Supplementary Information

Synthesis and Antibacterial Evaluation of 3,5-Diaryl-1,2,4-oxadiazole Derivatives

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All compounds (**20-39**) were characterized by infrared spectroscopy (IR), high resolution mass spectra (HRMS), ¹H and ¹³C nuclear magnetic resonance (NMR) and bidimensional techniques (heteronuclear single-quantum correlation (HSQC) and heteronuclear multiple bond correlation (HMBC)).

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Figure S1. IR spectrum (KBr) of compound 20.



Figure S2. Mass spectrum of compound 20.



Figure S3. ¹H NMR spectrum (600.00 MHz, CDCl₃) of compound 20.



Figure S4. Expanded ¹H NMR spectrum (600.00 MHz, CDCl₃) of compound **20**.



Figure S5. ¹³C NMR spectrum (150.0 MHz, CDCl₃) of compound 20.



Figure S6. Expanded ¹³C NMR spectrum (150.0 MHz, CDCl₃) of compound **20**.



Figure S7. HSQC of compound 20.



Figure S8. HMBC of compound 20.



Figure S9. IR spectrum (KBr) of compound 21.



Figure S10. Mass spectrum of compound 21.



Figure S11. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 21.



Figure S12. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound **21**.



Figure S13. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 21.



Figure S14. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 21.



Figure S15. IR spectrum (KBr) of compound 22.



Figure S16. Mass spectrum of compound 22.



Figure S17. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 22.



Figure S18. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 22.



Figure S19. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 22.



Figure S20. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 22.



Figure S21. HSQC of compound 22.



Figure S22. HMBC of compound 22.



Figure S23. IR spectrum (KBr) of compound 23.



Figure S24. Mass spectrum of compound 23.



Figure S25. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 23.



Figure S26. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 23.



Figure S27. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 23.



Figure S28. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 23.



Figure S29. HSQC of compound 23.



Figure S30. HMBC of compound 23.



Figure S31. IR spectrum (KBr) of compound 24.



Figure S32. Mass spectrum of compound 24.



Figure S33. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 24.



Figure S34. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 24.



Figure S35. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 24.



Figure S36. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 24.



Figure S37. HSQC of compound 24.



Figure S38. HMBC of compound 24.



Figure S39. IR spectrum (KBr) of compound 25.



Figure S40. Mass spectrum of compound 25.



Figure S41. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 25.



Figure S42. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 25.



Figure S43. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 25.



Figure S44. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 25.



Figure S45. HSQC of compound 25.



Figure S46. HMBC of compound 25.



Figure S47. IR spectrum (KBr) of compound 26.



Figure S48. Mass spectrum of compound 26.



Figure S49. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 26.



Figure S50. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 26.



Figure S51. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 26.



Figure S52. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 26.



Figure S53. IR spectrum (KBr) of compound 27.



Figure S54. Mass spectrum of compound 27.



Figure S55. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 27.



Figure S56. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 27.



Figure S57. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 27.



Figure S58. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 27.



Figure S59. HSQC of compound 27.



Figure S60. HMBC of compound 27.



Figure S61. IR spectrum (KBr) of compound 28.



Figure S62. Mass spectrum of compound 28.



Figure S63. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 28.



Figure S64. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 28.



Figure S65. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 28.



Figure S66. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 28.



Figure S67. HSQC of compound 28.



Figure S68. HMBC of compound 28.



Figure S69. IR spectrum (KBr) of compound 29.



Figure S70. Mass spectrum of compound 29.


Figure S71. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 29.



Figure S72. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound **29**.



Figure S73. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 29.



Figure S74. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 29.



Figure S75. IR spectrum (KBr) of compound 30.



Figure S76. Mass spectrum of compound 30.



Figure S77. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound **30**.



Figure S78. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 30.



Figure S79. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 30.



Figure S80. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 30.



Figure S81. HSQC of compound 30.



Figure S82. HMBC of compound 30.



Figure S83. IR spectrum (KBr) of compound 31.



Figure S84. Mass spectrum of compound 31.



Figure S85. ¹H NMR spectrum (600.00 MHz, CDCl₃) of compound 31.



Figure S86. Expanded ¹H NMR spectrum (600.00 MHz, CDCl₃) of compound 31.



Figure S87. ¹³C NMR spectrum (150.0 MHz, CDCl₃) of compound 31.



Figure S88. Expanded ¹³C NMR spectrum (150.0 MHz, CDCl₃) of compound 31.



Figure S89. HSQC of compound 31.



Figure S90. HMBC of compound 31.



Figure S91. IR spectrum (KBr) of compound 32.



Figure S92. Mass spectrum of compound 32.



Figure S93. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 32.



Figure S94. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 32.



Figure S95. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 32.



Figure S96. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 32.



Figure S97. HSQC of compound 32.



Figure S98. HMBC of compound 32.



Figure S99. IR spectrum (KBr) of compound 33.



Figure S100. Mass spectrum of compound 33.



Figure S101. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 33.



Figure S102. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 33.



Figure S103. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 33.



Figure S104. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 33.



Figure S105. HSQC of compound 33.



Figure S106. HMBC of compound 33.



Figure S107. IR spectrum (KBr) of compound 34.



Figure S108. Mass spectrum of compound 34.



Figure S109. ¹H NMR spectrum (600.00 MHz, CDCl₃) of compound 34.



Figure S110. Expanded ¹H NMR spectrum (600.00 MHz, CDCl₃) of compound 34.



Figure S111. ¹³C NMR spectrum (150.0 MHz, CDCl₃) of compound 34.



Figure S112. Expanded ¹³C NMR spectrum (150.0 MHz, CDCl₃) of compound 34.



Figure S113. HSQC of compound 34.



Figure S114. HMBC of compound 34.



Figure S115. IR spectrum (KBr) of compound 35.



Figure S116. Mass spectrum of compound 35.



Figure S117. ¹H NMR spectrum (600.00 MHz, CDCl₃) of compound 35.



Figure S118. Expanded ¹H NMR spectrum (600.00 MHz, CDCl₃) of compound 35.



Figure S119. ¹³C NMR spectrum (150.0 MHz, CDCl₃) of compound 35.



Figure S120. Expanded ¹³C NMR spectrum (150.0 MHz, CDCl₃) of compound 35.



Figure S121. HSQC of compound 35.



Figure S122. HMBC of compound 35.



Figure S123. IR spectrum (KBr) of compound 36.



Figure S124. Mass spectrum of compound 36.



Figure S125. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 36.



Figure S126. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 36.



Figure S127. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 36.



Figure S128. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 36.



Figure S129. HSQC of compound 36.



Figure S130. HMBC of compound 36.



Figure S131. IR spectrum (KBr) of compound 37.







Figure S133. ¹H NMR spectrum (400.00 MHz, DMSO- d_6) of compound 37.



Figure S134. Expanded ¹H NMR spectrum (400.00 MHz, DMSO- d_6) of compound **37**.



Figure S135. ¹³C NMR spectrum (100.0 MHz, DMSO-*d*₆) of compound **37**.



Figure S136. Expanded ¹³C NMR spectrum (100.0 MHz, DMSO-*d*₆) of compound 37.



Figure S137. IR spectrum (KBr) of compound 38.







Figure S139. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 38.



Figure S140. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 38.



Figure S141. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 38.



Figure S142. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 38.


Figure S143. HSQC of compound 38.



Figure S144. HMBC of compound 38.



Figure S145. IR spectrum (KBr) of compound 39.







Figure S147. ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound **39**.



Figure S148. Expanded ¹H NMR spectrum (400.00 MHz, CDCl₃) of compound 39.



Figure S149. ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound 39.



Figure S150. Expanded ¹³C NMR spectrum (100.0 MHz, CDCl₃) of compound **39**.



Figure S151. HSQC of compound 39.



Figure S152. HMBC of compound 39.