REFERENCES

Abd El-Rahim,W.M., Moawad, H., Hashem, M. M., Gebreil, G. M., Zakaria, M. 2020. Highly efficient fungal pectinase and laccase producers among isolates from flax retting liquor. *Biocatal Agric Biotechnol*. doi: 10.1016/j.bcab.2020.101570

Adriaenssens, N., Coenen, S., Versporten, A., Muller, A., Minalu, G., Faes, C., Vankerckhoven, V., Aerts, M., Hens, N., Molenberghs G. & Goossens, H. 2011. On behalf of the ESAC Project Group EuropeanSurveillance of Antimicrobial Consumption (ESAC): Outpatientantibiotic use in Europe and association with resistance: a cross-national database study (1997–2009). *J. Antimicrob*. Chemother.66(suppl 6): vi3-v12

Acharya, P.B., Acharya, D.K., Modi, H.A. 2008. Optimization for cellulaseproduction by Aspergillus niger using saw dust as substrate. *AfrJ Biotechnol*. 7(22):4147-52.

Adzitey, F. 2015. Antibiotic classes and antibiotic susceptibility of bacterial isolates from selected poultry; a mini review. *World Vet. J*. 5 (3):36-41

Agustien, A. 2010. *Protease Bakteri Termofilik*. Bandung: Unpad Press.

Akhmaloka, A., Suharto, A., Nurbaiti, S., Tika, I. N. & Warganegara, F. M. 2006. Ribotyping Identification of Thermophilic Bacterium from Papandayan Crater. *J. Eng. Technol. Sci*., 38(1): 1–10

Alharbi, S. A., Wainwright, M., Alahmadi, T. A., Salleeh, H. B., Faden, A. A., & Chinnathambi, A. 2014. What if Fleming had not discovered penicillin? *Saudi Journal of Biological Sciences*. 21, 283–293. https://doi.org/10.1016/j.sjbs.2013.12.007

Alkhalili, R.N., Bernfur, K., Dishisha, T., Mamo, G., Schelin, J., Canbäck, B., Emanuelsson, C., Hatti-Kaul, R. 2016. Antimicrobial protein candidates from the thermophilic Geobacillus sp. strain ZGt-1: Production, proteomics, and bioinformatics analysis. *Int. J. Mol. Sci*. 17, 1363

Amaliyah, N. 2017. *Penyehatan Makanan Dan Minuman*-A. Deepublish

Andrade, CMMC., Nei, P Jr. Antranikian, G. 1999. Extremelythermophilic microorganisms and their polymer hydrolyticenzymes. *Braz J Microbiol*. 30:287-98.

Aro, N., Ilmen, M., Saloheimo, A., Penttila, M. 2002. ACEI is a repressor ofcellulase and xylanase genes of Trichoderma reesei. *ApplEnviron Microbiol*. 69:56-65.

Baker-Austin, C., Dopson, M. 2007. Life in acid: pH homeostasis in acidophiles. *Trends Microbiol*. doi: 10.1016/j.tim.2007.02.005.

Başbülbül ., Özdemir, G., Biyik, H.H. 2012. Isolation and Characterization of a Bacteriocin-Like Substance Produced by Geobacillus toebii Strain HBB-247. *Indian J. Microbiol*., 52(1): 104–108

Berdy, J. 2005. Bioactive microbial metabolites. *Journal of Antibiotics (Tokyo)*, 58, 1–26. doi.org/10.1038/ja.2005.1

Bhattarai, K., Bastola, R., Baral, B. 2020. Antibiotic drug discovery: Challenges and perspectives in the light of emerging antibiotic resistance. *Advances in Genetics*. doi:10.1016/bs.adgen.2019.12.002

Boucher, H.W., Corey, G.R. 2008. Epidemiology of methicillin-resistant Staphylococcus aureus. *Clin Infect Dis*.

Broadbent et al.1971. Bacteria and actinomycetes antagonistic to fungal root pathogens in Australian soils. *Australian Journal of Biological Sciences*

Breijyeh, Z.,Jubeh, B., Karaman, R. 2020. Resistance of Gram-Negative Bacteria to Current Antibacterial Agents and Approaches to Resolve It. *Molecules*, 25, 1340

Calderon, C. B., Sabundayo, B. P. 2007. *Antimicrobial classifications: Drugs for bugs. In: Schwalbe R, Steele-Moore L & Goodwin AC (eds) Antimicrobial susceptibility testing protocols*. CRC Press, Taylor and Frances group. ISBN 978-0-8247-4100-6.

Cappuccino, J.G. dan N. Sherman. 2005. *Microbiology A Laboratory Manual (7th Edition*. Perason Education Inc. Publishing as Benjamin Cummings. San Fransisco.

Cappuccino, JG. dan Sherman, N. 2014. *Manual Laboratorium Mikrobiologi Edisi Kedelapan*. Alih Bahasa: Nur Miftahurrahman. Jakarta: EGC

Centers for Disease Control and Prevention (CDC). 2003. Outbreaks of community-associated methicillin-resistant Staphylococcus aureus skin infections. Los Angeles County, California, 2002-2003. *MMWR Morb Mortal Wkly Rep*. 07;52(5):88

Chaudary, Nazia., Shradda, Prabhu. 2016. Thermophilic Actinomycetes from Hot Water Spring Capable of Producing Enzymes of Industrial Importance. *International Journal of Research Studies in Biosciences.* doi.org/10.20431/2349-0365.0406005

Crowe, M. A., Power, J. F., Morgan, X. C. 2014. Pyrinomonas methylaliphatogenes gen. nov., sp. nov., a novel group 4 thermophilic member of the phylum

Acidobacteria from geothermal soils. *Int J Syst Evol Microbiol*. doi: 10.1099/ijs.0.055079-0.

Denyer, S. P., Hodges, N. A., German S. P. 2004. *Introduction topharmaceutical microbiology. In: Denyer SP, Hodges NA & GermanSP (eds.) Hugo and Russell's Pharmaceutical Microbiology*. 7th Ed.Blackwell Science, UK. Pp. 3-8.

Diggins, F. W. E. 1999. The true history of the discovery of penicillin, with refutation of the misinformation in the literature. *British Journal of Biomedical Science*, 56, 83–93.

Domagala, J. M. 1994. Structure-activity and structure-side-effect relationships for the quinolone antibacterials. *J. Antimicrob. Chemother*. 33:685-706

Dwidjoseputro. 1989. *Pengantar Fisiologi Tanaman*. Jakarta : PT. Gramedia Pustaka

Ebrahimipour, G. hossein., Khosravibabadi, Z., Sadeghi, H. & Aliahmadi, A. 2014. Isolation, Partial Purification and Characterization of an Antimicrobial Compound, Produced by Bacillus atrophaeus. *Jundishapur J. Microbiol*., 7(8)

Elazm, A.A., Abd El-Rahim, W.M., Moawad, H., Zaki S., Sedik, M.Z., Rostom, M. 2020. Bioremediation of hexavalent chromium widely discharged in leather tanning effluents. *Egypt. J. Chem*. doi: 10.21608/ejchem.2019.18457.2142.

El-Tarabily, K.A., and Sivasithamparam, K. (2006). Non-Streptomycete Actinomycetes as Biocontrol Agents of Soil-borne Fungal Plant Pathogens and As Plant Growth Promoters. *Soil Biology and Biochemistry*, 38: 1505-1520.

Etebu, E., Arikekpa, I. 2016. Antibiotics: Classification and mechanisms of action with emphasis on molecular perspectives. *Int. J. Appl*. Microbiol. Biotechnol. Res.

Etten JV., Cho, CH., Joon, HS., Bhattacharya, D. 2022. Extremophilic red algae as models for understanding adaptation to hostile environments and the evolution of eukaryotic life on the early earth. *Semin Cell Dev Biol*. doi: 10.1016/jsemcdb(2022)03007

Eyssen, H. J., Van den Bosch, J. F., Janssen, G. A., Vanderhaeghe, H. 1971. Specific inhibition of cholesterol absorption by sulfaguanidine. *Atherosclerosis*. 14 (2):181-192

Fadrian. 2023. *Antibiotik, Infeksi, dan Resistensi*. Andalas University Press. ISBN: 978-623-172-203-4

Febriani, Mulia A., Suzanni., Ellenia, Rakashiwi., Nurdin, Teuku., M. Iqbalsyah. 2024. Polypeptide Antibiotic Produced by a Thermo-Halophilic Bacterium

from Pria Laot Sabang 76 Isolate. *Jurnal Riset Kimia*. doi: 10.25077/jrk.v15i1.634

Frank, U., Tacconelli, E. 2012. *The Daschner Guide to In-Hopsital Antibiotic Therapy*. European standards.

Gallo, M., and Katz, E. 1972. Regulation of secondary metabolite biosynthesis: catabolite repression of phenoxazinone synthase and actinomycin formation by glucose. *J. Bacteriol*. 109, 659–667.

Garrity, G. M., J.A. Bell., and T.G. Lilburn. 2004. Taxonomic Outline of the Prokaryotes. in Berge's Manual of Systematic Bacteriology. *Springer*. New York

Grégoire, P., Bohli, M., Cayol, J.-L., Joseph, M., Guasco, S., Dubourg, K., Cambar, J. 2011. Caldilinea tarbellica sp. a filamentous, thermophilic, anaerobic bacterium isolated from a deep hot aquifer in the Aquitaine Basin. *Int. J. Syst. Evol. Microbiol*., 61(6): 1436–1441 (2011)

Heesemann, J. 1993. Mechanisms of resistance to beta-lactam antibiotics. *Infection*. 21(1):S4-9.

Hibbing, M. E., Fuqua, C., Parsek, M. R., & Peterson, S. B. 2010. Bacterialcompetition: surviving and thriving in the microbial jungle. *Nat Rev Microbiol* 8, 15–25. https://doi.org/10.1038/nrmicro2259

Hudzicki,J.2009. Kirby-Bauer Disk Diffusion Susceptibility Test Protocol. *American Society for Microbiology*

Hussain, M. Y., Ali-Nizam, A. A., & Abou-Isba, S. M. 2017. Antibacterial Activities (Bacitracin and Polymyxin B) of Lyophilized Extracts from Indigenous Bacillus subtilis Against Staphylococcus aureus.

Junge, K., Christner, B., Staley, JT. 2011. Diversity of Psychrophilic Bacteria from Sea Ice—and Glacial Ice Communities In: Horikoshi K (eds) Extremophiles Handbook. *Springer*, Tokyo. 10.1007/978-4-431-53898-1_39

Kaper, J.B., Nataro, J.P., Mobley, H.L. 2004. Pathogenic Escherichia coli. Nat Rev *Microbio*l. 2004;2:123–140. doi: 10.1038/nrmicro818

Kaur, H., Onsare, J. G., Sharma, V. & Arora, D. S. 2015. Isolation, purification and characterization of novel antimicrobial compound 7-methoxy-2,2-dimethyl-4-octa-4′,6′-dienyl-2H-napthalene-1-one from Penicillium sp and its cytotoxicity studies. *AMB Express*, 5(1): 40

Khalil, A. 2011. Screening and characterization of thermophilic bacteria (lipase cellulase and amylase producers) from hot springs in Saudi Arabia. *J Food Agri Environ*. 9:672–675.

Kusumawati, N., Bettysri, LJ., Siswa, S., Ratihdewanti., Hariadi. 2008. Seleksi Bakteri Asam Laktat Indigenous sebagai Galur Probiotik dengan Kemampuan Menurunkan Kolesterol. *Jurnal Mikrobiologi Indonesia*. 2(1) :120-128.

Kurahman, O.T., Yuliawati A., HaerunnisaL., Supriyatna, A., Cahyanto, T.,Suryani Y., Supriadin, A., Hidayat,C., Masri, M. 2020. The isolation andidentification bacteria on jallalahanimal (study on the feeding tilapia(Oreochromis niloticus) with chickenmanure as foods. *Elkawnie: Journalof Islamic Science and Technology*.6(2): 222-236

Leston, S., Nunes, M., Rosa, J. 2014. Prospection, collection, and preservation of marine samples. In: Rocha-Santos T, Duarte AC, et al., editors. Analysis of marine samples in search of bioactive compounds. *Elsevier*;.

Lewis, K. 2013. Platform untuk Penemuan Antibiotik. Nat. Rev. *Drug Discovery*. 12, 371–387. 10.1038/nrd3975

Li, J., dkk. 2021. Penguraian limbah pertanian menggunakan bakteri termofilik. *Jurnal Ilmu Pertanian*, 15(2), 45–60.

Liu, X., Wang, M., Nie, Y., & Wu, X.-L. (2021). Successful microbial colonization of space in a more dispersed manner. *ISME Communications*, 1(1), 1–10. https://doi.org/10.1038/s43705-021-00063-7

Ligon, B. L. 2004. Penicillin: Its discovery and early development. Seminars in Pediatric *Infectious Diseases*, 15, 52–57. https://doi.org/10.1053/j.spid.2004.02.001.

Lowy, F.D. 1998. Staphylococcus aureus infections. *N Engl J Med*. Aug 20;339(8):520-3

MacElroy, R.D. 1974. Some comments on the evolution of extremophiles. *Biosystems*. doi: 10.1016/0303-2647(74)90026-4

Madigan, M.T., J.M.Martinko, dan J.Parker. 2000. *Brock Biology of Microorganism*. Prentice Hall Inc. New Jersey.

Madigan, M. T., Martinko, J. M., 2006. *Brock biology of microorganisms.* 11th edition. Pearson Prentice Hall Inc.

Mahajan, G. B., Balachandran, L. 2012. Antibacterial agents from actinomycetes - a review. *Front Biosci. (Elite Ed)*. 4:240-253.

Marsh, W.S., Heise, B.W., Krzmarzick, M.J. 2021. Isolation and characterization of a halophilic Modicisalibacter sp. strain Wilcox from produced water. *Sci Rep*. doi: 10.1038/s41598-021-86196-0

Martin, A., McMinn, A. 2018. Sea ice, extremophiles and life on extra-terrestrial ocean worlds. *Int J Astrobiol*. 17(1):1–16. doi: 10.1017/S1473550416000483

Martins, A., Tenreiro, T., Andrade, G. 2013. Photoprotective bioactivity present in a unique marine bacteria collection from portuguese deep sea hydrothermal vents. *Mar Drugs*. 11:1506–1523. doi: 10.3390/md11051506.

McGeer, A., Fleming, C. A., Gree K., Low, D. E. 2001. Antimicrobial resistance in Ontario: Are we making progress? Laboratory Proficiency Testing Program *Newsletter*. 293:1-2.

McMurry, J. 2016. Organic chemistry. *Cengage Learning*.

Medical News Today. 2015. *Antibiotics: How do antibiotics work?* MediLexicon International Ltd. Bexhill-on-sea UK.

Melton-Celsa, A.R., Darnell, S.C., O'Brien, A.D. 1996. Activation of Shiga-like toxins by mouse and human intestinal mucus correlates with virulence of enterohemorrhagic Escherichia coli O91:H21 isolates in orally infected, streptomycin-treated mice. *Infect Immun*. 64:1569–1576. doi: 10.1128/iai.64.5.1569-1576.1996.

Mohammad, B.T., Al Daghistani, H.I., Jaouani, A. 2017. Isolation and characterization of thermophilic bacteria from Jordanian hot springs: Bacillus licheniformis and Thermomonas hydrothermalis isolates as potential producers of thermostable enzymes. *Int J Microbiol*. 6943952. doi: 10.1155/2017/6943952

Morales, G., Sierra, P., Mancilla., Parade, A., Loyola, L.A., Gallardo, O., Borquez, J. 2003. Secondary Metabolites from Four Medicinal Plants from Northern Chile, Antimicrobial Activity, and Biotoxicity against Artemia salina. *Journal Chile Chem*. 48 (2)

Muqarramah,M., Agustien, A., Alamsjah, F. 2023. Isolation,Screening and Partial Characterization of Thermophilic Bacteria Producing Protease From Bukik Gadang Hot Springs, Solok Regency. *International Journal of Progressive Science and Technology*.

Musikasang H, Sohsomboon N, Tani A, Maneerat S. 2012. Bacteriocinproducing lactic acid bacteria as a probiotic potential from Thai indigenous chickens. Czech J Anim Sci 57 (3): 137-149. DOI: 10.17221/5568-CJAS.

Nadell, C. D., Drescher, K., & Foster, K. R. (2016). Spatial structure, cooperation and competition in biofilms. *Nature Reviews Microbiology*, 14(9), 589–600. https://doi.org/10.1038/nrmicro.2016.84

Nam et al. 2004. Galaktosidase gene of Thermus thermophilus KNOUC 112 isolated from hot springs of a volcano area in New Zealand: identification of bacteria,

cloning, and expression of the gene in Escherichia coli. *J Anim Sci* 17:1591-1598

Narsing, Rao, M.P., Dong, Z.Y., Luo, Z.H. 2021. Physicochemical and microbial diversity analyses of Indian hot springs. *Front Microbiol*. 12:627200. doi: 10.3389/fmicb.2021.627200

Narsing, Rao, M.P., Liu, L., Jiao, J.Y. 2018. Hot springs of India: occurrence and microbial diversity. In: Egamberdieva D, Birkeland, NK, Panosyan H, Li WJ (eds) Microorganisms for sustainability. Singapore, *Springer,* vol 8, pp 29–55

Nataro, J.P., Kaper, J.B. 1998. Diarrheagenic Escherichia coli. *Clin Microbiol Rev*. 11:142–201. doi: 10.1128/cmr.11.1.142.

Oliveira, K.S., Lima, L.A., Cobacho, N. B., Dias, S.C., Franco, O. L. 2016. *Chapter 2. Mechanisms of Antibacterial Resistance: Shedding Some Light on These Obscure Processes? In: Kon K, Rai M. Antibiotic Resistance: Mechanisms and New Antimicrobial Approaches*. p. 19-32.

O'Neill, J. 2022. Tackling drug-resistant infections globally: final report and recommendations..

Peterson, L. R. 2008. Currently available antimicrobial agents and their potential for use as monotherapy. *Clin Microbial. Infect*. 14(6):30-45.

Pikuta, E.V., Hoover, R.B., Tang.J. 2007. Microbial extremophiles at the limits of life. *Crit Rev Microbiol*. 33:183–209. doi: 10.1080/10408410701451948

Ramesha V, Deeksha Raj N. 2019. Production of secondary metabolites. *Pharma Innovation*;8(12):46-48.

Rangel, J.M., Sparling, P.H., Crowe, C., Griffin, P.M., Swerdlow, D.L. 2005. Epidemiology of Escherichia coli O157:H7 outbreaks, United States, 1982–2002. *Emerg Infect Dis.* 11:603–609. doi: 10.3201/eid1104.040739

Rasigade, J.P., Vandenesch, F. 2014. Staphylococcus aureus: a pathogen with still unresolved issues. *Infect Genet Evol*. 21:510-4.

Rekadwad, B., Pathak, A. 2016. First report on revelatory prokaryotic diversity of Unkeshwar hot spring (India) having biotechnological potential. *Indian J Biotechnol*. 15:195–200.

Rotter, A., Barbier, M., Bertoni, F. 2021. The essentials of marine biotechnology. *Front Marine Sci*. 2021;8:629629. doi: 10.3389/fmars. 629629.

Ruhe, J. J., Manson T., Bradsher R. W., Menon A., 2005. Use of long acting tetracyclines for Methicillin-Resistant infections: Caseseries and Review of literature. *Clinical InfectiousDiseases*, : 1429-1434

Russell, A. D. 2004. *Types of antibiotics and synthetic antimicrobialagents. In: Denyer S. P., Hodges N. A. & German S. P. (eds.) Hugoand Russell's pharmaceutical microbiology*. 7th Ed. Blackwell Science,UK. Pp. 152-186

Saghatelyan, A., Margaryan, A., Panosyan, H., Birkeland, N.K. 2014. Microbial diversity of terrestrial geothermal springs in Armenia and Nagorno-Karabakh: a review. *Springer*

Salano, O.A., Makonde, HM., Kasili, R.W. 2021. Diversity and distribution of fungal communities within the hot springs of soda lakes in the Kenyan rift valley. *Afri J Microbiol Res*. doi: 10.3390/microorganisms9071473.

Sanchez, A. R., Rogers, R. S. & Sheridan P. J. 2004. Tetracycline and other tetracycline-derivative staining of the teeth and oral cavity. *Int. J. Dermatol*. 43(10):709-715.

Sánchez, L. A., Sierra, M. G., Siñeriz, F. &Delgado, O. 2013. Andrimid production at low temperature by a psychrotolerant Serratia proteamaculans strain. World *J. Microbiol. Biotechnol*., 29(10): 1773–1781

Sawale, A. A., Kadam, T. & Mitkare, S., 2013. Isolation and characterization of secondary metabolites from halophilic bacillus species from marin drive in mumbai. J. Appl. Pharm. Sci., 3: 182–188 (2013)

Schlegel, H. G. 2003. *General microbiology*. 7th Ed. CambridgeUniversity Press, Cambridge University. Press, UK. United StatesPharmacopeia. USP-62

Schneider, E,K., Felisa Reyes-Ortega., Tony, Velkov., Jian, Li. 2017. Antibiotic–non-antibiotic combinations for combating extremely drug-resistant Gram-negative 'superbugs'. *Essays in Biochemistry*. DOI: 10.1042/EBC20160058

Simandjuntak,S., Mokosuli Yermia Samuel. 2018. Isolation and Identification of Thermophilic Bacteria,Producer of Amylase Enzyme, from Lake Linow,North Sulawesi. *Journal of pure and applied Microbiology*. Vol. 12(2), p. 543-554

Singh, P., Jain, K., Desai, C. 2019. Chapter 18—microbial community dynamics of extremophiles/extreme environment. In: *Microbial Diversity in the Genomic Era*, pp 323–332. 10.1016/B978-0-12-814849-500018-6

Stetter, K.O. 1999. Extremophiles and their adaptation to hot environments. *FEBS Lett*. 452(1–2):22–25. doi: 10.1016/S0014-5793(99)00663-8.

Straub, C.T, Counts, J.A., Nguyen, D.M.N, Wu, CH., Zeldes, BM., Crosby, JR., Conway J.M., Otten, J.K., Lipscomb, G.L, Schut, G.J, Adams, MWW., Kelly RM. 2018. Biotechnology of extremely thermophilic archaea. *FEMS Microbiol Rev*. 42(5):543–578. doi: 10.1093/femsre/fuy012.

Sykes, R. B., Cimarusti, C. M., Bonner, D. P., Bush, K., Floyd, D. M., Georgopapadakou, N. H., Koster, W. H., Liu, W. C., Parker, W. L., Principe P. A., Rathnum, M. L., Slusarchyk, W. A., Trejo, W. H. & Wells, J. S. 1981. Monocyclic β-lactam antibiotics produced by bacteria. *Nature*. 291:489-491

Sudarsono, A. 2008. Isolasi dan Karakterisasi Bakteri pada Ikan Laut dalam Spesies Ikan Gindara (Lepidocibium flavobronneum). *Skripsi*. Institut Pertanian Bogor. Bogor.

Sumilat, D. A. 2019. Skrining Aktivitas Antibakteri Beberapa Jenis Spons Terhadap Pertumbuhan Strain Bakteri Staphylococcus aureus, Escherichia coli, Staphylococcus saprophyticus, dan Pseudomonas aeruginosa. *Jurnal Ilmiah Platax*, 7(2), 455–461.

Takami, H., Nishi, S., Lu, J., Shimamura, S., and Takaki, Y. 2004. "Genomic characterization of thermophilic Geobacillus species isolated from the deepest sea mud of the Mariana Trench." *Extremophiles*. 8:351-356.

Takano, E. 2006. γ-Butyrolactones: Streptomyces signalling molecules regulating antibiotic production and differentiation. *Current Opinion in Microbiology*, 9(3), 287–294.

Talaro, K. P., Chess, B. 2008. *Foundations in microbiology*. 8 Ed. McGraw Hill, New York.

Tan, S. Y., Tatsumura, Y. 2015. Alexander Fleming (1881–1955): Discoverer of penicillin. *Singapore Medical Journal*, 56, 366–367. https://doi.org/10.11622/smedj. 2015105.

Toy, T., S., S, Lampus, B., S., Hutagalung, S., P. 2015. Uji daya hambat ekstrak rumput laut Gracilaria SP terhadap pertumbuhan Bakteri Staphylococcus aureus. Fakultas Kedokteran Universitas Sam Ratulangi. Manado. *Jurnal e-GiGi (eG)* Vol 3(1) 153-159

Tracey, A., Taylor., Chandrashekhar, G., Unakal. 2023. *Staphylococcus aureus Infection. Treasure Island (FL)*: StatPearls Publishing

Vahdatzadeh, M., Shams-Ghahfarokhi, M., Razzaghi-Abyaneh, M., & Teimoori-Toolabi, L. 2021. Role of ROS signaling in triggering penicillin and cephalosporin production in filamentous fungi. *Biotechnology and Applied Biochemistry*, 68(1), 153–161. https://doi.org/10.1002/bab.2019

Van, Hoek A. H. A. M., Mevius D., Guerra B., Mullany P., Roberts A. P. & Aarts H. J. M. 2011. Acquired antibiotic resistance genes: An overview. *Front. Microbiol.* 2:203 doi: 10.3389/fmicb.2011.00203.

Walsh, Christopher. 2016. Antibiotics: Challenges, Mechanisms, Opportunities. *ASM Press*. LCCN 201504045498

Wang, S., Hou, W., Dong, Hl. 2013L Control of temperature on microbial community structure in hot springs of the Tibetan Plateau. *PLoS ONE*. 8:e62901. doi: 10.1371/journal.pone.0062901.

White, D., Cox, E. 2013. Fighting the impact of antibiotic-resistance. *FDA Consumer health Information.*

World Health Organization, 2017. Prioritization of pathogens to guide discovery, research and development of new antibiotics for drug resistant bacterial infections, including tuberculosis, Essential medicines and health products. *World Health Organization*. https://doi.org/WHO reference number: WHO/EMP/IAU/2017.12

Wright, G. D. 2010. Q & A: Antibiotic resistance: Where does it come from and what can we do about it? *BMC Biol*. 8:123. doi.org/10.1186/1741-7007-8-123

Xu, X. 2014. Ciliates in extreme environments. *J Eukary Microbiol*. 61:410–418. doi: 10.1111/jeu.12120

Zgonik, V., Mulec, J., Eleršek, T. 2021. Extremophilic Microorganisms in Central Europe. *Microorganisms*. 2021;9:2326. doi: 10.3390/microorganisms9112326.

Zhang, R, Naughton, D.P. 2010. Vitamin D in health and disease: currentperspectives. *Nutr J*. 9:65. doi: 10.1186/1475-2891-9-65, PMID 21143872

Zhu, D., Adebisi, W.A., Ahmad, F., Sethupathy, S., Danso, B., Sun, J. 2020. Recent Development of Extremophilic Bacteria and Their Application in Biorefinery. *Front Bioeng Biotechnol*. 8:483. doi: 10.3389/fbioe.2020.00483