

**Supplementary Material S1. List of the 126 studies included in the narrative review, with their relative doi.**

**Total studies included from the databases (n=99)**

1. Kaprou, 2021 <https://doi.org/10.3390/antibiotics10020209>
2. Bortolaia, 2020 <https://doi.org/10.1093/jac/dkaa345>
3. Palavecino, 2020 [https://doi.org/10.1007/978-1-4939-9849-4\\_2](https://doi.org/10.1007/978-1-4939-9849-4_2)
4. Madhavan, 2021 <http://dx.doi.org/10.18502/ijm.v13i1.5489>
5. Kaya, 2019 <https://doi.org/10.18016/ksutarimdoga.vi.457495>
6. Mahmoud, 2019 <https://doi.org/10.1111/jam.14347>
7. Pilmis, 2019 <https://doi.org/10.1093/jac/dkz271>
8. Åkerlund, 2020 <https://doi.org/10.1093/jac/dkaa333>
9. Jasuja 2020 <https://doi.org/10.1007/s10096-020-04146-6>
10. Jasuja 2020 <https://doi.org/10.1007/s10096-020-03846-3>
11. Yoo, 2020 <https://doi.org/10.3343/alm.2020.40.1.57>
12. Kuo, 2020 <https://doi.org/10.7717/peerj.8963>
13. Cherkaoui 2021 <https://doi.org/10.1128/JCM.00777-21>
14. Cherkaoui 2020 <https://doi.org/10.1016/j.cmi.2019.11.008>
15. Al Rawahi 2019 <https://doi.org/10.1128/JCM.00994-19>
16. Khawaja, 2020 10.5455/JPMA.290732
17. Dupieux, 2020 <https://doi.org/10.1128/JCM.01346-19>
18. Kolesnik, 2021 <https://doi.org/10.1128/Spectrum.00462-21>
19. Becker, 2020 <https://doi.org/10.3389/fmicb.2020.568891>
20. Rodriguez-Sanchez 2019 <http://dx.doi.org/10.2807/1560-7917.ES.2019.24.4.1800193>
21. Yoon, 2021 <https://doi.org/10.3390/antibiotics10080982>
22. Welker, 2019 <https://doi.org/10.3389/fmicb.2019.02711>
23. Oviano, 2019 <https://doi.org/10.1128/CMR.00037-18>
24. Kim, 2019 <https://doi.org/10.3390/pathogens8040214>
25. Paskova, 2020 <https://doi.org/10.1007/s12223-020-00799-0>
26. Hu, 2019 <https://doi.org/10.3389/fmicb.2019.02504>
27. Nix, 2020 <https://doi.org/10.3389/fmicb.2020.00232>
28. Horseman, 2020 <https://doi.org/10.1016/j.diagmicrobio.2020.115093>
29. Flores-Treviño, 2019 <https://doi.org/10.1038/s41598-019-55430-1>
30. Liu, 2020 <https://doi.org/10.1002/rcm.8972>
31. Sanchez-Carrillo, 2019 <https://doi.org/10.1007/s10096-019-03595-y>
32. Boland, 2019 <https://doi.org/10.1186/s12879-019-4623-x>
33. Mizusawa, 2020 <https://doi.org/10.1080/14787210.2020.1760842>
34. Maurin, 2020 <https://doi.org/10.1007/s10096-020-03968-8>
35. Liu, 2020 <https://doi.org/10.1016/j.jmii.2020.07.021>
36. Liu, 2021 <https://doi.org/10.2147/IDR.S288991>
37. Brahama, 2019 <https://doi.org/10.1038/s41598-019-52557-z>
38. Boonsiri, 2020 <https://doi.org/10.1038/s41598-019-52557-z>
39. Goering, 2019 <https://doi.org/10.1128/AAC.00558-19>
40. Kime, 2019 <https://doi.org/10.1128/mBio.01755-19>
41. Gargis, 2020 <https://doi.org/10.1128/JCM.02038-19>
42. Dewar, 2019 <https://doi.org/10.1016/j.jhin.2019.08.002>
43. McHugh, 2020 <https://doi.org/10.1099/jmm.0.001171>
44. Drwiega, 2019 10.1097/IPC.0000000000000737
45. Titecat, 2021 <https://doi.org/10.3389/fmed.2021.553965>

46. Paonessa, 2019 <https://doi.org/10.1016/j.chest.2019.02.007>
47. Coppens, 2019 <https://doi.org/10.1186/s13756-018-0460-8>
48. Ayebare, 2019 <https://doi.org/10.1186/s12866-019-1566-8>
49. Boattini, 2020 <https://doi.org/10.1016/j.jhin.2019.12.025>
50. Sun, 2021 <https://doi.org/10.1007/s10096-021-04259-6>
51. Carroll, 2020 10.1128/JCM.01730-19
52. Hilda, 2019 10.1371/journal.pone.0219819
53. Buonomini, 2020 10.3390/diagnostics10100830
54. Galia, 2019 10.3934/microbiol.2019.2.138
55. McClure, 2020 <https://doi.org/10.3389/fmicb.2020.01295>
56. Shanmugakani 2020, <https://doi.org/10.1099/jmm.0.001159>
57. Kashani, 2020 10.5812/jjm.96682
58. Leikem, 2000 <https://doi.org/10.1007/s10096-019-03773-y>
59. Babiker, 2019 <https://doi.org/10.1016/j.jgar.2019.04.006>
60. Cunningham, 2020 <https://doi.org/10.1016/j.diagmicrobio.2020.115060>
61. Ransom, 2020 <https://doi.org/10.1093/clinchem/hvaa172>
62. Brown, 2019 <https://doi.org/10.1128/JCM.00858-19>
63. Blane, 2019 <https://doi.org/10.1093/jac/dkz170>
64. Raven, 2019 <https://doi.org/10.1128/JCM.00180-19>
65. Ho, 2019 <https://doi.org/10.1038/s41467-019-12898-9>
66. Han, 2020 <https://doi.org/10.1038/s41598-020-68855-w>
67. Potluri, 2020 <https://doi.org/10.1039/C9AN01959F>
68. Li, 2019 <https://doi.org/10.1007/s00604-019-3571-x>
69. Kochan, 2020 <https://doi.org/10.1021/acs.analchem.0c00474>
70. Ciloglu, 2020 <https://doi.org/10.1039/D0AN00476F>
71. Ciloglu, 2021 <https://doi.org/10.1038/s41598-021-97882-4>
72. Gill, 2019 <https://doi.org/10.1007/s00604-018-3186-7>
73. Reynoso, 2021 <https://doi.org/10.3390/chemosensors9080232>
74. Ozkaya, 2019 <https://doi.org/10.3390/diagnostics9040191>
75. Patel, 2021 <https://iopscience.iop.org/article/10.1149/1945-7111/abef85>
76. Mohamed, 2021 <https://doi.org/10.1021/acsnano.0c09902>
77. Oueslat, 2021 <https://doi.org/10.3390/chemosensors9050097>
78. Mahadhy, 2020 <https://doi.org/10.1016/j.btre.2020.e00568>
79. Ma, 2019 <https://doi.org/10.1039/C9LC00797K>
80. Pan, 2021 <https://doi.org/10.1039/D1AN00028D>
81. Suea-Ngam, 2021 <https://doi.org/10.1002/adhm.202001755>
82. Chen, 2021 <https://doi.org/10.1039/D1AN00350J>
83. Chen, 2020 <https://doi.org/10.1186/s13756-020-00774-x>
84. Meng, 2020 <https://doi.org/10.3389/fmicb.2020.01487>
85. Choopara, 2021 <https://doi.org/10.1021/acssensors.0c01405>
86. Maldonado, 2020 <https://doi.org/10.1039/C9AN01485C>
87. Amini, 2020 <https://doi.org/10.1080/17458080.2020.1775197>
88. Hilton, 2020 <https://doi.org/10.1039/C9AN01449G>
89. Neil, 2021 <https://doi.org/10.1038/s41598-021-97844-w>
90. Schulz, 2020 <https://doi.org/10.1039/D0LC00294A>
91. Khan, 2019 <https://doi.org/10.1007/s10529-018-02638-2>
92. Nemr, 2019 <https://doi.org/10.1021/acs.analchem.8b04792>
93. Toren, 2020 <https://doi.org/10.1039/D0LC00751J>
94. Wongthong, 2020 <https://doi.org/10.1007/s11274-019-2788-5>

95. Wu, 2021 <https://doi.org/10.1186/s13756-021-00967-y>
96. Ersoy, 2021 <https://doi.org/10.3390/antibiotics10091089>
97. Shanmugakani, 2020 <https://doi.org/10.1039/D0LC00034E>
98. Yi, 2020 <https://doi.org/10.1021/acsinfecdis.9b00260>
99. Brown, 2020 <https://doi.org/10.3390/v12060631>

#### **Additional studies identified from the references of the 99 included studies (n=27)**

1. Xu, 2016 <https://doi.org/10.1007/s11033-016-4062-3>
2. The European Committee on Antimicrobial Susceptibility Testing. Breakpoint tables for interpretation of MICs and zone diameters  
[https://www.eucast.org/fileadmin/src/media/PDFs/EUCAST\\_files/Breakpoint\\_tables/v\\_11.0\\_Breakpoint\\_Tables.pdf](https://www.eucast.org/fileadmin/src/media/PDFs/EUCAST_files/Breakpoint_tables/v_11.0_Breakpoint_Tables.pdf)
3. CLSI. Performance Standards for Antimicrobial Susceptibility Testing. 30th ed. CLSI supplement M100. Wayne, PA: Clinical and Laboratory Standards Institute; 2020.  
<https://www.nih.org.pk/wp-content/uploads/2021/02/CLSI-2020.pdf>
4. EUCAST reading guide 2021  
[https://www.eucast.org/fileadmin/src/media/PDFs/EUCAST\\_files/MIC\\_testing/Reading\\_guide\\_BMD\\_v\\_3.0\\_2021.pdf](https://www.eucast.org/fileadmin/src/media/PDFs/EUCAST_files/MIC_testing/Reading_guide_BMD_v_3.0_2021.pdf)
5. Perillaud, 2019 <https://doi.org/10.1016/j.diagmicrobio.2018.07.016>
6. Bauer, 1966 [https://doi.org/10.1093/ajcp/45.4\\_ts.493](https://doi.org/10.1093/ajcp/45.4_ts.493)
7. Jorgensen, 2009 <https://doi.org/10.1086/647952>
8. Eucast, 2019  
[https://www.eucast.org/fileadmin/src/media/PDFs/EUCAST\\_files/RAST/EUCAST\\_RAST\\_methodology\\_v1.1\\_Final.pdf](https://www.eucast.org/fileadmin/src/media/PDFs/EUCAST_files/RAST/EUCAST_RAST_methodology_v1.1_Final.pdf)
9. Idelevich, 2018 <https://doi.org/10.1016/j.cmi.2017.10.016>
10. Garcia-Alvarez, 2011 [https://doi.org/10.1016/S1473-3099\(11\)70126-8](https://doi.org/10.1016/S1473-3099(11)70126-8)
11. Dupieux, 2017 <https://doi.org/10.1128/JCM.00068-17>
12. Burckart, 2018 <https://doi.org/10.3389/fmicb.2018.01744>
13. Pancholi, 2018 <https://doi.org/10.1128/JCM.01329-17>
14. Lutgring, 2018 <https://doi.org/10.1128/JCM.01672-17>
15. Becker, 2018 <https://doi.org/10.3201/eid2402.171074>
16. Schwendener, 2017 <http://dx.doi.org/10.1038/srep43797>
17. Notomi, 2000 <https://doi.org/10.1093/nar/28.12.e63>
18. Hendriksen, 2019 <https://doi.org/10.3389/fpubh.2019.00242>
19. Butler, 2016 <https://doi.org/10.1038/nprot.2016.036>
20. Liu, 2016 <http://dx.doi.org/10.1038/srep23375>
21. van Belkum, 2018 <https://doi.org/10.3389/fmicb.2018.01437>
22. Hiramatsu, 2001 [https://doi.org/10.1016/S1473-3099\(01\)00091-3](https://doi.org/10.1016/S1473-3099(01)00091-3)
23. Becker, 2014 <https://doi.org/10.1128/CMR.00109-13>
24. Hall, 2016 <https://doi.org/10.1128/CMR.00062-05>
25. Pavlaki, 2013 <https://doi.org/10.1016/j.jgar.2013.06.005>
26. Buetti, 2017 <http://dx.doi.org/10.1136/bmjopen-2016-013665>
27. Urushibara, 2019 <https://doi.org/10.1093/jac/dkz406>