

DAFTAR PUSTAKA

- Akhter, S. 2015. Prevalence and Detection of AmpC β -Lactamases in Gram Negative Bacilli from BIHS Hospital, Mirpur, Dhaka. *Int. J. Res. Stud. Microbiol. Biotechnol.*, 1–6.
- Albuquerque, I., Silva, A.R., Carreira, M.S., Friões, F. 2019. *Proteus mirabilis* endocarditis. *BMJ Case Rep*, 10–12.
- Armbruster, C.E., Mobley, H.L.T., Pearson, M.M. 2018. Pathogenesis of *Proteus mirabilis* Infection. *EcoSal Plus.*, 8(1):1–123.
- Aryal, S.C., Upreti, M.K., Sah, A.K., Ansari, M., Nepal, K., Dhungel, B., Adhikari, N., Lekhak, B., Rijal, K.R. 2020. Plasmid-mediated AMPC β -lactamase CITM and DHAM genes among gram-negative clinical isolates. *Infect. Drug Resist.*, 13:4249–4261.
- Basavaraju, M., Gunashree, B.S. 2023. *Escherichia coli*: An Overview of Main Characteristics. In: *Escherichia coli - Old New Insights. IntechOpen*. Available at: <http://dx.doi.org/10.5772/intechopen.105508> diakses pada tanggal 13 Maret 2024.
- Bindu, D., Saikumar, C. 2022. Molecular Characterization of AmpC β -lactamases.pdf. *J Pure Appl Microbiol.*, 16(4):2783–2790.
- Cheung, D.A., Nicholson, A., Butterfield, T.R., DaCosta, M. 2020. Prevalence, co-infection and antibiotic resistance of *Escherichia coli* from blood and urine samples at a hospital in Jamaica. *J. Infect. Dev. Ctries.*, 14(2):146–152.
- Cui, X., Zhang, H., Du, H. 2019. Carbapenemases in Enterobacteriaceae: Detection and Antimicrobial Therapy. *Front. Microbiol.*, 10(August):1–12.
- D'Angelo, R.G., Johnson, J.K., Bork, J.T., Heil, E.L. 2016. Treatment options for extended-spectrum beta-lactamase (ESBL) and AmpC-producing bacteria. *Expert Opin. Pharmacother.*, 17(7):953–967.
- Dahlan, M.S. 2013. *Statistik untuk Kedokteran dan Kesehatan: Deskriptif, Bivariat, dan Multivariat, Dilengkapi Aplikasi dengan Menggunakan SPSS Edisi 3*. Jakarta: Penerbit Salemba Medika, pp: 35-41.
- Doi, Y., Potoski, B.A., Adams-Haduch, J.M., Sidjabat, H.E., Pasculle, A.W., Paterson, D.L. 2008. Simple disk-based method for detection of *Klebsiella pneumoniae* carbapenemase-type β -lactamase by use of a boronic acid compound. *J. Clin. Microbiol.*, 46(12):4083–4086.
- Elsherif, R., Ismail, D., Elawady, S., Jastaniah, S., Al-Masaudi, S., Harakeh, S., Karrouf, G. 2016. Boronic acid disk diffusion for the phenotypic detection of polymerase chain reaction-confirmed, carbapenem-resistant, gram-negative bacilli isolates. *BMC Microbiol.*, 16(1):1–8.
- Etemadi, S., Ebrahimzadeh Leylabadlo, H., Ghotaslou, R. 2020. AmpC β -lactamase

- among Enterobacteriaceae: A new insight. *Gene Reports*, 19, 100673.
- Gude, M.J., Seral, C., Sáenz, Y., González-Domínguez, M., Torres, C., Castillo, F.J. 2012. Evaluation of four phenotypic methods to detect plasmid-mediated AmpC β -lactamases in clinical isolates. *Eur. J. Clin. Microbiol. Infect. Dis.*, 31(8):2037–2043.
- Guerrero, E.R., Rodelas, J.C.C., Mari, J.M.N., Fernandez, J.G. 2022. Systematic Review of Plasmid AmpC Type Resistances in *Escherichia coli* and *Klebsiella pneumoniae* and Preliminary Proposal of a Simplified Screening Method for ampC. *Microorganisms*, 10:1–24.
- Gupta, G., Tak, V., Mathur, P. 2014. Detection of AmpC β Lactamases in Gram-negative Bacteria. *J. Lab. Physicians*, 6(01):001–006.
- Hafsan. 2014. *Mikrobiologi Analitik*. Makassar: Alauddin University Press, pp: 1–5.
- Hassan, A., Usman, J., Kaleem, F., Gill, M.M., Khalid, A., Iqbal, M., Ingram, P. 2013. Evaluation of Different Phenotypic Methods for Detection of Amp C Beta-Lactamase Producing Bacteria in Clinical Isolates. *J. Coll. Physicians Surg. Pakistan*, 23(9):629–632.
- Hidayati, S.N. 2016. Pertumbuhan *Escherichia coli* yang diisolasi dari Feses Anak Ayam Broiler terhadap Ekstrak Daun Salam (*Syzygium polyanthum* [Wight.] Walp.). *J. Med. Vet.*, 10(2):2007–2010.
- Ibrahim, M.E., Abbas, M., Al-shahrai, A.M., Elamin, B.K. 2019. Phenotypic Characterization and Antibiotic Resistance Patterns of Extended-Spectrum β -Lactamase- and AmpC β -Lactamase-Producing Gram-Negative Bacteria in a Referral Hospital, Saudi Arabia. *Can. J. Infect. Dis. Med. Microbiol.* [Preprint]. Available at <https://doi.org/10.1155/2019/6054694> diakses pada tanggal 8 Mei 2024.
- Inamdar, D.P., B, A. 2020. Phenotypic methods for detection of Amp C β lactamases in Gram negative clinical isolates of a tertiary care hospital. *Indian J. Microbiol. Res.*, 125–129.
- Ingram, P.R., Inglis, T.J.J., Vanzetti, T.R., Henderson, B.A., Harnett, G.B., Murray, R.J. 2011. Comparison of methods for AmpC β -lactamase detection in Enterobacteriaceae Printed in Great Britain. *J. Med. Microbiol.*, 60:715–721.
- Ishizuka, K., Takahashi, S., Anzai, J. 2006. Phenylboronic Acid Monolayer-Modified Electrodes Sensitive to Ribonucleosides. *Electrochemistry*, 74(8), 688–690.
- Jacoby, G.A. 2009. AmpC β -Lactamases. *Clin. Microbiol. Rev.*, 22(1):161–182.
- Jenkins, C., Rentenaar, R.J., Landraud, L., Brisse, S. 2017. Enterobacteriaceae. In: Infectious Diseases. In: *Infect. Dis. (Fourth Ed.)*, 1565–1578.e2. Available at: <https://doi.org/10.1016/B978-0-7020-6285-8.00180-5> diakses pada tanggal

12 Maret 2024.

- Jensen, B.H., Olsen, K.E.P., Struve, C., Krogfelt, K.A., Petersen, A.M. 2014. Epidemiology and clinical manifestations of enteroaggregative escherichia coli. *Clin. Microbiol. Rev.*, 27(3):614–630.
- Joji, R., Al-Mahameed, A., Jishi, T., Fatani, D., Saeed, N., Jaradat, A., Ezzat, H., Bindayna, K. 2021. Molecular detection of plasmid-derived AmpC β -lactamase among clinical strains of Enterobacteriaceae in Bahrain. *Ann. Thorac. Med.*, 287–293.
- Kamel, F.H., Jarjes, S.F. 2015. Essentials of Bacteriology and Immunology, (January 2015):1–213.
- Kolesnyk, A.S., Khairova, N.F. 2022. Justification for the Use of Cohen's Kappa Statistic in Experimental Studies of NLP and Text Mining. *Cybern. Syst. Anal.*, 58(2):280–288.
- Kurniawan, R., Darniati, D., Abrar, M., Fakhurrizi, F., Jalaluddin, M., Erina, E. 2023. Isolasi dan Identifikasi Bakteri Escherichia Coli Pada Produk Ceker Ayam Bakar Di Gampong Ulee Lheue Kota Banda Aceh. *J. Ilm. Mhs. Vet.*, 7(2):2–9.
- Linciano, P., Vicario, M., Kekez, I., Bellio, P., Celenza, G., Martín-Blecua, I., Blázquez, J., Cendron, L., Tondi, D. 2019. Phenylboronic acids probing molecular recognition against class A and class C β -lactamases. *Antibiotics*, 8(4).
- Ljubović, A.D., Granov, Đ., Husić, E., Gačanović, D., Halković, J., Čamdžić, A., Keser, Š.K., Zec, S.L. 2023. Prevalence of extended-spectrum β -lactamase and carbapenem-resistant Klebsiella pneumoniae in clinical samples. *Saudi Med. J.*, 801–807.
- Manyahi, J., Kibwana, U., Mgimba, E., Majigo, M. 2020. Multi-drug resistant bacteria predict mortality in bloodstream infection in a tertiary setting in Tanzania. *PLoS One*, 15(3):1–11.
- Martin, R.M., Bachman, M.A. 2018. Colonization , Infection , and the Accessory Genome of Klebsiella pneumoniae, 8(January):1–15.
- Meini, S., Tascini, C., Ceï, M., Sozio, E., Rossolini, G.M. 2019. AmpC β -lactamase-producing Enterobacterales: what a clinician should know. *Infection*, 363–375.
- Mol P, R., Bindayna, K.M., Shanthi, G. 2021. Evaluation of Two Phenotypic Methods for the Detection of Plasmid-Mediated AmpC β -Lactamases among Enterobacteriaceae Isolates. *J. Lab. Physicians*, 13(02):151–155.
- Najjuka, C.F., Kateete, D.P., Lodiongo, D.K., Mambo, O., Mocktar, C., Kayondo, W., Baluku, H., Kajumbula, H.M., Essack, S.Y., Joloba, M.L. 2020. Prevalence of plasmid-mediated AmpC beta-lactamases in Enterobacteria

- isolated from urban and rural folks in Uganda. *AAS Open Res.*, 3:1–17.
- Najmah, Ridwan, A., Idayanti, T., Emelda, Setianingtyas, D., Dwijastuti, N.M.S., Putra, S.P., Krihariyani, D., Aini, Parisihni, K. 2024. *Pengantar Mikrobiologi*. Purbalingga: Eureka Media Aksara, pp: 17-46.
- Pakbin, B., Bruck, W.M., Rossen, J.W.A. 2021. Virulence Factors of Enteric Pathogenic *Escherichia coli* : A Review. *Int. J. Mol. Sci.*, 22:9922.
- Partridge, S.R. 2015. Resistance mechanisms in Enterobacteriaceae. *Pathology*, 276–284.
- Pavani, P., Kumar, K., Rani, A., Venkatesu, P., Lee, M.J. 2021. The influence of sodium phosphate buffer on the stability of various proteins: Insights into protein-buffer interactions. *J. Mol. Liq.*, 331:115753.
- Pournaras, S., Poulou, A., Tsakris, A. 2010. Inhibitor-based methods for the detection of KPC carbapenemase- producing Enterobacteriaceae in clinical practice by using boronic acid compounds. *J. Antimicrob. Chemother.*, 65(7):1319–1321.
- Puspitaningrum, R., Adhiyanto, C., Solihin. 2018. *Genetika Molekuler dan Aplikasinya*. Jakarta: Universitas Negeri Jakarta, pp: 1-31.
- Rawy, D.K., El-Mokhtar, M.A., Hemida, S.K., Askora, A., Yousef, N. 2020. Isolation, Characterization and Identification of *Klebsiella Pneumoniae* From Assiut University Hospital and Sewage Water in Assiut Governorate, Egypt. *Assiut Univ. J. Bot. Microbiol.*, 49(2):60–76.
- Riley, L.W. 2020. Distinguishing Pathovars from Nonpathovars: *Escherichia coli*. *Microbiol. Spectr.*, 8(4):1–23.
- Rizi, K.S., Mosavat, A., Youssefi, M., Jamehdar, S.A., Ghazvini, K., Safdari, H., Amini, Y., Farsiani, H. 2020. High prevalence of blaCMY AmpC beta-lactamase in ESBL co-producing *Escherichia coli* and *Klebsiella* spp. clinical isolates in the northeast of Iran. *J. Glob. Antimicrob. Resist.*, 22:477–482.
- Robatjazi, S., Nikkhahi, F., Niazadeh, M., Amin Marashi, S.M., Peymani, A., Javadi, A., Kashani, A.H. 2021. Phenotypic Identification and Genotypic Characterization of Plasmid-Mediated AmpC β -Lactamase-Producing *Escherichia coli* and *Klebsiella pneumoniae* Isolates in Iran. *Curr. Microbiol.*, 2317–2323.
- Salvia, T., Dolma, K.G., Dhakal, O.P., Khandelwal, B., Singh, L.S. 2022. Phenotypic Detection of ESBL, AmpC, MBL, and Their Co-occurrence among MDR Enterobacteriaceae Isolates. *J. Lab. Physicians*, 14(03):329–335.
- Santiago, G.S., Gonçalves, D., da Silva Coelho, I., de Mattos de Oliveira Coelho, S., Neto Ferreira, H. 2020. Conjugative plasmidic AmpC detected in *Escherichia coli*, *Proteus mirabilis* and *Klebsiella pneumoniae* human clinical

- isolates from Portugal. *Brazilian J. Microbiol.*, 51(4):1807–1812.
- Schaffer, J.N., Pearson, M.M. 2015. *Proteus mirabilis* and Urinary Tract Infections. *Microbiol Spectr*, 3(5):212–263.
- Shaaban, M., Elshaer, S.L., Abd El-Rahman, O.A. 2022. Prevalence of extended-spectrum β -lactamases, AmpC, and carbapenemases in *Proteus mirabilis* clinical isolates. *BMC Microbiol.*, 22(1):1–13.
- Shagufta, R., Fomda, B., Gulnaz, B., Lubna, S., Jan, A., Mohd, S., Junaid, A. 2017. Prevalence of AmpC Beta-lactamase in Gram Negative Bacilli by Different Phenotypic Methods in a Tertiary Care Institute in Kashmir. *Br. J. Med. Med. Res.*, 19(2):1–9.
- Shawky, S.M., Abdallah, A., Khouly, M. 2015. Antimicrobial activity of colistin and tiegecycline against carbapenem-resistant *Klebsiella pneumoniae* clinical isolates in Alexandria, Egypt. *Int. J. Curr. Microbiol. Appl. Sci.*, 4(2):731–742.
- Tamma, P.D., Doi, Y., Bonomo, R.A., Johnson, J.K., Simner, P.J. 2019. A Primer on AmpC β -Lactamases: Necessary Knowledge for an Increasingly Multidrug-resistant World. *Clin. Infect. Dis.*, 1446–1455.
- Tian, X., Sun, S., Jia, X., Zou, H., Li, S., Zhang, L. 2018. Epidemiology of and risk factors for infection with extended-spectrum β -lactamase-producing carbapenem-resistant enterobacteriaceae: Results of a double case–control study. *Infect. Drug Resist.*, 11:1339–1346.
- Ting, S.M.V., Ismail, Z., Hanafiah, A. 2024. Prevalence of AmpC beta-lactamase and extended spectrum beta-lactamase co-producer in *Escherichia coli* and *Klebsiella* species in a teaching hospital. *Malays. J. Pathol.*, 46(1):79–89.
- Tondi, D., Calò, S., Shoichet, B.K., Costi, M.P. 2010. Structural study of phenyl boronic acid derivatives as AmpC β -lactamase inhibitors. *Bioorganic Med. Chem. Lett.*, 3416–3419.
- Utamy, G., Hasbi, M., Purwanto, E. 2021. Isolasi dan Identifikasi Bakteri Penghasil Biosurfaktan pada Kolam Anaerob IPAL Industri Minyak Sawit. *Sumberd. dan Lingkung. Akuatik*, 2(1):231–240.
- Wassef, M., Behiry, I., Younan, M., Guindy, N. El, Mostafa, S., Abada, E. 2014. Genotypic identification of AmpC β -lactamases production in gram-negative Bacilli isolates. *Jundishapur J. Microbiol*, 7(1):e8556.
- Zhou, Q., Tang, M., Zhang, X., Lu, J., Tang, X., Gao, Y. 2022. Detection of AmpC β -lactamases in gram-negative bacteria. *Heliyon*, 8 (12). Available at: <https://doi.org/10.1016/j.heliyon.2022.e12245> diakses pada tanggal 6 Mei 2024.
- Zhou, Y., Zhou, Z., Zheng, L., Gong, Z., Li, Y., Jin, Y., Huang, Y., Chi, M. 2023.

Urinary Tract Infections Caused by Uropathogenic *Escherichia coli*:
Mechanisms of Infection and Treatment Options. *Int. J. Mol. Sci.*, 24(13).