Supporting Information

Ring closure mechanisms mediated by laccase to synthesize phenothiazines, phenoxazines, and phenazines

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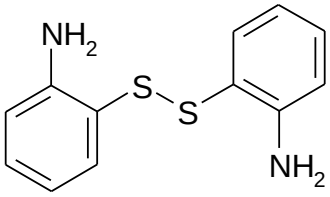
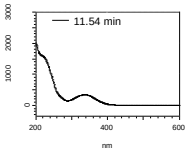
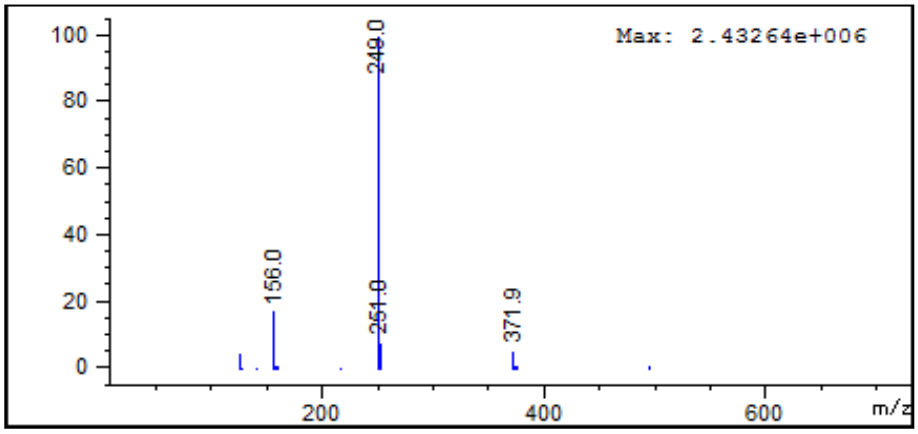
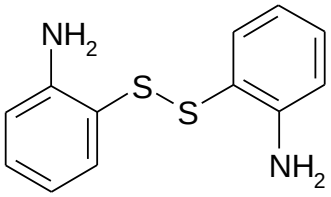
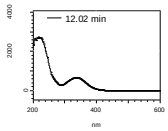
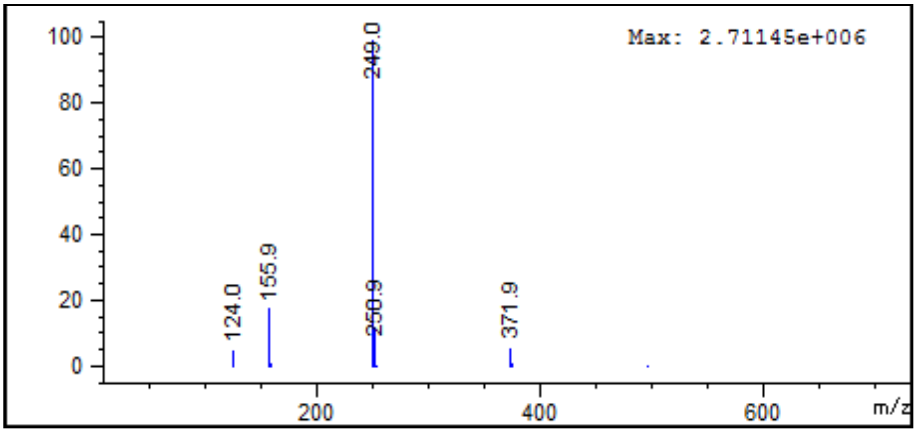
Structural Data of Compounds

Table S1: Data of structural characterization of product **6** - product resulted from **3a**

6	**2-Aminophenyl disulfide**
 248.37 g/mol	**Fig. S1** UV-vis spectrum for product **6**  **Figure. S2** MS spectrum for product **6** - AP-ESI: pos. ion mode 

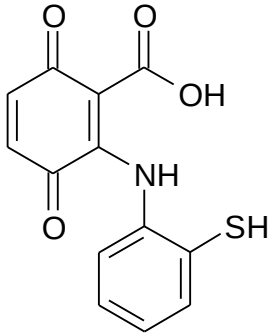
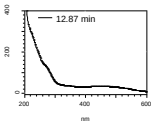
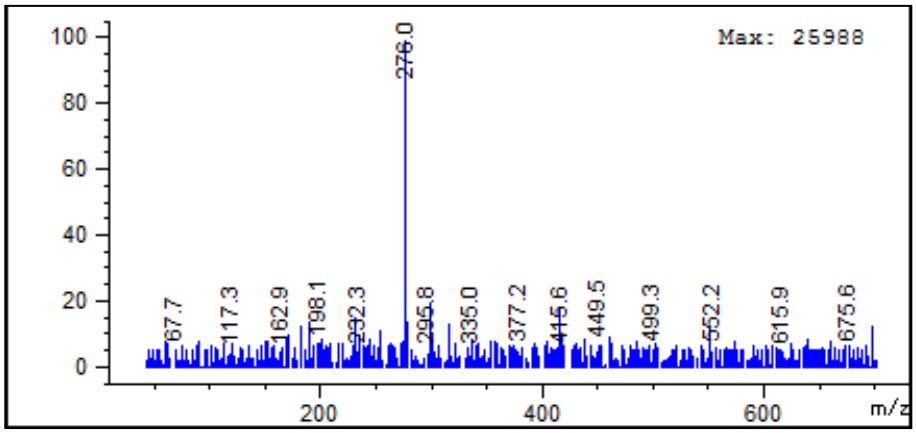
R_f (HPLC) 11.54 min, UV-vis (MeOH) λ_{max} 215, 334 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 249.0 (100).

Table S2: Data of structural characterization of **6(ref) - 2-Aminophenyl disulfide (received from commercial supplier)**

6(ref)	**2-Aminophenyl disulfide**
	**Figure. S3** UV-vis spectrum for **6(ref)** 
248.37 g/mol	**Figure. S4** MS spectrum for **6(ref)** - AP-ESI: pos. ion mode 

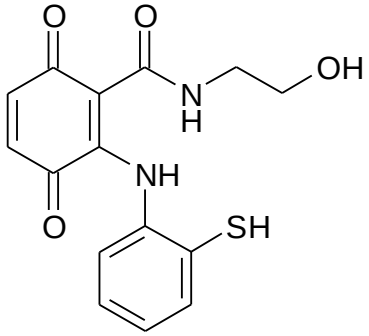
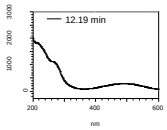
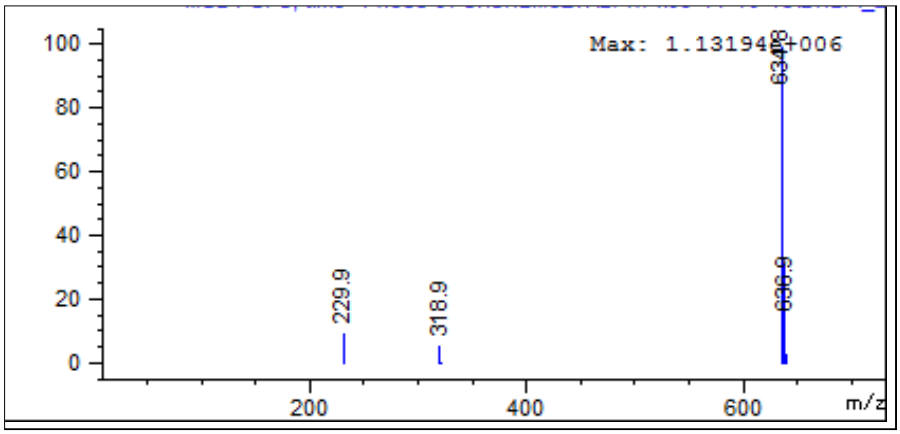
R_f (HPLC) 12.02 min, UV-vis (MeOH) λ_{max} 218, 335 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 249.0 (100).

Table S3: Data of structural characterization of product **4a** - product resulted from **1a** and **3a**

4a	**2-(2-Mercaptophenylamino)-3,6-dioxocyclohexa-1,4-diene-1-carboxylic acid**
 275.28 g/mol	**Figure. S5** UV-vis spectrum for product **4a**  **Figure. S6** MS spectrum for product **4a** - AP-ESI: pos. ion mode 

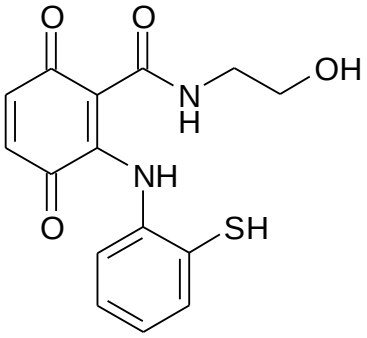
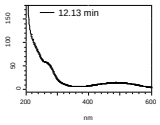
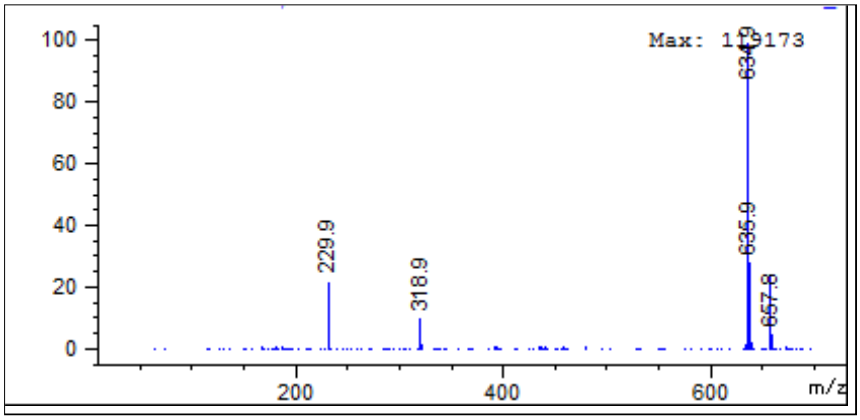
R_f (HPLC) 12.87 min, UV-vis (MeOH) λ_{max} 448 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 276.0 (100).

Table S4: Data of structural characterization of product **4b** - product resulted from **1b** and **3a**

4b	**2-(2-Mercaptophenylamino)-N-(2-hydroxyethyl)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**
 318.35 g/mol	**Figure. S7** UV-vis spectrum for product **4b**  **Figure. S8** MS spectrum for product **4b** - AP-ESI: pos. ion mode 

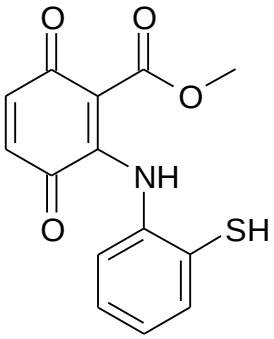
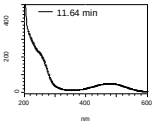
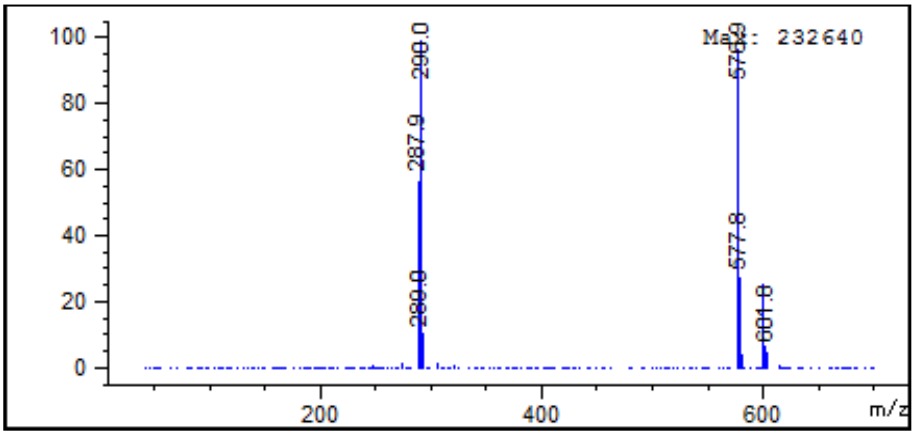
R_f (HPLC) 12.19 min, UV-vis (MeOH) λ_{max} 215, 263, 488 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 318.9 (5).

Table S5: Data of structural characterization of product **4b** - product resulted from **1a** and 2-aminophenyl disulfide (received from commercial supplier)

4b	**2-(2-Mercaptophenylamino)-N-(2-hydroxyethyl)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**
 318.35 g/mol	**Figure. S9** UV-vis spectrum for product **4b**  **Figure. S10** MS spectrum for product **4b** - AP-ESI: pos. ion mode 

R_f (HPLC) 12.13 min, UV-vis (MeOH) λ_{max} 214, 261, 486 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 318.9 (10).

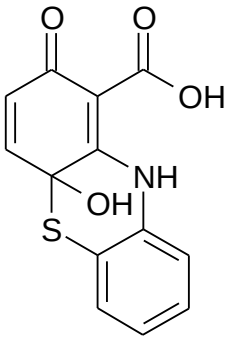
Table S6: Data of structural characterization of product **4c** - product resulted from **1c** and **3a**

4c	**2-(2-Mercaptophenylamino)-3,6-dioxocyclohexa-1,4-diene-1-carboxylic acid methylester**
 289.31 g/mol	**Figure. S11** UV-vis spectrum for product **4c**  **Figure. S12** MS spectrum for product **4c** - AP-ESI: pos. ion mode 

R_f (HPLC) 11.64 min, UV-vis (MeOH) λ_{max} 210, 413 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 290.0 (100).

Table S7: Data of structural characterization of product **5a** - product resulted from **1a** and **3a**

5a	**4a-Hydroxy-N-(2-hydroxyethyl)-2-oxo-10H-phenothiazine-1-carboxylic acid**



275.28 g/mol

Figure. S13 UV-vis spectrum for product **5a**

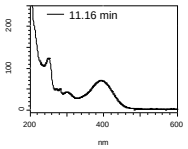
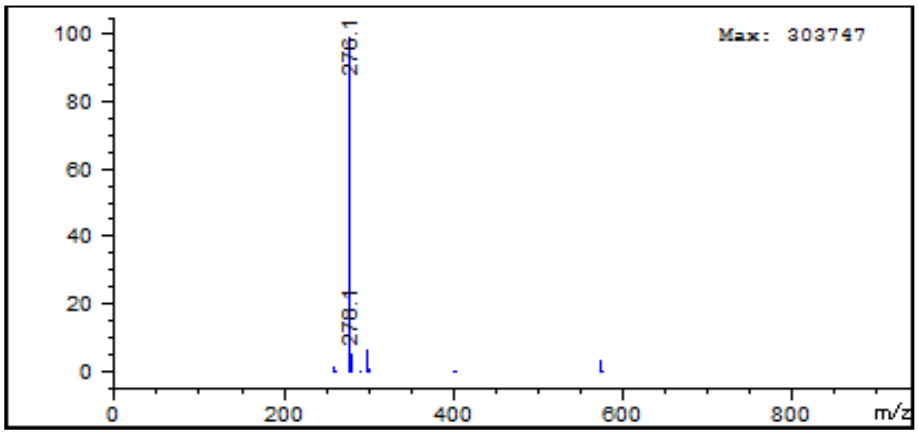


Figure. S14 MS spectra for product **5a** - AP-ESI: pos. ion mode



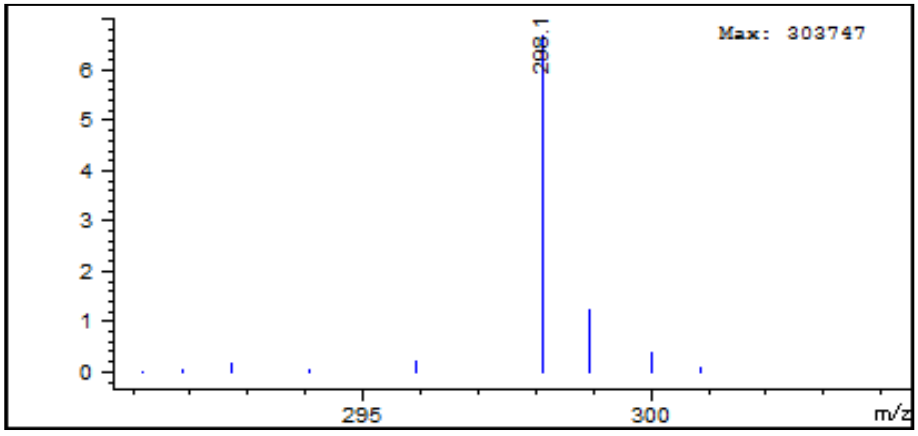
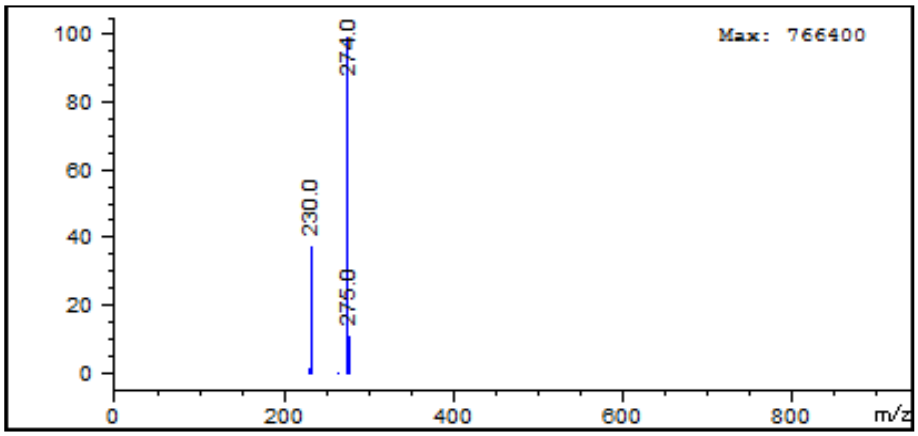


Figure. S15 MS spectrum for product **5a** - AP-ESI: neg. ion mode



Synthesis and isolation as described above. R_f (HPLC) 11.16 min, UV-vis (MeOH) λ_{max} 250, 280, 299, 393 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 276.1 (100), $[M+Na]^+$ 298.1 (7); AP-ESI: neg. ion mode $[M-H]^-$ 274.0 (100).

Table S8: Data of structural characterization of product **5b** - product resulted from **1b** and **3a**

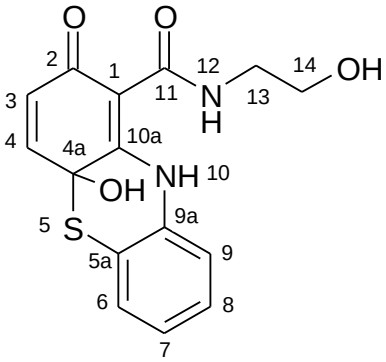
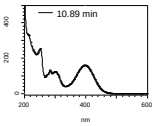
5b	**4a-Hydroxy-N-(2-hydroxyethyl)-2-oxo-10H-phenothiazine-1-carboxamide**
 318.35 g/mol	**Figure. S16** UV-vis spectrum for product **5b** 

Figure. S17 MS spectrum for product **5b** - AP-ESI: pos. ion mode

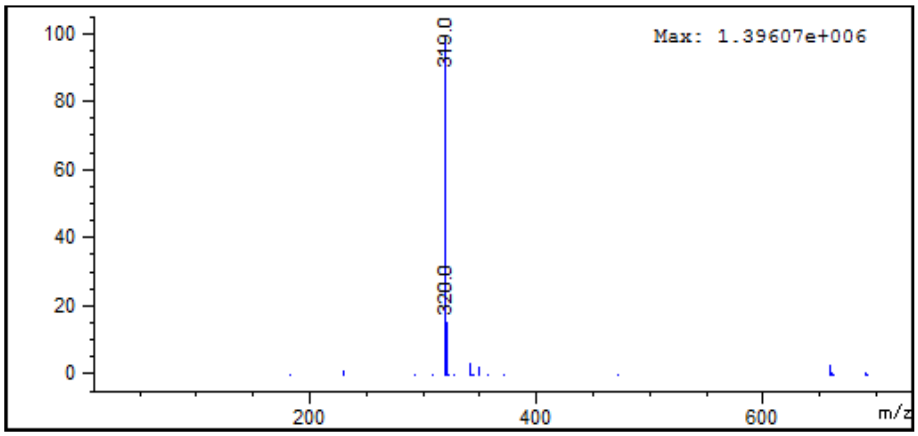


Figure. S18 MS spectrum for product **5b** - AP-ESI: neg. ion mode

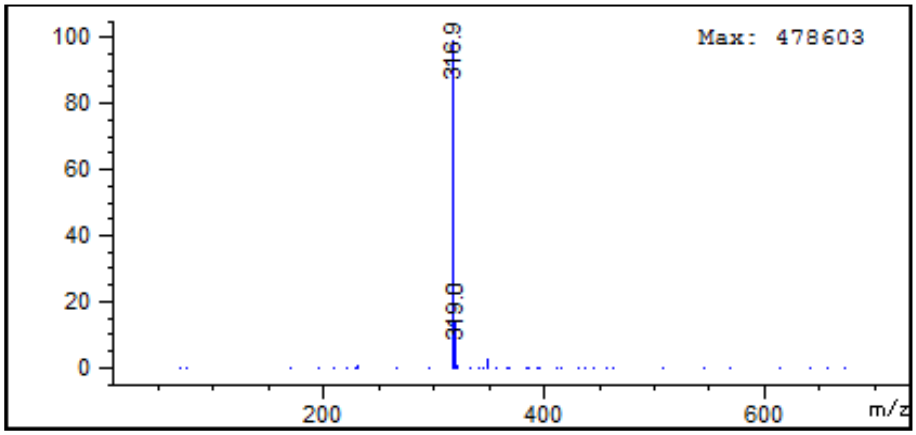


Figure. S19 ^{1}H NMR for product **5b**

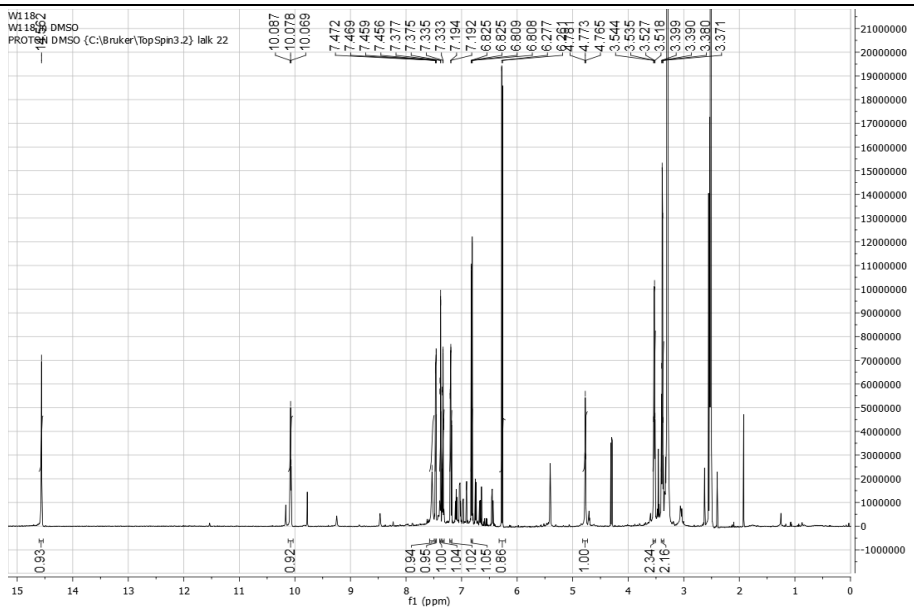


Figure. S20 ^{13}C NMR for product **5b**

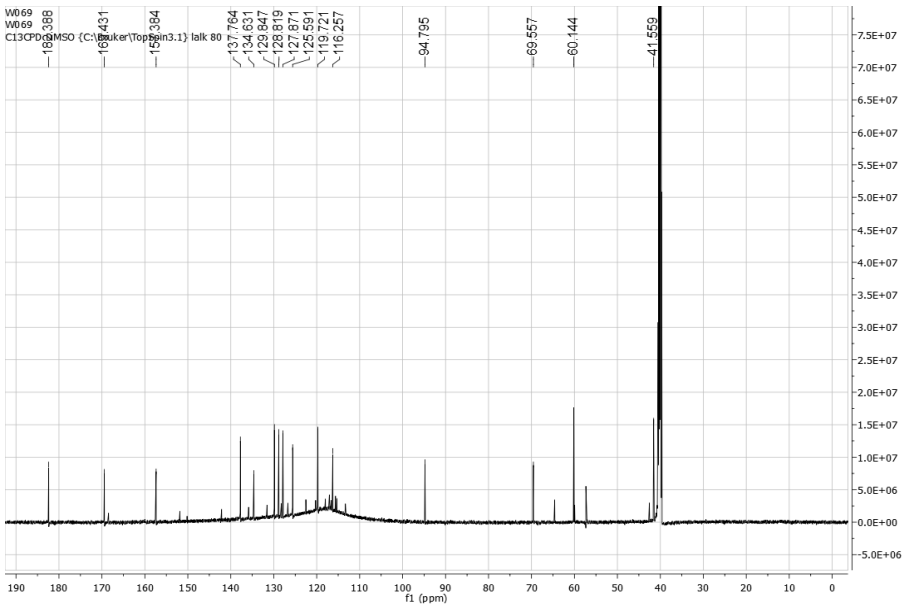


Figure. S21 HSQC for product **5b**

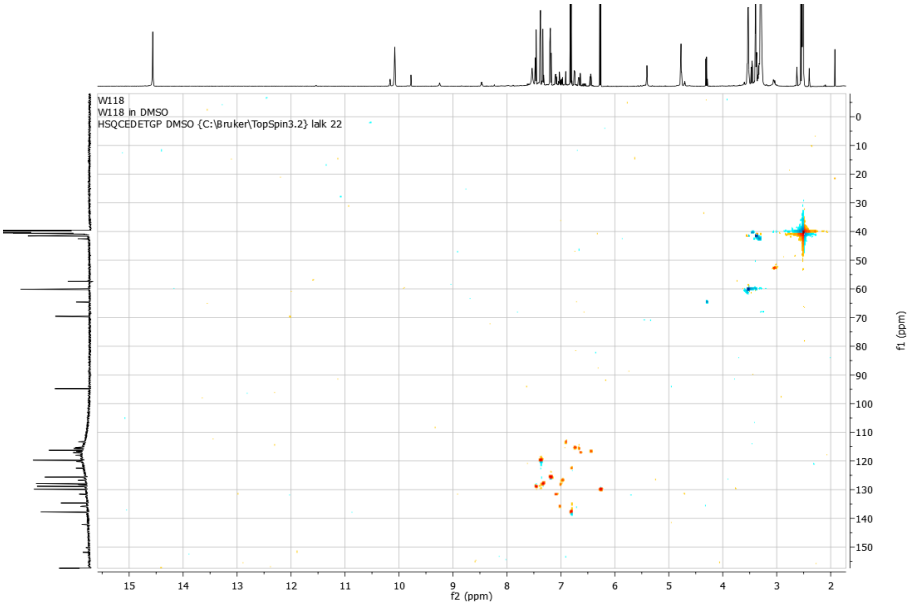


Figure. S22 HMBC for product **5b**

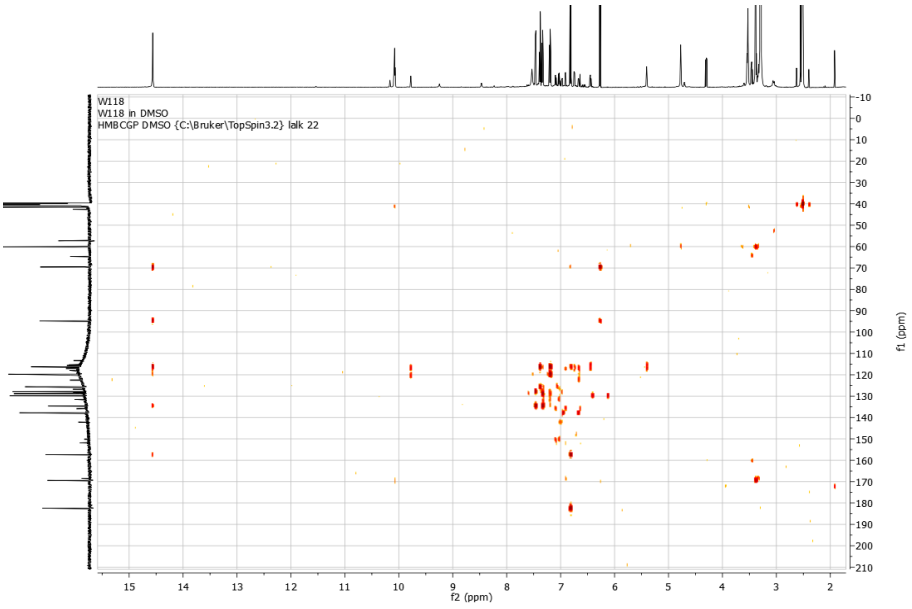
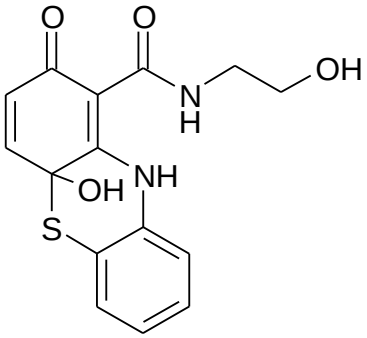
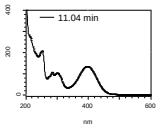
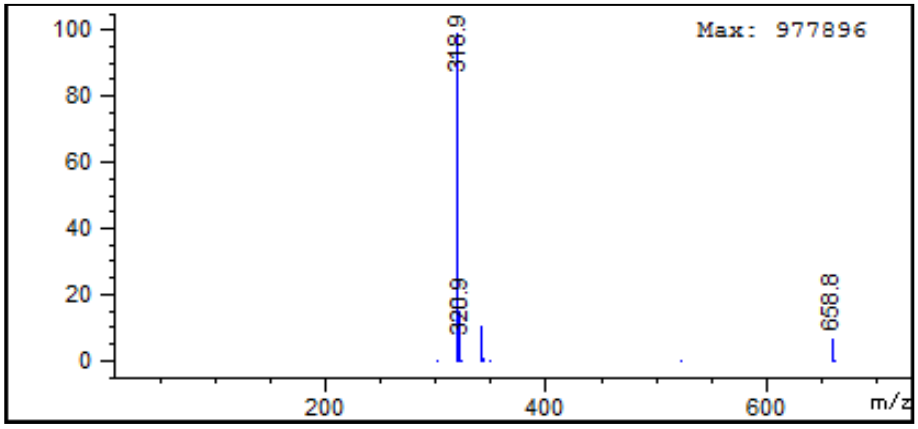
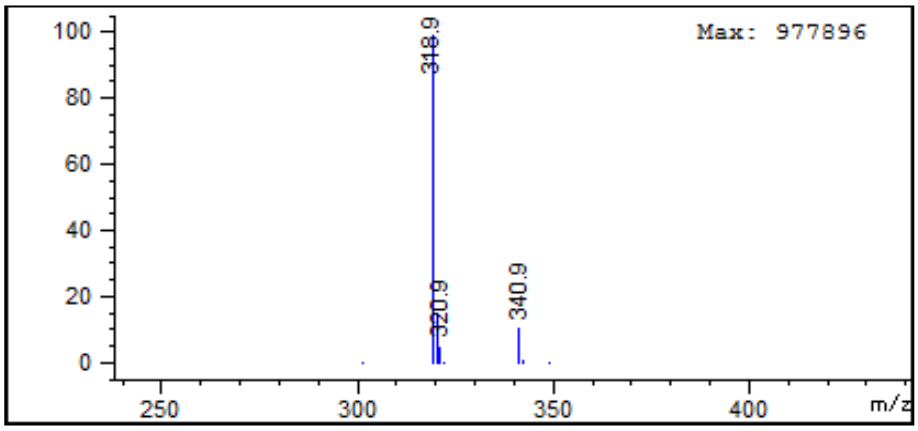


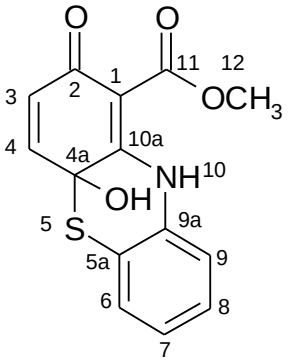
Table S9: Data of structural characterization of product **5b** - product resulted from **1b** and 2-aminophenyl disulfide

5b	**4a-Hydroxy-N-(2-hydroxyethyl)-2-oxo-10H-phenothiazine-1-carboxamide**
 318.35 g/mol	**Figure. S23** UV-vis spectrum for product **5b**  **Figure. S24** MS spectra for product **5b** - AP-ESI: pos. ion mode  

R_f (HPLC) 11.05 min, UV-vis (MeOH) λ_{max} 252, 284, 300, 397 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 318.9 (100), $[M+Na]^+$ 340.9 (11), $[2M+Na]^+$ 658.8 (5).

Table S10: Data of structural characterization of product **5c** - product resulted from **1c** and **3a**

5c	**4a-Hydroxy-N-(2-hydroxyethyl)-2-oxo-10H-phenothiazine-1-carboxylic acid methylester**
5c	**Figure. S25** UV-vis spectrum for product **5c**



289.31 g/mol

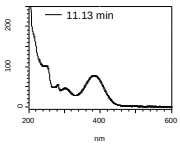


Figure. S26 MS spectrum for product **5c** - AP-ESI: pos. ion mode

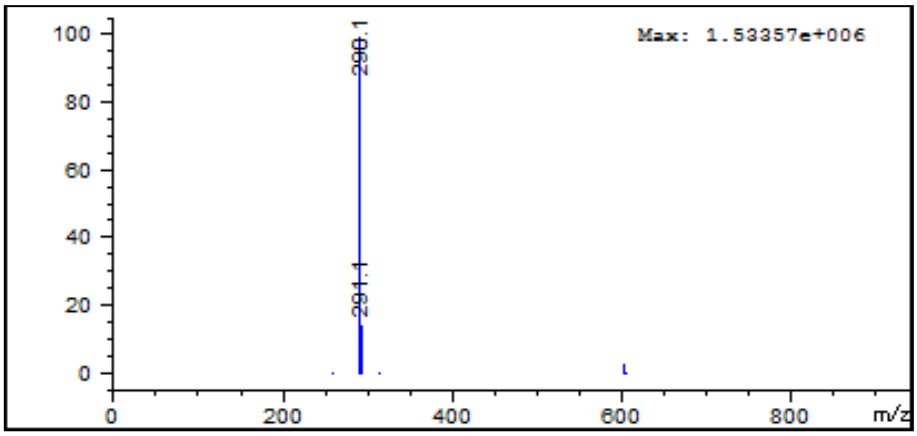
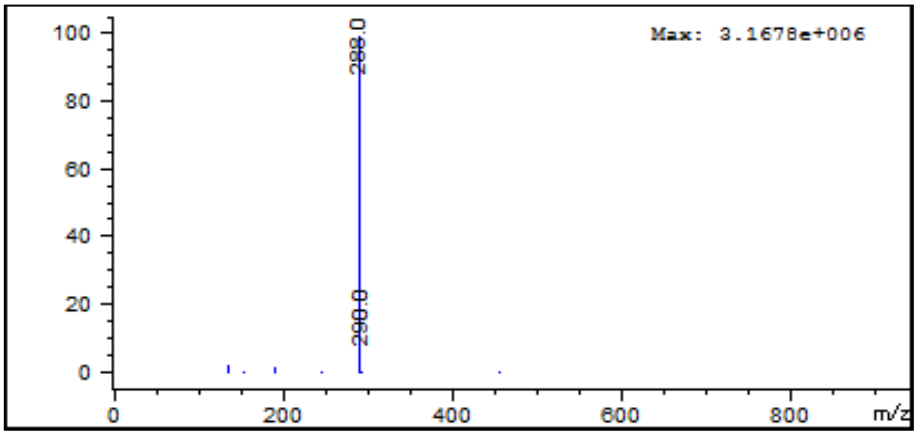


Figure. S27 MS spectrum for product **5c** - AP-ESI: neg. ion mode



8c

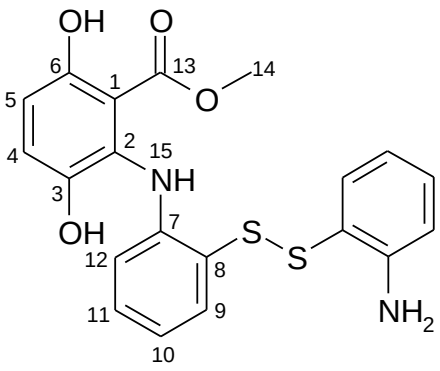


Figure. S28 ^{1}H NMR for product **5c** and **8c**

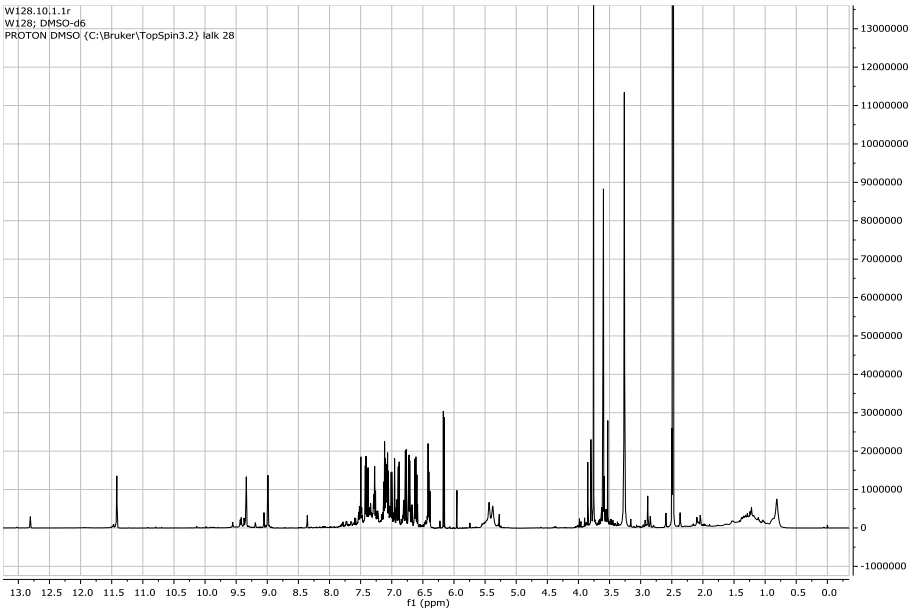


Figure. S29 ^{13}C NMR for product **5c** (**8c**)

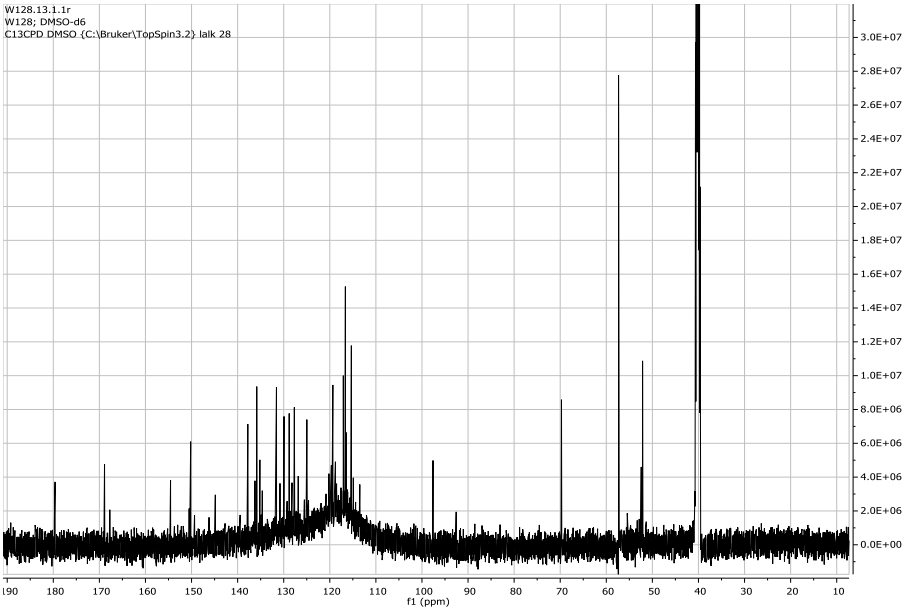


Figure. S30 HSQC for product **5c** (**8c**)

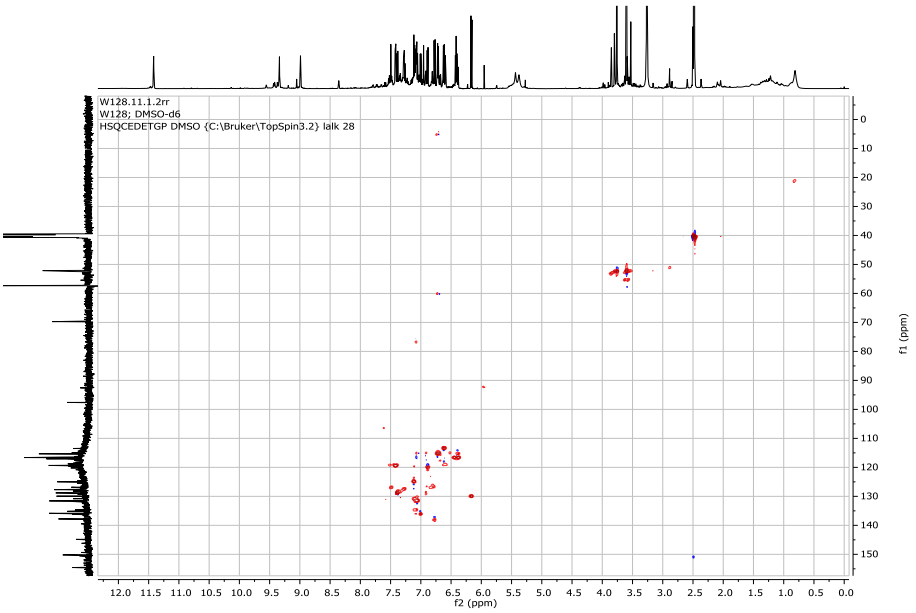


Figure. S31 HMBC for product **5c** (**8c**)

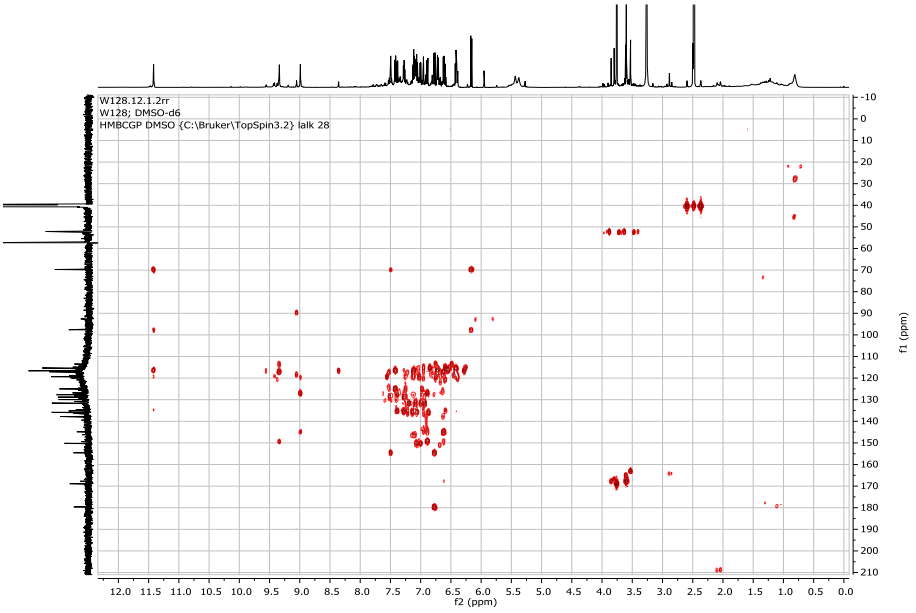
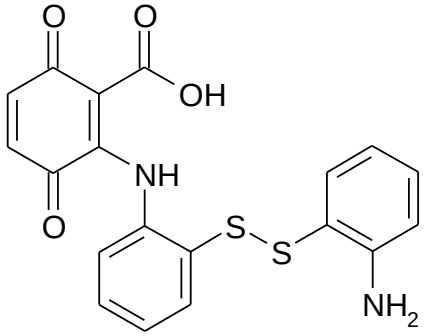


Table S11: Data of structural characterization of product **7a** - product resulted from **1a** and **3a**

7a	**[2-[(2-Aminophenyl)disulfanyl]anilino]-3,6-dioxocyclohexa-1,4-diene-1-carboxylic acid**



398.46 g/mol

Figure. S32 UV-vis spectrum for product **7a**

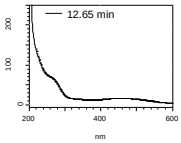
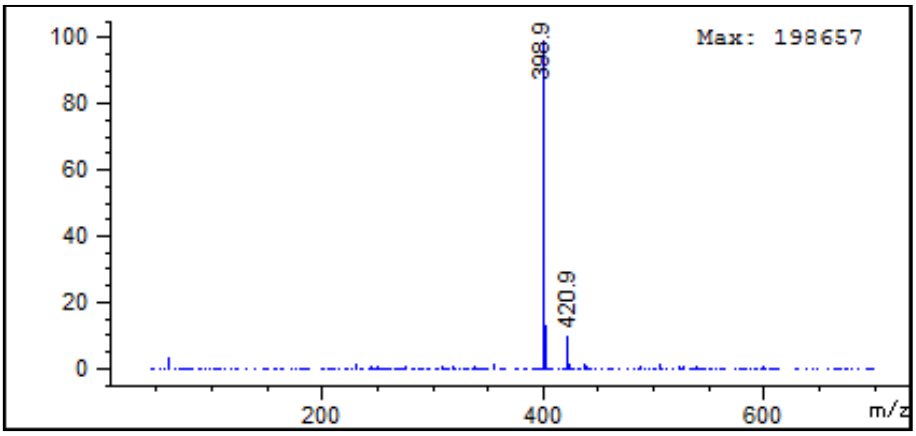
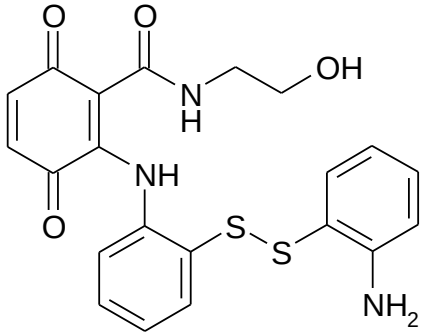
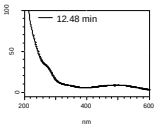
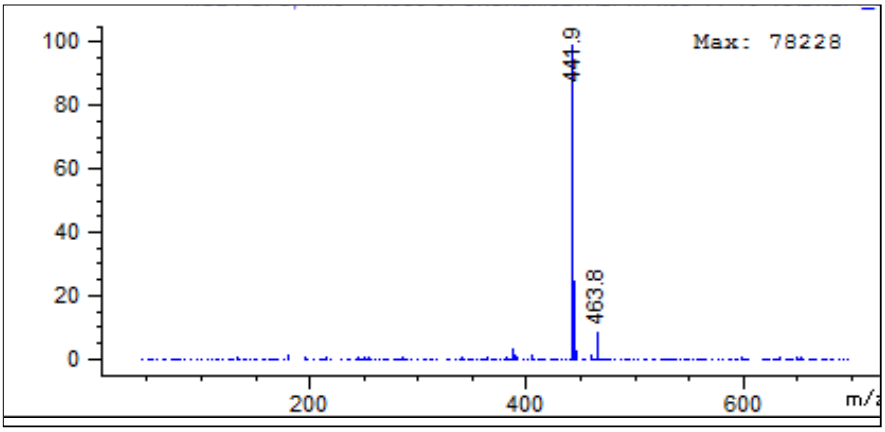


Figure. S33 MS spectrum for product **7a** - AP-ESI: pos. ion mode



R_f (HPLC) 12.60 min, UV-vis (MeOH) λ_{max} 210, 455 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 398.9 (100), $[M+Na]^+$ 420.9 (10).

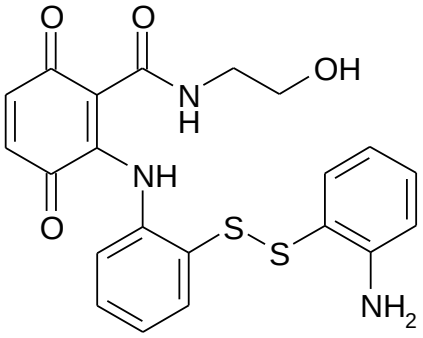
Table S12: Data of structural characterization of product **7b** - product resulted from **1b** and **3a**

7b	**2-[2-[(2-Aminophenyl)disulfanyl]anilino]-N-(2-hydroxyethyl)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**
 441.53 g/mol	**Figure. S34** UV-vis spectrum for product **7b**  **Figure. S35** MS spectrum for product **7b** - AP-ESI: pos. ion mode 

R_f (HPLC) 12.48 min, UV-vis (MeOH) λ_{max} 209, 492 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 441.9 (100), $[M+Na]^+$ 463.9 (8).

Table S13: Data of structural characterization of product **7b** - product resulted from **1b** and 2-aminophenyl disulfide (received from commercial supplier)

7b	**2-[2-[(2-Aminophenyl)disulfanyl]anilino]-N-(2-hydroxyethyl)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**



441.53 g/mol

Figure. S36 UV-vis spectrum for product **7b**

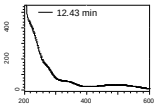
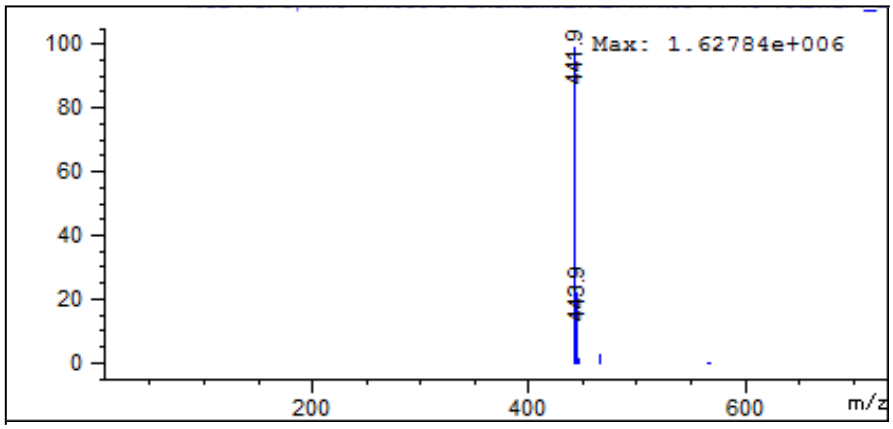


Figure. S37 MS spectrum for product **7b** - AP-ESI: pos. ion mode

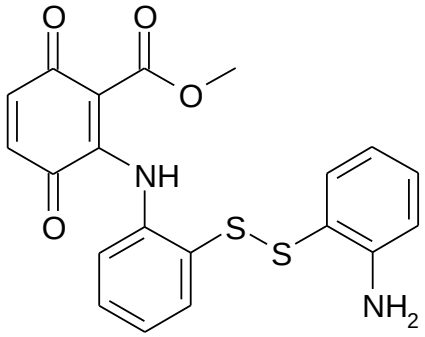


R_f (HPLC) 12.43 min, UV-vis (MeOH) λ_{max} 209, 492 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 441.9 (100).

Table S14: Data of structural characterization of products **7c, 8c** - products resulted from **1c** and **3a**

7c	**[2-[(2-Aminophenyl)disulfanyl]anilino]-3,6-dioxocyclohexa-1,4-diene-1-carboxylic acid methylester**
8c	**[2-[(2-aminophenyl)disulfanyl]anilino]-3,6-dihydroxy-benzoic acid**

7c



412.49 g/mol

Figure. S38 UV-vis spectrum for product **7c**

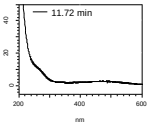


Figure. S39 MS spectrum for product **7c** - AP-ESI: pos. ion mode

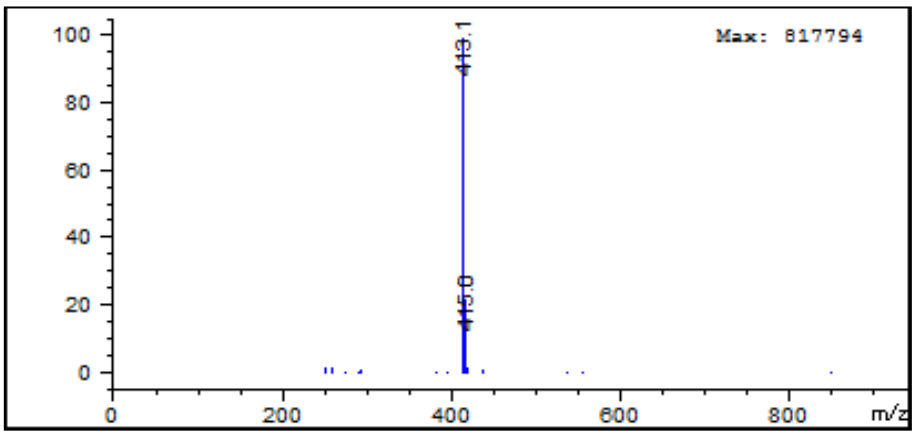
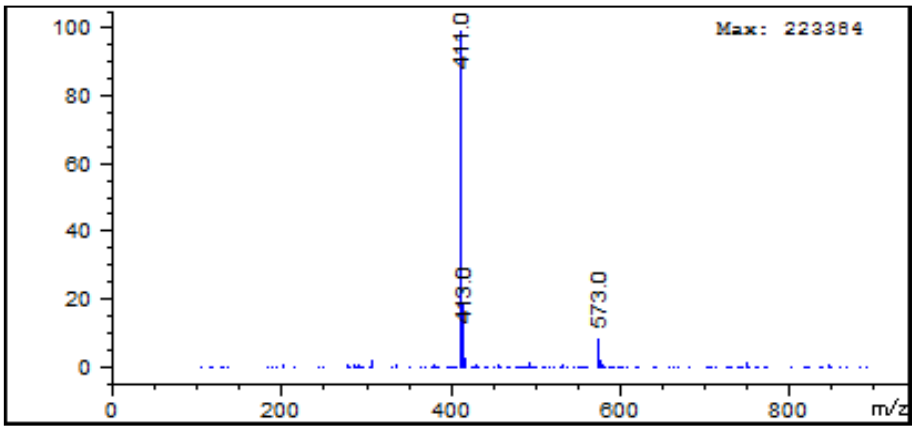
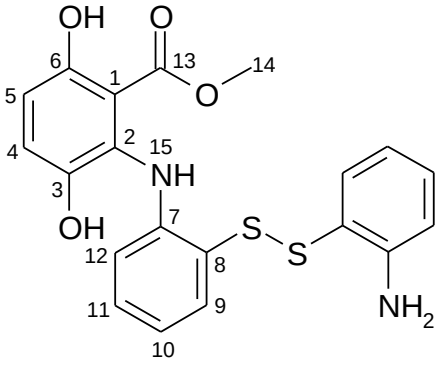


Figure. S40 MS spectrum for product **7c** - AP-ESI: neg. ion mode



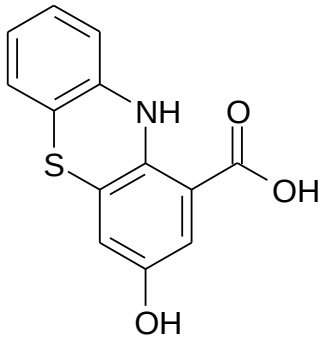
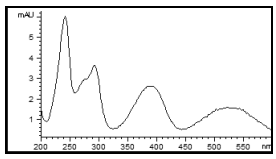
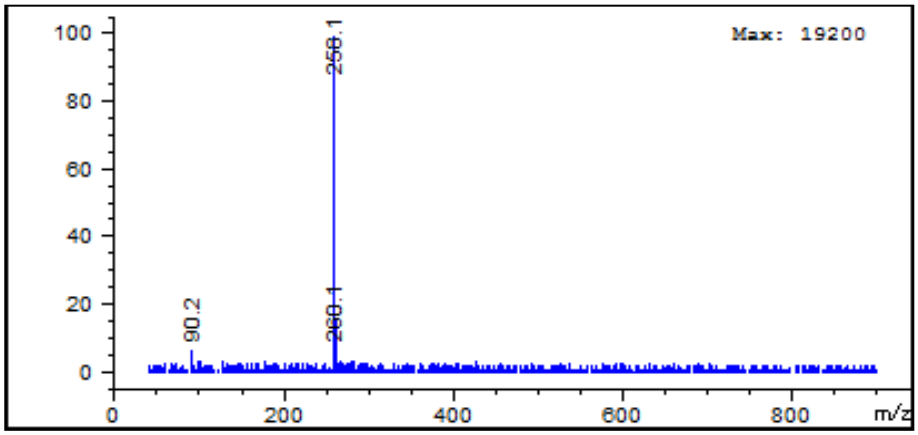
8c for ^{1}H NMR, ^{13}C NMR, HMBC, and HSQC spectra see structural data of product **5c** 4a-Hydroxy-N-(2-hydroxyethyl)-2-oxo-10H-

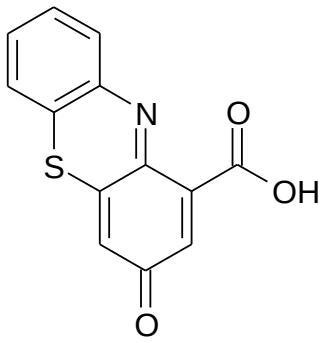


phenothiazine-1-carboxylic acid methylester

Data for **7c**: R_f (HPLC) 11.72 min, UV-vis (MeOH) λ_{max} 210, 473 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 413.1 (100); AP-ESI: neg. ion mode $[M-H]^-$ 411.0 (100).

Table S15: Data of structural characterization of products **9a, 10a** - product resulted from **1a** and **3a**

9a	**3-Hydroxy-10H-phenothiazine-1-carboxylic acid**
10a	**3-Oxo-phenothiazine-1-carboxylic acid**
9a	**Figure. S41** UV-vis spectrum for product **9a, 10a**
 259.29 g/mol	 **Figure. S42** MS spectrum for product **9a, 10a** - AP-ESI: pos. ion mode 
10a	



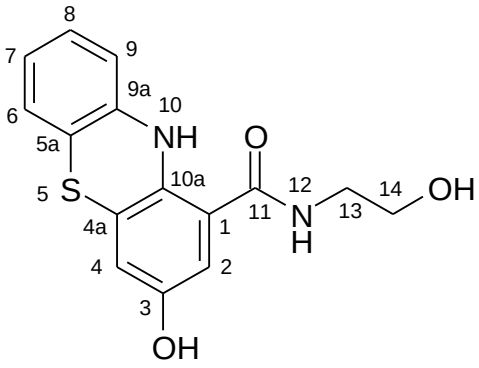
257.27 g/mol

10a: R_f (LC/MS) 5.81 min, UV-vis (MeOH) λ_{max} 240, 292, 390, 528 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 258.1 (100). **9a**: MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 260.1 (6)

Table S16: Data of structural characterization of products **9b**, **10b** - products resulted from **1b** and **3a**

9b	**3-Hydroxy-N-(2-hydroxyethyl)-10H-phenothiazine-1-carboxamide**
10b	**N-(2-Hydroxyethyl)-3-oxo-phenothiazine-1-carboxamide**

9b



302.35 g/mol

10b

Figure. S43 UV-vis spectrum for product **9b, 10b**

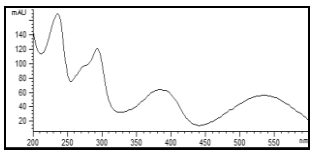
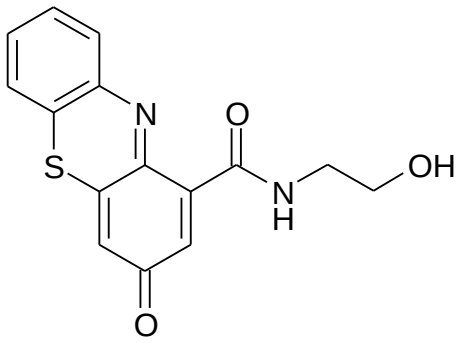
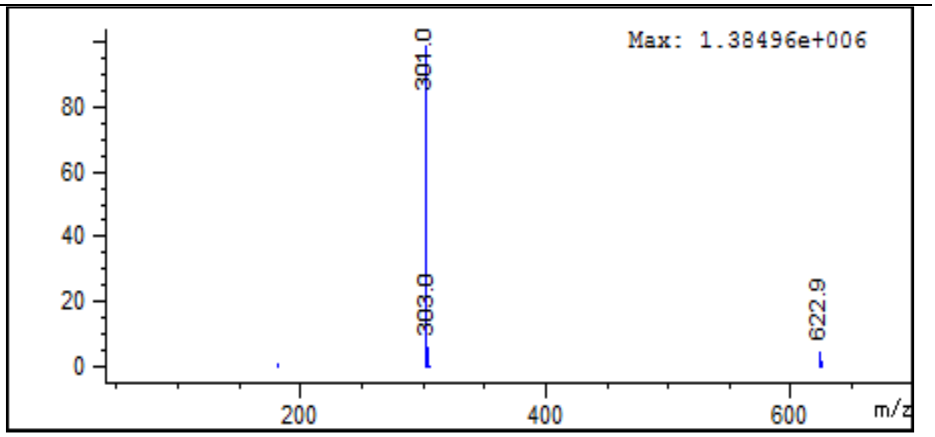


Figure. S44 MS spectra for product **9b, 10b** - AP-ESI: pos. ion mode



300.34 g/mol



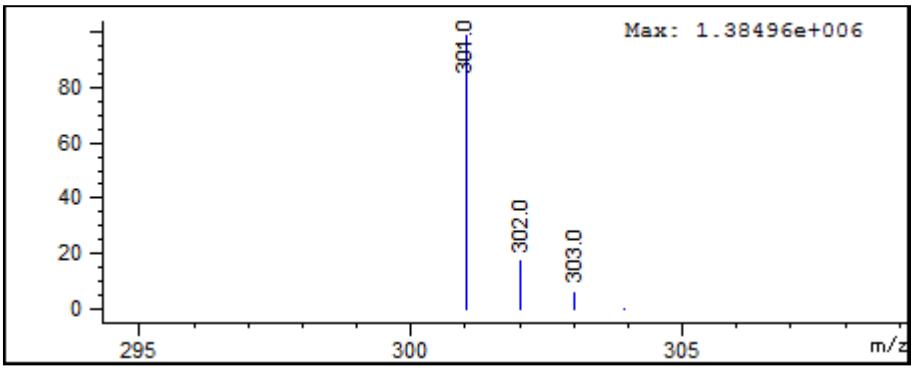


Figure. S45 ^{1}H NMR for product **9b**

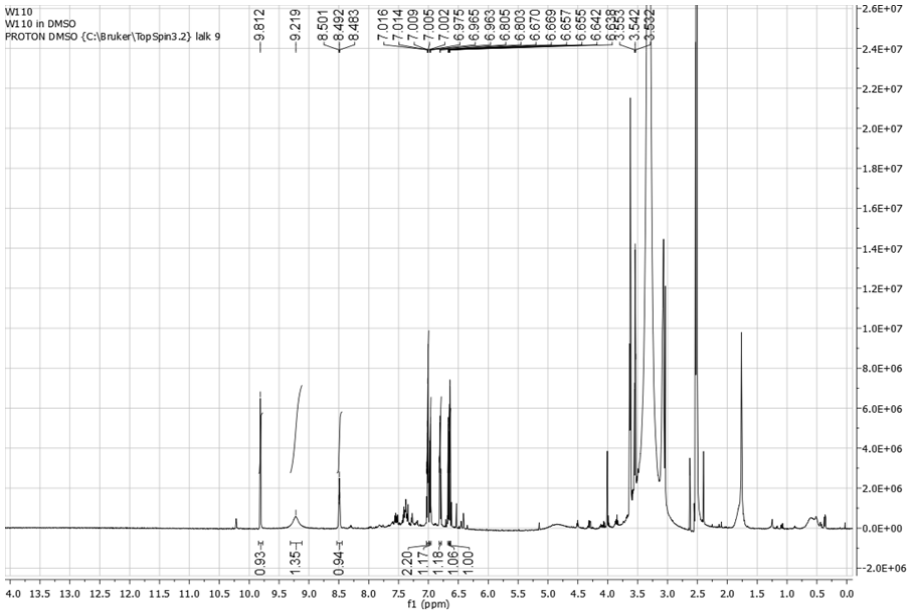


Figure. S46 ^{13}C NMR for product **9b**

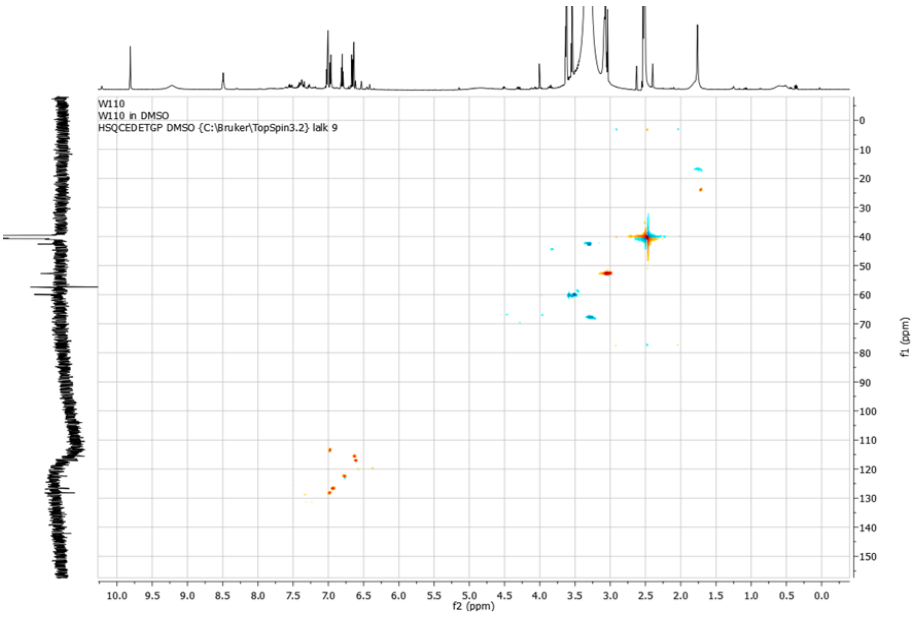


Figure. S47 HSQC for product **9b**

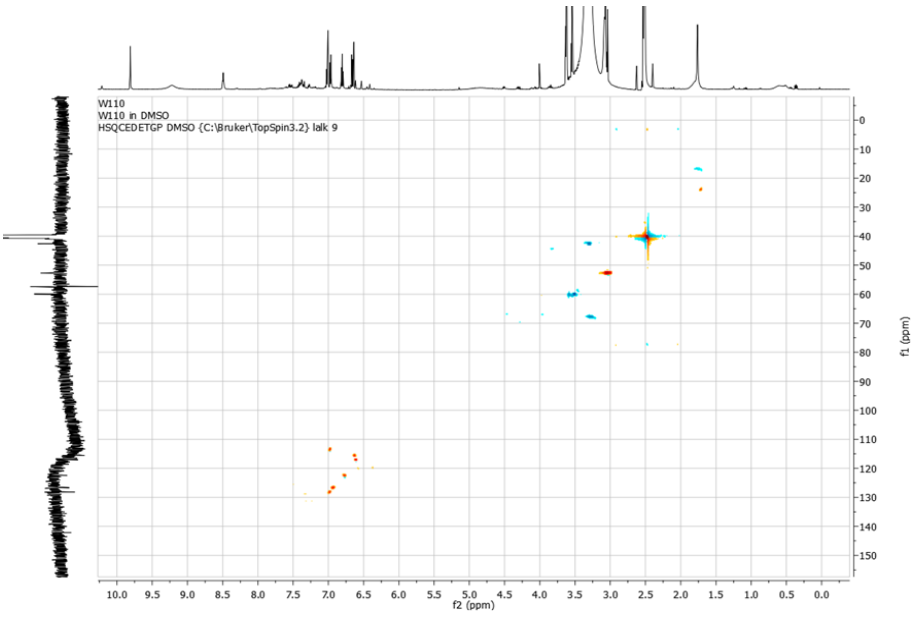


Figure. S48 HMBC for product **9b**

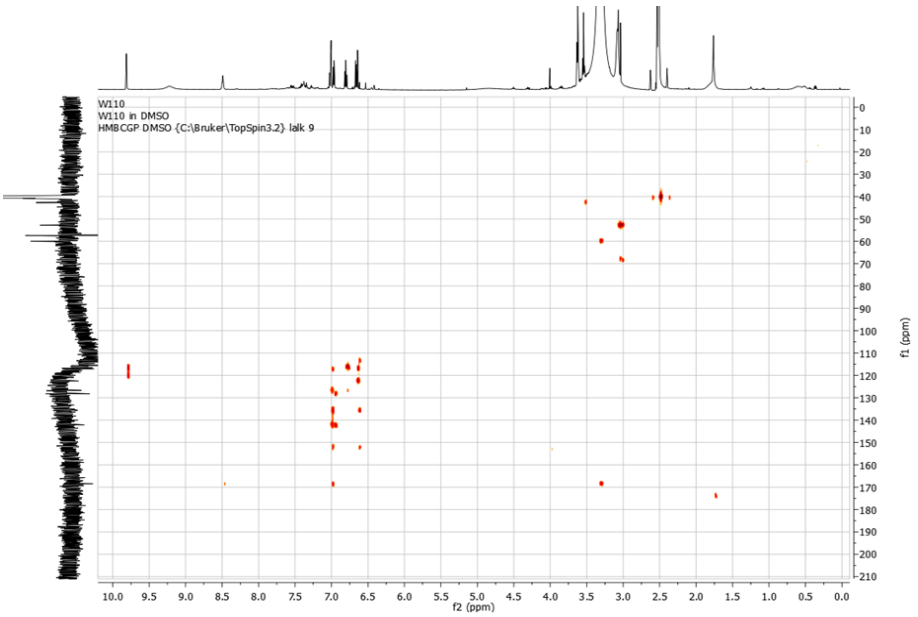
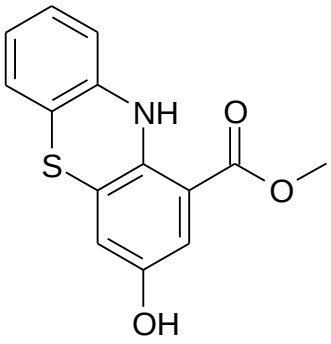


Table S17: Data of structural characterization of products **9c**, **10c** - product resulted from **1c** and **3a**

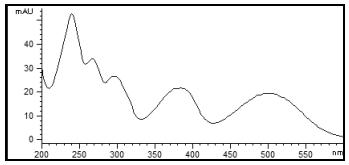
9c	**3-Hydroxy-10H-phenothiazine-1-carboxylic acid methylester**
10c	**3-Oxo-phenothiazine-1-carboxylic acid methylester**

9c

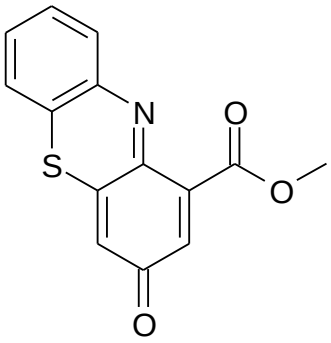


273.31 g/mol

Figure. S49 UV-vis spectrum for product **9c, 10c**

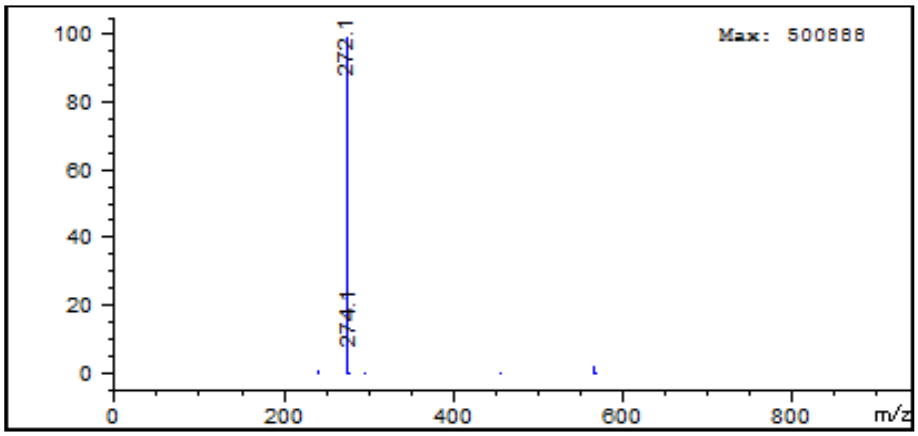


10c



271.30 g/mol

Figure. S50 MS spectrum for product **9c, 10c** - AP-ESI: pos. ion mode

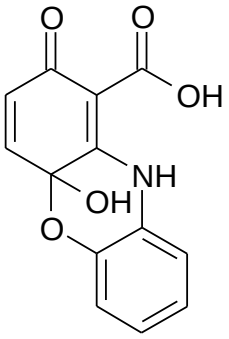


10c: R_f (LC/MS) 14.67 min, UV-vis (MeOH) λ_{max} 241, 269, 297, 382, 503 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 272.1 (100). **9c**: MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 274.1 (4).

Table S18: Data of structural characterization of product **11a** - product resulted from **1a** and **3b**

11a	**4a-Hydroxy-2-oxo-10H-phenoxazine-1-carboxylic acid**

Figure. S51 UV-vis spectrum for product **11a**



259.22 g/mol

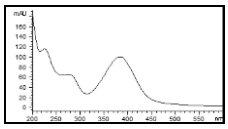


Figure. S52 MS spectra for product **11a** - AP-ESI: pos. ion mode

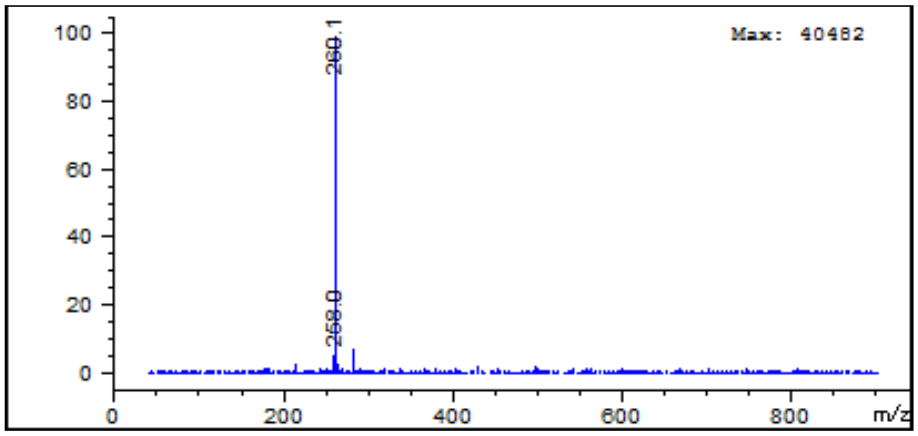
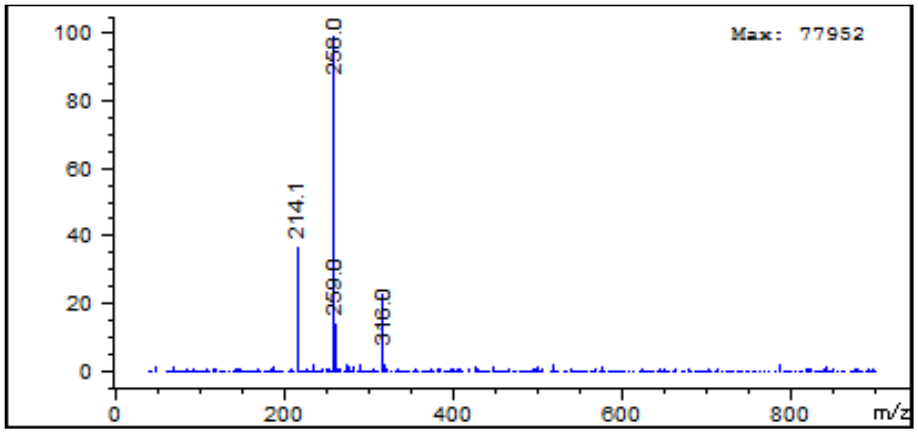


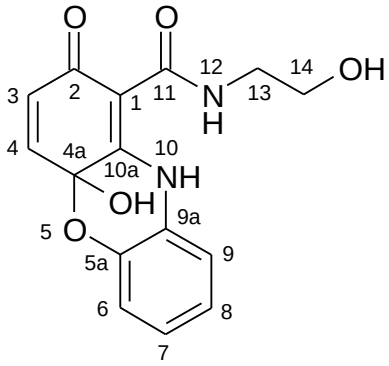
Figure. S53 MS spectra for product **11a** - AP-ESI: neg. ion mode



R_f (HPLC) 10.72 min, UV-vis (MeOH) λ_{max} 225, 280, 381 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 260.1 (100); AP-ESI: neg. ion mode $[M-H]^-$ 258.0 (100).

Table S19: Data of structural characterization of product **11b** - product resulted from **1b** and **3b**

11b	**4a-Hydroxy-N-(2-hydroxyethyl)-2-oxo-10H-phenoxazine-1-carboxamide**



302.29 g/mol

Fig. S54 UV-vis spectrum for product **11b**

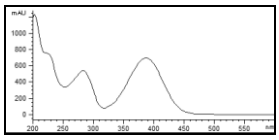


Figure. S55 MS spectrum for product **11b** - AP-ESI: pos. ion mode

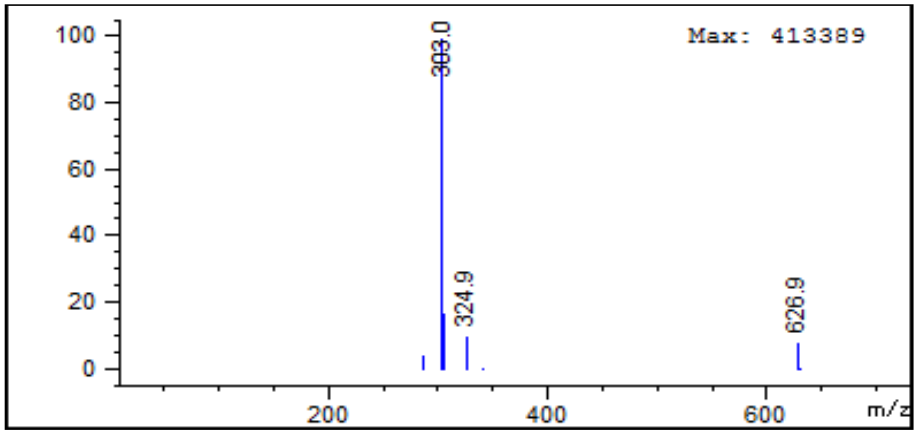


Figure. S56 ^{1}H NMR for product **11b**

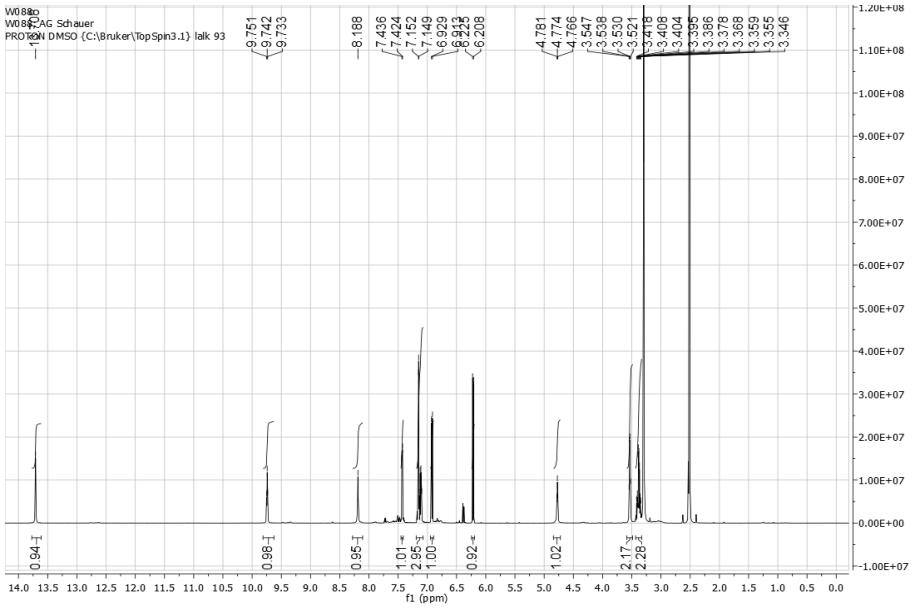


Figure. S57 ^{13}C NMR for product **11b**

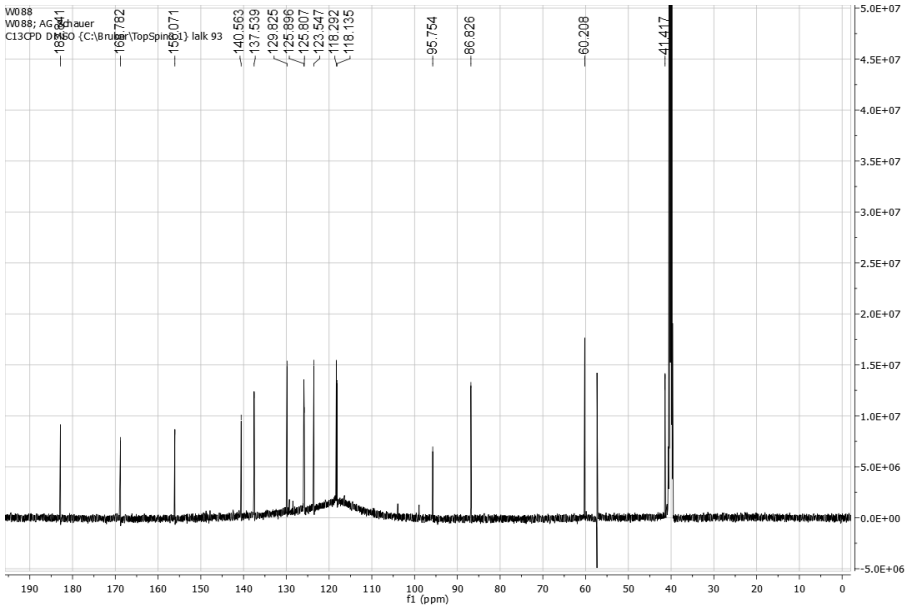


Figure. S58 HSQC for product **11b**

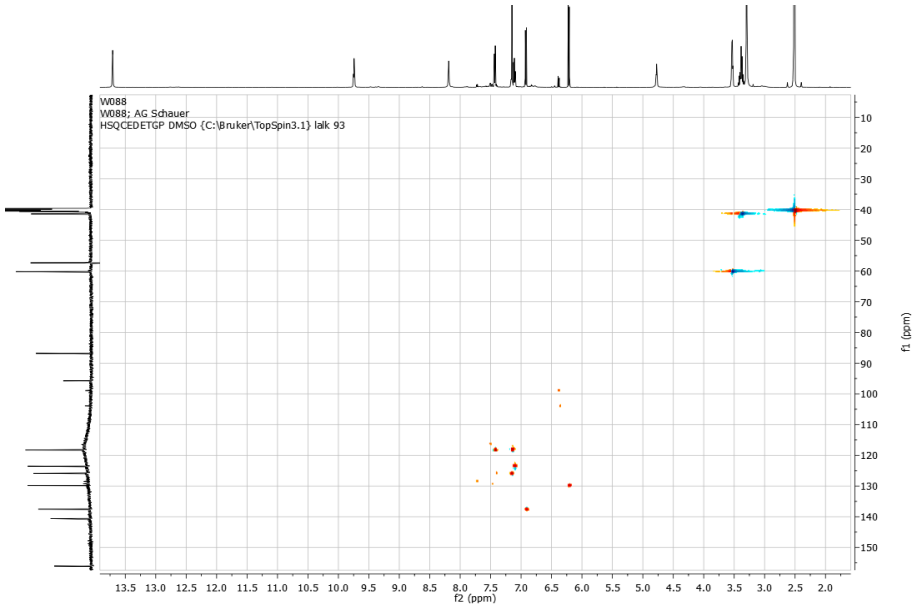


Figure. S59 HMBC for product **11b**

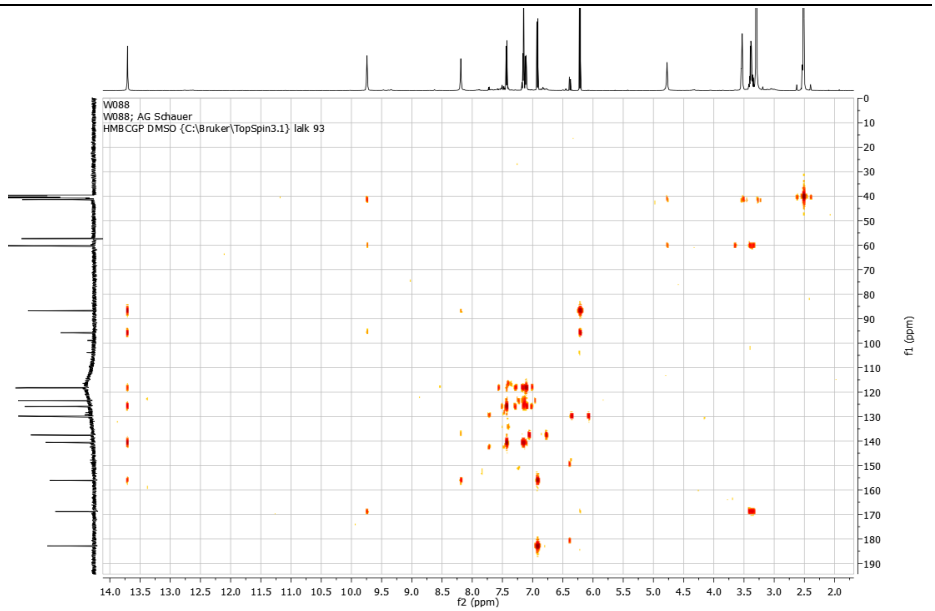


Figure. S60 ^{1}H ^{1}H COSY for product **11b**

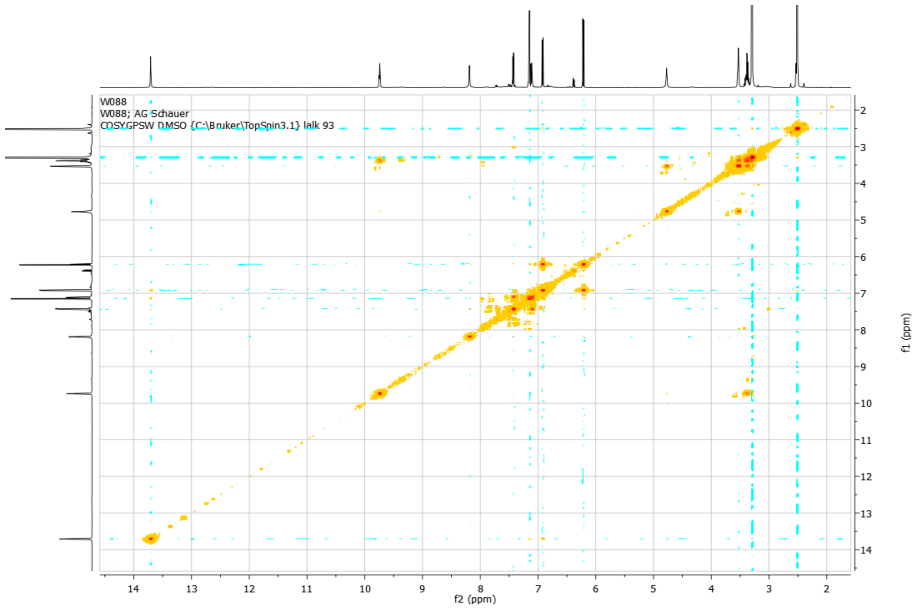
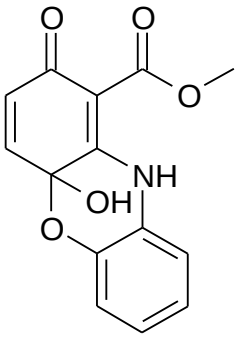
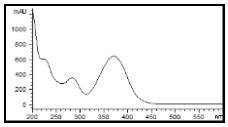


Table S20: Data of structural characterization of product **11c** - product resulted from **1c** and **3b**

11c	**4a-Hydroxy-2-oxo-10H-phenoxazine-1-carboxylic acid methylester**

Figure. S61 UV-vis spectrum for product **11c**





273.25 g/mol

Figure. S62 MS spectrum for product **11c** - AP-ESI: pos. ion mode

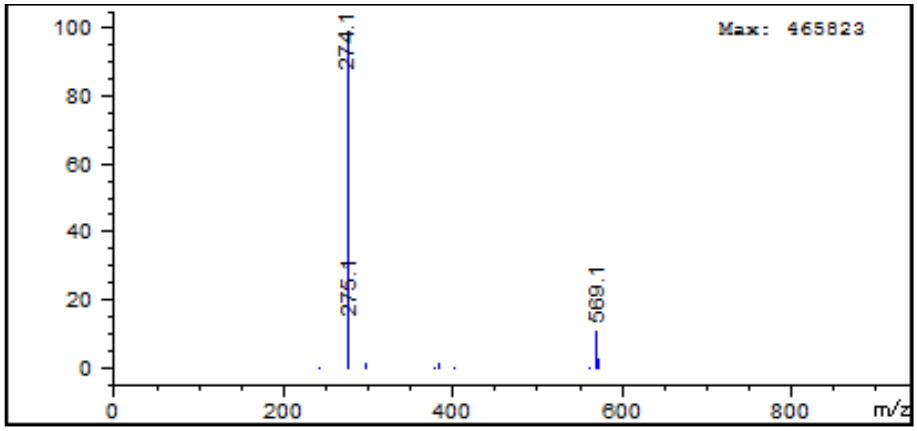
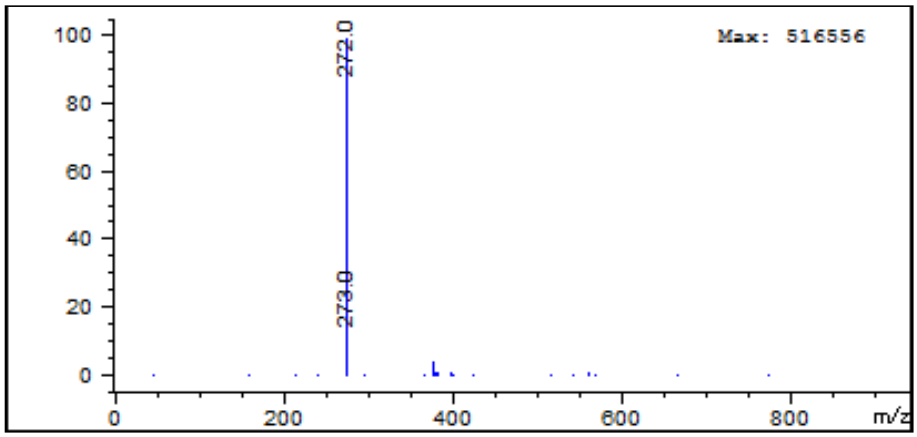


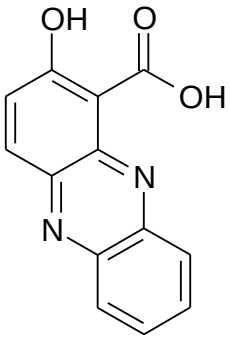
Figure. S63 MS spectrum for product **11c** - AP-ESI: neg. ion mode



R_f (HPLC) 10.72 min, UV-vis (MeOH) λ_{max} 225, 286, 371 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 274.1 (100), $[2M+Na]^+$ 569.1 (11); AP-ESI: neg. ion mode $[M-H]^-$ 272.0 (100).

Table S21: Data of structural characterization of product **12a** - product resulted from **1a** and **3c**

12a	**2-Hydroxyphenazine-1-carboxylic acid**



240.22 g/mol

Figure. S64 UV-vis spectrum for product **12a**

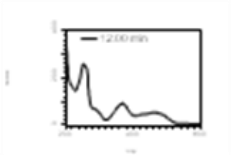


Figure. S65 MS spectrum for product **12a** - AP-ESI: pos. ion mode

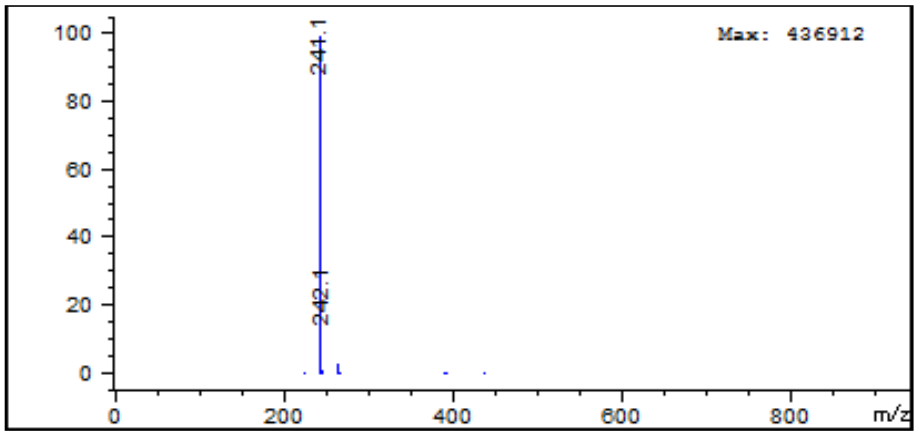
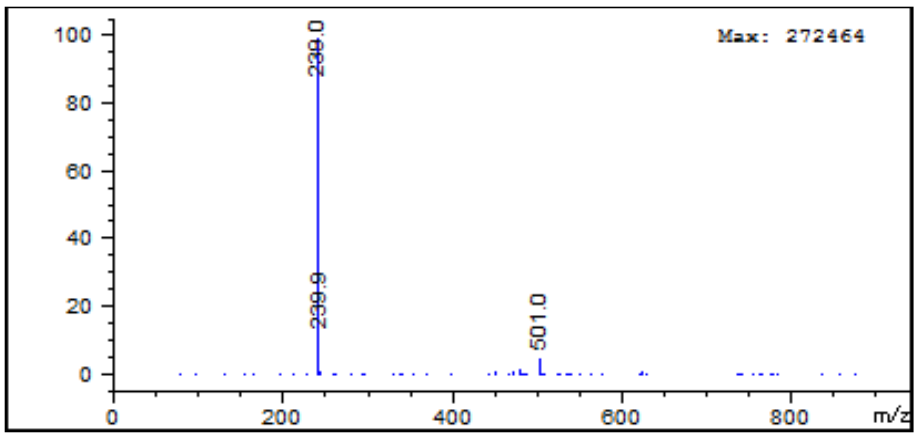


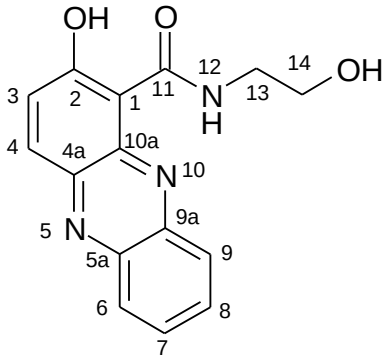
Figure. S66 MS spectrum for product **12a** - AP-ESI: neg. ion mode



R_f (HPLC) 12.00 min, UV-vis (MeOH) λ_{max} 220, 254, 369, 463 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 241.1 (100); AP-ESI: neg. ion mode $[M-H]^-$ 239.0 (100).

Table S22: Data of structural characterization of product **12b** - product resulted from **1b** and **3c**

12b	**2-Hydroxy-N-(2-hydroxyethyl)-phenazine-1-carboxamide**



283.29 g/mol

Figure. S67 UV-vis spectrum for product **12b**

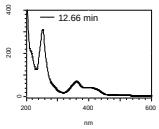


Figure. S68 MS spectrum for product **12b** - AP-ESI: pos. ion mode

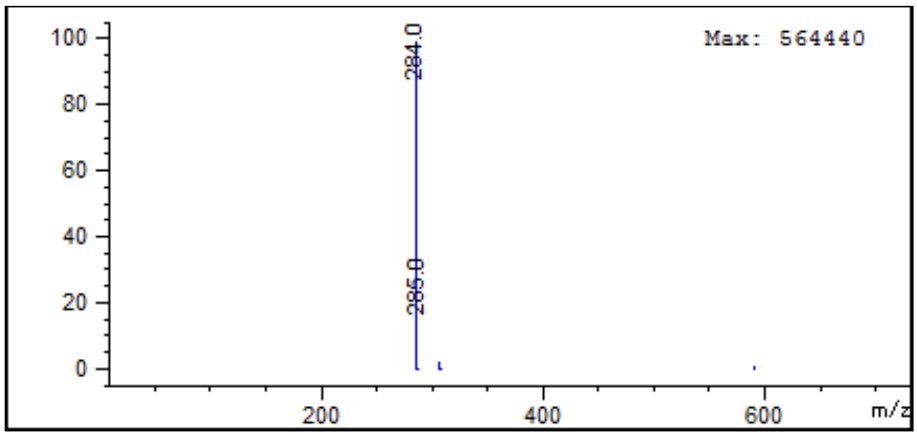


Figure. S69 ^{1}H NMR for product **12b**

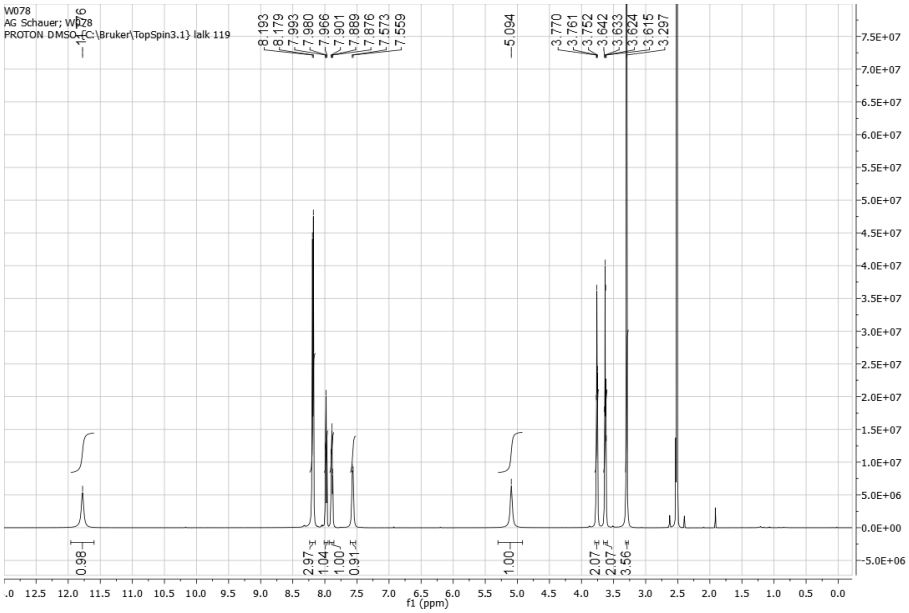


Figure. S70 ^{13}C NMR for product **12b**

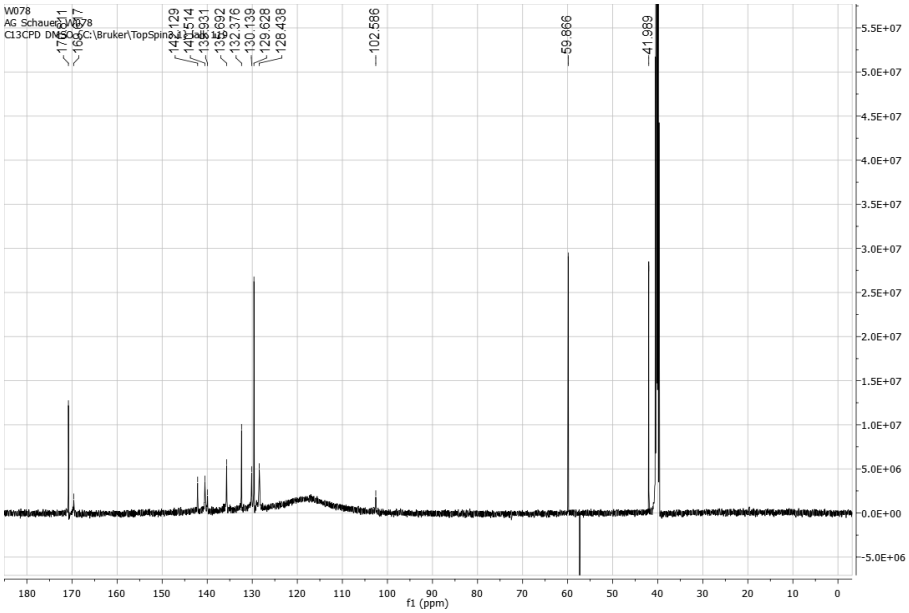


Figure. S71 HSQC for product **12b**

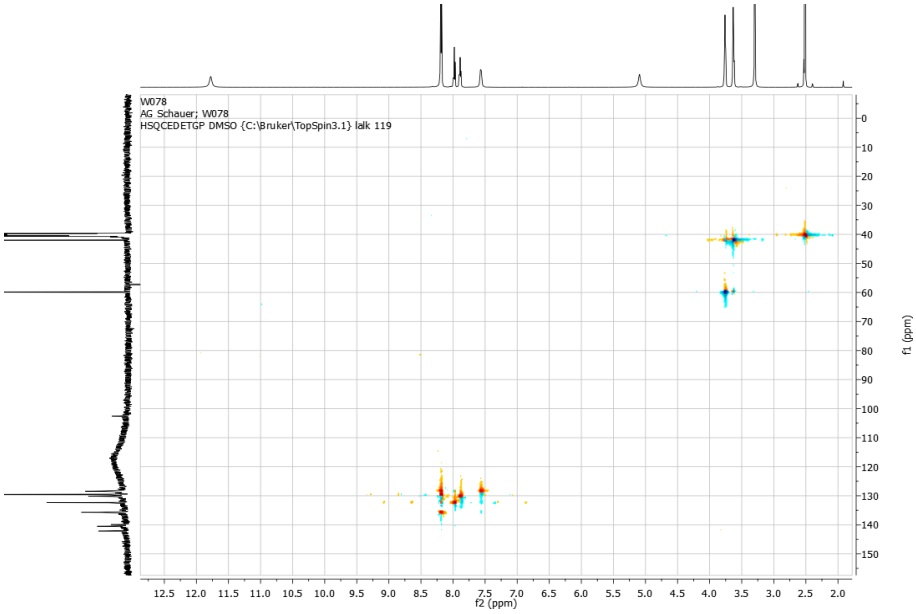


Figure. S72 HMBC for product **12b**

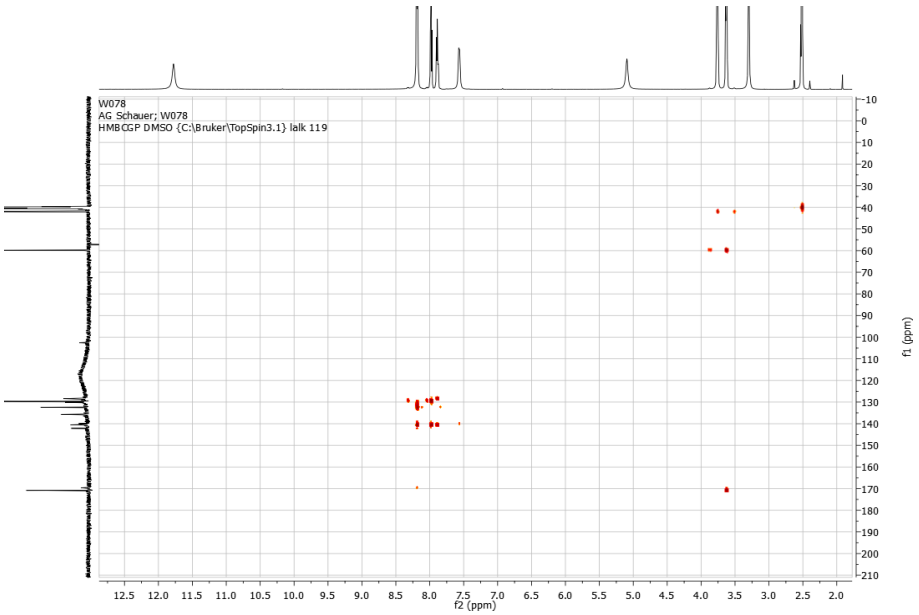
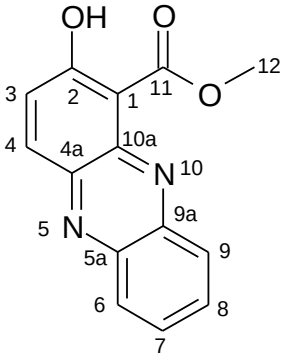
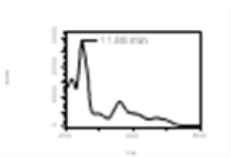


Table S23: Data of structural characterization of product **12c** - product resulted from **1c** and **3c**

12c	**2-Hydroxyphenazine-1-carboxylic acid methylester**

Figure. S73 UV-vis spectrum for product **12c**





254.25 g/mol

Figure. S74 MS spectrum for product **12c** - AP-ESI: pos. ion mode

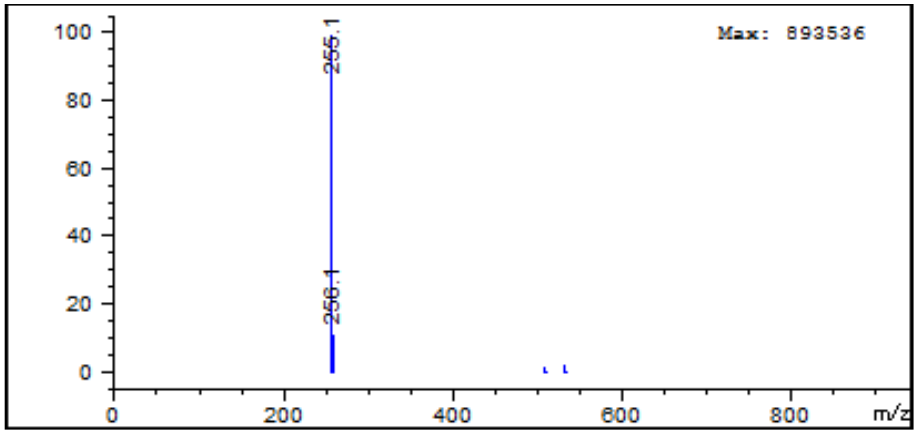


Figure. S75 MS spectrum for product **12c** - AP-ESI: neg. ion mode

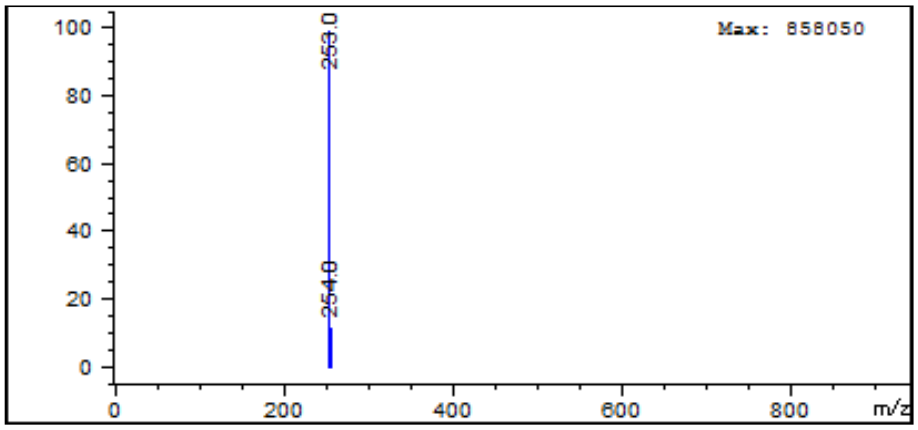


Figure. S76 ^{1}H NMR for product **12c**

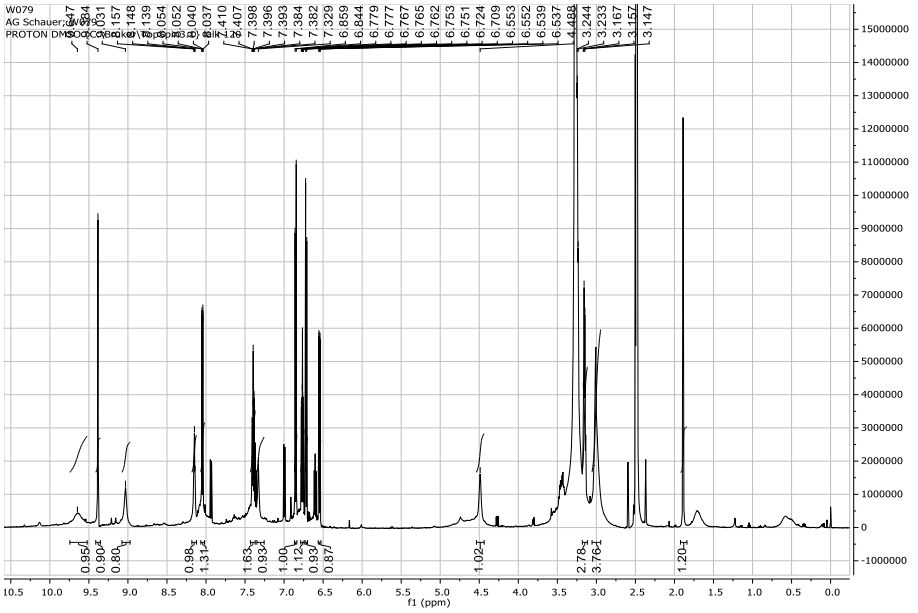


Figure. S77 ^{13}C NMR for product **12c**

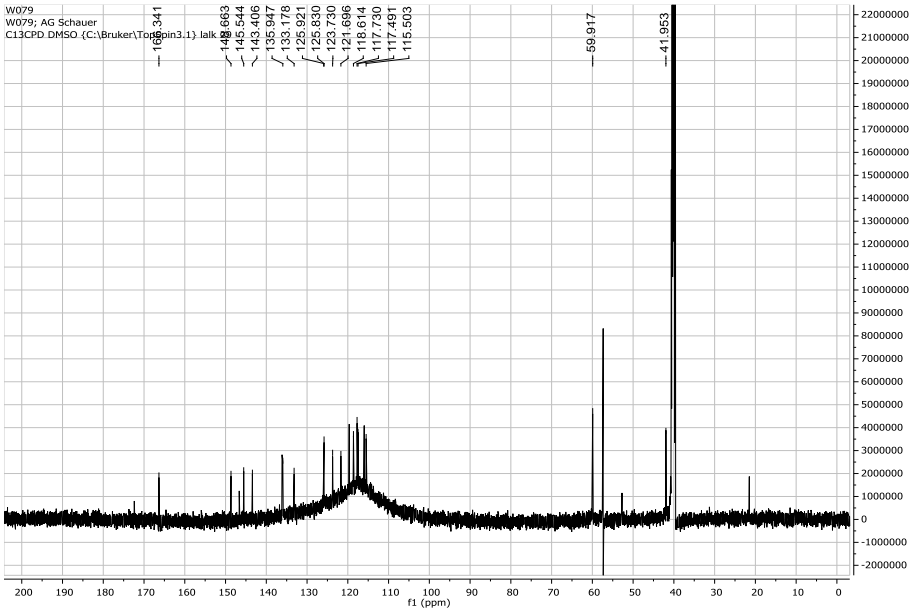


Figure. S78 HSQC for product **12c**

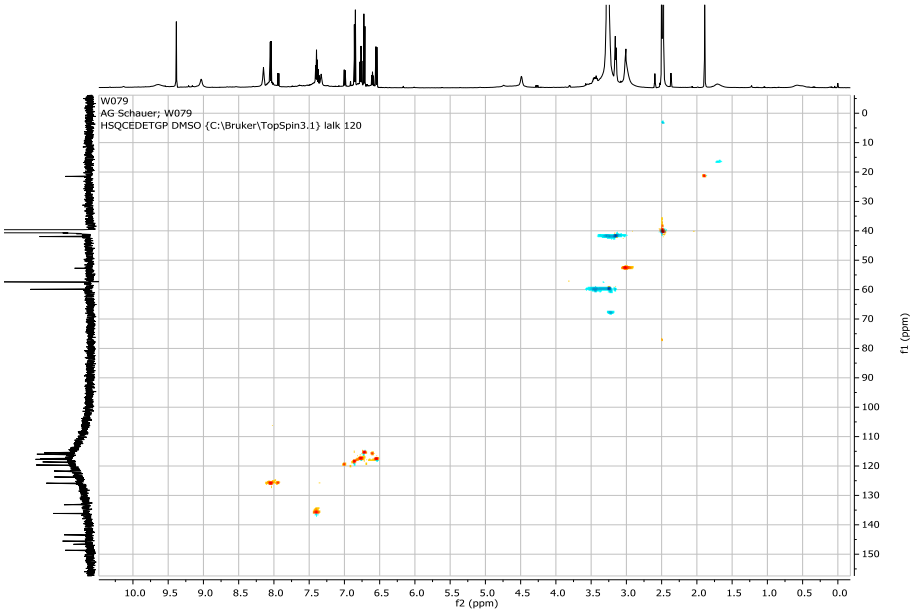


Figure. S79 HMBC for product **12c**

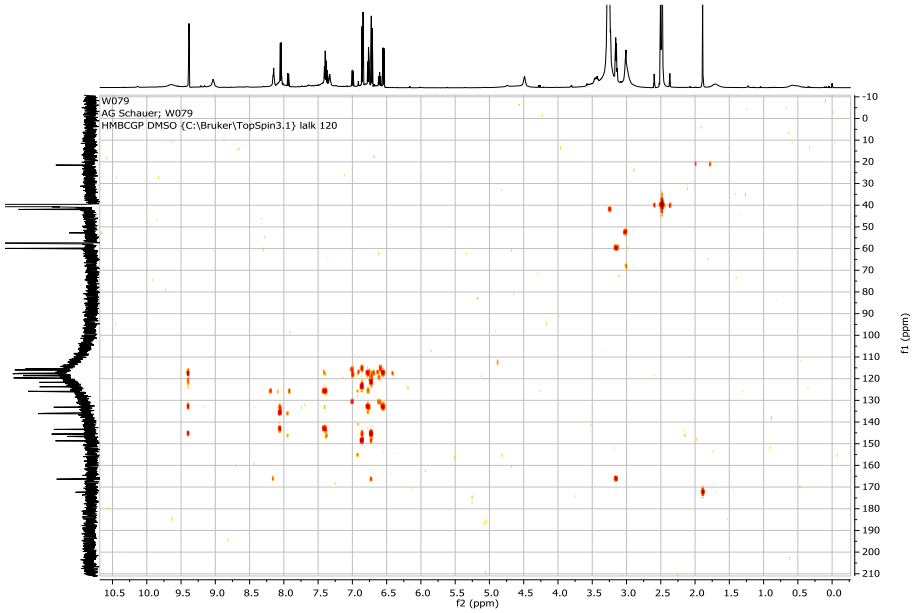
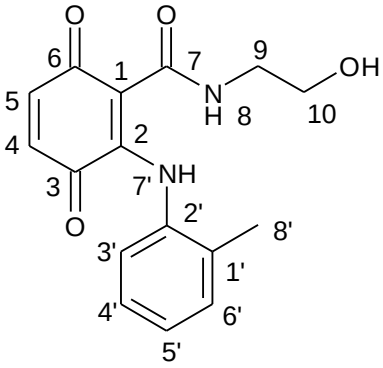


Table S24: Data of structural characterization of products **13a, 14a** - products resulted from **1b** and **3d**

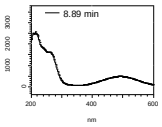
13a	**N-(2-Hydroxyethyl)-2-(2-methylanilino)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**
14a	**3,6-Dihydroxy-N-(2-hydroxyethyl)-2-(2-methylanilino)benzamide**

13a

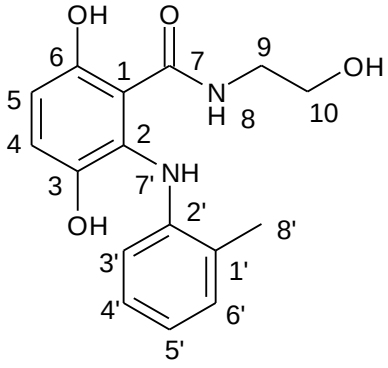


300.32 g/mol

Figure. S80 UV-vis spectrum for product **13a**



14a



302.33 g/mol

Figure. S81 MS spectrum for product **13a** - AP-ESI: pos. ion mode

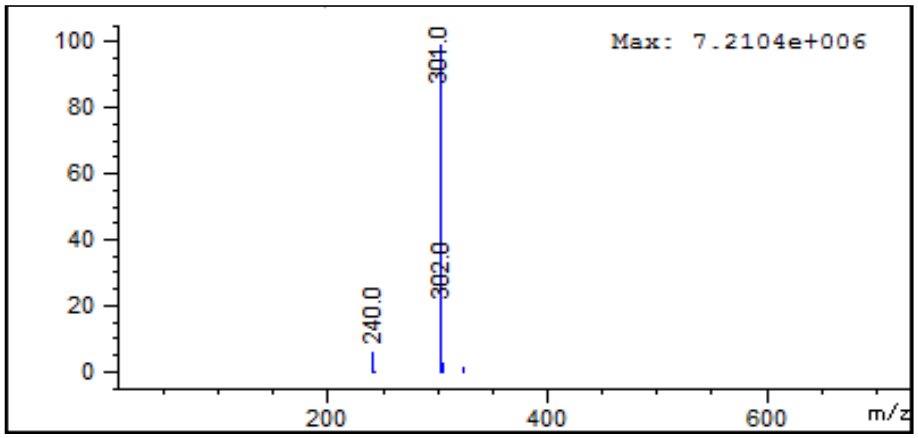


Figure. S82 ^{1}H NMR for product **13a, 14a**

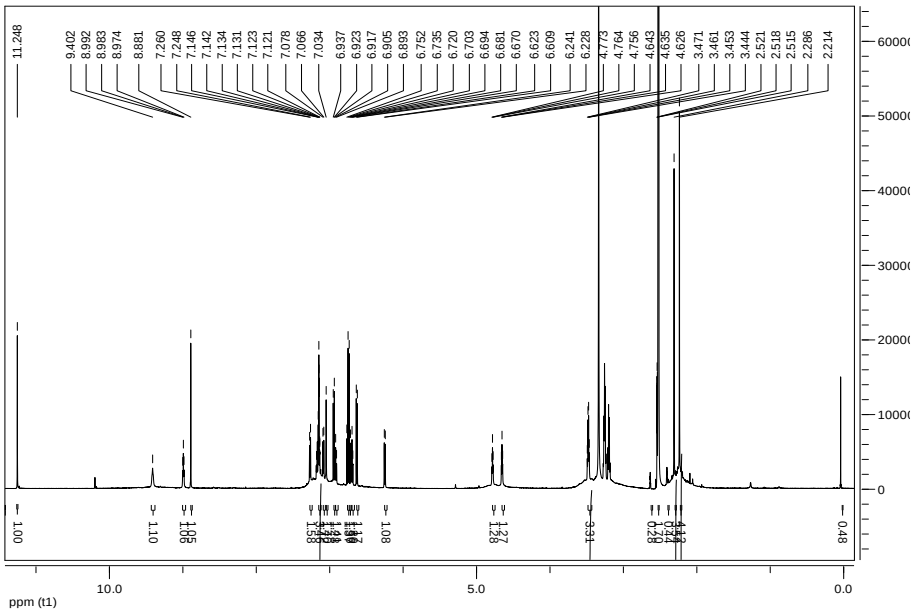


Figure. S83 ^{13}C NMR for product **13a, 14a**

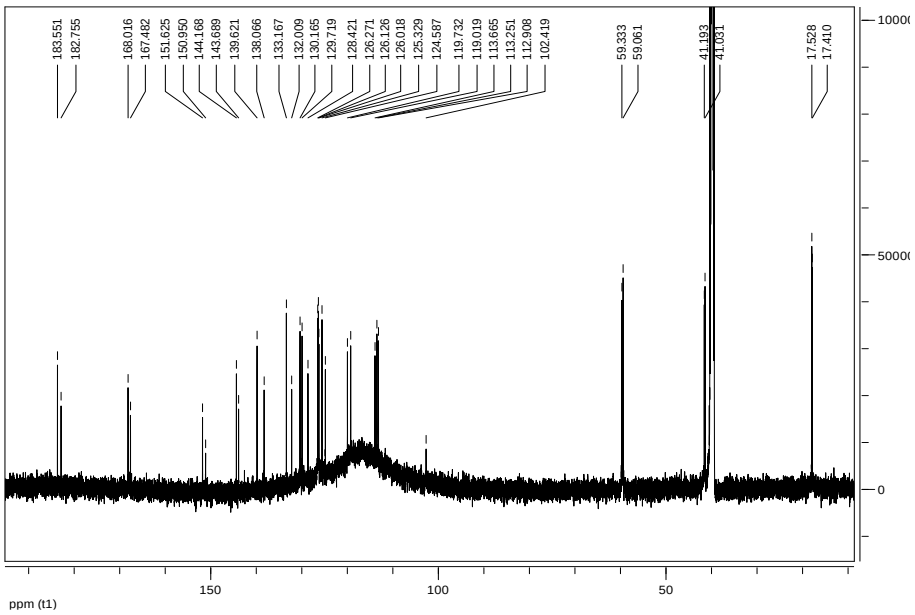


Figure. S84 HMBC for product **13a, 14a**

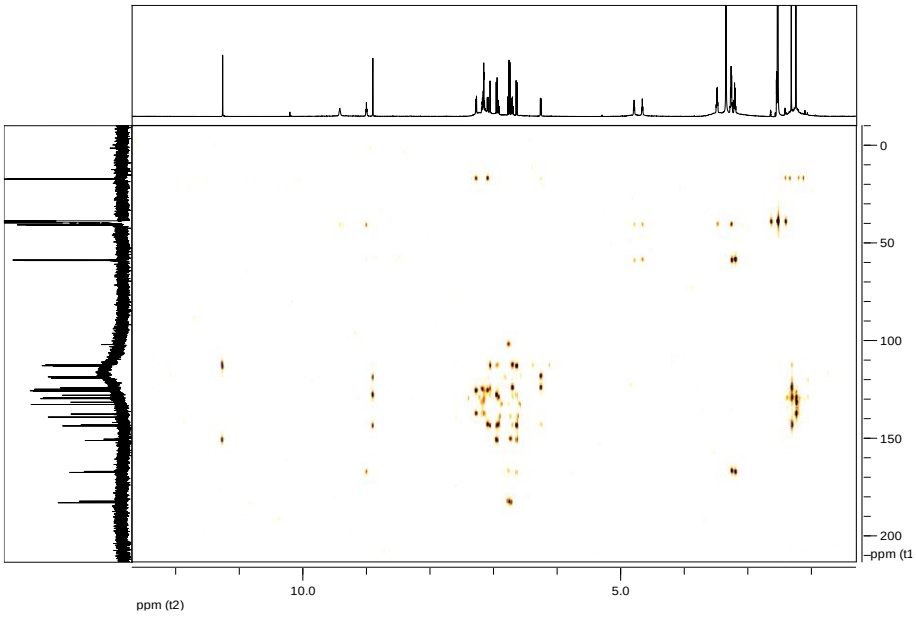
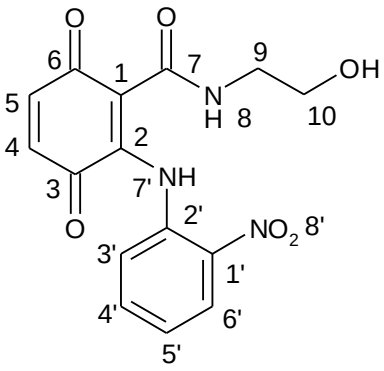


Table S25: Data of structural characterization of products **13b, 14b** - products resulted from **1b** and **3e**

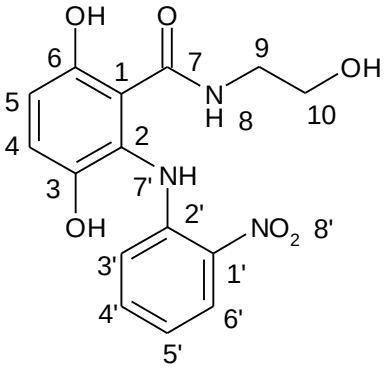
13b	**N-(2-Hydroxyethyl)-2-(2-nitroanilino)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**
14b	**3,6-Dihydroxy-N-(2-hydroxyethyl)-2-(2-nitroanilino)benzamide**

13b



331.29 g/mol

14b



333.30 g/mol

Figure. S85 UV-vis spectrum for product **13b**

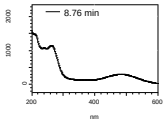


Figure. S86 MS spectrum for product **13b** - AP-ESI: pos. ion mode

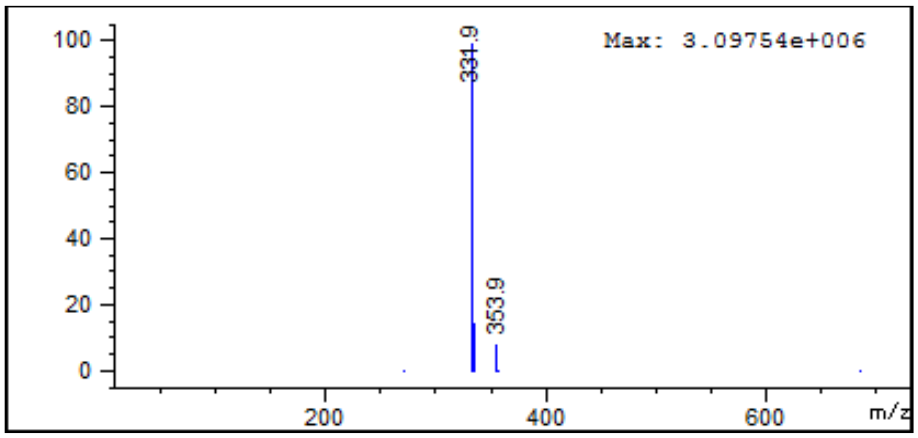


Figure. S87 ^{1}H NMR for product **14b**

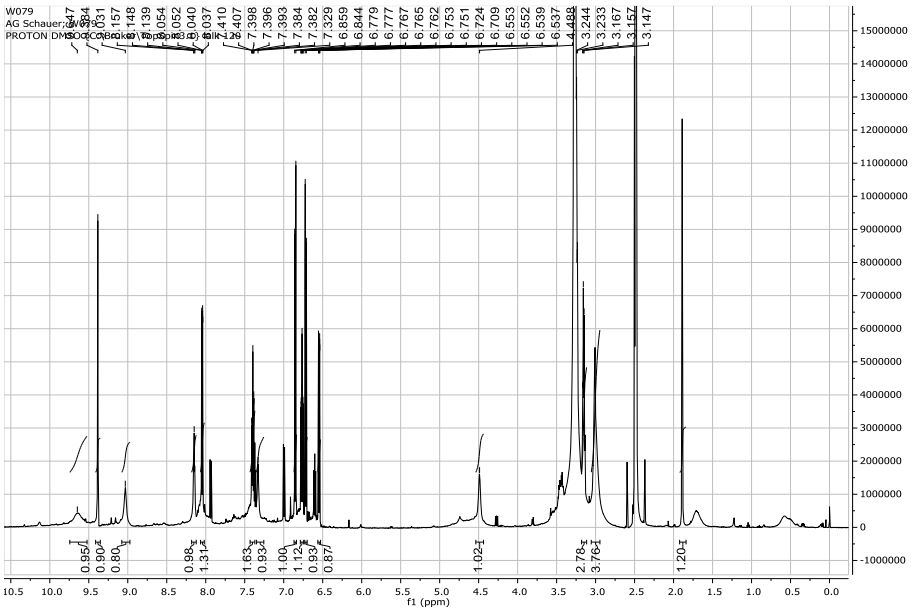


Figure. S88 ^{13}C NMR for product **14b**

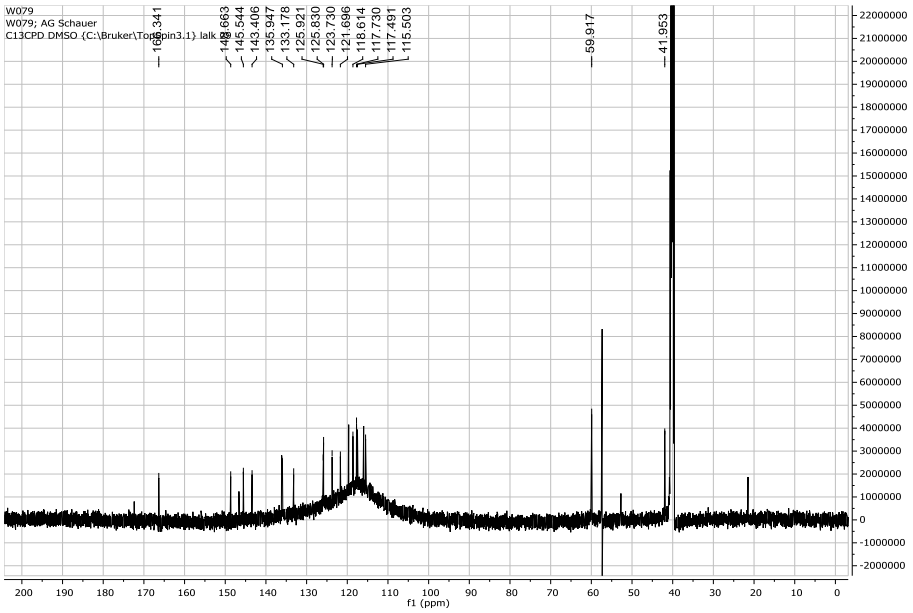


Figure. S89 HSQC for product **14b**

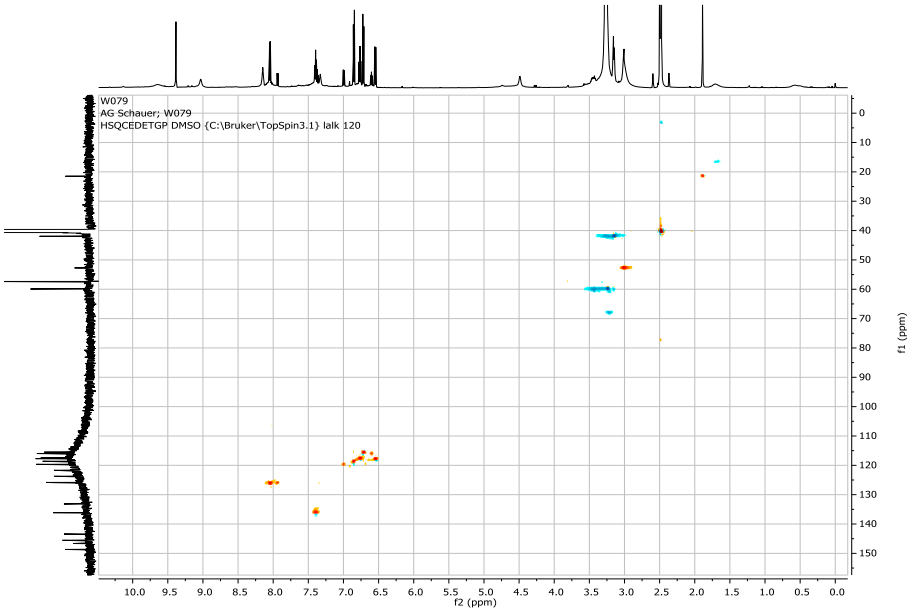


Figure. S90 HMBC for product **14b**

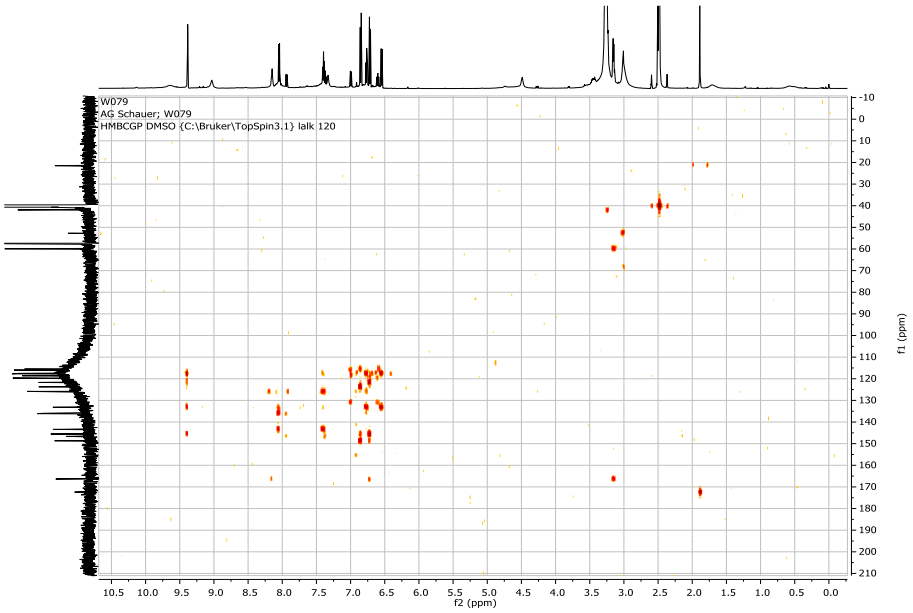
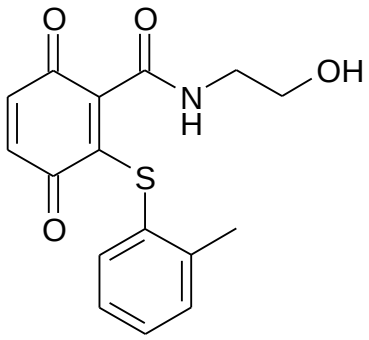


Table S26: Data of structural characterization of product **13c** - product resulted from **1b** and **3f**

13c	**N-(2-Hydroxyethyl)-2-(o-tolylsulfanyl)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**



317.37 g/mol

Figure. S91 UV-vis spectrum for product **13c**

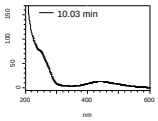
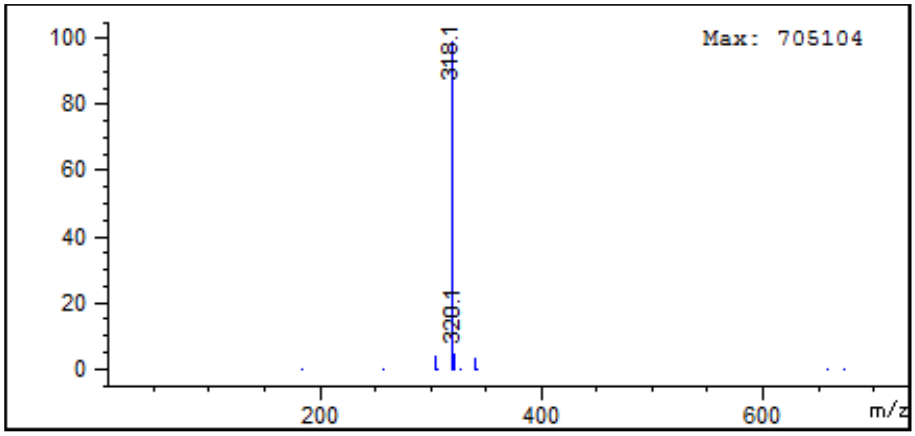


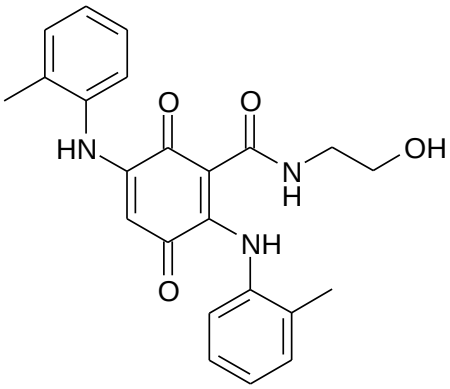
Figure. S92 MS spectrum for product **13c** - AP-ESI: pos. ion mode



R_f (HPLC) 10.04 min, UV-vis (MeOH) λ_{max} 205, 245, 440 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 318.1 (100).

Table S27: Data of structural characterization of product **15a** - product resulted from **1b** and **3d**

15a	**N-(2-Hydroxyethyl)-2,5-bis(2-methylanilino)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**



405.46 g/mol

Figure. S93 UV-vis spectrum for product **15a**

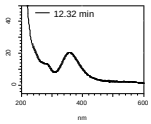
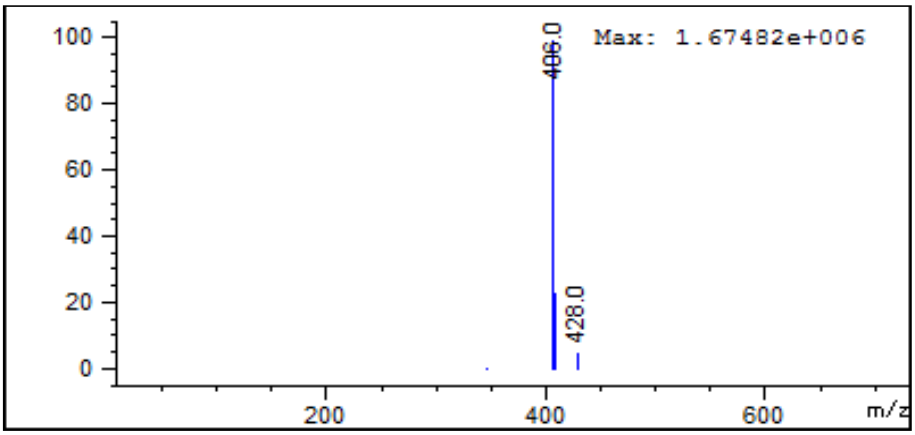


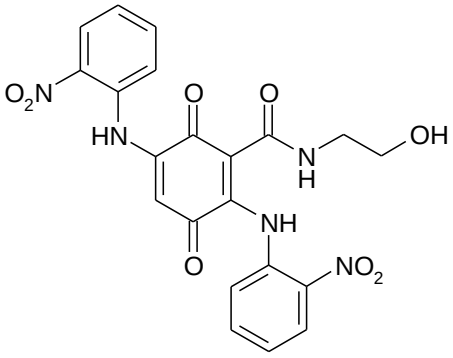
Figure. S94 MS spectrum for product **15a** - AP-ESI: pos. ion mode



R_f (HPLC) 12.32 min, UV-vis (MeOH) λ_{max} 210, 281, 359 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 406.0 (100), $[M+Na]^+$ 428.0 (5).

Table S28: Data of structural characterization of product **15b** - product resulted from **1b** and **3e**

15b	**N-(2-Hydroxyethyl)-2,5-bis(2-nitroanilino)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**



467.40 g/mol

Figure. S95 UV-vis spectrum for product **15b**

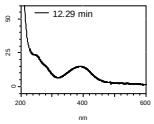
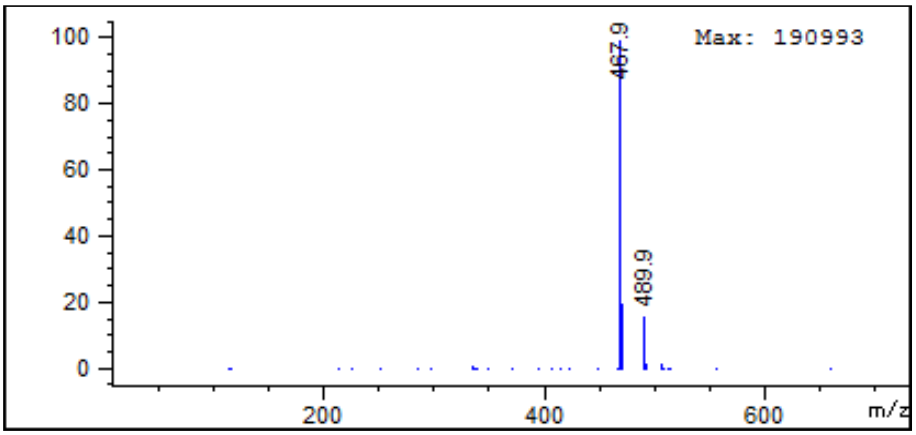


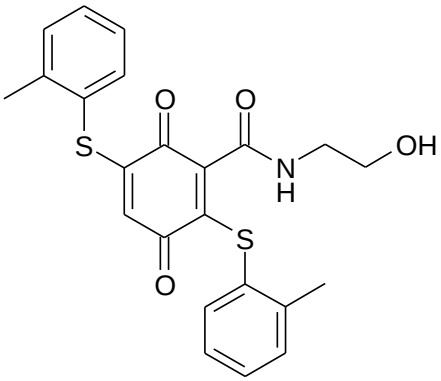
Figure. S96 MS spectrum for product **15b** - AP-ESI: pos. ion mode



R_f (HPLC) 9.00 min, UV-vis (MeOH) λ_{max} 209, 262, 383 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 467.9 (100), $[M+Na]^+$ 489.9 (16).

Table S29: Data of structural characterization of product **15c** - product resulted from **1b** and **3f**

15c	**N-(2-Hydroxyethyl)-2,5-bis(o-tolylsulfanyl)-3,6-dioxocyclohexa-1,4-diene-1-carboxamide**



439.56 g/mol

Figure. S97 UV-vis spectrum for product **15c**

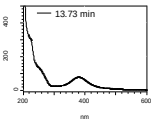
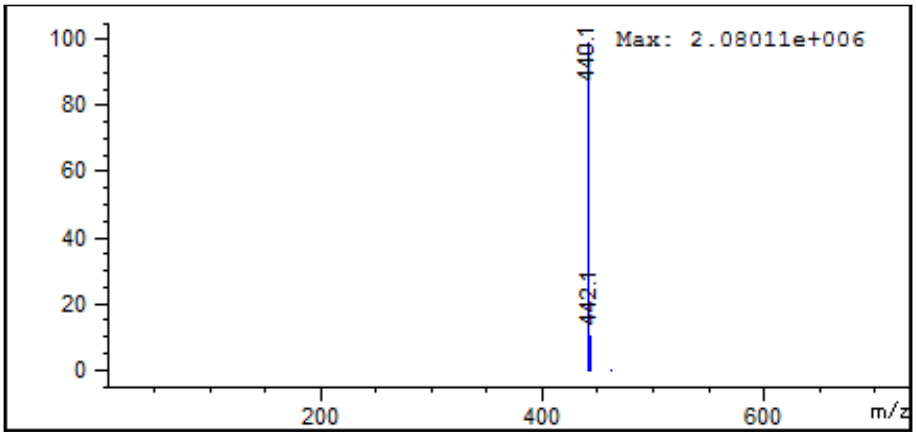


Figure. S98 MS spectrum for product **15c** - AP-ESI: pos. ion mode



R_f (HPLC) 10.04 min, UV-vis (MeOH) λ_{max} 205, 225, 379 nm. MS *m/z* (rel. intensity) AP-ESI: pos. ion mode $[M+H]^+$ 440.1 (100).