

DAFTAR PUSTAKA

- Alarcon, E., Romero, N., Agullar, H., Teran, J.L., Gomez, A., Roa, L.F, Lobato, C.E., and Escobar, A., 2013, Green Synthesis of Chalcones Derivatives of Acetophenone, 10th Green Chemistry Conference
- Ansari, F.L., Nazir, S., Noureen, H. and Mirza, B., 2005, Combinatorial Synthesis and Antibacterial Evaluation of an Indexed Chalcone Library, *J. Chem. Biodivers.*, 2(12), 1656 – 15664
- Ashokbhai, M.H., Merambhai, P.J., Narbherambhai, P.K., Kaushik, K.K., and Praful, P.K., 2014, Synthesis of Substituted Pyrazole Derivatives and Evaluation of Their Antimicrobial Activity, *Arch. App. Sci. Res.*, 6(3), 74 – 75
- Albuquerque, H.M.T., Santos, C.M.M., Cavaleiro, J.A.S., and Silva, A.M.S., 2014, Chalcones as Versatile Synthons for the Synthesis of 5- and 6-membered Nitrogen Heterocycles, *Curr. Org. Chem.*, 18(21), 2750 - 2775
- Asiri, A.M. and Khan S.A., 2011, Synthesis and Antibacterial Activities of a Bis-Chalcone Derived from Thiophene and Its Bis-Cyclized Products, *J. Mol.*, 16, 523 – 531
- Bajia, B. and Srivastava, Y.K., 2007, A Facile Solvent Free Microwave Induced Synthesis and Antibacterial Activity of Some 3-(2'-Hydroxyphenyl)-5-(Substituted Aryl)-2-Pyrazoline-N¹-Carboxaldehydes, *J. Chem.*, 4(2), 187 – 191
- Behalo, M.S., 2010, Synthesis of 3-(Phenoxathiin-2-yl)-2-Pyrazoline Derivatives as New Antibacterial and Antifungal Agents. *J. Sulf. Chem.*, 31, 287 – 97
- Chavan, P.G., Badadhe, P.V., and Shelke, S.N., 2015, Synthesis and Screening of Biological Activities of Some Important Pyrazoline Derivatives, *Int. J. Innov. Res. Sci., Eng. Tech.*, 4(2), 417 – 421
- Chebanov, V.A., Zbruyev, A.I., Desenko, S.M., Orlov, V.D., and Yamerenko, F.G., 2008, Three – Membered Azaheterocycles Based on α,β -Unsaturated Ketones, *J. Curr. Org. Chem.*, 12(10), 792 – 812
- Chen, Y.H., Wang, W.H., Wang, Y.H., Lin, Z.Y., Wen, C.C., and Chern, C.Y., 2013, Evaluation of the Anti-Inflammatory Effect of Chalcone and Chalcone Analogues in a Zebrafish Model, *J. Mol.*, 18, 2052 – 2060
- Choundry, A.N., and Juyal, V., 2011, Synthesis of Chalcone and Their Derivatives as Antimicrobial Agents, *Int. J. Pharm. Pharm. Sci.*, 2(3), 125 – 128

- Chovatia, Y.S., Gandhi, S.P., Gorde, P.L., and Bagade, S.B., 2010, Synthesis and Antibacterial Activity of Some Pyrazoline Derivatives, *Ori. J. Chem.*, 26(1), 275 – 278
- Coyle, M.B. (Ed), 2005, *Manual of Antimicrobial Susceptibility Testing*, American Society for Microbiology, Departments of Laboratory Medicine and Microbiology University of Washington, Seattle
- Daba, H., Pandian, S., Gosselin, J.F., Simard, R.E., Huang, J., and Lacroix, C., 1991, Detection dan Activity of a Bacteriocin Produced by *Leuconoctoc mesenteroides*, *J. Appl. Environ. Microbiol.*, 57(12), 3450 – 3455
- Dallas, S.D., McGee, L., Limbago, B., Patel, J.B., McElmeel, M.L., Fulcher, L.C., Lonsway, D.R., and Jorgensen, J.H., 2013, Development of Doxycycline MIC and Disk Diffusion Interpretive Breakpoints and Revision of Tetracycline Breakpoints for *Streptococcus pneumonia*, *J. Clin. Microbiol.* 51(6), 1798 – 1802
- Das, B.C., Bwpwmik, D., and Chaudhuri, S., 2012, Microwave System, *J. Pharm*, 1(6), 1 – 17
- Deng, H., Yu, Z.Y., Shi, G.Y., Chen, M.J., Tao, K., and Hou, T.P., 2012, Synthesis and *in Vitro* Antifungal Evaluation of 1,3,5-Trisubstituted-2-Pyrazoline Derivatives. *Chem. Biol. Drug Des.*, 79, 279 – 289
- Dev, S. and Dhaneshwar, S.R., 2013, A Solvent – Free Protocol for The Green Synthesis of Heterocyclic Chalcones, *Der. Pharm. Lett.*, 5(5), 219 – 223
- Doan, T.N. and Tran, D.T., 2011, Synthesis, Antioxidant and Antimicrobial Activities of a Novel Series of Chalcones, Pyrazolic Chalcones, and Allylic Chalcones, *J. Pharm. Pharm.*, 2(4), 282 – 286
- Francis, A.J. Jonathan, D.B., and Roopsingh, D., 2014, A Study on The Synthesis and Biocidal Efficacy of Certain Random Copolyesters Containing Chalcone Moiety, *Int. J. Pharm. Bio. Sci.*, 5(4), 589 – 596
- Fass, R. and Barnishan, J., 2001. Comparison of Antimicrobial *in vitro* Activities Against *Streptococcus Pneumonia* Independent of MIC Susceptibility Breakpoints Using MIC Frequency Distribution Curves, Scattergrams and Linear Regression Analyses, *J. Antimic. Chem.*, 48, 609 – 615
- Fulmer, G.R., Miller, A.J.M., Sherden, N.H., Gottlieb, H.E., Nudelman, A., Stoltz, B.M., Bercaw, J.E., and Goldberg, K.I., 2010, NMR Chemical Shifts of Trace Impurities: Common Laboratory Solvents, Organic, and Gases in Deuterated Solvents Relevant to The Organometallic Chemist, *Organometallics*, 29, 2176 – 2179

- Gothwal, P. and Srivastava, Y.K., 2012, A Facile Microwave Induced Synthesis of Some Novel 3-[4'-(4''-Nitrophenoxy)-Phenyl]-5-(Substituted Aryl)-2-Pyrazoline-1-Carboxaldehydes as Potential Antimicrobial Agent, *J. Chem., Bio. Phys. Sci.*, 2(2), 622 – 627
- Gottlieb, H.E., Kotlyar, V., and Nudelman, A., 1997. NMR Chemical Shifts of Common Laboratory Solvent as Trace Impurities, *J. Org. Chem.*, 62, 7512 – 7515
- Grodowska, K. and Parczewski, 2010, Analytical Methods for Residual Solvent Determination in Pharmaceutical Products, *J. Drug. Res.*, 67(1), 13 – 26
- Guerra, W., Silva – Caldeira, P.P., Terenzi, H., and Pereira – Maia, E.C., 2016, Impact of Metal Coordination on the Antibiotic and Non-Antibiotic Activities of Tetracycline-Based Drugs, *Coordination Chemistry Reviews*, doi: 10.1016/j.ccr.2016.04.009
- Hassan, S. Y., 2013, Synthesis, Antibacterial and Antifungal Activity of Some New Pyrazoline and Pyrazole Derivatives, *J. Mol.*, 18, 2683 – 2711
- Havrylyuk, D., Zimenkovsky, B., Vasylenko, O., Zaprutko, L., Gzella, A., and Lesyk, R., 2009, Synthesis of novel Thiazolone-Based Compounds Containing Pyrazoline Moiety and Evaluation of Their Anticancer Activity, *Eur. J. Med. Chem.*, 44, 1396 – 1404
- Havrylyuk, D., Zimenkovsky, B., Vasylenko, O., and Lesyk, R., 2013, Synthesis and Anticancer and Antiviral Activities of New 2-Pyrazoline-Substituted 4-Thiazolidinones, *J. Heterocyclic Chem.*, 50, E55 – E62
- Jamwal, A., Javed, A., and Bhardwaj, V., 2013, A review on Pyrazole Derivatives of Pharmacological Potential, *J. Pharm. BioSci.*, 3, 114 – 123
- Jasril, Teruna, H.Y., Zamri, A., Alfatos, D., Yuslinda, E. dan Nurulita, Y., 2012, Sintesis Uji Antibakteri Senyawa Turunan Bromo Kalkon Piridin, *J. Natur Ind.*, 14(3), 172 - 175
- Jauhari, S., Surati, A.M. and Desai, K.R., 2012, A Brief Review: Microwave Assisted Organic Reaction, *J. Arch. Appl. Sci. Res.*, 4(1), 645 – 661
- Joshi., S.D., Dixit, S.R., Kirankumar, M.N., Aminabhavi, T.M., Raju, K.V.S.N., Narayan, R., Lherbet, C., and Yang, Kap Seung, 2016, Synthesis, Antimycobacterial Screening and Ligand-Based Molecular Docking Studies on Novel Pyrrole Derivatives Bearing Pyrazoline, Isoxazole and Phenyl Thiourea Moieties, *Eur. J. Med. Chem.*, 107, 133 – 152
- Kateb, B.A., Hussien, A.A., Baseer, M.A., 2016, Microwave – Assisted Efficient Synthesis of Ortho Hydroxy Chalcone as Probes for Biological Activities, *Int. J. Pharm. Pharm. Res.*, 6(1), 210 – 227

- Kitawat, B.S. and Singh, M., 2014, Synthesis, Characterization, Antibacterial, Antioxiandt, DNA Binding and SAR Study of a Novel Pyrazine Moiety Bearing 2-Pyrazoline Derivatives, *New J. Chem.*, 38, 4290–4299
- Kumar, S., Lamba, M.S., and Makrandi, J.K., 2008, An Efficient Green Procedure for the Synthesis of Chalcone Using C-200 as Solid Support Under Grinding Conditions, *Green Chem. Lett. Rev.*, 1(2), 123 – 125
- Kumar, S. and Pandey, A., 2013. Review: Chemistry and Biological of Flavonoids : An Overview, *The Sci. World J.*, doi/10.1155/2013/162750
- Kundariya, D.S., Joshi, N.K., and Godhaviya, P.K., 2012, Synthesis toward 4,6-Disubstituted Pyrimidines via Chalcone Derivatives and Their Biological Evaluation, *Res. J. Pharm., Bio. Chem. Sci.*, 3(4), 325 – 337
- Lévai, A. and Jeko J., 2007, Synthesis of Carboxylic Acid Derivatives of 2-Pyrazolines, *ARKIVOC*, (i), 134 – 145
- Madigan, M.T., Martinko, J.M., Stahl, D.A., and Clark, D.P., 2012, *Brock Biology of Microorganisms*, 13th Ed., Pearson Education, San Fransisco
- Malhotra, V., Pathak, S., Nath, R., Mukerjee, D., and Shanker, K., Subtituted Pyrazolines and Their Cardiovascular Activity, *J. Indian Chem.*, 41B, 1310 – 1313
- Mandić, Z., 2012, *Physico – Chemical Methods in Drug Discovery and Development*, IAPC Publishing, Zagreb
- Miguel, F.B., Dantas, J.A., Amorim, S., Andrade, G.F.S., Costa, L.A.S., and Couri, M.R.C., 2016. Synthesis, Spectroscopic and Computational Characterization of The Tautomerism of Pyrazoline Derivatives from Chalcones, *Spectrochimica Acta Part A: Mol. Biomol. Spectro.*, 152, 318 – 326
- Mounika, S., 2013, Synthesis Characterisation and Evaluation of Some Pyrazoline Derivatives, *Int. J. Pharm. Sci. Res.*, 1(2), 2347 – 2154
- Narrender, T. and Reddy, K.P., 2007, A Simple and Highly Efficient Method for The Synthesis of Chalcones by Using Borontrifluoride-Etherate, *Tetrahedron Lett.*, 48, 3177 – 3180
- Nguyen, F., Starosta, A.L., Arenz, S., Sohmen, S., Donhofer, A., and Wilson, D.N., 2013, Tetracycline Antibiotic and resistance Mechanisms, *J. Biol. Chem.*, 95(5), 559 – 575
- Ovais, S., Bashir, R., Yaseen, S., Rathore, P., Samim M, and Javed K., 2013, Synthesis and Pharmacological Evaluation of Some Novel 2-Pyrazolines Bearing Benzenesulfonamide as Anti-Inflammatory and Blood Glucose Lowering Agents, *Med. Chem. Res.*, 22, 1378 – 1385

- Ozdemir, A. and Zitouni, G.T., 2008, Novel Analogues of 2-Pyrazolines: Synthesis, Characterization and Antimicrobial Evaluation, *Turk. J. Chem.*, 32, 529 – 538
- Pathak, V.N., Joshi, R., Sharma, J., Gupta, N. And Rao, V.M., 2009, Mild and Ecofriendly Tandem Synthesis and Spectral and Antimicrobial Studies of N1 Acetyl–5–Aryl–3–(Substituted Styryl) Pyrazolines. *Phosphorus, Sulfur, and Silicon*, Vol. 184, pp. 1854 – 1865
- Patil, C.B., Mahajan, S.K. and Katti, S. A., 2009, Chalcone: A Versatile Molecule, *J. Pharm. Sci. Res.*, 1(3), 11 – 22
- Pavia, D.L., Lampman, G.M., Kriz, G.S., and Vyvyan, J.R., 2009, *Introduction do Spectroscopy – 4th Ed.*, Department of Chemistry Western Washington University, Bellingham
- Pizutti, L., Franco, M.S.F., and Flores, A.F.C., 2012, *Green Chemistry – Environmentally Benign Approaches: Recent Advances in the Ultrasound – Assited Synthesis of Azoles*, ISBN: 978-953-51-0334-9
- Prasad, Y.R., Rao, A.L., Prasoon, L., Murali, K., and Kumar, P.R., 2005, Synthesis and antidepressant activity of some 1,3,5-triphenyl-2-pyrazolines and 3-(200-hydroxy naphthalen-100-yl)-1,5-diphenyl-2-pyrazolines, *Bioorg. Med. Chem. Lett.*, 15, 5030 – 5034
- Raja, P.P., Riyazulah, M.S., and Kumar, V.S., 2010, Synthesis and Biological Evaluation of Chalcone Derivatives, *Intr, J. Chem. Tech. Res.*, 2(4), 1998 – 2004
- Rana, A.K., Lade, S.B., Sorathia, S., Joshi, M.J. and Shah, N.M., 2012, Synthesis, Characterization and Antimicrobial Evaluation of Some New N-Acetyl Pyrazoline Derivatives from Substituted Fura-2-Carbaldehyde, *Der Chem. Sin.*, 3(4), 965 – 969
- Sahoo, A., Parida, M., Sinha, B.H., dan Venkatesan, J., 2011, Antimicrobial Studies of Some New Novel Pyrazoline Derivatives, *Int. J. Res. Pharm. Chem.*, 1(3), 457 – 464
- Sahu, U., Panda, N.C., Ravikumar, B.V.V., and Kumar A., 2014, Activity of Chalcone and Its Derivatives – a Review, *PharmaTutor Magazine*, 2(1), 62 – 75
- Santhi, N., Emayavaramba, M., Gopi, C., Manivannan, C., and Raguraman, A., 2014, Green Synthesis and Antibacterial evaluation of Some 2-Pyrazoline Derivatives, *Int. J. Ad. Chem.*, 2(2), 53 – 58

- Shamsuzzaman, Khanam, H., Dar, A.M., Siddiqui, N., and Rechman, S., 2016, Synthesis, Characterization, Antimicrobial and Anticancer Studies of New Steroidal Pyrazolines, *J. Saudi Chem. Soc.*, 20, 7 – 12
- Sharma, S., Kaur, S., Bansal, T., and Gaba, J., 2014, Review on Synthesis of Bioactive Pyrazoline Derivatives. *J. Chem. Sci. Trans.*, 3, 861–75.
- Sharshira, E.M. and Hamada, M.M., 2012, Synthesis and Antimicrobial Evaluation of Some Pyrazole Derivates, *J. Mol.*, 17, 4962 – 4971
- Siddiqui, Z.N., Musthafa, T.N.M., Ahmad, A., and Khan, A.U., 2011, Thermal Solvent – Free Synthesis of Novel Pyrazolyl Chalcones and Pyrazolines as Potential Antimicrobial Agents, *J. Bioorg. Med. Chem. Lett.*, 21, 2860 – 2865
- Singh, P., Negi, J.S., nee Pant, G.J., and Rawat, M.S.M., 2009, Synthesis and Characterization of a Novel 2-Pyrazolines, *J. Molbank*, M614
- Singh, P., Negi, J.S., nee Pant, G.J., and Rawat, M.S.M., 2010, 5-(3-Nitrophenyl)-3-Phenyl-4,5-Dihydro-1H-Pyrazole-1-Carbaldehyde, *J. Molbank*, M650
- Sultan, A., Raza, A.R., Abbas, M., Khan, K.M, Tahir, M.N., and Saari, N., 2013, Evaluation of Silica – H₂SO₄ as na Efficient Heterogeneous Catalyst for The Synthesis of Chalcones, *J. Mol.*, 10081 – 10094
- Susanti, E., Matsjeh, S., Mustofa, Redjeki, T. and Wahyuningsih, T.D., 2014, Syntheses and Antioxidant Activities of Some Hydroxy Dimethoxy Chalcone Derivatives, *Indonesia J. Pharm.*, 25(1), 17 – 24
- Syam, S., Abdelwahab, S.I., Al-Mamary, M.A., and Mohan, S., 2012, Synthesis of Chalcones with Anticancer Activity. *J. Mol.*, 17, 6179 – 6195
- Tertel, M.L. (Ed), 2014, *Performance Standards for Antimicrobial Susceptibility Testing; Twenty – Fourth Informational Supplement (CLSI M100-S24)*, Clinical and Laboratory Standard Institute, Wayne
- Turkar, S.S., Rodge, A.H., Hatnapure, G.D., Keche, A.P., dan Gaikwad, G.S., 2010. Synthesis and Antibacterial, Antifungal Activity of Some Novel Chalcone Derivatives, *J. Chem. Pharm. Res.*, 2(5), 348 – 355
- Venkataraman, S., Jain, S., Shah, K., and Upmanyu, N., 2010, Synthesis and Biological Activity of Some Novel Pyrazolines, *J. Drug Res.*, 67(4), 361 – 366
- Vibhute, Y.B. and Baseer, M.A., 2003, Synthesis and Activity of a New Series of Chalcones as Antibacterial Agent, *J. Indian Chem.*, 42B, 202 – 205
- Viveka, S., Dinesha, Shama, P., Nagaraja G.K., Ballav, S., and Kerkar, S., 2015, Design and Synthesis of Some New Pyrazolyl-Pyrazolines as Potential Anti-

Inflammatory, Analgesic and Antibacterial Agents, *Eur. J. Med. Chem.*, 101, 442 – 451

Volk, W.A. and Wheeler, M.F., 1993, *Basic Microbiology*, 6th Ed., Harper and Row, New York

Vouga, M. and Greub, G., 2016, Emerging Bacterial Pathogens: The Past and Beyond, *J. Eur. Soc. Clin. Mic. Inf. Dis.*, 22(1), 12 – 21