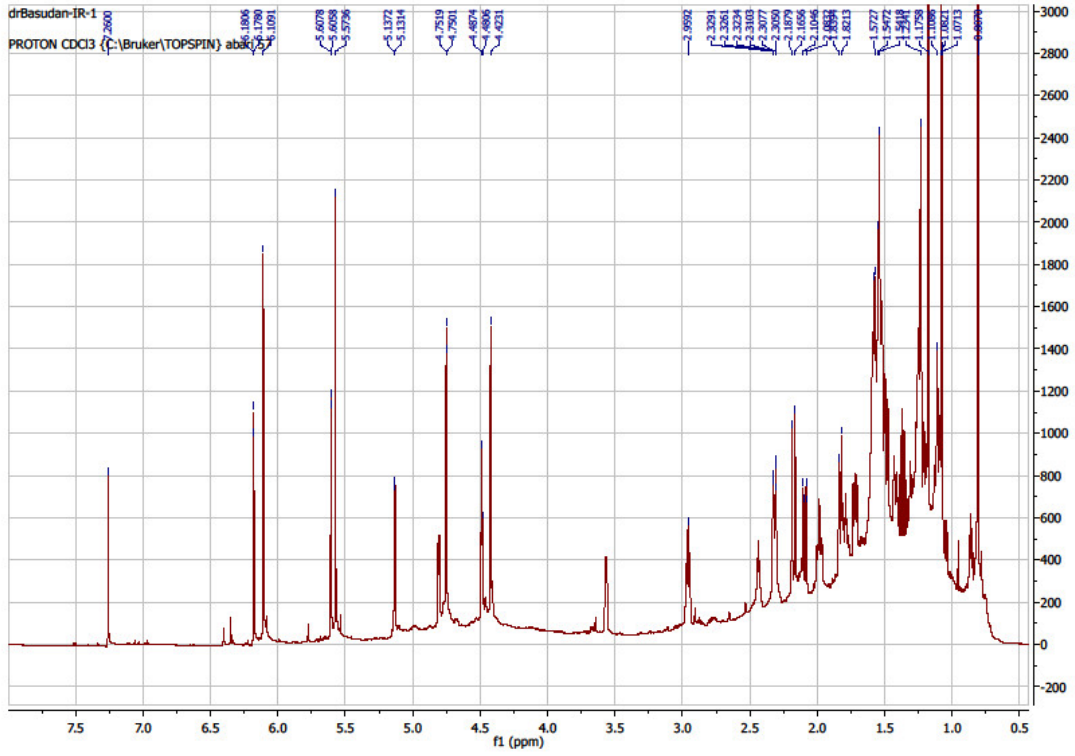


Figure S1. ¹H NMR spectrum of compound 1 (Disesquicin).

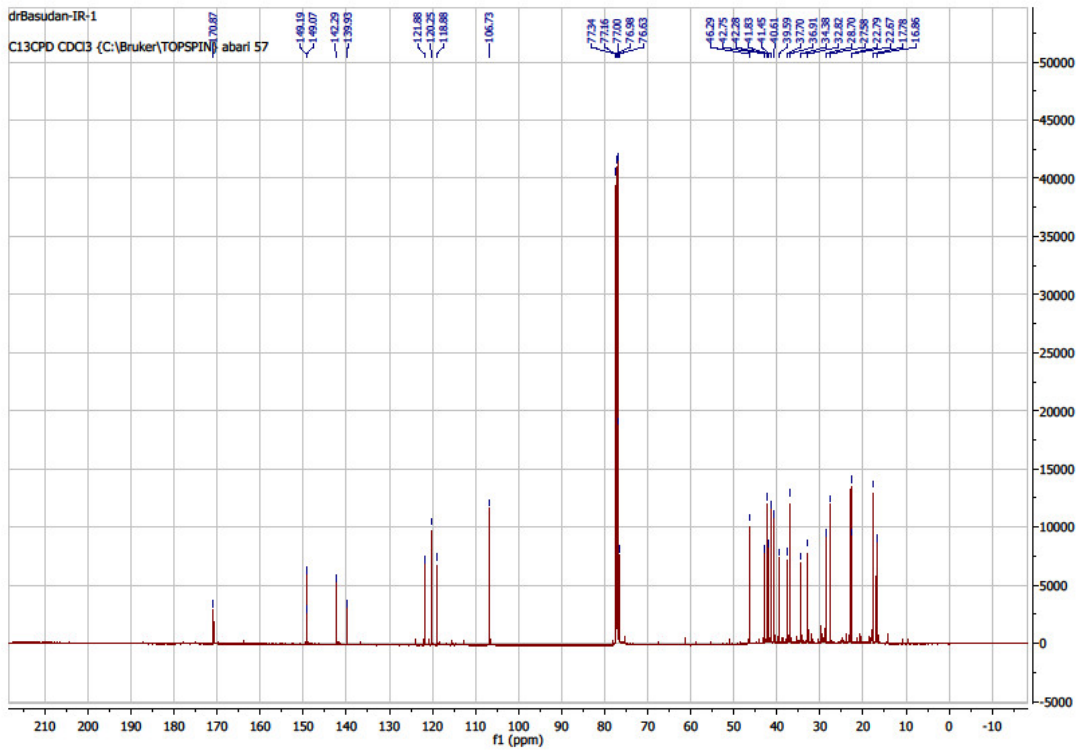


Figure S2. ¹³C NMR spectrum of compound 1 (Disesquicin).

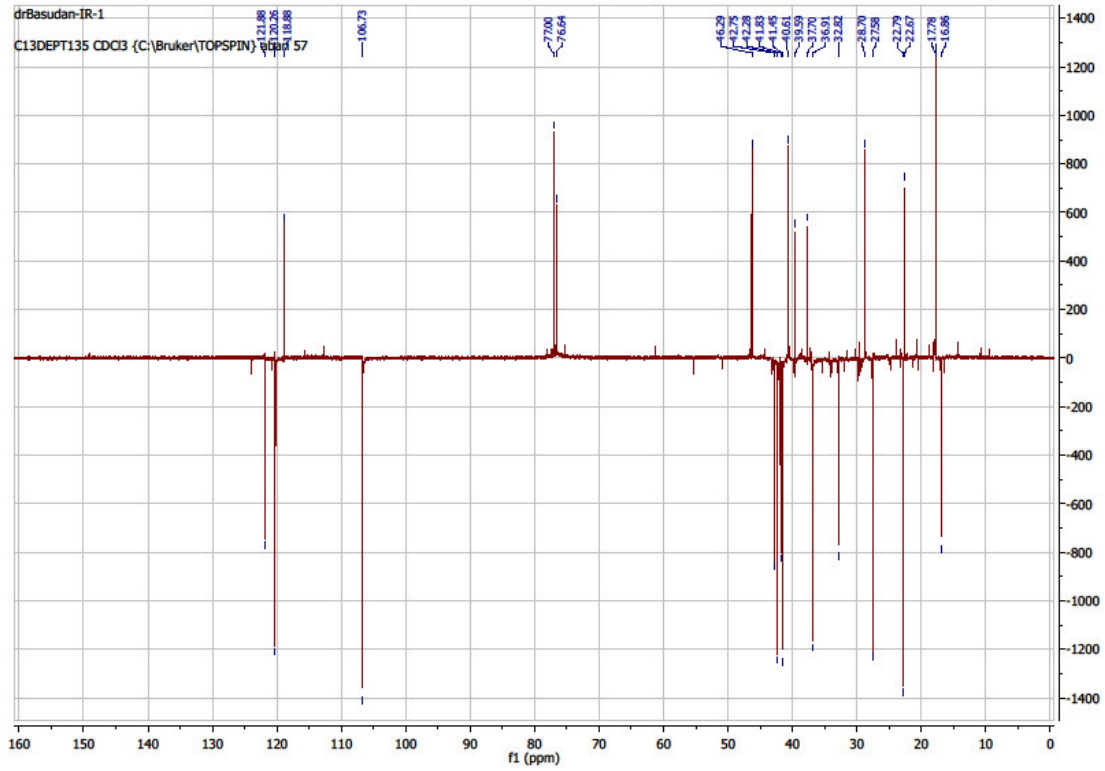


Figure S3. DEPT spectrum of compound 1 (Disesquicin).

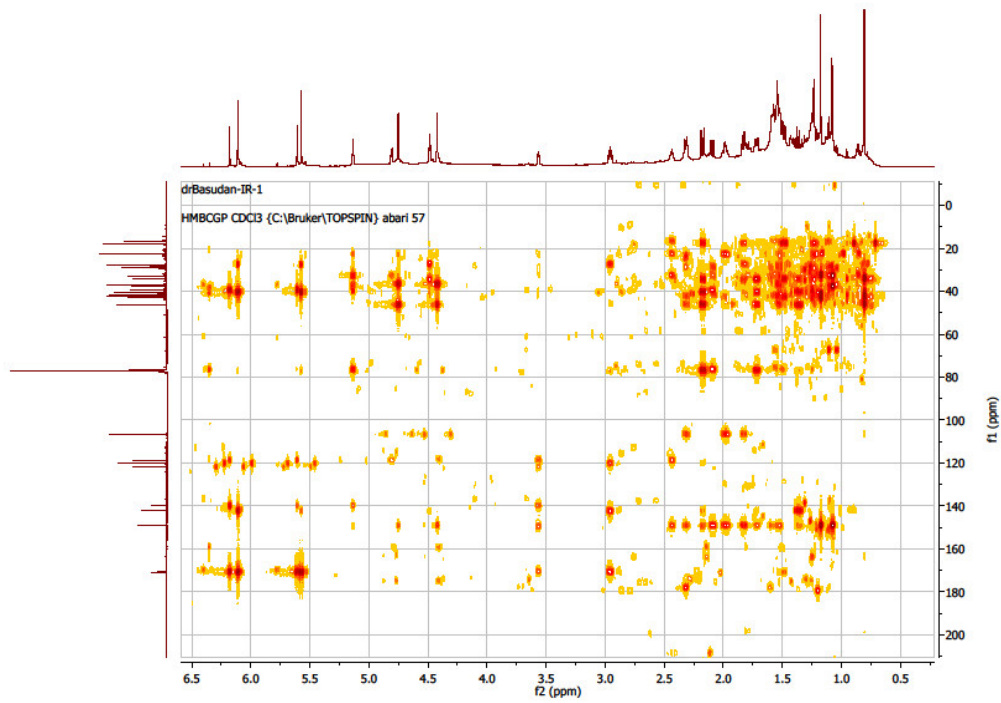


Figure S4. HMBC spectrum of compound 1 (Disesquicin).

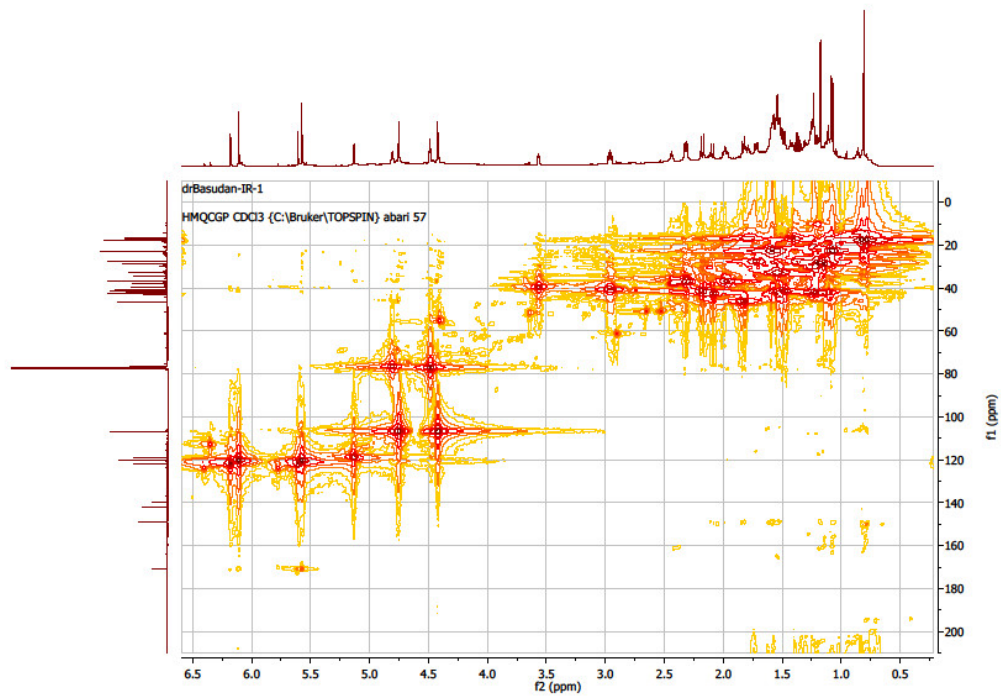


Figure S5. HMQC spectrum of compound 1 (Disesquicin).

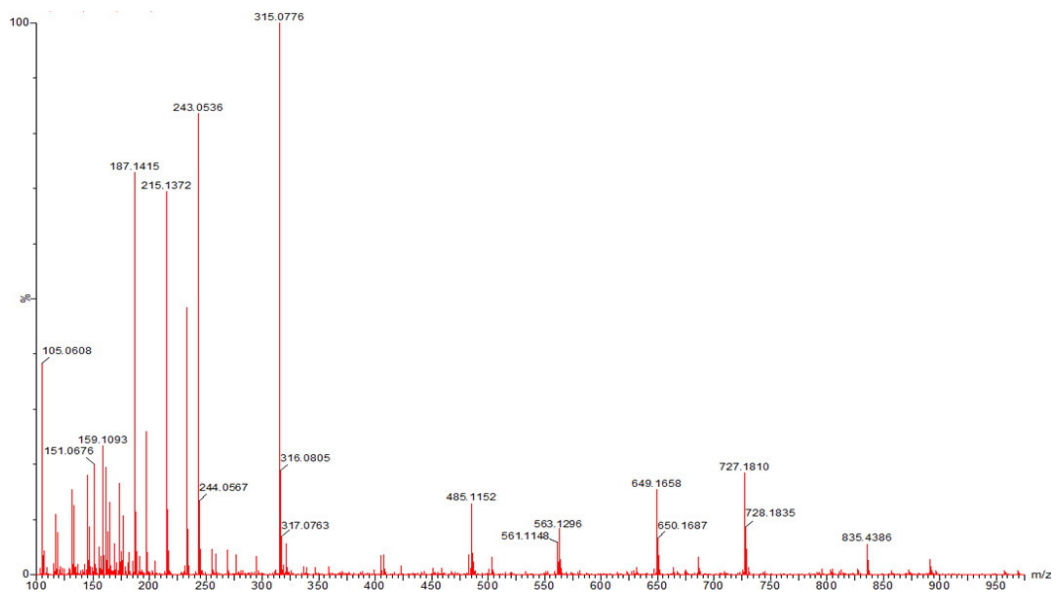


Figure S6. Mass spectrum of compound 1 (Disesquicin).

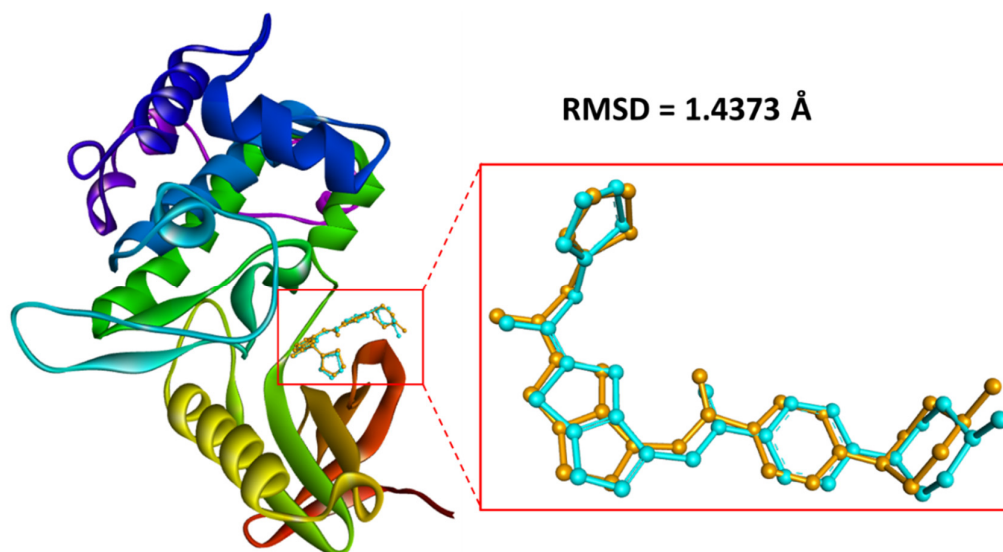


Figure S7. Re-docking of PHA-680626 with PLK-1 and comparison of the docking pose (golden color) with the X-ray crystal structure pose (teal color). The RMSD (root mean square deviation) between the two poses was 1.4373 Å.

Table 1. Molecular docking parameters of compound 1 with different kinases.

Target	PDB Id and Resolution	Grid Dimensions (Å)	Grid Position (Å)	Binding Energy (kcal mol ⁻¹)	
				Cognate Ligand	Compound 1
MEK1	1S9J; 2.4 Å	31.5 × 24.7 × 26.7	34.3 × 36.5 × 42.2	-8.4	-8.0
ERK2	1WZY; 2.5 Å	28.7 × 25.2 × 27.1	7.5 × 7.8 × 44.0	-8.3	-7.9
JNK	2P33; 2.4 Å	24.4 × 26.5 × 26.9	20.5 × 9.2 × 30.4	-9.0	-8.1
JAK	4OLI; 2.8 Å	27.1 × 26.4 × 26.6	-30.3 × 23.8 × 39.5	-8.8	-7.5
PKA	6E99; 1.9 Å	33.3 × 28.1 × 26.1	-7.4 × 7.5 × -13.2	-9.4	-8.0
PLK-1	2OWB; 2.1 Å	27.7 × 32.7 × 33.0	2.06 × 25.2 × 66.8	-10.0	-8.9
CDK2	6GUE; 2.0 Å	25.7 × 29.9 × 24.4	-6.5 × -22.2 × 20.7	-8.8	-8.1