Supplementary information

New transition metal Complexes with Indole ring pendent: Insights into the Antifungal activity and Mode of Action

Ovas Ahmad Dar[1], Shabir Ahmad Lone[2], Manzoor Ahmad Malik[1], Mohmmad Younus Wani[3],Aijaz Ahmad[2,4*] and Athar Adil Hashmi[1*].

[1] Department of Chemistry, Jamia Millia Islamia, New Delhi 110025, India

[2]Clinical Microbiology and Infectious Diseases, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, 2193, South Africa

[3]Chemistry Department, Faculty of Science, University of Jeddah,P.O. Box 80327, Jeddah 21589, Kingdom of Saudi Arabia

[4]Infection Control, Charlotte Maxeke Johannesburg Academic Hospital, National Health Laboratory Service, Johannesburg, 2193, South Africa

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Figure S1 Mass spectrum of schiff base ligand **(L)**

Figure S2 Mass spectrum of **C1** complex

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Figure S9^{1}HNMR spectrum of Schiff base (**L**) in $CDCl_3$

Figure S10^{1}HNMR spectrum of **C4** complex in DMSO-d_6

Figure S11^{13}CNMR spectrum of Schiff base ligand**(L)**

Figure S12^{13}CNMR spectrum of **C4** complex

Table S1: Effect of the test compounds (L, C1-C4) on the rate of H^+-efflux by various*Candida albicans* isolates at pH 7.0: Cells were suspended in 0.1 mM $CaCl_2$ and 0.1 MKCl at 25 °C

1. Mass spectra

The mass spectra of the Schiff base (**L**) and metal complexes (**C1-C4**) were recorded and found in good agreement with the molecular formulae and structures of these synthesized compounds. The mass spectra $[M+H]^+$of Schiff base ligand (**L**) showed the molecular ion peak at m/z 315.0 and its corresponding metal complexes (**C1**, **C2**, **C3** and **C4**) showed molecular ion peaks at 609.5, 605.9, 605.5 and 611.4 respectively. The mass spectra of the synthesized compounds are given in **FiguresS1-S5** .

2. ^{1}H NMR and ^{13}C NMR spectra

The ^{1}H NMR of the Schiff base (**L**) and **C4** complex was recorded in $CDCl_3$ and DMSO-d6 respectively using tetramethylsilane (TMS) as internal standard. In Schiff base ligand (**L**) the CH=N (azomethinic) proton appeared as a singlet at 8.4 ppm and in **C4** complex the signal for the imine proton appeared at 8.53 ppm and this downfield shift with respect to the corresponding signal in the free ligand confirms the coordination of azomethine nitrogen with the Zn(II) metal ion . The Ph-OH proton of the Schiff base appeared as a singlet at 13.11 ppm. In **C4** complex the Ph-OH proton signal was found absent confirming the complexation through phenolic oxygen. The aromatic protons in Schiff base appeared as a set of multiplets in the region 6.7-8.2 ppm. The CH_2 protons of the Schiff base appeared as triplets in the region 2.9-3.5 ppm. The positions of the main signals in the ^{1}HNMR and ^{13}CNMR are given in the experimental section. The attained ^{13}C values of **C4** complex were compared with the corresponding ligands and were in good agreement with the proposed structure of the **C4** complex. In Schiff base the azomethine carbon atom was observed at 163.94 ppm which was shifted to 164.10 ppm in complex. The paramagnetic **C1**, **C2** and **C3** complexes did not show fine NMR spectra and were therefore not

included in this study. The ^{1}H and ^{13}C NMR spectra of Schiff base (L) and C4 complex are shown in **Figures S9-S12.**

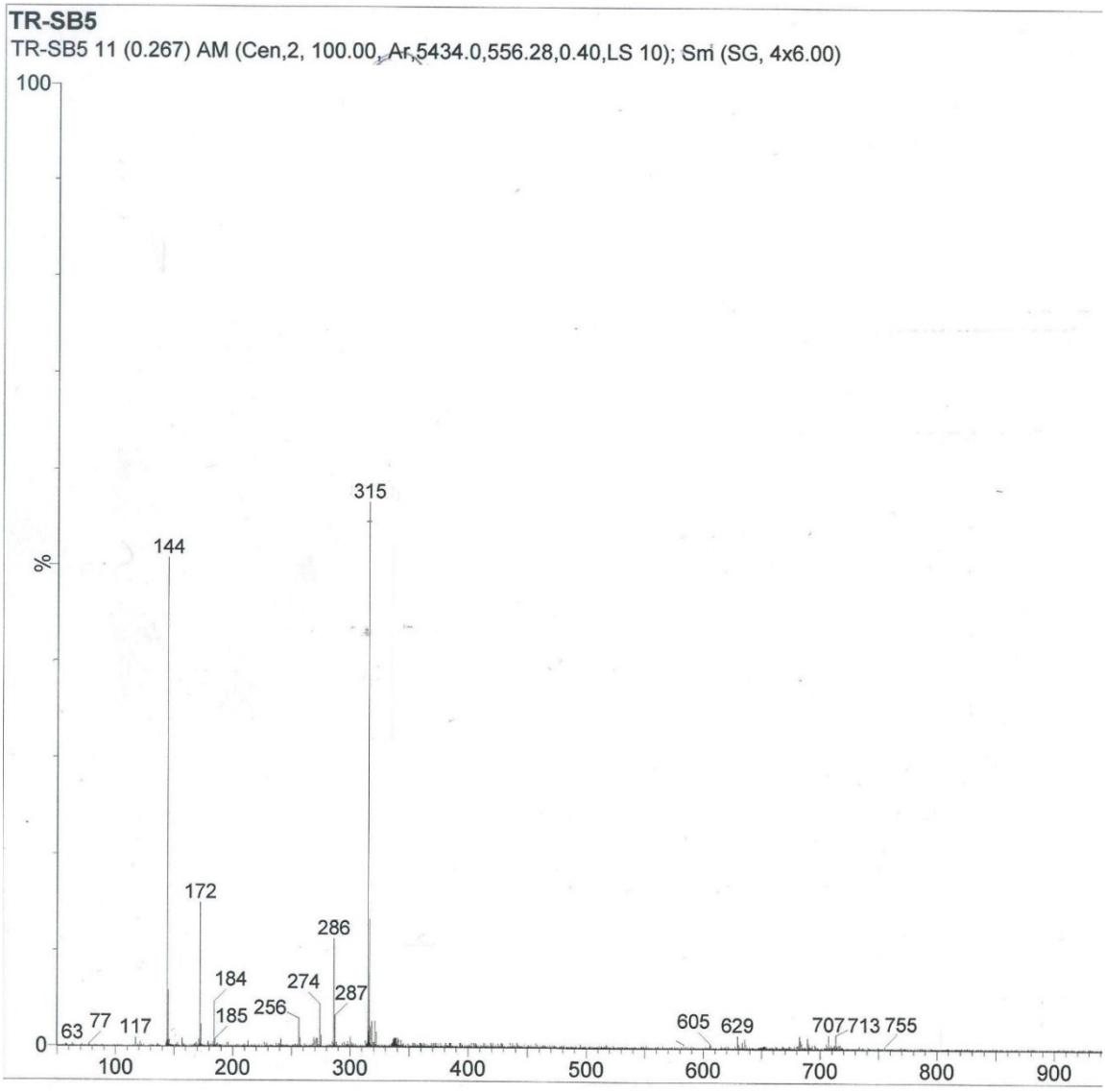

Figure S1 Mass spectrum of schiff base ligand **(L)**showing prominent parent ion peak at 315 (m/z) which corresponds to $[M+H]^{+}$

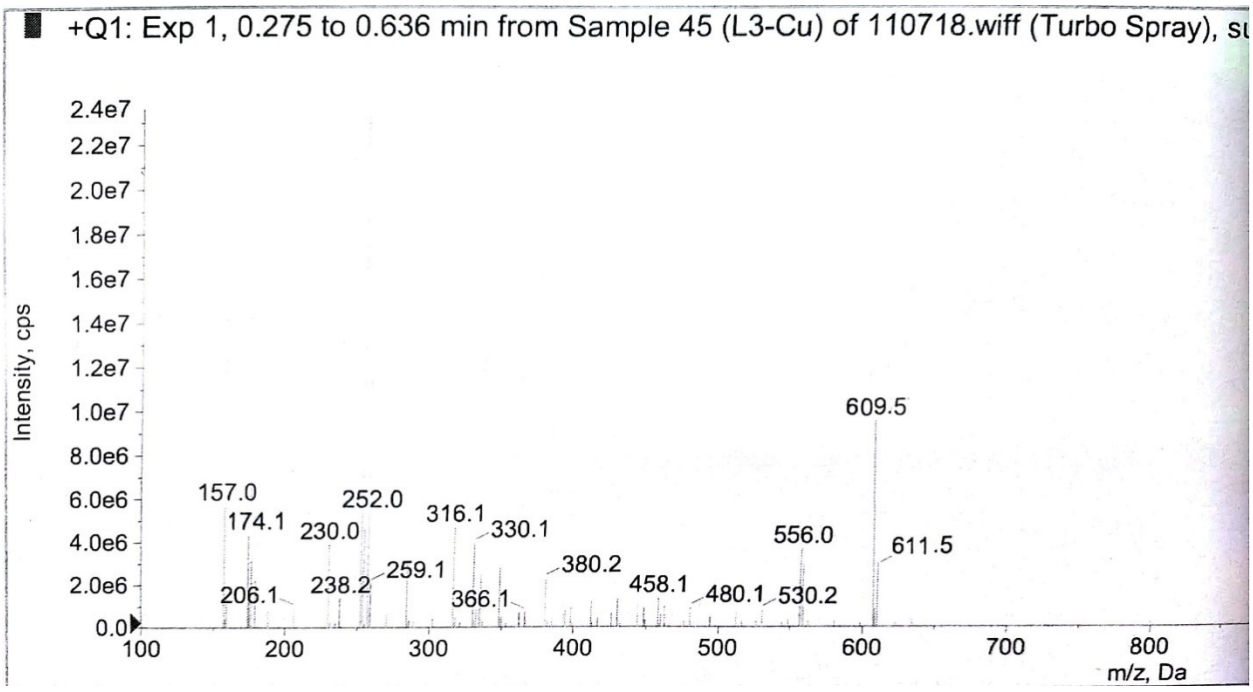

Figure S2 Mass spectrum of **C1**complex showing prominent parent ion peak at 609.5 (m/z) which corresponds to $[M+H]^+$

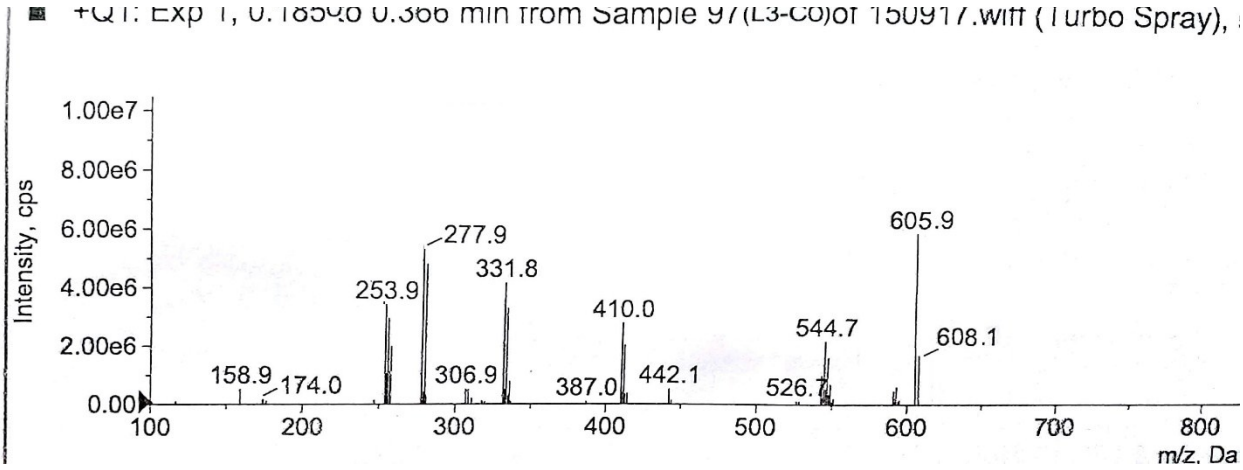

Figure S3 Mass spectrum of **C2** complex showing prominent parent ion peak at 605.9 (m/z) which corresponds to $[M+H]^+$

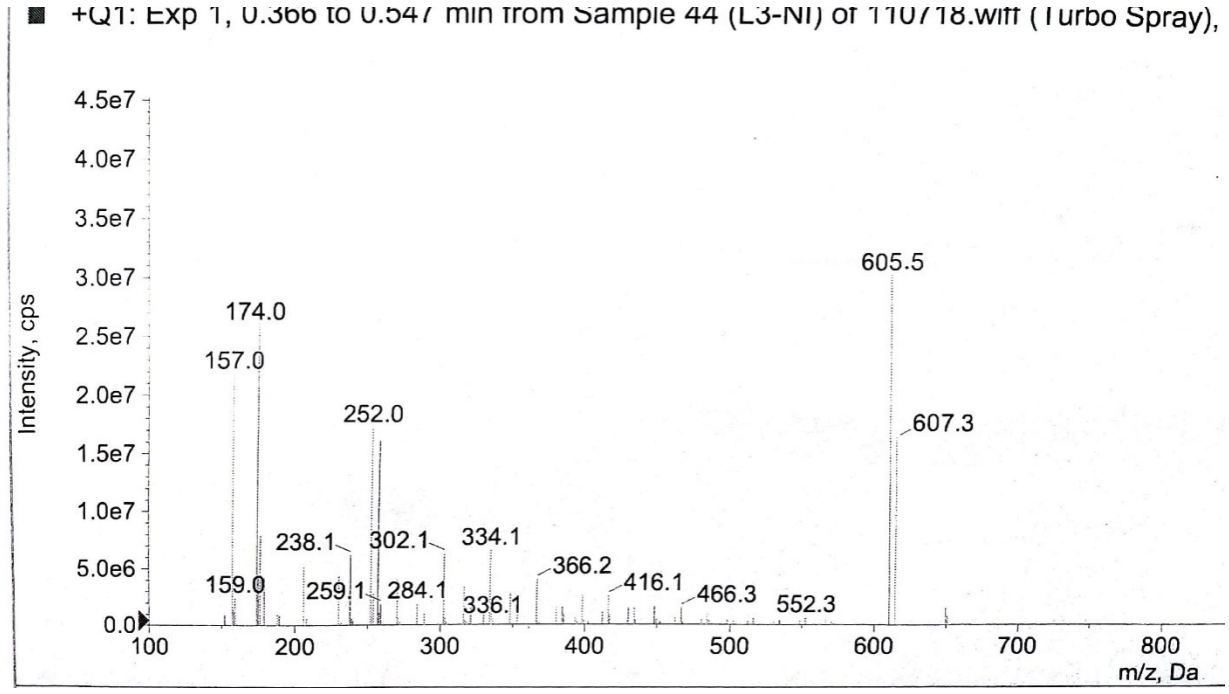

Figure S4 Mass spectrum of **C3** complex showing prominent parent ion peak at 605.5 (m/z) which corresponds to $[M+H]^+$

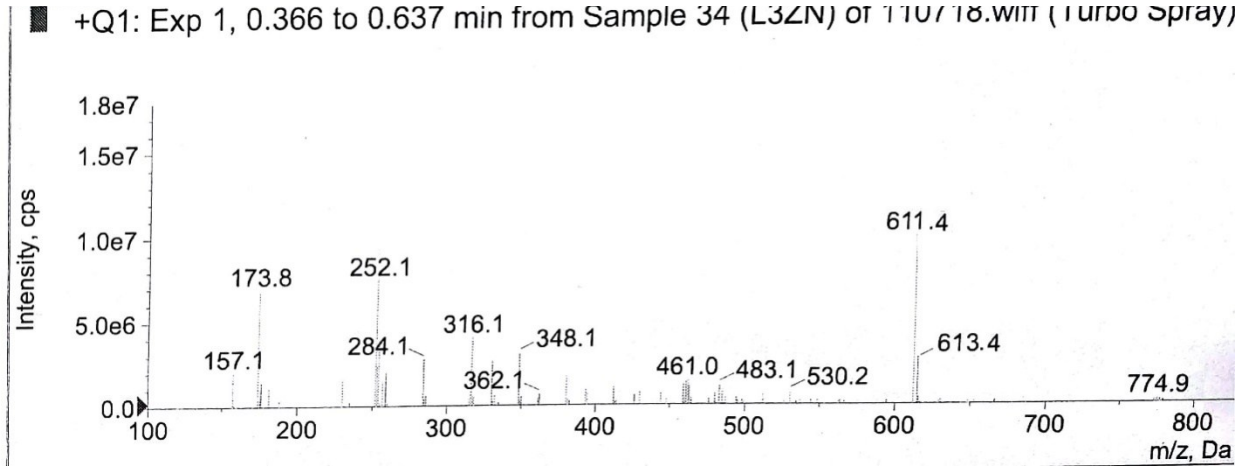

Figure S5 Mass spectrum of **C4** complex showing prominent parent ion peak at 611.4 (m/z) which corresponds to $[M+H]^+$

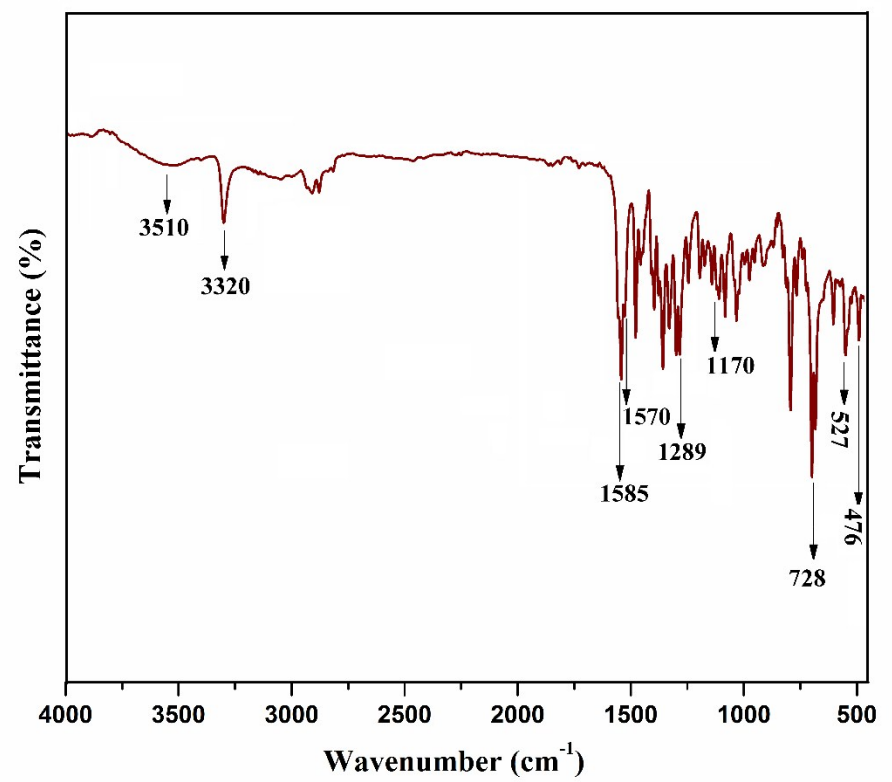

Figure S6FT-IR spectrum of **C2** complex

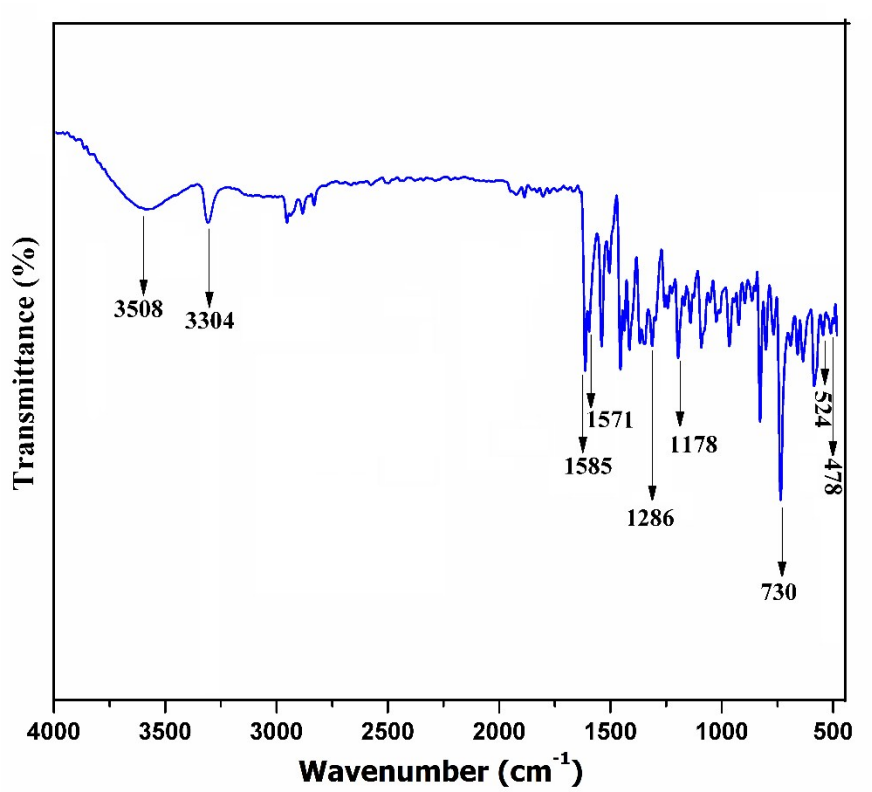

Figure S7FT-IR spectrum of **C3** complex

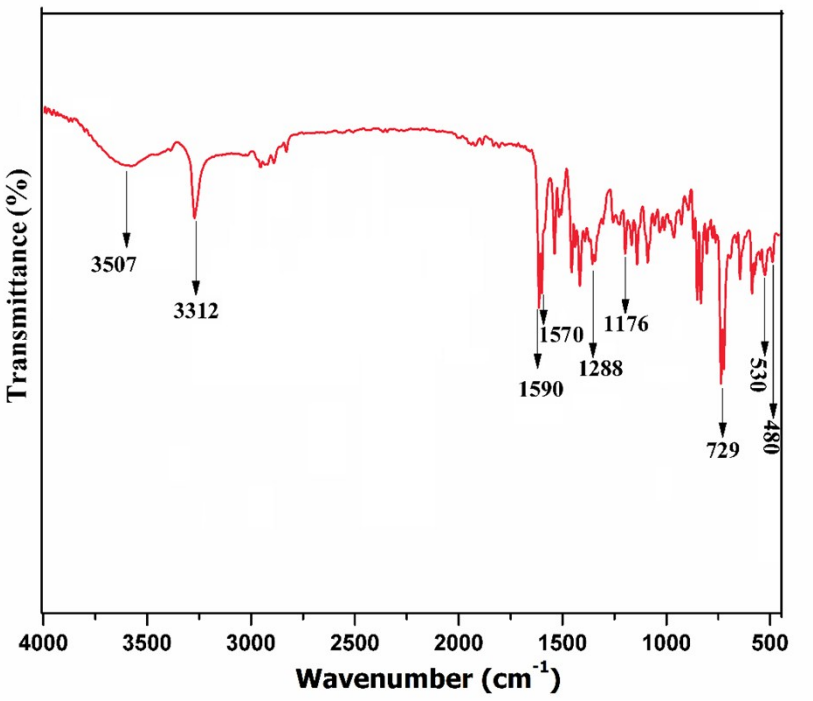

Figure S8FT-IR spectrum of **C4** complex

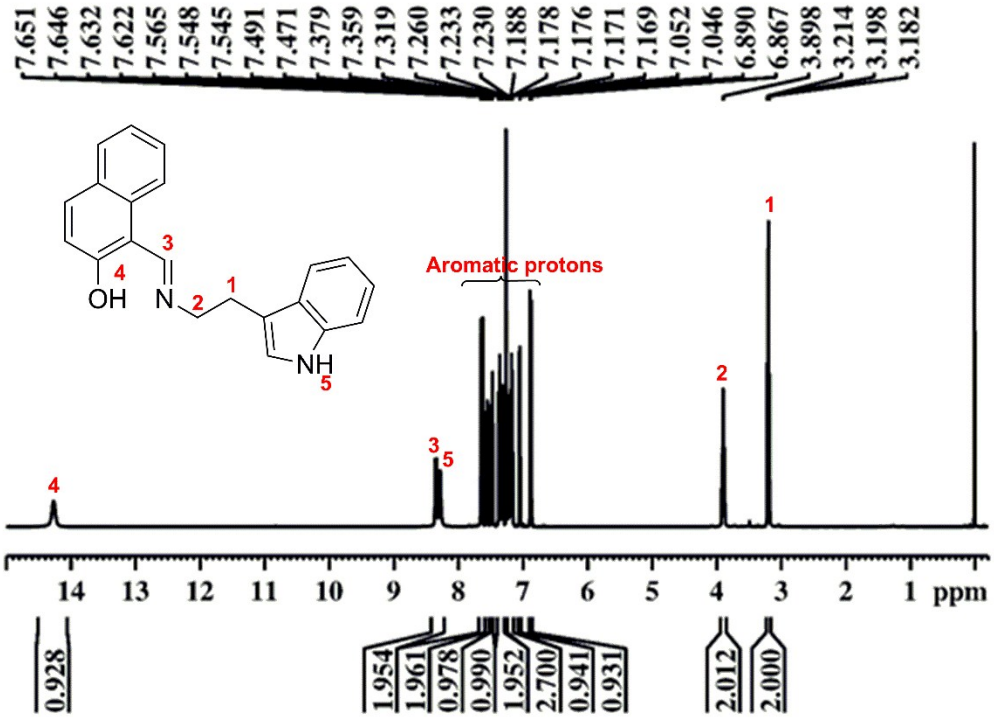

Figure S9[1]HNMR spectrum of Schiff base (**L**) in $CDCl_3$

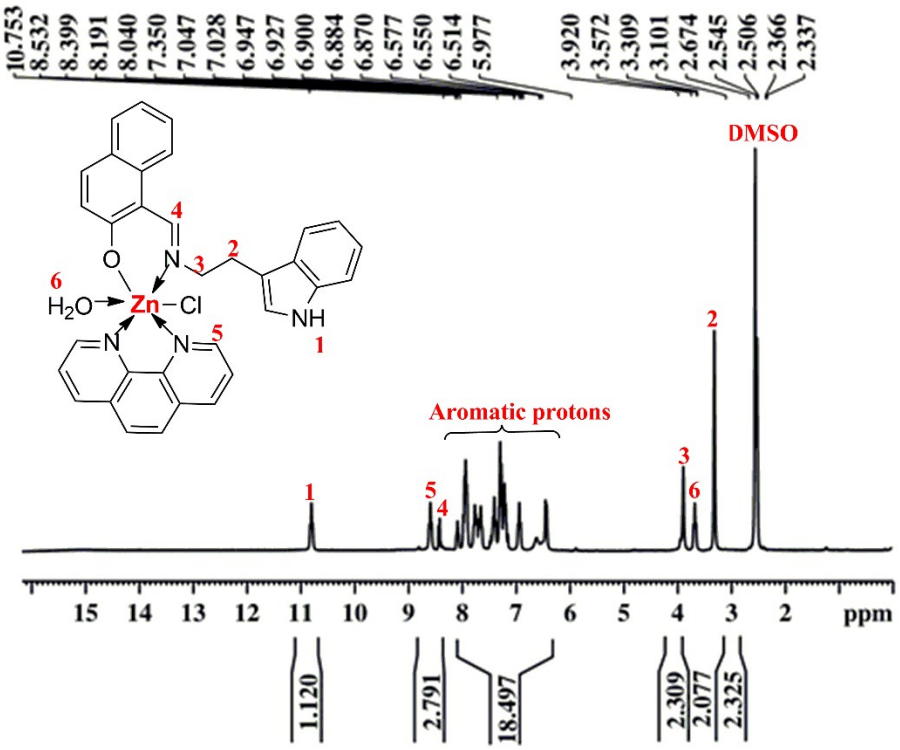

Figure S10[1]HNMR spectrum of **C4** complex in DMSO-d_6

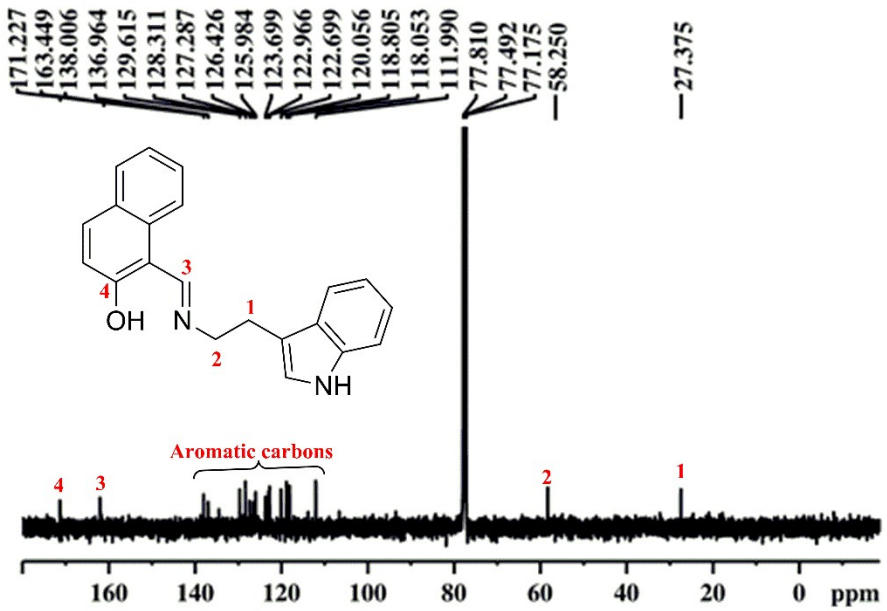

Figure S11[13]CNMR spectrum of Schiff base ligand **(L)**

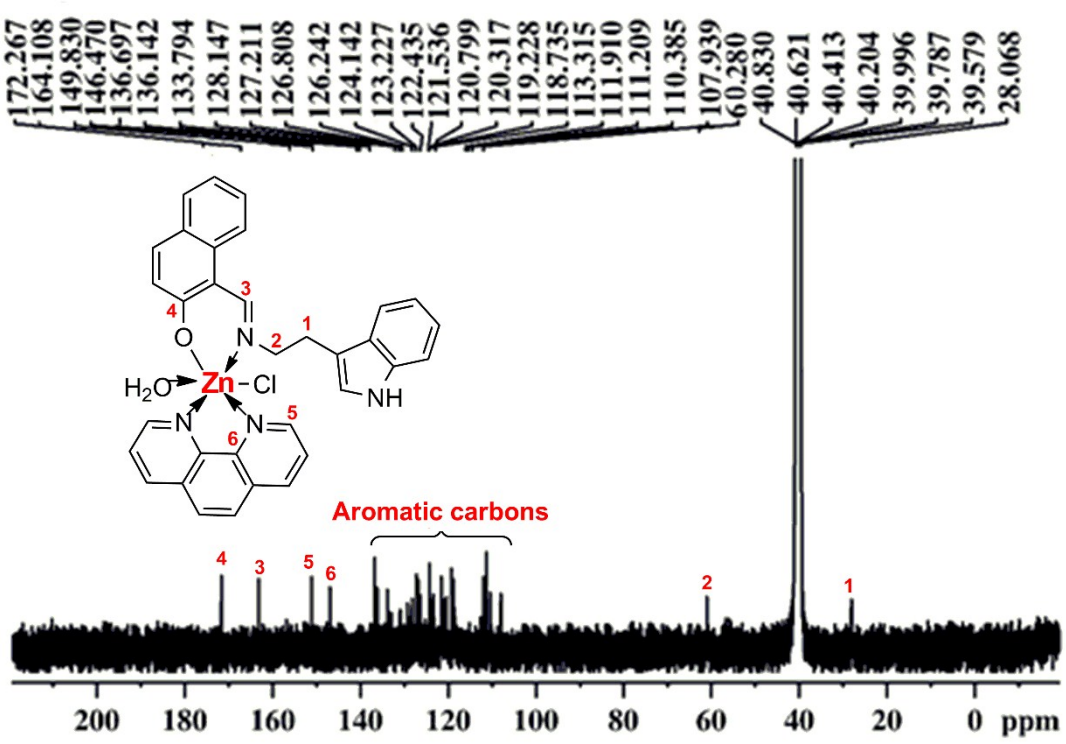

Figure S12[13]CNMR spectra of **C4** complex

Table S1 Effect of the test compounds (L, C1-C4)on the rate of H^+-efflux by various*Candida albicans* isolates at pH 7.0: Cells were suspended in 0.1 mM $CaCl_2$ and 0.1 MKCl at 25 °C

Test compounds	Range of relative H^+-efflux rate ($\times 10^{-11}$ mol/min/mg cells)										
	FLC Susceptible strains								FLC Resistant strains		
	SC5314	4175	4179	4180	4251	4554	4563	4576	4085	4122	4135
Control	4.131	5.642	5.861	6.124	5.113	5.772	6.193	5.911	9.043	8.442	8.341
Glucose(5 mM)	11.34	11.89	12.71	12.48	11.22	12.32	13.57	12.61	22.99	21.37	21.54
L	3.038 (27)	3.923 (31)	4.577 (22)	4.673 (24)	4.003 (19)	4.237 (27)	4.787 (23)	4.451 (25)	5.362 (41)	5.259 (38)	5.246 (37)
L+Glucose	9.331 (18)	9.429 (21)	10.68 (16)	9.772 (12)	10.01 (11)	10.01 (19)	11.61 (15)	10.61 (16)	18.23 (21)	17.51 (18)	6.181 (26)
C1	3.033 (27)	3.886 (31)	4.588 (22)	4.673 (24)	4.029 (19)	4.219 (27)	4.156 (23)	4.451 (25)	6,520 (28)	6.441 (24)	6.781 (19)
C1+Glucose	9.296 (18)	9.429 (21)	10.68 (16)	9.834 (12)	10.02 (11)	9.992 (19)	11.57 (15)	10.58 (16)	18.23 (21)	19.63 (19)	6.923 (17)
C2	4.689 (59)	2.098 (63)	2.778 (53)	2,639 (57)	2.623 (49)	2.869 (51)	2.768 (56)	2.843 (52)	2.830 (69)	2.820 (67)	3.028 (64)
C2+Glucose	7.563 (44)	6.325 (47)	5.783 (55)	6.402 (49)	6.698 (41)	4.078 (67)	6.391 (53)	7.226 (43)	8.989 (61)	6.582 (69)	2.94 (65)
C3	0.983 (67)	1.602 (72)	2.174 (63)	2,652 (57)	1.416 (53)	2.372 (59)	2.558 (59)	2.288 (62)	1.709 (81)	1.849 (78)	1.843 (78)
C3+Glucose	5.635 (51)	5.125 (57)	6.266 (51)	3.456 (63)	4.645 (59)	6.542 (47)	6.120 (55)	4.843 (62)	7.380 (68)	7.971 (63)	2.761 (67)
C4	3.161 (24)	2.882 (49)	4.178 (29)	4,862 (21)	4.407 (24)	3.873 (33)	4.279 (31)	4.498 (24)	6.339 (30)	6.171 (27)	5.747 (31)
C4+Glucose	9.632 (15)	7.027 (41)	10.11 (21)	10.75 (14)	9.391 (17)	9.400 (24)	10.62 (22)	10.78 (15)	17.95 (22)	17.83 (17)	6.056 (27)
Fluconazole	3.571 (14)	4.585 (19)	5.233 (11)	5.469 (11)	4.566 (13)	4.571 (21)	5.456 (12)	5.385 (09)	8.130 (10)	7.758 (08)	7.582 (10)

Values in parentheses give the %-ageinhibition of H^+-efflux w.r.t. control