Supporting Information for Publication

The Novel Anti-Hepatitis B Virus Activity of *Euphorbia schimperi* and its Quercetin and Kaempferol Derivatives

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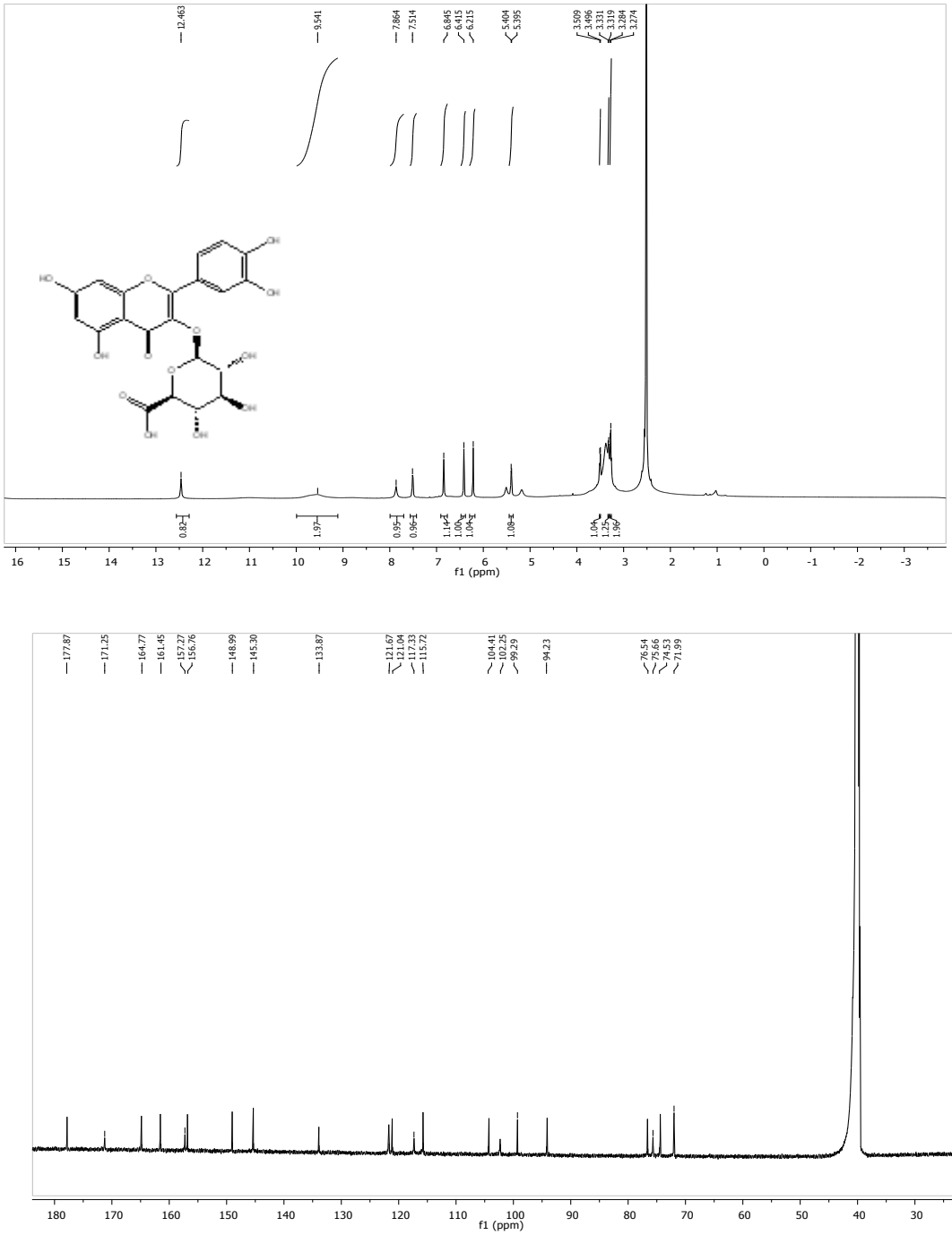

Figure S1. The ^{1}H NMR (700 MHz, DMSO-d6; upper panel) and ^{13}C NMR (175 MHz, DMSO-d6; lower panel) spectrum of *E. schimperi* derived quercetin 3-*O*-glucuronide.

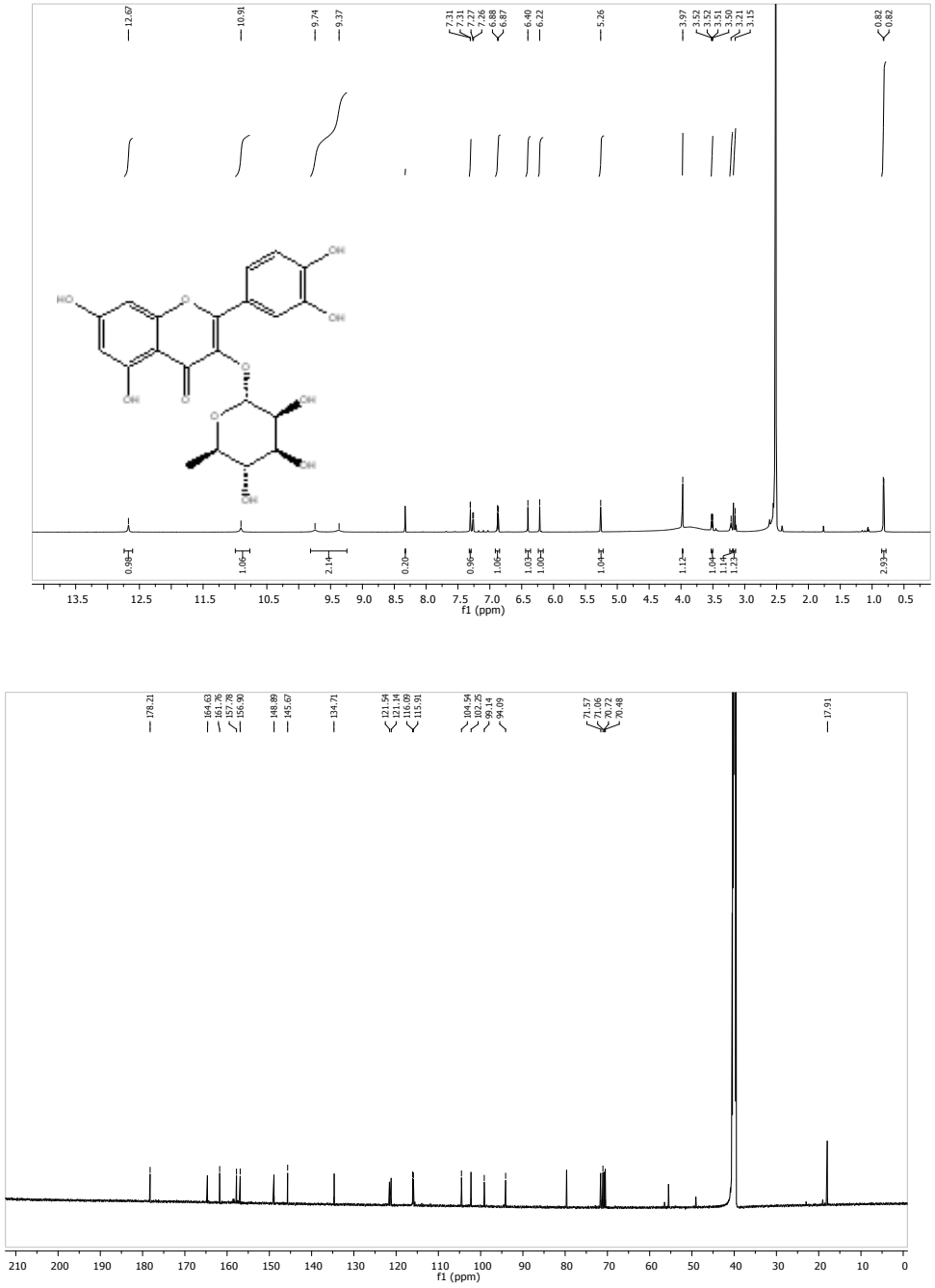

Figure S2. The [1]H NMR (700 MHz, DMSO-d6; upper panel) and [13]C NMR (175 MHz, DMSO-d6; lower panel) spectrum of *E. schimperi* derived quercetin 3-*O*-rhamnoside.

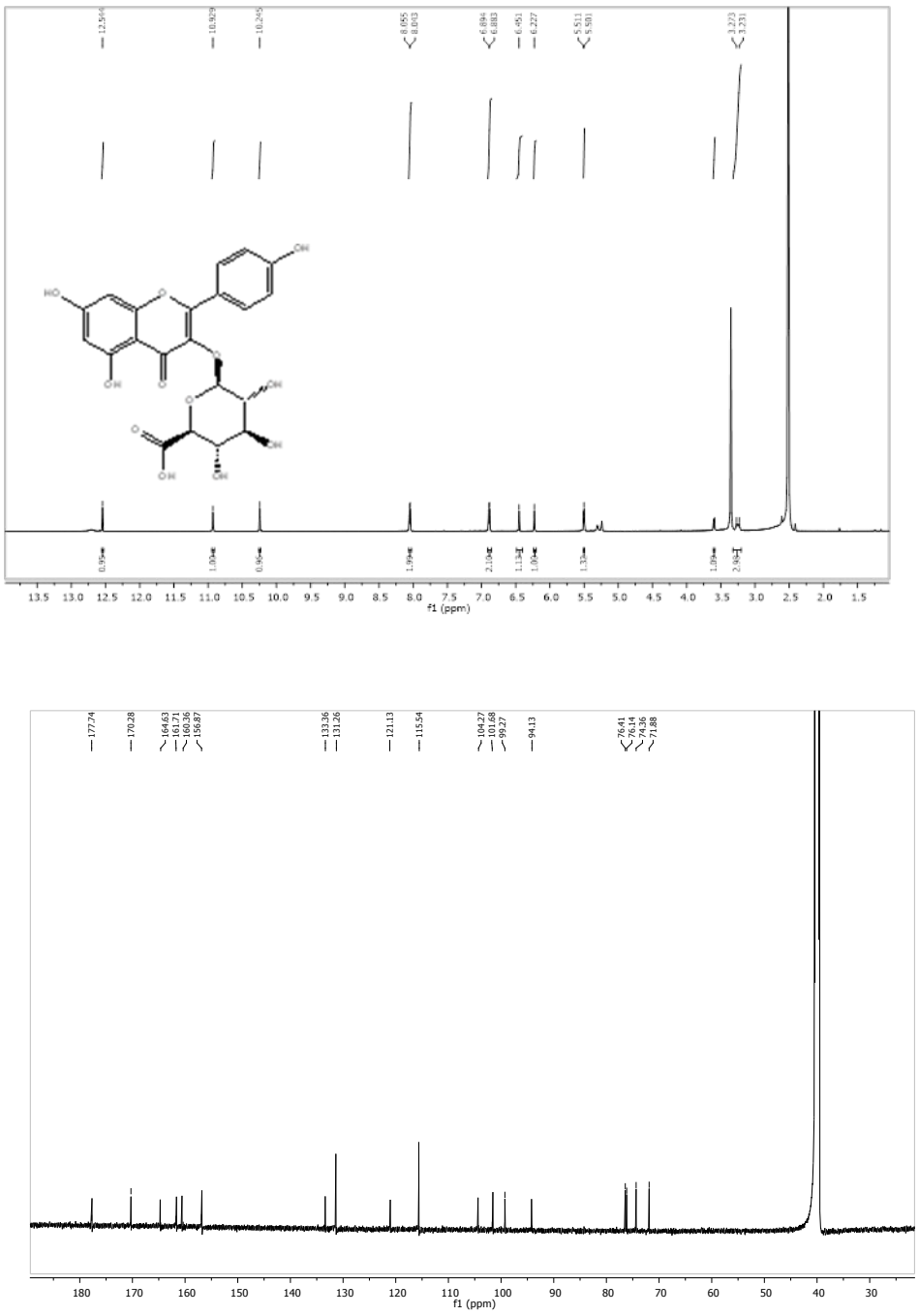

Figure S3. The ^{1}H NMR (700 MHz, DMSO-d6; upper panel) and ^{13}C NMR (175 MHz, DMSO-d6; lower panel) spectrum of *E. schimperi* derived kaempferol-3-*O*-glucuronide.

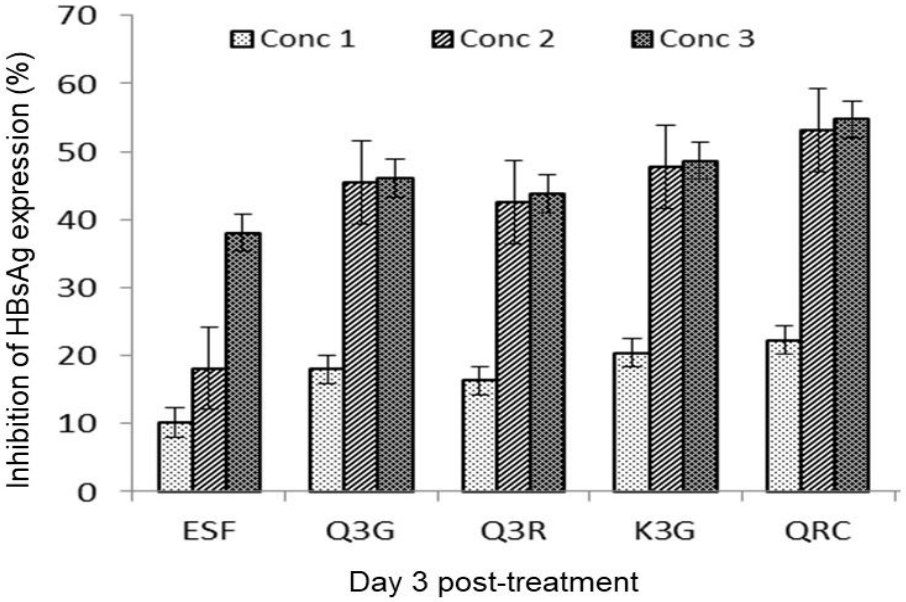

Figure S4. Dose-dependent inhibitory effect of *E. schemperi* fraction (ESF), quercetin-3-*O*-glucuronide (Q3G), quercetin-3-*O*-rhamnoside (Q3R) and kaempferol-3-*O*-glucuronide (K3G) on HBsAg expression at 48 h post-treatment. ESF (Conc 1: 25 µg/ml; Conc 2: 50 µg/ml; Conc 3: 100 µg/ml). Q3G, Q3R and K3G (Conc 1: 6.25 µg/ml; Conc 2: 12.5 µg/ml; Conc 3: 25.0 µg/ml). Quercetin (QRC; Conc 1: 6.25 µg/ml; Conc 2: 12.5 µg/ml; Conc 3: 25.0 µg/ml) was used as positive control. Values on Y-axis are means of three determinations.

Table S1. Docking energies (kcal/mol) of the tested falvonols and standard drugs.

Ligands	***Target***	
	HBV-Pol/RT	HBV-Core
Quercetin	-8.309	-8.736
Quercetin-3-*O*-glucuronide*	-9.313	-7.443
Quercetin-3-*O*-rhamnoside*	-6.493	-9.001
Kaempferol	-8.976	-9.128
Kaempferol-3-*O*-glucuronide*	-9.197	-8.178
Kaempferol-3-*O*-rhamnoside	-9.382	-8.212
Lamudivine triphosphate	-9.153	-
Heteroaryldihydropyrimidine	-	-8.876

**E. schimperi* derived