h. IR (KBr) Spectral data (ν_{max} in cm^{-1})

VIIa: 3206 (NH), 1685 (C=O), 1620 (C=N)
VIIb: 3195 (NH), 1690 (C=O), 1622 (C=N)
VIIc: 3230 (NH), 1685 (C=O),1625 (C=N)
VIId: 3215 (NH), 1695 (C=O), 1624 (C=N)
VIIe: 3230 (NH), 1675 (C=O), 1630 (C=N)
VIIf: 3210 (NH), 1685 (C=O), 1627 (C=N)
VIIg: 3180 (NH), 1695 (C=O), 1627 (C=N)
VIIh: 3195 (NH), 1700 (C=O), 1629 (C=N)
VIIi: 3245 (NH), 1705 (C=O), 1630 (C=N)
VIIj: 3240 (NH), 1685 (C=O), 1630 (C=N)

i. ^{1}H NMR (DMSO-d_6) Spectral data (δ in ppm)

VIIa: 2.22 (s, 3H CH_3), 2.40 (s, 3H, CH_3), 2.46 (s, 3H, $COCH_3$), 5.26 (s, 2H, OCH_2), 6.8 (s, H, Ar-NH), 7.1-7.3 (m, 9H, Ar-H), 7.4(d, 2H, C_6H_4), 7.7 (d, 2H,C_6H_4).
VIIg: 2.20 (s, 3H CH_3), 2.26 (s, 3H, CH_3), 2.39 (s, 3H, CH_3), 2.44 (s, 3H, $COCH_3$), 5.24 (s, 2H, OCH_2), 6.8 (s, H, Ar - NH), 7.1-7.3 (m, 9H, Ar-H), 7.4 (d, 2H, C_6H_4), 7. 7 (d, 2H, C_6H_4).
VIIh: 2.19 (s, 3H, CH_3), 2.37 (s, 3H, $COCH_3$), 2.24 (s, 2H, CH_3), 4.92 (s, 2H, OCH_2), 6.8 (s, H, Ar-NH), 7.1-7.3 (m, 9H, Ar-H), 7.4 (d, 2H, C_6H_4), 7.7 (d, 2H, C_6H_4).
VIIi: 2.18 (s, 3H CH_3), 2.39 (s, 3 H, CH_3), 2.43 (s, 3H, $COCH_3$), 3.89 (s, 3H, OCH_3), 5.24 (s, 2H, OCH_2), 6.8 (s, H, Ar-NH), 7.1-7.3 (m, 9H, Ar-H), 7.4 (d, 2H, C_6H_4), 7.7 (d, 2H, C_6H_4).
VIIj: 2.16 (s, 3H CH_3), 2.35 (s, 3H, CH_3), 2.40 (s, 3H, $COCH_3$), 5.22 (s, 2H, OCH_2), 6.8 (s, H, Ar - NH), 7.1-7.3 (m, 9H, Ar-H), 7.4 (d, 2H, C_6H_4), 7.7 (d, 2H, C_6H_4).

j. Elemental analysis data of compounds VIII (M.P., Yield, Molecular formula, Element: Found %, (Calc %)

VIII: 150 °C, 65 %, $C_{19}H_{20}N_6O_3S$, C:55.33(55.19), H:4.85(4.68), N:20.38(20.21), O:16.50(16.35), S:7.76(7.62).

k. IR (KBr) Spectral data (ν_{max} in cm^{-1})

VIII: 3126 (oxadiazole NH), 3180 (NH), 1603 (C=N), 1670 (C=O), 1134 (C=S).

l. ^{1}H NMR (DMSO-d_6) Spectral data (δ in ppm)

VIII: 2.3 (s, 3H CH_3), 5.45 (s, 2H, OCH_2-), 6.8 (s, H, Ar - NH), 7.1–7.3 (m, 5H, Ar - H),7.4 (d, 2H, C_6H_4), 7.7 (d, 2H, C_6H_4), 14.7 (s, H, thiol-thione tautomeric proton NH)

m. Elemental analysis data of compounds IX (R_1=H, R_2, M.W., M.P., Yield, Molecular formula, Element: Found %, (Calc %)

IXa: *p*-tolyl, 240°C, 75 %, $C_{27}H_{25}N_7O_3S$, C:61.48(61.32), H:4.47(4.30), N:18.59(18.45), O:9.10(8.93), S:6.07(5.90).
IXb: *p*-anisyl, 245°C, 77 %, $C_{27}H_{25}N_7O_4S$, C:59.66(59.48), H:4.60(4.56), N:18.04(17.85), O:11.78(11.62), S:5.89(5.69).
IXc: *p*-flurophenyl, 235°C, 78 %, $C_{26}H_{22}N_7O_3SFl$, C:58.76(58.65), H:4.14(3.98), N:18.45(18.33), O:9.04(8.86), S:6.02(5.80), Fl:3.55 (3.38).
IXd: *p*-chlorophenyl, 250°C, 73 %, $C_{26}H_{22}N_7O_3SCl$, C:56.98(56.75), H:4.01(3.83), N:17.88(17.69), O:8.76(8.61), S:5.84(5.69), Cl:6.48(6.31).
IXe: *p*-bromophenyl, 230°C, 80 %, $C_{26}H_{23}N_7O_3Br$, C:52.71(52.58), H:3.71(3.59), N:16.55(16.38), O:8.10(7.92), S:5.40(5.23), Br:13.49(13.30).
IXf: *p*-nitrophenyl, 255°C, 83 %, $C_{26}H_{22}N_8O_5S$, C:55.91(55.74), H:3.94(3.78), N:20.07(19.87), O:14.33(14.21), S:5.73(5.57).
IXg: diethyl, 260°C, 72 %, $C_{28}H_{37}N_8O_3S$, C:59.46(59.28), H:6.54(6.39), N:19.82(19.70), O:8.49(8.32), S:5.66(5.44).
IXh: diphenyl, 266 °C, 70 %, $C_{32}H_{27}N_7O_3S$, C:65.29(65.18), H:4.52(4.62), N:17.01(16.63), O:8.03(8.14), S:5.27(5.44).
IXi: morpholinyl, 270°C, 70 %, $C_{20}H_{18}N_7O_4S$, C:53.09(52.89), H:3.98(3.76), N:21.68(21.52), O:14.15(13.98), S:7.07(6.84).
IXj: piperazinyl, 272°C, 72 %, $C_{22}H_{20}N_7O_3S$, C:57.14(56.98), H:4.32(4.17), N:21.21(21.07), O:10.38(10.23), S:6.92(6.76).