

REFERENCES

A

- Abbassi, G. S. M., Shokoohizadeh L, Rashidi N, Tajbakhsh E. (2017). Molecular Analysis of *Pseudomonas aeruginosa* Strains Isolated from Burn Patients by Repetitive Extragenic Palindromic-PCR (rep-PCR), Iran Red Crescent Med J.; 19(4): e43508.
- Abozahraa Rania, El-Khollyb Mohammed A., Baraka Kholoud. (2021). Virulence genotyping of drug resistant *Pseudomonas aeruginosa* clinical isolates in Egypt using multiplex PCR. Gene Reports; 22: 101000.
- Acharya A. & Paterson D. (2002). *Pseudomonas aeruginosa*. in: Yu V Weber R Raoult D Antimicrobial therapy and vaccines. Apple Trees Productions, LLC, New York: 549-592.
- Afessa B., Green B. (2000). Bacterial pneumonia in hospitalized patients with HIV infection: the pulmonary complications, ICU support, and prognostic factors of hospitalized patients with HIV (PIP) study. Chest. 117(4):1017–1022.
- Afshari A., Pagani L., Harbarth S. (2012). Year in review 2011: critical care–infection. Crit Care; 16:242.
- Akash Deep, R. Ghildiyal, S. Kandian, N. Shinkre, (2004). Clinical and Microbiological Profile of Nosocomial infections in the Pediatric intensive care Unit. Indian Pediatr. 41:1238- 1246.
- Akerlund E, Huss FR, Sjoberg F. (2007). Burns in Sweden: an analysis of 24,538 cases during the period 1987-2004. Burns; 33:31-6.

- Akingbade OA, Balogun S., Ojo DA *et al.* (2012). Plasmid profile analysis of multidrug resistant *Pseudomonas aeruginosa* isolated from wound infections in South West, Nigeria. *World Applied Sci J*.
- Al- Shammaa Noor Fouad Kadhimi. (2016). Virulence genes profile of *Pseudomonas aeruginosa* local isolates from burns and wounds, Ph. D. thesis the College of Science/ University of Baghdad, College of Science, department of Biology.
- Al-Azzawi Shahla Najm Abed. (2018). Molecular study of *Pseudomonas aeruginosa* resistance that isolated from Wounds and burns treated with antiseptics. College of Education for Pure Sciences/ Ibn Al-Haitham/ Department of Biology/ University of Baghdad, Master thesis.
- AL-Fatlawi Ali A.A. and Al-Dahhan Hawraa A. A. (2015). Isolation and antibiotic resistance of *P. aeruginosa* isolated from upper respiratory tract infection in Najaf governorate, Al-Kufa University Journal for Biology; 7(3): 225.
- Alhazmi, Alaa (2015). *Pseudomonas aeruginosa* – Pathogenesis and Pathogenic Mechanisms. International Journal of Biology. Vol.7, No. 2.
- Ali J, Rafiq QA, Ratcliffe E. (2018). Antimicrobial resistance mechanisms and potential synthetic treatments. *Future Sci OA*. 4(4): FSO290.
- Alice S. Prince. (2012). In Principles and Practice of Pediatric Infectious Diseases (Fourth Edition).
- Alina, H., Mariana, C., Ani Ioana, C., Coralia, B., Alexandru, M. and Veronica, L. (2013). Virulence markers in *Pseudomonas aeruginosa* isolates from Hospital acquired infections occurred in patients with

underlying cardiovascular disease. Romanian Biotechnological Letters, 18 (6): 8843- 8854.

- Aljebory Ibraheem Salih. (2018). PCR Detection of Some Virulence Genes of *Pseudomonas aeruginosa* in Kirkuk city, Iraq. J. Pharm. Sci. & Res., 10(5):1068-1071.
- Al-Kaaby Wafaa A. J. (2015). Molecular Detection of Virulence Factors Genes in *Pseudomonas aeruginosa* Isolated from Different Infections Cases in Al-Diwaniya Hospital. Al-Qadisiyah Journal of pure science, 2(20): 53-58.
- AL-Kaisse Asmaa A., AL-Thwani Amina N., AL-Segar Rabab Q. (2015). Incidence and Antibiotics Sensitivity of Multidrug-Resistance of *Pseudomonas aeruginosa* Isolated from Burn's Patients and Environmental Samples from Three Hospitals in Baghdad, Journal of Biotechnology Research Center, Vol. 9 No.2: 67.
- Al-Khafaji N. (2014). Molecular study of some virulence factors among *Pseudomonas aeruginosa* recovered from burn infection, International Journal of Medicine.4 (3): 71-80.
- Allegranzi B., Luzzati R., Luzzani A. (2002). Impact of antibiotic changes in empirical therapy on antimicrobial resistance in intensive care unit-acquired infections. J Hosp Infect.; 52(2):136–140.
- AL-Mayyahi Anmar W., AL-Hashimy Ashwak B. and AL-Awady Khalid R. (2018). Molecular detection of *exoU* and *exoS* among *Pseudomonas aeruginosa* isolates from Baghdad and Wasit, Iraq. Iraqi Journal of Biotechnology, 17 (1): 1-8.
- AL-Rubaye Mustafa Riyadh Salman, Evren Yildiztugay, Ahmed Uysa, Mohammed Taghreed Khudhur, Abdullah Hanna N. (2020). Molecular

detection of virulent *exoU* mutation of *Pseudomonas aeruginosa* isolated from wound and burn samples, EurAsian Journal of BioSciences, 14: 2811-2816.

- Al-Saray, Zahraa Abdul Kareem Kadhem. (2016). Effect of Gama Irradiation on some virulence factors and Multidrug Resistance of Bacteria Isolated from Burn and Wound Infections. M.Sc. thesis, College of Science, AL Mustansiriyah University. 103.
- Al-Taie Lazim H., Hassan Sawsan, Al-Mayah Kasim Sh., Talib Saba. (2014). Isolation and Identification of Bacterial Burn Wound Infection and Their Sensitivity to Antibiotics, Al- Mustansiriyah J. Sci. Vol. 25, No 2: 17.
- Altoparlak U., Erol S., Akcay MN, Celebi F., Kadanali A. (2004). The time-related changes of antimicrobial resistance patterns and predominant bacterial profiles of burn wounds and body flora of burned patients. Burns 30(7):660-4.
- Anderson D., Schmalzer K., Sato H., Casey M., Terhune S., Haas A., Feix J., Frank D. (2011). Ubiquitin and ubiquitin-modified proteins activate the *Pseudomonas aeruginosa* T3SS cytotoxin, *ExoU*. Mol. Microbiol.; 82:1454–1467.
- Antônio, J. R., Mario, R.O., Renan, R.R., Maria, V. L., Francisco, L. L., Soraya, L.R. (2019). *Pseudomonas aeruginosa*: Virulence Factors, Antibiotic Resistance Genes Brazilian Archives of Biology, and Technology, 62: e19180503.
- Augustine Haley, Gillis Joshua A, Jason Williams Jason Williams. (2015). *Pseudomonas aeruginosa* wound infections: a critical appraisal of topical antiseptics, Dalhousie Medical Journal 42(1):13-17.

- Azam Mohd W, Khan Asad U. (2019). Updates on the pathogenicity status of *Pseudomonas aeruginosa*, Drug Discov Today; 24(1):350-359.
- Alnour, T. M., & Ahmed-Abakur, E. H. (2017). Multidrug resistant *Pseudomonas (P) aeruginosa*: Medical impact, pathogenicity, resistance mechanisms and epidemiology. *JSM Microbiology*, 5(3): 1046.
- Al-Ahmadi G Jami and Roodsari Zahmatkesh R (2016). Fast and specific detection of *Pseudomonas aeruginosa* from other pseudomonas species by PCR, The Annals of Fires and Burn Disaster 29(4):264-267.
- Al-Shwaikh, R., & Alornaaouti, A. (2018). Detection of *tox A* gene in *Pseudomonas aeruginosa* that isolates from different clinical cases by using PCR. Ibn AL- Haitham Journal for Pure and Applied Science, 26-30. doi:10.30526/2017.IHSCICONF.1767
- Aneja K.R (2003), Experiments in Microbiology, Plant Pathology and Biotechnology, fourth revised edition, New Age International (P) limited, Ansari road, Daryaganj, New Delhi-110002.

B

- Babu, A.; Reddy,B.; Anuradha,C.H. and Chandrasekar,P.(2014). Hand book for Microbiology Practice in Oral and Maxillofacial Diagnosis. Bloomington.
- Badr RI, El-Nagdy M, El-Sabagh A, El-Din AB. (2008). *Pseudomonas aeruginosa* Exotoxin A as a Virulence Factor in Burn Wound Infections.
- Bagge N., Hentzer M., Andersen J. B., Ciofu O., Givskov M., Høiby N. (2004a). Dynamics and spatial distribution of beta-lactamase

- expression in *Pseudomonas aeruginosa* biofilms. *Antimicrob. Agents Chemother.* 48, 1168–1174. 10.1128/AAC.48.4.1168-1174.
- Bahaa El –Din, A.; El-Nagdy, M.; Badr, R. and El-Sabagh, A. (2008). *Pseudomonas aeruginosa* exotoxin A: Its Role in Burn Wound Infection, and Wound Healing, Egypt, *J. Plast. Reconstr. Surg.*, 32 (1): 59- 65.
 - Bahador, N., Shoja, S., Faridi, F., Dozandeh-Mobarrez, B., Qeshmi, F. I., Javadpour, S., & Mokhtary, S. (2019). Molecular detection of virulence factors and biofilm formation in *Pseudomonas aeruginosa* obtained from different clinical specimens in Bandar Abbas. *Iranian journal of microbiology*, 11(1), 25–30.
 - Ball, C. A. *et al.* (2000). Integrating functional genomic information into the *Saccharomyces* genome database. *Nucleic Acids Res.* 28, 77±80.
 - Barret JP, Herndon DN. (2003). Effects of burn wound excision on bacterial colonization and invasion. *Plast Reconstr Surg*; 111:744–750.
 - Basu, S., Bose, C., Ojha, N., Das, N., Das, J., Pal, M., & Khurana, S. (2015). Evolution of bacterial and fungal growth media. *Bioinformation*, 11(4), 182–184.
 - Ben Haj Khalifa, A., Moissenet, D., Vu Thien, H., & Khedher, M. (2011). Les facteurs de virulence de *Pseudomonas aeruginosa*: mécanismes et modes de régulations [Virulence factors in *Pseudomonas aeruginosa*: mechanisms and modes of regulation]. *Annales de biologie clinique*, 69(4), 393–403.

- Berra L., Sampson J., Wiener-Kronish J. (2010). *Pseudomonas aeruginosa*: acute lung injury or ventilator associated pneumonia? *Minerva Anesthesiol.* , 76(10):824–832.
- Bhatia Rajesh, Ichhpujani R.L. Essentials of Medical Microbiology. 4th Edition, Publisher: Jaypee Brothers Medical Publishers (P) Ltd. New Delhi, India. ISBN: 9788184481549. (2008).
- Bibhabati Mishra.2001.: Resistance pattern of *Pseudomonas* species, PP.3
- Bielecki, P., Glik, J., Kawecki, M., & Martins dos Santos, V. A. (2008). Towards understanding *Pseudomonas aeruginosa* burn wound infections by profiling gene expression. *Biotechnology letters*, 30(5), 777–790.
- Billings N, Millan M, Caldara M, Rusconi R, Tarasova Y, Stocker R, Ribbeck K. The extracellular matrix Component Psl provides fast-acting antibiotic defense in *Pseudomonas aeruginosa* biofilms. *PLoS Pathog.* 2013; 9(8): e1003526.
- Biswal, I., Arora, B. S., Kasana, D., & Neetushree (2014). Incidence of multidrug resistant *Pseudomonas aeruginosa* isolated from burn patients and environment of teaching institution. *Journal of clinical and diagnostic research: JCDR*, 8(5): DC26–DC29.
- Blanc D. (2004). The use of molecular typing for epidemiological surveillance and investigation of endemic nosocomial infections. *Infect Genet Evol.*, 4: 193-197.
- Blondel-Hill, E., Henry, E. A. & Speert, D. P. (2007). *Pseudomonas*. In *Manual of Clinical Microbiology*, 9th edn, pp. 734–748. Edited by P. R. Murray, E. J. Baron, J. H. Jorgensen, M. L. Landry & M. A. Pfaller. Washington, DC: American Society for Microbiology.

- Boissy R., Ahmed A., Janto B., Earl J., Hall B., Hogg J., *et al.* (2011). Comparative supragenomic analyses among the pathogens *Staphylococcus aureus*, *Streptococcus pneumoniae*, and *Haemophilus influenza* using a modification of the finite supragenome model. *BMC Genomics*; 12(1):187.
- Bouillot, S., Munro, P., Gallet, B., Reboud, E., Cretin, F., Golovkine, G., Schoehn, G., Attrée, I., Lemichez, E., & Huber, P. (2017). *Pseudomonas aeruginosa* Exolysin promotes bacterial growth in lungs, alveolar damage and bacterial dissemination. *Scientific reports*, 7(1): 2120.
 - Bradbury RS, Roddam LF, Merritt A., Reid DW. (2010). Champion AC. Virulence gene distribution in clinical, nosocomial and environmental isolates of *Pseudomonas aeruginosa*. *Journal of Medical Microbiology*; 59(8): 881 – 890.
 - Burgess D. (2005). Use of pharmacokinetics and pharmacodynamics to optimize antimicrobial treatment of *Pseudomonas aeruginosa* infections. *Clin Infect Dis.*, 40: S99-S104.
 - Bassetti M., Vena A., Croxatto A., Righi E., Guery B. (2018). How to manage *Pseudomonas aeruginosa* infections. *Drugs Context*. 7:212527. *Egyptian Journal of Medical Microbiology*; 17(1): 125 – 132.

C

- Cabot G, Zamorano L, Moyà B, Juan C, Navas A, Blázquez J, Oliver A. (2016). Evolution of *Pseudomonas aeruginosa* Antimicrobial

- Resistance and Fitness under Low and High Mutation Rates. *Antimicrob Agents Chemother.*, 60(3):1767-78.
- Church, D., Elsayed, S., Reid, O., Winston, B., & Lindsay, R. (2006). Burn wound infections. *Clinical microbiology reviews*, 19(2): 403–434.
 - Coban Y. K. (2012). Infection control in severely burned patients. *World journal of critical care medicine*, 1(4), 94–101.
 - Cotar AI, Chifiriuc MC, Banu O, Lazar V. (2013). Molecular characterization of virulence patterns in *Pseudomonas aeruginosa* strains isolated from respiratory and wound samples. *Biointerface Res Appl Chem.*, 3:551–558.
 - Cramer, N., Klockgether, J., Wrasman, K., Schmidt, M., Davenport, C., and Tümmler, B. (2011). Microevolution of the major common *Pseudomonas aeruginosa* clones C and PA14 in cystic fibrosis lungs. *Environ. Microbiol.* 13, 1590–1604.
 - Ciofu O., & Tolker-Nielsen, T. (2019). Tolerance and Resistance of *Pseudomonas aeruginosa* Biofilms to Antimicrobial Agents- How *P. aeruginosa* Can Escape Antibiotics. *Frontiers in microbiology*, 10: 913.
 - Ciofu O., Rojo-Molinero E., Macia M. D., Oliver A. (2017). Antibiotic treatment of biofilm infections.
 - CLSI. (2018). *Performance Standards for Antimicrobial Susceptibility Testing*. 28th ed. Wayne, PA: Clinical and Laboratory Standards Institute.
 - Coetzee, Emile & Rode, Heinz & Kahn, Delawir. (2013). *Pseudomonas aeruginosa* burn wound infection in a dedicated paediatric burns unit.

- South African journal of surgery. Suid-Afrikaanse tydskrif vir chirurgie. 51. 50-53. 10.7196/sajs.1134.
- Collee, J. G., Fraser, A. G., Marmino, B. P., & Simons, A. (1996). Mackin and McCartney Practical Medical Microbiology. The Churchill Livingstone. Inc. USA.
 - Colvin KM, Gordon VD, Murakami K, Borlee BR, Wozniak DJ, Wong GC, Parsek MR. The pel polysaccharide can serve a structural and protective role in the biofilm matrix of *Pseudomonas aeruginosa*. PLoS Pathog. (2011) Jan 27; 7(1): e1001264. doi: 10.1371/journal.ppat.1001264. PMID: 21298031; PMCID: PMC3029257.
 - Cotar, A.I.; Chifiriuc, M.C.; Banu, O. and Lazar, V. (2013). Molecular characterization of virulence patterns in *Pseudomonas aeruginosa* strains isolated from respiratory and wound samples. Biointerface Res. Appl. Chem.; 3: 551-558.
 - Chen Jian-Woon, Lau Yin Yin, Krishnan Thiba, Chan Kok-Gan, and Chang Chien-Yi, 2018. Recent Advances in Molecular Diagnosis of *Pseudomonas aeruginosa* Infection by State-of-the-Art Genotyping Techniques, Front Microbiol.; 9: 1104 doi: 10.3389/fmicb.2018.01104.

D

- Andersson, D. I., & Hughes, D. (2014). Microbiological effects of sublethal levels of antibiotics. *Nature Reviews Microbiology*, 12(7): 465-478.

- Daniel, D. S., Ng, Y. K., Chua, E. L., Arumugam, Y., Wong, W. L., & Kumaran, J. V. (2013). Isolation and identification of gastrointestinal microbiota from the short-nosed fruit bat *Cynopterus brachyotis*. *Microbiological research*, 168(8):485–496.
- Dassner, A. M., Sutherland, C., Girotto, J., & Nicolau, D. P. (2017). In vitro Activity of Ceftolozane/Tazobactam Alone or with an Aminoglycoside against Multi-Drug-Resistant *Pseudomonas aeruginosa* from Pediatric Cystic Fibrosis Patients. *Infectious diseases and therapy*, 6(1): 129–136.
- Dean, C. R., Visalli, M. A., Projan, S. J., Sum, P. E., & Bradford, P. A. (2003). Efflux-mediated resistance to tigecycline (GAR-936) in *Pseudomonas aeruginosa* PAO1. *Antimicrobial agents and chemotherapy*, 47(3): 972–978.
- DeBritto, S., Gajbar, T.D., Satapute, P. *et al.* (2020). Isolation and characterization of nutrient dependent pyocyanin from *Pseudomonas aeruginosa* and its dye and agrochemical properties. *Sci Rep* 10, 1542.
- Deschaght, P., Van Daele, S., De Baets, F., & Vaneechoutte, M. (2011). PCR and the detection of *Pseudomonas aeruginosa* in respiratory samples of CF patients. A literature reviews. *Journal of cysticfibrosis: official journal of the European Cystic Fibrosis Society*, 10(5), 293–297.
- Di, X., Wang, R., Liu, B., Zhang, X., Ni, W., Wang, J., Liang, B., Cai, Y., & Liu, Y. (2015). In vitro activity of fosfomycin in combination with colistin against clinical isolates of carbapenem-resistant *Pseudomonas aeruginosa*. *The Journal of antibiotics*, 68(9):551–555.

- Dietz, H., Pfeifle, D., & Wiedemann, B. (1997). The signal molecule for beta-lactamase induction in *Enterobacter cloacae* is the anhydromuramyl-pentapeptide. *Antimicrobial agents and chemotherapy*, 41(10): 2113–2120.
- Diken Gür S. AKSÖZ N. (2016). Molecular typing of clinical *Pseudomonas aeruginosa* strains by using RAPD- PCR. *Minerva Biotechnol.*; 28(2):104–113.
- Dissanaïke, S., & Rahimi, M. (2009). Epidemiology of burn injuries: highlighting cultural and socio-demographic aspects. *International review of psychiatry* (Abingdon, England), 21(6): 505–511.
- Dou, Y., Huan, J., Guo, F., Zhou, Z., & Shi, Y. (2017). *Pseudomonas aeruginosa* prevalence, antibiotic resistance and antimicrobial use in Chinese burn wards from 2007 to 2014. *The Journal of international medical research*, 45(3): 1124–1137.
- Driscoll, J.A., Brody, S.L. & Kollef, M.H. (2007). The Epidemiology, Pathogenesis and Treatment of *Pseudomonas aeruginosa* Infections. *Drugs*; 67: 351–368.

E

- El Solh, A. A., Akinnusi, M. E., Wiener-Kronish, J. P., Lynch, S. V., Pineda, L. A., & Szarpa, K. (2008). Persistent infection with *Pseudomonas aeruginosa* in ventilator-associated pneumonia. *American journal of respiratory and critical care medicine*, 178(5): 513–519.

- Erol, S., Altoparlak, U., Akcay, M. N., Celebi, F., & Parlak, M. (2004). Changes of microbial flora and wound colonization in burned patients. *Burns: journal of the International Society for Burn Injuries*, 30(4): 357–361.
- Ewing, Brent & Green, Phil. (2000). Ewing, B. & Green, P. Analysis of expressed sequence tags indicates 35,000 human genes. *Nature Genet.* 25, 232-234. *Nature genetics.* 25: 232-4. 10.1038/76115.
- European Centre for Disease Prevention and Control. (2016). Point prevalence survey of health care associated infections and antimicrobial use in European acute care hospitals - protocol version 5.3. Stockholm: ECDC.
- Evers, L. H., Bhavsar, D., & Mailänder, P. (2010). The biology of burn injury. *Experimental dermatology*, 19(9): 777–783.
- Exner, M., Bhattacharya, S., Christiansen, B., Gebel, J., Goroncy-Bermes, P., Hartemann, P., Heeg, P., Ilschner, C., Kramer, A., Larson, E., Merkens, W., Mielke, M., Oltmanns, P., Ross, B., Rotter, M., Schmithausen, R. M., Sonntag, H. G., & Trautmann, M. (2017). Antibiotic resistance: What is so special about multidrug-resistant Gram-negative bacteria? *GMS hygiene and infection control*, 12, Doc05.
- El-Ageery Safaa Mohamad, Al Otibi Aisha Abdul Mohsen. (2016). Phenotypic and Genotypic Characterization of *Pseudomonas aeruginosa* Isolates from Burn Patients, *Egyptian Journal of Medical Microbiology*, Volume 25, No. 1: 53-60.
- Elmouaden CH., Laglaoui A., Ennane L., Bakkali M., Abid M., J Infect Dev Ctries, 2019. Virulence genes and antibiotic resistance of

Pseudomonas aeruginosa isolated from patients in the Northwestern of Morocco, J Infect Dev Ctries; 13(10): 892-898. doi: 10.3855/jidc.10675

F

- Falagas, M. E., & Kopterides, P. (2006). Risk factors for the isolation of multi-drug-resistant *Acinetobacter baumannii* and *Pseudomonas aeruginosa*: a systematic review of the literature. *The Journal of hospital infection*, 64(1): 7–15.
- Feltman, H., Schulert, G., Khan, S., Jain, M., Peterson, L., & Hauser, A. R. (2001). Prevalence of type III secretion genes in clinical and environmental isolates of *Pseudomonas aeruginosa*. *Microbiology (Reading, England)*, 147(Pt 10): 2659–2669.
- Forbes, B.A.; Sahm, D.F. and Weissfeld, A.S. (2007). Diagnostic Microbiology, 12th ed., Mosby Elsevier, Houston, Texas, p (63), (234), (222), 218,229,234,232,246.
- Forbes, B.A.; Sahm, D.F. and Weissfeld, A.S. (2002). *Pseudomonas*, *Burkholderia*, and similar organisms. In: Forbes BA, Sahm DF, Weissfeld AS, editors. Bailey and Scott's Diagnostic Microbiology. 11th ed. St. Louis: Mosby Inc; p. 448-61.
- Forson, O. A., Ayanka, E., Olu-Taiwo, M., Pappoe- Ashong, P. J., & Ayeh-Kumi, P. J. (2017). Bacterial infections in burn wound patients at a tertiary teaching hospital in Accra, Ghana. *Annals of burns and fire disasters*, 30(2): 116–120.

- Foulkes D., McLean, K., Haneef, A., Fernig D., Winstanley C., Berry N., & Kaye, S. B. (2019). *Pseudomonas aeruginosa* Toxin ExoU as a Therapeutic Target in the Treatment of Bacterial Infections. *Microorganisms*, 7(12): 707.
- Fournier, P. E., Drancourt, M., Colson, P., Rolain, J. M., La Scola, B., & Raoult, D. (2013). Modern clinical microbiology: new challenges and solutions. *Nature reviews. Microbiology*; 11(8): 574–585.
- Fair, R. J., & Tor, Y. (2014). Antibiotics and bacterial resistance in the 21st century. *Perspectives in medicinal chemistry*; 6: 25–64.
- Firouzi-Dalvand L, Pooladi M. (2014). Identification of *exoS*, *exoU* genes in *Pseudomonas aeruginosa*. *JPS*; 5:89–95. *Infect Epidemiol Med*. 2016 Spring; Volume 2, Issue 2: 8-11.

G

- Gade PAV, Olsen TB, Jensen PØ, Kolpen M, Høiby N, Henneberg KÅ, Sams T.(2018). Modelling of ciprofloxacin killing enhanced by hyperbaric oxygen treatment in *Pseudomonas aeruginosa* PAO1 biofilms. *PLoS One*. 13(6):e0198909.
- Galle, M., Jin, S., Bogaert, P., Haegman, M., Vandenabeele, P., & Beyaert, R. (2012). The *Pseudomonas aeruginosa* type III secretion system has an exotoxin S/T/Y independent pathogenic role during acute lung infection. *PloS one*, 7(7): e41547.

- Gawish, A. A., Mohammed, N. A., ElShennawy, G. A., and Mohammed, H.A. (2013). An investigation of type 3 secretion toxins encoding-genes of *Pseudomonas aeruginosa* isolates in a University Hospital in Egypt. Department of Microbiology and Immunology, Faculty of Medicine, Zagazig University, Egypt 3 (3): 116-122.
- Gendrin, C., Contreras-Martel, C., Bouillot, S., Elsen, S., Lemaire, D., Skoufias, D. A., Huber, P., Attree, I., & Dessen, A. (2012). Structural basis of cytotoxicity mediated by the type III secretion toxin ExoU from *Pseudomonas aeruginosa*. *PLoS pathogens*, 8(4): e1002637.
- Georgescu, M., Gheorghe, I., Curutiu, C. *et al.* (2016). Virulence and resistance features of *Pseudomonas aeruginosa* strains isolated from chronic leg ulcers. *BMC Infect Dis*; 16: 92.
- Gingeras, T. R., Higuchi, R., Kricka, L. J., Lo, Y. M., & Wittwer, C. T. (2005). Fifty years of molecular (DNA/RNA) diagnostics. *Clinical chemistry*; 51(3): 661–671.
- Goldsworthy MJH. (2008). Gene expression of *Pseudomonas aeruginosa* and MRSA within a catheter-associated urinary tract infection biofilm model, *Bioscience Horizons: The International Journal of Student Research*, Volume 1, Issue 1: 28–37.
- Gonzalez, L., Cravoisy, A., Barraud, D., Conrad, M., Nace, L., Lemarié, J., Bollaert, P. E., & Gibot, S. (2013). Factors influencing the implementation of antibiotic de-escalation and impact of this strategy in critically ill patients. *Critical care (London, England)*, 17(4): R140.
- Goodman A. L, Merighi M., Hyodo M., Ventre I. Filloux A. and Lory S. (2009). “Direct interaction 424 between sensor kinase proteins

mediates acute and chronic disease phenotypes in a bacterial 425
pathogen,” *Genes Dev.*, vol. 23, no. 2: 249–259.

- Guo, S., & DiPietro, L. A. (2010). Factors Affecting Wound Healing. *Journal of Dental Research*, 89(3): 219–229.

H

- Harley, J. P. and Prescott, L. M. (2002). Laboratory Exercises in Microbiology. 5th ed. McGraw Hill. New York.
- Hassuna N. A. (2016). Molecular Detection of the Virulent ExoU Genotype of *Pseudomonas aeruginosa* Isolated from Infected Surgical Incisions. *Surgical infections*, 17(5): 610–614.
- Hentzer, M., Teitzel, G. M., Balzer, G. J., Heydorn, A., Molin, S., Givskov, M., & Parsek, M. R. (2001). Alginate overproduction affects *Pseudomonas aeruginosa* biofilm structure and function. *Journal of bacteriology*, 183(18): 5395–5401.
- Huang, H., Chen, B., Liu, G., Ran, J., Lian, X., Huang, X., Wang, N., & Huang, Z. (2018). A multi-center study on the risk factors of infection caused by multi-drug resistant *Acinetobacter baumannii*. *BMC infectious diseases*, 18(1): 11.
- Hussien Iman A., Habib Khalid A., Jassim Kifah A. (2012). Bacterial Colonization of Burn Wounds, Baghdad Science Journal, Vol.9 (4): 326.

J

- Juan C., Peña C., Oliver A. (2017). Host and pathogen biomarkers for severe *Pseudomonas aeruginosa* infections. J Infect Dis 215: S44– S51. doi:10.1093/infdis/jiw299.
- Joodzadeh M., Sheikh A. F., Shahin M. & Tavakol H. (2016). Correlation of Frequency of *Pseudomonas Aeruginosa* and *exoS* & *exoU* Genes and Their Antibiotic Sensitivity Pattern in Specimen Isolated from ICU Ward. International Journal of Medical Research & Health Sciences, 5, 6:248-254.
- Jeschke, M. G., van Baar, M. E., Choudhry, M. A., Chung, K. K., Gibran, N. S., & Logsetty, S. (2020). Burn injury. *Nature reviews. Disease primers*, 6(1), 11.

K

- Kaye KS, Schmit K, Pieper C, Sloan R *et al.* (2005). The effect of increasing age on the risk of surgical site infection. Journal of Infectious Diseases, 191(7): 1052-62.
- Khan A.A. and Cerniglia C.E., (1994). Detection of *Pseudomonas aeruginosa* from clinical and environmental samples by amplification of the exotoxinA gene using PCR. Applied and Environmental Microbiology; 60: 3739–3745.

- Khan HA, Ahmad A, Mehboob R. (2015). Nosocomial infections and their control strategies. *Asian Pac J Trop Biomed.*; 5(7):509–514.
- Khan HA, Baig FK, Mehboob R. (2017). Nosocomial infections: Epidemiology, prevention, control and surveillance. *Asian Pac J Trop Biomed.*; 7(5):478–482.
- Khattab, M. A., Nour, M. S. and El-Sheshtawy, N.M. (2015). Genetic Identification of *Pseudomonas aeruginosa* Virulence Genes among Different Isolates, *J. Microb. Biochem. Technol.*, 7(5):274-277.
- Khodayary, R., Nikokar, I., Mobayen, M. R., Afrasiabi, F., Araghian, A., Elmi, A., & Moradzadeh, M. (2019). High incidence of type III secretion system associated virulence factors (exoenzymes) in *Pseudomonas aeruginosa* isolated from Iranian burn patients. *BMC research notes*, 12(1): 28.
- Kidd, T.J., Soares, M. R., Paynter S., Bell S.C. (2015). ACP in CF Investigator Group. The social network of cystic fibrosis centre care and shared *Pseudomonas aeruginosa* strain infection: a cross-sectional analysis. *The Lancet. Respiratory Medicine*; 3(8):640-650.
- Kim, J., Ahn, K., Min, S., Jia, J., Ha, U., Wu, D., & Jin, S. (2005). Factors triggering type III secretion in *Pseudomonas aeruginosa*. *Microbiology (Reading, England)*, 151(Pt 11): 3575– 3587.
- Kipnis, E., Sawa, T., & Wiener-Kronish, J. (2006). Targeting mechanisms of *Pseudomonas aeruginosa* pathogenesis. *Medecine et maladies infectieuses*, 36(2): 78–91.
- Klockgether, J., Munder, A., Neugebauer, J., Davenport, C. F., Stanke, F., Larbig, K. D., Heeb, S., Schöck, U., Pohl, T. M., Wiehlmann, L., &

- Tümmeler, B. (2010). Genome diversity of *Pseudomonas aeruginosa* PAO1 laboratory strains. *Journal of bacteriology*, 192(4): 1113–1121.
- Kollef M. H. (2013). Antibiotics for the critically ill: more than just selecting appropriate initial therapy. *Critical care (London, England)*, 17(3): 146.
 - Kuah, Jia Ying & Saxena, Apoorva. (2015). Managing Burn Wound Infections. 10.13140/RG.2.2.28303.48800.
 - Kung, V. L., Ozer, E. A., & Hauser, A. R. (2010). The accessory genome of *Pseudomonas aeruginosa*. *Microbiology and molecular biology reviews: MMBR*, 74(4):621–641.

L

- Laine, L., Perry, J. D., Lee, J., Oliver, M., James, A. L., De La Foata, C., Halimi, D., Orenga, S., Galloway, A., & Gould, F. K. (2009). A novel chromogenic medium for isolation of *Pseudomonas aeruginosa* from the sputa of cystic fibrosis patients. *Journal of cystic fibrosis: official journal of the European Cystic Fibrosis Society*, 8(2):143–149.
- Leal-Klevezas, D. S., Martínez-Vázquez, I. O., Cuevas-Hernández, B., & Martínez-Soriano, J. P. (2000). Antifreeze solution improves DNA recovery by preserving the integrity of pathogen-infected blood and other tissues. *Clinical and diagnostic laboratory immunology*, 7(6), 945–946.
- Lee, J., & Zhang, L. (2015). The hierarchy quorum-sensing network in *Pseudomonas aeruginosa*. *Protein & cell*, 6(1): 26–41.

- Lila, G., Mulliqi, G., Raka, L., Kurti, A., Bajrami, R., & Azizi, E. (2018). Molecular epidemiology of *Pseudomonas aeruginosa* in University Clinical Center of Kosovo. *Infection and drug resistance*, 11: 2039–2046.
- Lister, P.D., Wolter, D.J., Hanson, N.D. (2009). Antibacterial-resistant *Pseudomonas aeruginosa*: clinical impact and complex regulation of chromosomally encoded resistance mechanisms. *Clin Microbiol Rev*, 22: 582-610.
- Livak, K.J., and Schmittgen, T.D. (2001). Analysis of relative gene expression data using real-time quantitative PCR and the $2^{-\Delta\Delta CT}$ method. *Methods* (25): 402–408.
- Livermore D. M. (2002). Multiple mechanisms of antimicrobial resistance in *Pseudomonas aeruginosa*: our worst nightmare? *Clinical infectious diseases: an official publication of the Infectious Diseases Society of America*, 34(5): 634–640.
- Llor, C., & Bjerrum, L. (2014). Antimicrobial resistance: risk associated with antibiotic overuse and initiatives to reduce the problem. *Therapeutic advances in drug safety*, 5(6): 229–241.

M

- Macià, M. D., Rojo-Molinero, E., & Oliver, A. (2014). Antimicrobial susceptibility testing in biofilm-growing bacteria. *Clinical microbiology and infection: the official publication of the European Society of Clinical Microbiology and Infectious Diseases*, 20(10): 981–990.

- Madaha, E. L., Mienie, C., Gonsu, H. K., Bughe, R. N., Fonkoua, M. C., Mbacham, W. F., Alayande, K. A., Bezuidenhout, C. C., & Ateba, C. N. (2020). Whole-genome sequence of multi-drug resistant *Pseudomonas aeruginosa* strains UY1PSABAL and UY1PSABAL2 isolated from human broncho-alveolar lavage, Yaoundé, Cameroon. *PloS one*; 15(9): e0238390.
- Magiorakos AP. (2011). Multidrug Resistant (MDR), Extensively Drug Resistant (XDR) and Pandrug-1 Resistant (PDR) bacteria in healthcare settings. Expert Proposal for Standardized International Terminology.
- Mahmmudi, Z. & Emami, Amir & Gorzin, Ali. (2016). Genotyping of *Pseudomonas aeruginosa* strains Isolated from burn patients by RAPD-PCR molecular technique with primer 287. *International Journal of Advanced Biotechnology and Research*. 7: 102-110.
- Manenzhe, R. I., Zar, H. J., Nicol, M. P., & Kaba, M. (2015). The spread of carbapenemase-producing bacteria in Africa: a systematic review. *The Journal of antimicrobial chemotherapy*, 70(1): 23–40.
- Mathee, K., Narasimhan, G., Valdes, C., Qiu, X., Matewish, J. M., Koehrsen, M., Rokas, A., Yandava, C. N., Engels, R., Zeng, E., Olavarietta, R., Doud, M., Smith, R. S., Montgomery, P., White, J. R., Godfrey, P. A., Kodira, C., Birren, B., Galagan, J. E., & Lory, S. (2008). Dynamics of *Pseudomonas aeruginosa* genome evolution. *Proceedings of the National Academy of Sciences of the United States of America*, 105(8): 3100–3105.
- Mayank, D., Anshuman, M., Singh, R. K., Afzal, A., Baronia, A. K., & Prasad, K. N. (2009). Nosocomial cross-transmission of *Pseudomonas aeruginosa* between patients in a tertiary intensive care unit. *Indian journal of pathology & microbiology*, 52(4):509–513.

- MacFaddin, J. F. (2000). *Biochemical Tests for Identification of Medical Bacteria*, 3rd ed., Philadelphia: Lippincott Williams & Wilkins.
- Mesquita, C.S., Soares-Castro, P., & Santos, P. (2013). *Pseudomonas aeruginosa*: phenotypic flexibility and antimicrobial resistance.
- Mihailidis T. H. (2020). The use of hydrogen peroxide in the treatment of burn wound infection: a systematic review, and survey of current clinical practice in the United Kingdom. *International journal of burns and trauma*, 10(2), 38–46. (Retraction published Int J Burns Trauma. 15;10(3):90.
- Min Wu, Xuefeng Li, in *Molecular Medical Microbiology* (Second Edition), 2015.
- Mirmohammadi, S. J., Mehrparvar, A. H., Kazemeini, K., & Mostaghaci, M. (2013). Epidemiologic characteristics of occupational burns in yazd, iran. *International journal of preventive medicine*, 4(6): 723–727.
- Mitchell, B. G., Shaban, R. Z., MacBeth, D., Wood, C. J., & Russo, P. L. (2017). The burden of healthcare-associated infection in Australian hospitals: A systematic review of the literature. *Infection, disease & health*, 22(3): 117–128.
- Mohammed, A. A., Muheel, M.H., Mujbel, F.A. (2014). Study the Antimicrobial Drug Resistance to some Microbes Isolates from Skin and Blood in Burn Patients, Magazine of Al-Kufa University for Biology, Vol.6(2): 1-9.
- Mohanty, S.; Maurya, V.; Gaiind, R.; Deb, M. (2013). Phenotypic characterization and colistin susceptibilities resistance of *Pseudomonas aeruginosa* and *Acinetobacter spp.* J. Infect. Der. Ctries., 7(1): 880-887.

- Moradali, M. F., Ghods, S. & Rehm, B. H. A. (2017). *Pseudomonas aeruginosa* lifestyle: a paradigm for adaptation, survival, and persistence. *Front. Cell Infect. Microbiol.* 7: 39.
- Morello, J. A.; Mizer, H. E. and Granato, P. A. (2006). Laboratory Manual and Workbook in Microbiology Applications to Patient Care. 18th ed. McGraw Hill. Boston.
- Morris S, Cerceo E. (2020). Trends, Epidemiology, and Management of Multi-Drug Resistant Gram-Negative Bacterial Infections in the Hospitalized Setting. *Antibiotics.* 9(4):196.
- Moore, N. M., & Flaws, M. L. (2011). Antimicrobial resistance mechanisms in *Pseudomonas aeruginosa*. *Clinical laboratory science: journal of the American Society for Medical Technology*, 24(1): 47–51.
- Murali, T. S., Kavitha, S., Spoorthi, J., Bhat, D. V., Prasad, A., Upton, Z., Ramachandra, L., Acharya, R. V., & Satyamoorthy, K. (2014). Characteristics of microbial drug resistance and its correlates in chronic diabetic foot ulcer infections. *Journal of medical microbiology*, 63(Pt 10): 1377–1385.
- Murray, P. R., Baron, E. J., Jorgensen, J. H., Landry, M. L., and Pfaller, M. A. (2007). Manual of clinical microbiology. Washington, D.C: ASM Press.

N

- Najafi K., Kafil, H. S., Shokrian S., Azimi S., Asgharzadeh M., Yousefi M. & Aghazadeh M. (2015). Virulence Genes and Antibiotic Resistance Profile of *Pseudomonas aeruginosa* isolates in Northwest of Iran. JOURNAL OF PURE and applied microbiology, 9(Spl. Edn. 1): 383-389.
- Nakayama, Y., Yamaguchi, H., Einaga, N., & Esumi, M. (2016). Pitfalls of DNA Quantification Using DNA-Binding Fluorescent Dyes and Suggested Solutions. *PloS one*, 11(3): e0150528.
- Nguemeleu, E., Boivin, S., Robins, S., Sia, D., Kilpatrick, K., Brousseau, S., Dubreuil, B., Larouche, C., & Parisien, N. (2020). Development and validation of a time and motion guide to assess the costs of prevention and control interventions for nosocomial infections: A Delphi method among experts. *PloS one*, 15(11): e0242212.
- Nasser, S., Mabrouk, A., & Maher, A. (2003). Colonization of burn wounds in Ain Shams University Burn Unit. *Burns: journal of the International Society for Burn Injuries*, 29(3):229–233.
- Navendu M.J. (2006). Prevalence of bacterial infection in patients of burns with their antibiotic sensitivity pattern.
- Neamah A.A. (2017). Molecular Detection of virulence factor genes in *Pseudomonas aeruginosa* isolated from human and animals in Diwaniya province, Kufa Journal for Veterinary Medical Sciences;8(1): 218 -230.
- Newman, J. W., Floyd, R. V., & Fothergill, J. L. (2017). The contribution of *Pseudomonas aeruginosa* virulence factors and host factors in the establishment of urinary tract infections. *FEMS microbiology letters*, 364(15), 10.1093/femsle/fnx124.

- Nicholas, M. M., Maribeth, L. F. (2011). Epidemiology and Pathogenesis of *Pseudomonas aeruginosa* Infections. American Society for Clinical Laboratory Science Jan 2011, 24 (1): 43-46.
- Nikbin, V. S., Aslani, M. M., Sharafi, Z., Hashemipour, M., Shahcheraghi, F., & Ebrahimipour, G. H. (2012). Molecular identification and detection of virulence genes among *Pseudomonas aeruginosa* isolated from different infectious origins. *Iranian journal of microbiology*, 4(3): 118–123.
- Norbury, W., Herndon, D. N., Tanksley, J., Jeschke, M. G., & Finnerty, C. C. (2016). Infection in Burns. *Surgical infections*, 17(2): 250–255.

O

- Odunuga, O. O., Adekoya, O. A., & Sylte, I. (2015). High-level expression of pseudolysin, the extracellular elastase of *Pseudomonas aeruginosa*, in *Escherichia coli* and its purification. *Protein expression and purification*, 113: 79-84.
- Orlandi, V. T., Martegani, E., & Bolognese, F. (2018). Catalase A is involved in the response to photooxidative stress in *Pseudomonas aeruginosa*. *Photodiagnosis and photodynamic therapy*, 22: 233–240.
- Oster C. (2010). Return to work and health –related Quality of life after sever burn injury.

P

- Pachori, P., Gothwal, R., & Gandhi, P. (2019). Emergence of antibiotic resistance *Pseudomonas aeruginosa* in intensive care unit; a critical review. *Genes & diseases*, 6(2): 109–119.
- Pang, Z., Raudonis, R., Glick, B. R., Lin, T. J., & Cheng, Z. (2019). Antibiotic resistance in *Pseudomonas aeruginosa*: mechanisms and alternative therapeutic strategies. *Biotechnology advances*, 37(1): 177–192.
- Paul J. P. (2018). Principles and Practice of Pediatric Infectious Diseases (Fifth Edition).
- Peabody, M.A., Laird, M.R., Vlasschaert, C., Lo, R. & Brinkman, F. S.L. (2015). PSORTdb: Expanding the bacteria and archaea protein subcellular localization database to better reflect diversity in cell envelope structures. *Nucleic acids research*. 44. 10.1093/nar/gkv1271.
- Peña, C., Cabot, G., Gómez-Zorrilla, S., Zamorano, L., Ocampo-Sosa, A., Murillas, J., Almirante, B., Pomar, V., Aguilar, M., Granados, A., Calbo, E., Rodríguez-Baño, J., Rodríguez-López, F., Tubau, F., Martínez-Martínez, L., Oliver, A., & Spanish Network for Research in Infectious Diseases (REIPI) (2015). Influence of virulence genotype and resistance profile in the mortality of *Pseudomonas aeruginosa* bloodstream infections. *Clinical infectious diseases: an official publication of the Infectious Diseases Society of America*; 60(4): 539–548.
- Percival, S. L., Suleman, L., Vuotto, C., & Donelli, G. (2015). Healthcare-associated infections, medical devices and biofilms: risk,

- tolerance and control. *Journal of medical microbiology*; 64(Pt 4): 323–334.
- Pfaffl, M. W., Horgan, G. W., & Dempfle, L. (2002). Relative expression software tool (REST) for group-wise comparison and statistical analysis of relative expression results in real-time PCR. *Nucleic acids research*; 30(9): e36.
 - Pirnay JP, Bilocq F, Pot B, Cornelis P, Zizi M, *et al.* (2009). *Pseudomonas aeruginosa* Population Structure Revisited. *PLOS ONE* 4(11): e7740.
 - Pollack Matthew, (1984). The Virulence of *Pseudomonas aeruginosa*, *Reviews of Infectious Diseases*; Vol. 6, Supplement 3. *Pseudomonas aeruginosa: Biology, Immunology, and Therapy: A Cefsulodin Symposium*, Published By: Oxford University Press: S617-S626 (10 pages). <https://www.jstor.org/stable/445349>
 - Pommerville, J.C. (2007). *Alcamo's Laboratory Fundamentals of Microbiology*. 8th ed. Jones and Bartlett Publishers. Forbes, B. A.; Saham, D. F.; Weissfeld, A. S. (2002). *Bailey and Scott's diagnostic microbiology*. 11th edition. Mosby Inc Baltimore Bosten. P 181-5.
 - Poole K. (2011). *Pseudomonas aeruginosa: resistance to the max*. *Frontiers in microbiology*, 2: 65.
 - Poole, K., (2004). Efflux-mediated multiresistance in Gram-negative bacteria. *Clinical microbiology and infection: the official publication of the European Society of Clinical Microbiology and Infectious Diseases* 10 (1): 12–26.

- Prasad, A.S.B., Shruptha, P., Prabhu, V. *et al.* (2020). *Pseudomonas aeruginosa* virulence proteins pseudolysin and protease IV impede cutaneous wound healing. *Lab Invest* 100:1532–1550.
- Pritsch, M., Zeynudin, A., Messerer, M., Baumer, S., Liegl, G., Schubert, S., Löscher, T., Hoelscher, M., Belachew, T., Rachow, A., & Wieser, A. (2017). First report on bla_{NDM-1}-producing *Acinetobacter baumannii* in three clinical isolates from Ethiopia. *BMC infectious diseases*, 17(1): 180.
- Philip S. S., Michael J. F., Kerry S. W., James P. F., Laura B., Garth A. J. (2015). Contribution of Stress Responses to Antibiotic Tolerance in *Pseudomonas aeruginosa* Biofilms. *Antimicrobial Agents and Chemotherapy*, 59 (7): 3838-3847.

R

- Rabin, S. D., Veesenmeyer, J. L., Bieging, K. T., & Hauser, A. R. (2006). A C-terminal domain targets the *Pseudomonas aeruginosa* cytotoxin ExoU to the plasma membrane of host cells. *Infection and immunity*, 74(5):2552–2561.
- Rao, X., Lai, D., & Huang, X. (2013). A new method for quantitative real-time polymerase chain reaction data analysis. *Journal of computational biology: a journal of computational molecular cell biology*, 20(9): 703–711.
- Raziq, Amir. (2017). Molecular Study of Two Virulence Genes of *Pseudomonas aeruginosa*, The Oxa 10 and Tox a with The Comparisons of The Relevant Sequences: 28-38.

- Regal, R. E., DePestel, D. D., & VandenBussche, H. L. (2003). The effect of an antimicrobial restriction program on *Pseudomonas aeruginosa* resistance to beta-lactams in a large teaching hospital. *Pharmacotherapy*, 23(5): 618–624.
- Riedel Stefan, Hobden Jeffery A., Miller Steve, Morse Stephen A., Mietzner Timothy A., Detrick Barbara, Mitchell Thomas G., Sakanari Judy A., Hotez Peter, Mejia Rojelio, (2019). *Jawetz, Melnick, & Adelberg's Medical Microbiology*, 28^{ed}, by McGraw-Hill Medical Publishing.
- Rossolini, G. M., & Mantengoli, E. (2005). Treatment and control of severe infections caused by multiresistant *Pseudomonas aeruginosa*. *Clinical microbiology and infection: the official publication of the European Society of Clinical Microbiology and Infectious Diseases*, 11 Suppl 4:17–32.
- Ruiz-Roldán, L., Rojo-Bezares, B., de Toro, M. *et al.* (2020). Antimicrobial resistance and virulence of *Pseudomonas* spp. among healthy animals: concern about exolysin ExlA detection. *Sci Rep* 10: 11667.
- Rybtke, M., Hultqvist, L. D., Givskov, M., & Tolker-Nielsen, T. (2015). *Pseudomonas aeruginosa* Biofilm Infections: Community Structure, Antimicrobial Tolerance and Immune Response. *Journal of molecular biology*, 427(23): 3628–3645.
- Ramirez, J.C., Fleiszig, S.M.J., Sullivan, A.B., Tam, C., Borazjani, R., Evans, D.J. (2012). Traversal of multilayered corneal epithelia by cytotoxic *Pseudomonas aeruginosa* requires the phospholipase domain of exoU. *Investig Ophthalmol Vis Sci*, 53(1):448-453.
- Rasmussen, B. S., Christensen, N., Sorensen, J., Rosenvinge, F. S., Kolmos, H. J., & Skov, M. N. (2015). Outbreak of *Pseudomonas aeruginosa*

bacteraemia in a haematology department. *Danish medical journal*, 62(4): A5040-A5040.

- Rowe, S. M., Miller, S., & Sorscher, E. J. (2005). Cystic fibrosis. *The New England journal of medicine*, 352(19): 1992–2001.

S

- Saliba, A. M., Nascimento, D. O., Silva, M. C., Assis, M. C., Gayer, C. R., Raymond, B., Coelho, M. G., Marques, E. A., Touqui, L., Albano, R. M., Lopes, U. G., Paiva, D. D., Bozza, P. T., & Plotkowski, M. C. (2005). Eicosanoid-mediated proinflammatory activity of *Pseudomonas aeruginosa* ExoU. *Cellular microbiology*, 7(12): 1811–1822.
- Sabharwal, N., Dhall, S., Chhibber, S., & Harjai, K. (2014). Molecular detection of virulence genes as markers in *Pseudomonas aeruginosa* isolated from urinary tract infections. *International journal of molecular epidemiology and genetics*, 5(3): 125–134.
- Saeed, K. B., & Ahmad, N. S. (2013). Real-Time Polymerase Chain Reaction: Applications in Diagnostic Microbiology. *International Journal of Medical Students*, 1(1): 28-36.
- Saiman, L., Chen, Y., Gabriel, P. S., & Knirsch, C. (2002). Synergistic activities of macrolide antibiotics against *Pseudomonas aeruginosa*, *Burkholderia cepacia*, *Stenotrophomonas maltophilia*, and *Alcaligenes xylosoxidans* isolated from patients with cystic fibrosis. *Antimicrobial agents and chemotherapy*, 46(4): 1105–1107.
- Sato, H., & Frank, D. W. (2004). ExoU is a potent intracellular phospholipase. *Molecular microbiology*, 53(5): 1279–1290.

- Sawa, T., Shimizu, M., Moriyama, K., & Wiener-Kronish, J. P. (2014). Association between *Pseudomonas aeruginosa* type III secretion, antibiotic resistance, and clinical outcome: a review. *Critical care (London, England)*, 18(6): 668.
- Schwacha, M. G., Holland, L. T., Chaudry, I. H., & Messina, J. L. (2005). Genetic variability in the immune-inflammatory response after major burn injury. *Shock (Augusta, Ga.)*, 23(2): 123–128.
- Schwendimann, R., Blatter, C., Dhaini, S., Simon, M., & Ausserhofer, D. (2018). The occurrence, types, consequences and preventability of in-hospital adverse events - a scoping review. *BMC health services research*, 18(1): 521.
- Shaebth L.J. (2018). Molecular identification and sequencing of *Pseudomonas aeruginosa* virulence genes among different isolates in Al-Diwaneyah hospital. *Iraqi Journal of Veterinary Sciences*, 32 (2): 183-188.
- Shalini, S., Kranthi, K., & Gopalkrishna Bhat, K. (2010). The microbiological profile of nosocomial infections in the intensive care unit. *Journal of Clinical and Diagnostic Research*, 4(5): 3109-3112.
- Shilba, A.A., Al-Azzawi, R. H. and Al-Awadi, S. J. (2015). Dissemination of Carbapenem Resistant *Pseudomonas aeruginosa* among Burn Patients in Karbala Province\ Iraq, *Iraqi Journal of Science*, Vol 56, No.3A: 1850-1857.
- Skariyachan, S., Sridhar, V. S., Packirisamy, S., Kumargowda, S. T., & Challapilli, S. B. (2018). Recent perspectives on the molecular basis of biofilm formation by *Pseudomonas aeruginosa* and approaches for treatment and biofilm dispersal. *Folia microbiologica*, 63(4): 413–432.

- Short, A. Roth JJ, Hughes WB. (2004). The Essential Burn Unit Handbook. St Louis: QMP, 2004, (paperback); pp141. *Crit Care* 9, E9.
- Soares Anaïs, Alexandre Kévin, and Etienne Manuel. (2020). Tolerance and Persistence of *Pseudomonas aeruginosa* in Biofilms Exposed to Antibiotics: Molecular Mechanisms, Antibiotic Strategies and Therapeutic Perspectives, *Front Microbiol.*; 11: 2057.
- Solomon, F.B., Wadilo, F., Tufa, E.G. *et al.* (2017). Extended spectrum and metallo beta-lactamase producing airborne *Pseudomonas aeruginosa* and *Acinetobacter baumannii* in restricted settings of a referral hospital: a neglected condition. *Antimicrob Resist Infect Control* 6: 106.
- Sonmezer, M. C., Ertem, G., Erdinc, F. S., Kaya Kilic, E., Tulek, N., Adiloglu, A., & Hatipoglu, C. (2016). Evaluation of Risk Factors for Antibiotic Resistance in Patients with Nosocomial Infections Caused by *Pseudomonas aeruginosa*. *The Canadian journal of infectious diseases & medical microbiology = Journal canadien des maladies infectieuses et de la microbiologie medicale*: 1321487.
- Speert D. P. (2002). Molecular epidemiology of *Pseudomonas aeruginosa*. *Frontiers in bioscience: a journal and virtual library*, 7: e354– e361.
- Subedi, D., Vijay, A. K., & Willcox, M. (2018). Overview of mechanisms of antibiotic resistance in *Pseudomonas aeruginosa*: an ocular perspective. *Clinical & experimental optometry*, 101(2):162–171.

T

- Tacconelli, E., Carrara, E., Savoldi, A., Harbarth, S., Mendelson, M., Monnet, D. L., Pulcini, C., Kahlmeter, G., Kluytmans, J., Carmeli, Y., Ouellette, M., Outtersen, K., Patel, J., Cavaleri, M., Cox, E. M., Houchens, C. R., Grayson, M. L., Hansen, P., Singh, N., Theuretzbacher, U., WHO Pathogens Priority List Working Group (2018). Discovery, research, and development of new antibiotics: the WHO priority list of antibiotic-resistant bacteria and tuberculosis. *The Lancet. Infectious diseases*, 18(3): 318–327.
- Tadesse, A. and Alem, M. (2006). Medical Bacteriology. EPHTI.Gondar University.
- Tang, Y.-W., Sussman, M., Liu, D., Poxton, I., & Schwartzman, J. (2015). *Molecular medical microbiology*. Amsterdam: Academic Press.
- Tille, P. M., & Forbes, B. A. (2014). Bailey & Scott's diagnostic microbiology (Thirteenth edition.). St. Louis, Missouri: Elsevie.
- Todar, K. (2011). *Pseudomonas aeruginosa*. Textbook of Bacteriology. Science Magazine V. 304:1421.
- Traidej, M., Marquart, M. E., Caballero, A. R., Thibodeaux, B. A., & O'Callaghan, R. J. (2003). Identification of the active site residues of *Pseudomonas aeruginosa* protease IV. Importance of enzyme activity in autoproccessing and activation. The Journal of biological chemistry, 278(4): 2549–2553.
- Trøstrup, H., Lerche, C. J., Christophersen, L., Jensen, P. Ø., Høiby, N., & Moser, C. (2017). Immune Modulating Topical S100A8/A9

Inhibits Growth of *Pseudomonas aeruginosa* and Mitigates Biofilm Infection in Chronic Wounds. International journal of molecular sciences, 18(7): 1359.

- Tullu M S, Deshmukh C T, Baveja S M. (1998). Bacterial profile and antimicrobial susceptibility pattern in catheter related nosocomial infections. J Postgrad Med; 44:7-13.

U

Ullah Waheed Qasim Muhammad, Rahman Hazir, Jie Yan, Muhammad Noor, 2017. Beta-lactamase-producing *Pseudomonas aeruginosa*: Phenotypic characteristics and molecular identification of virulence genes, Journal of the Chinese Medical Association; 80, Issue 3: 173-177.

V

- Valot B, Guyeux C, Rolland JY, Mazouzi K, Bertrand X, Hocquet D (2015) What It Takes to Be a *Pseudomonas aeruginosa*? The Core Genome of the Opportunistic Pathogen Updated. PLoS ONE 10(5): e0126468.
- Veessenmeyer, J. L., Hauser, A. R., Lisboa, T., & Rello, J. (2009). *Pseudomonas aeruginosa* virulence and therapy: evolving translational strategies. *Critical care medicine*, 37(5): 1777–1786.
- Vindeirinho, J.M., Soares, H.M. & Soares, E.V. (2020). Modulation of Siderophore Production by *Pseudomonas fluorescens* Through the

Manipulation of the Culture Medium Composition. *Appl Biochem Biotechnol*. PMID: 32500426 DOI: 10.1007/s12010-020-03349-z.

- 4 Vogelstein B and Gillespie D, 1979. Preparative and analytical purification of DNA from agarose; *Proc. Natl. Acad. Sci. USA*.

W

- Weldhagen, G. F., Poirel, L., & Nordmann, P. (2003). Ambler class A extended-spectrum beta-lactamases in *Pseudomonas aeruginosa*: novel developments and clinical impact. *Antimicrobial agents and chemotherapy*, 47(8): 2385–2392.
- Wiehlmann, L., Wagner, G., Cramer, N., Siebert, B., Gudowius, P., Morales, G., Köhler, T., van Delden, C., Weinel, C., Slickers, P., & Tümmler, B. (2007). Population structure of *Pseudomonas aeruginosa*. *Proceedings of the National Academy of Sciences of the United States of America*, 104(19): 8101–8106.
- Williams, F. N., Herndon, D. N., Hawkins, H. K., Lee, J. O., Cox, R. A., Kulp, G. A., Finnerty, C. C., Chinkes, D. L., & Jeschke, M. G. (2009). The leading causes of death after burn injury in a single pediatric burn center. *Critical care (London, England)*, 13(6): R183.
- Williams, H., Campbell, L., Crompton, R. A., Singh, G., McHugh, B. J., Davidson, D. J., McBain, A. J., Cruickshank, S. M., & Hardman, M. J. (2018). Microbial Host Interactions and Impaired Wound Healing in Mice and Humans: Defining a Role for BD14 and NOD2. *The Journal of investigative dermatology*, 138(10): 2264–2274.
- Wolska, K., & Szweda, P. (2009). Genetic features of clinical

- Pseudomonas aeruginosa* strains. *Polish journal of microbiology*, 58(3):255–260.
- World Health Organization. (2014). Report on the burden of endemic health care-associated infection worldwide.
 - World Health Organization. (2017). Global priority list of antibiotic-resistant Bacteria to guide research, discovery, and development of new.
 - World Health Organization. (2017). Guidelines for the prevention and control of carbapenem-resistant *Enterobacteriaceae*, *Acinetobacter baumannii* and *Pseudomonas aeruginosa* in health care facilities.
 - World Health Organization. (2017). Burn prevention: success stories and lessons learned.
 - Wallace, H.; Hammack, T. and Hammack, A. (1998). Bacteriological Analytical Manual, 8th edition, chapter 5. Food drug administration. USA.
 - Winn, W., Allen, S., Janda, W., Koneman, E., Procop, G., Schreckenberger, P. and Woods, G. (2006) Koneman's Color Atlas and Textbook of Diagnostic Microbiology. 6th Edition, Lippincott Williams and Wilkins, New York.

Y

- Yan, H., Asfahl, K.L., Li, N. *et al.* (2019). Conditional quorum-sensing induction of a cyanide-insensitive terminal oxidase stabilizes cooperating populations of *Pseudomonas aeruginosa*. *Nat Commun* 10, 4999.
- Yang J, Zhao HL, Ran LY, *et al.* (2015). Mechanistic insights into elastin degradation by pseudolysin, the major virulence factor of the

- opportunistic pathogen *Pseudomonas aeruginosa*. Scientific Reports. 5:9936.
- Yousefi-Avarvand, A., Khashei, R., Sedigh Ebrahim-Saraie, H., Emami, A., Zomorodian, K., & Motamedifar, M. (2015). The Frequency of Exotoxin A and Exoenzymes S and U Genes Among Clinical Isolates of *Pseudomonas aeruginosa* in Shiraz, Iran. *International journal of molecular and cellular medicine*, 4(3): 167–173.
 - Yuan, J.S., Reed, A., Chen, F. *et al.* (2006). Statistical analysis of real-time PCR data. *BMC Bioinformatics* 7: 85.
 - Yuosif, A. M., Turkey, A. M. and Suliaman A. A. (2015). Molecular Variation Study of Clinical Isolates of *Pseudomonas aeruginosa* for 16SrRNA, *pvdE*, *toxA*, and *phzM* Genes Related with Virulence and Characterization Features. *Al-Anbar University Journal of Pure Sciences*. 9 (3): 24. ISSN: 1991-8941.

Z

- Zhang, L., Fritsch, M., Hammond, L., Landreville, R., Slatculescu, C., Colavita, A., & Mah, T. F. (2013). Identification of genes involved in *Pseudomonas aeruginosa* biofilm-specific resistance to antibiotics. *PloS one*, 8(4): e61625.
- Zeng, L. I. N. (2004). *Pseudomonas aeruginosa* pathogenicity and antibiotic resistance (Doctoral dissertation, University of Florida).