

DAFTAR PUSTAKA

- Abdjan, M. I., Aminah, N. S., Siswanto, I., Kristanti, A. N., Takaya, Y., & Choudhary, M. I. (2021). Exploration of stilbenoid trimers as potential inhibitors of sirtuin1 enzyme using a molecular docking and molecular dynamics simulation approach. *RSC Advances*, 11(31), 19323–19332. <https://doi.org/10.1039/d1ra02233d>
- Afita, R. B., Arafah, & Hari, N. (2016). *Faktor Yang Berhubungan Dengan Perilaku Ibu Rumah Tangga Melakukan Pemeriksaan Payudara Sendiri (SADARI)*. 1–23.
- Al-jumaili, M. H. A., Khairi, M., & Al, Y. (2021). *Study of Selected Flavonoid Structures and Their Potential Activity as Breast Anticancer Agents*. 0–5. <https://doi.org/10.1177/11769351211055160>
- Anggorowati, L. (2013). Faktor Risiko Kanker Payudara Wanita. *KESMAS - Jurnal Kesehatan Masyarakat*, 8(2), 121–126. <https://doi.org/10.15294/kemas.v8i2.2635>
- Arcinthy Rachmania, R., Supandi, & Anggun Larasati, O. (2015). Analisis In-Silico Senyawa Diterpenoid Lakton Herba Sambiloto (*Andrographis paniculata* Nees) Pada Reseptor Alpha-Glucosidase Sebagai Antidiabetes Tipe II. *Pharmacy*, 12(02), 210–222.
- Asnawi, A., Febrina, E., Aligita, W., Yuliantini, A., & Arfan, A. (2023). Penambatan Molekul dan Dinamika Molekul beberapa Fitokimia dari *Acalypha Indica* L. sebagai Inhibitor Matriks Metalloproteinase. *Jurnal Sains Farmasi & Klinis*, 10(1), 62. <https://doi.org/10.25077/jsfk.10.1.62-70.2023>
- Burhan, A., Aisyah, A. N., Awaluddin, A., Zulham, Z., Taebe, B., & Gafur, A. (2019). Uji Aktivitas Antioksidan Dan Antikanker Ekstrak Batang Murbei (*Morus Alba* L.) Terhadap Sel Kanker Widr Secara in Vitro. *Kartika : Jurnal Ilmiah Farmasi*, 7(1), 17. <https://doi.org/10.26874/kjif.v7i1.173>
- Cardoso, F., Costa, A., Senkus, E., Aapro, M., André, F., Barrios, C. H., Bergh, J., Bhattacharyya, G., Biganzoli, L., Cardoso, M. J., Carey, L., Corneliussen-James, D., Curigliano, G., Dieras, V., El Saghir, N., Eniu, A., Fallowfield, L., Fenech, D., Francis, P., ... Winer, E. (2017). 3rd ESO-ESMO International Consensus Guidelines for Advanced Breast Cancer (ABC 3). *Annals of Oncology*, 28(1), 16–33. <https://doi.org/10.1093/annonc/mdw544>
- Chagas, C. M., Moss, S., & Alisaraie, L. (2018). Drug metabolites and their effects on the development of adverse reactions: Revisiting Lipinski's Rule of Five. *International Journal of Pharmaceutics*, 549(1–2), 133–149. <https://doi.org/10.1016/j.ijpharm.2018.07.046>
- Chirumbolo, S., Bjørklund, G., Lysiuk, R., Vella, A., Lenchyk, L., & Upyr, T. (2018). Targeting cancer with phytochemicals via their fine tuning of the cell

- survival signaling pathways. *International Journal of Molecular Sciences*, 19(11). <https://doi.org/10.3390/ijms19113568>
- Chisholm-Burns, M. A., Schwinghammer, T. L., Wells, B. G., Malone, P. M., Kolesar, J. M., & Dipiro, J. T. (2016). *Pharmacotherapy Principles & Practice* (4th ed.).
- Dall, G. V., & Britt, K. L. (2017). Estrogen effects on the mammary gland in early and late life and breast cancer risk. *Frontiers in Oncology*, 7(MAY), 1–10. <https://doi.org/10.3389/fonc.2017.00110>
- Dewi, R. S., Anggraeni, A., Bahti, H. H., Yusuf, M., Hardianto, A., & Mutholib, A. (2022). Simulasi Dinamika Molekuler Ligan Disekunderbutil ditiofosfat (DSBDTP) Untuk Ekstraksi Logam Tanah Jarang. *SainsMath: Jurnal MIPA Sains Terapan*, 20(3), 1–9.
- Dinata, D. I., Peni, M. I., & Asnawi, A. (2023). Identification of Angiotensin Receptor Blocker II Ligands From Gotu Kola (*Centella asiatica* L.) Extract: an In Silico Study. *Jurnal Sains Dan Seni ITS*, 6(1), 51–66. <http://repositorio.unan.edu.ni/2986/1/5624.pdf%0Ahttp://fiskal.kemenkeu.go.id/ejournal%0Ahttp://dx.doi.org/10.1016/j.cirp.2016.06.001%0Ahttp://dx.doi.org/10.1016/j.powtec.2016.12.055%0Ahttps://doi.org/10.1016/j.ijfatigue.2019.02.006%0Ahttps://doi.org/10.1>
- Ekalu, A. (2020). UV Characterization (Moenie cite nie). *Ekalu and Habila Beni-Suef University Journal of Basic and Applied Sciences*, 9(45), 1–14.
- Eun, H. S., Min, K. S., Jeong, L. H., Vetrivel, P., Saralamma, V. V. G., Doo, H. J., Hee, K. E., Joon, L. S., & Sup, K. G. (2019). Scutellarein induces fas-mediated extrinsic apoptosis and G2/M cell cycle arrest in Hep3B hepatocellular carcinoma cells. *Nutrients*, 11(2), 1–13. <https://doi.org/10.3390/nu11020263>
- Fatimah, F., Martha, R. D., & Kusumawati, A. (2020). Deteksi dan Identifikasi Senyawa Flavonoid Ekstrak Etanol Kulit Batang Tanaman Majapahit (*Crescentia cujete*) dengan LCMS. *CHEESA: Chemical Engineering Research Articles*, 3(2), 88. <https://doi.org/10.25273/cheesa.v3i2.7688.88-98>
- Fauzi, F. M., Wutsqa, Y. U., & Rohmatika, N. A. (2024). Studi Bioavalibilitas dan Molecular Docking Senyawa Fenolik *Ocimum sanctum* L . Sebagai Inhibitor Reseptor Esterogoren Alfa Pada Sel Kanker Payudara. *Akfarindo*, 9(1), 49–56.
- Ferwadi, S., Rahmat, G., & Astuti, W. (2017). Molecular Docking Study of Cinnamate Acid Compound and its Derivatives as Protein 1J4X Inhibitor to Cervical Cancer Cell. *Jurnal Kimia Mulawarman*, 14(2), 84–90. <http://www.rcsb.org/pdb/explore/explore.do?>
- Gawang, P., & I Gusti Made, S. (2020). *A Theoretical Study to Determine Band Gap of Conjugated Porphyrin with Calcium Metal Using Density Functional Theory (DFT)*. 9(2), 162–169.
- Genheden, S., & Ryde, U. (2015). The MM/PBSA and MM/GBSA methods to

- estimate ligand-binding affinities. *Expert Opinion on Drug Discovery*, 10(5), 449–461. <https://doi.org/10.1517/17460441.2015.1032936>
- George, B. P., Chandran, R., & Abrahamse, H. (2021). Role of phytochemicals in cancer chemoprevention: Insights. *Antioxidants*, 10(9). <https://doi.org/10.3390/antiox10091455>
- Granchi, C., Capecchi, A., Del Frate, G., Martinelli, A., Macchia, M., Minutolo, F., & Tuccinardi, T. (2015). Development and validation of a docking-based virtual screening platform for the identification of new lactate dehydrogenase inhibitors. *Molecules*, 20(5), 8772–8790. <https://doi.org/10.3390/molecules20058772>
- Hutskalov, I., Linden, A., & Čorić, I. (2023). Directional Ionic Bonds. *Journal of the American Chemical Society*. <https://doi.org/10.1021/jacs.3c01030>
- Ischak, N. I., Ode, L. O., Hasan, H., Kilo, A. La, & Asnawi, A. (2023). In silico screening of *Andrographis paniculata* secondary metabolites as anti-diabetes mellitus through PDE9 inhibition. *Research in Pharmaceutical Sciences*, 18(1), 100–111. <https://doi.org/10.4103/1735-5362.363619>
- Jha, V., Devkar, S., Gharat, K., Kasbe, S., Matharoo, D. K., Pendse, S., Bhosale, A., & Bhargava, A. (2022). Screening of Phytochemicals as Potential Inhibitors of Breast Cancer using Structure Based Multitargeted Molecular Docking Analysis. *Phytomedicine Plus*, 2(2), 100227. <https://doi.org/10.1016/j.phyplu.2022.100227>
- Kalontong, P. K., Safithri, M., & Tarman, K. (2022). Molecular Docking of Active Compound of *Spirulina platensis* as TMPRSS2 Inhibitor to Prevent the SARS-COV-2 Infection. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 25(2), 253–267. <https://doi.org/10.17844/jphpi.v25i2.40645>
- Karsana, E., Teruna, H. Y., & Zamri, A. (2015). Sintesis Dan Uji Toksisitas Senyawa Analog Para Metil Kalkon. *Photon: Jurnal Sain Dan Kesehatan*, 6(01), 41–44. <https://doi.org/10.37859/jp.v6i01.456>
- Karyawati, T., & Ruswanto. (2019). Simulasi Dinamika Molekular Senyawa 2,6-Dimethyl-4. *Paper Knowledge . Toward a Media History of Documents*.
- Katzung, B. G., Trevor, A. J., & Hall, M. K. (2015). Katzung & Trevor's Pharmacology Examination and Board Review, 11th Edition. In *Mc. Graw Hill*.
- Kaushik, S., Shyam, H., Agarwal, S., Sharma, R., Nag, T. C., Dwivedi, A. K., & Balapure, A. K. (2019). Genistein potentiates Centchroman induced antineoplasticity in breast cancer via PI3K/Akt deactivation and ROS dependent induction of apoptosis. *Life Sciences*, 239(November), 117073. <https://doi.org/10.1016/j.lfs.2019.117073>
- Kusuma, A. T., & Hadi, D. (2019). Virtual Screening Natural Compounds from Plants as Inhibitor of Estrogen Receptor Alpha I (ESR1). *Indonesian Journal*

of Pharmaceutical Science and Technology Journal Homepage, 1(1), 30–41.
<http://jurnal.unpad.ac.id/ijpst/>

- Le, X. T., Huynh, M. T., Pham, T. N., Than, V. T., Toan, T. Q., Bach, L. G., & Trung, N. Q. (2019). Optimization of total anthocyanin content, stability and antioxidant evaluation of the anthocyanin extract from vietnamese carissa carandas l. Fruits. *Processes*, 7(7), 1–15. <https://doi.org/10.3390/pr7070468>
- Lee, H.-R., Kim, T.-H., & Choi, K.-C. (2012). Functions and physiological roles of two types of estrogen receptors, ER α and ER β , identified by estrogen receptor knockout mouse. *Laboratory Animal Research*, 28(2), 71. <https://doi.org/10.5625/lar.2012.28.2.71>
- Matthew, D., Brian T, M., & Joanna E, B. (2017). Phytosteroids Beyond Estrogens: Regulators of Reproductive and Endocrine Function in Natural Products. *Physiology & Behavior*, 176(10), 139–148. <https://doi.org/10.1016/j.mce.2016.12.013>. Phytosteroids
- Mayrovitz, H. N. (2022). *Breast Cancer*.
- Mierza, V., Aida, F., Hartati, H., Verliani, H., & Zahra, N. A. (2023). Review Article Analysis of Various Isoflavone Identification Methods : Literature. *Journal of Pharmaceutical and Sciences*, 6(1), 109–117. <https://www.journal-jps.com>
- Mukama, T., Kharazmi, E., Sundquist, K., Sundquist, J., Brenner, H., & Fallah, M. (2020). Familial risk of breast cancer by dynamic, accumulative, and static definitions of family history. *Cancer*, 126(12), 2837–2848. <https://doi.org/10.1002/cncr.32815>
- Muttaqin, F. Z. (2019). Molecular Docking and Molecular Dynamic Studies of Stilbene Derivative Compounds As Sirtuin-3 (Sirt3) Histone Deacetylase Inhibitor on Melanoma Skin Cancer and Their Toxicities Prediction. *Journal of Pharmacopolium*, 2(2), 112–121. <https://doi.org/10.36465/jop.v2i2.489>
- Ng, H. W., Perkins, R., Tong, W., & Hong, H. (2014). Versatility or promiscuity: The estrogen receptors, control of ligand selectivity and an update on subtype selective ligands. In *International Journal of Environmental Research and Public Health* (Vol. 11, Issue 9). <https://doi.org/10.3390/ijerph110908709>
- Nugroho, A. (2017). Teknologi Bahan Alam, Lambung Mengkurat. In *Lambung Mangkurat University Press* (Issue January 2017).
- Nurfadhila, L., Utami, M. R., Pratiwi, D., Qhoirul, D., Martia, E., Jana, I. I., & Lamsar, A. (2023). Potensi Senyawa Turunan Xanton dari Kulit Buah Manggis (*Garcinia mangostana* L.) Sebagai Inhibitor Protein Mycobacterium tuberculosis: Studi In Silico. *PharmaCine : Journal of Pharmacy, Medical and Health Science*, 3(2), 55–63. <https://doi.org/10.35706/pc.v3i2.7847>
- Nurhayati, & Arifin H, Z. (2019). Analisis Faktor-Faktor Yang Berhubungan Dengan Kejadian Kanker Payudara. *Holistik J Kesehat.*, 13(2), 175–85.

- Oktaviani, R., Arifian, A., Ramadani, A., Zamruddin, N., & Rusli, R. (2023). Kajian In Silico Senyawa Turunan Kalkon Sebagai Antikanker. *Mulawarman Pharmaceuticals Conferences*, 10. <https://doi.org/10.54239/2319-022-001-001>
- Ononamadu, C. J., & Ibrahim, A. (2021). Molecular docking and prediction of ADME/drug-likeness properties of potentially active antidiabetic compounds isolated from aqueous-methanol extracts of *Gymnema sylvestre* and *Combretum micranthum*. *Biotechnologia*, 102(1), 85–99. <https://doi.org/10.5114/bta.2021.103765>
- Panicker, C. Y., Varghese, H. T., Manjula, P. S., Sarojini, B. K., Narayana, B., War, J. A., Srivastava, S. K., Van Alsenoy, C., & Al-Saadi, A. A. (2015). FT-IR, HOMO-LUMO, NBO, MEP analysis and molecular docking study of 3-Methyl-4-{(E)-[4-(methylsulfanyl)-benzylidene]amino} 1H-1,2,4-triazole-5(4H)-thione. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 151, 198–207. <https://doi.org/10.1016/j.saa.2015.06.076>
- Park, S., Lim, W., Bazer, F. W., & Song, G. (2018). Naringenin suppresses growth of human placental choriocarcinoma via reactive oxygen species-mediated P38 and JNK MAPK pathways. *Phytomedicine*, 50, 238–246. <https://doi.org/10.1016/j.phymed.2017.08.026>
- Pratama, A. A., Rifai, Y., & Marzuki, A. (2017). Docking Molekuler Senyawa 5,5'-Dibromometilsesamin. *Majalah Farmasi Dan Farmakologi*, 21(3), 67–69. <https://doi.org/10.20956/mff.v21i3.6857>
- Putri, Sofyan, Imaduddin, Aini, Zahro, & Juhaeri. (2022). *Studi Stabilitas Termal Mutan Phytase Q168R Menggunakan Simulasi Studi Stabilitas Termal Mutan Phytase Q168R Menggunakan Simulasi Dinamika Molekul*. May.
- Rachmania, R., Hariyanti, Zikriah, R., & Soultan, aditya. (2018). Studi In Silico Senyawa Alkaloid Herba Bakung Putih(*Crinum Asiaticum* L.) pada Penghambatan Enzim Siklooksigenase (COX). *Jurnal Penelitian Dan Pengembangan IlmuKimia*.
- Ramírez-Salinas, G. L., García-Machorro, J., Rojas-Hernández, S., Campos-Rodríguez, R., de Oca, A. C. M., Gomez, M. M., Luciano, R., Zimic, M., & Correa-Basurto, J. (2020). Bioinformatics design and experimental validation of influenza A virus multi-epitopes that induce neutralizing antibodies. *Archives of Virology*, 165(4), 891–911. <https://doi.org/10.1007/s00705-020-04537-2>
- Rastini, Giantari, Adnyani, & Laksmiani. (2019). *Molecular Docking Aktivitas Antikanker Dari Kuersetin Terhadap Kanker Payudara Secara In Silico*. 243–270.
- Reynaldi, M. A., & Setiawansyah, A. (2022). Potensi anti-kanker payudara tanaman songga (*Strychnos lucida* R.Br): Tinjauan interaksi molekuler terhadap reseptor estrogen- α in silico. *Sasambo Journal of Pharmacy*, 3(1), 30–35.

<https://doi.org/10.29303/sjp.v3i1.149>

- Riivari, E., & Maija, L. A. (2014). This is an electronic reprint of the original article . This reprint may differ from the original in pagination and typographic detail . *International Journal of Special Education*, 124(1), 70–84.
- Riverson, M. S. (2020). *Prosiding Seminar Nasional Biotik 2020 Potensi Antidiabetes Benzyl Beta D Glucopyranoside Dari Daun Yacon Sebagai Inhibitor Enzim Dpp-4: Metode In Silico*. 299–305. www.uniprot.com.
- Rodríguez-García, C., Sánchez-Quesada, C., Gaforio, J. J., & Gaforio, J. J. (2019). Dietary flavonoids as cancer chemopreventive agents: An updated review of human studies. *Antioxidants*, 8(5), 1–23. <https://doi.org/10.3390/antiox8050137>
- Rollando, S. (2017). *Rollando_Buku Referensi Pengantar Kimia Medisinal*.
- Ruswanto, R., Ratnasari, A., & Tuslinah, L. (2015). Sintesis Senyawa N'-(3,5-Dinitrobenzoyl)-Isonicotinohydrazide Dan Studi Interaksinya Pada Mycobacterium Tuberculosis Enoyl Acyl Carrier Protein Reductase (Inha). *Jurnal Kesehatan Bakti Tunas Husada: Jurnal Ilmu-Ilmu Keperawatan, Analis Kesehatan Dan Farmasi*, 14(1), 63. <https://doi.org/10.36465/jkbth.v14i1.112>
- Sen, D. J., Nandi, K., & Saha, D. (2021). Rule of Five: The Five Men Army to Cross The Blood Brain Barrier for Therapeutically Potent. *World Journal of Advance Healthcare Research*, 5(3), 206–211. <https://www.researchgate.net/publication/351945081>
- Septa, A., Agus, R., Rahayu, S., Purnaningtyas, D., Dewi, W., Tirto, R., Ino, S. N., Lisna, I., Heri, G., & Cahyanto, N. (2023). *Kimia Medisinal Pt Global Eksekutif Teknologi*. www.globaleksekutifteknologi.co.id
- Setiawati, A. (2014). Anticancer Activity of Mangosteen Pericarp Dry Extract Against MCF-7 Breast Cancer Cell Line Through Estrogen Receptor -A. *Indonesian Journal of Pharmacy*, 25(3), 119. <https://doi.org/10.14499/indonesianjpharm25iss3pp119>
- Singh, S., Bani Baker, Q., & Singh, D. B. (2021). Molecular docking and molecular dynamics simulation. *Bioinformatics: Methods and Applications*, 291–304. <https://doi.org/10.1016/B978-0-323-89775-4.00014-6>
- Siswandono, E. (2020). *Kimia Medisinal 1 Edisi 2*. Airlangga University Press.
- Sneha, P., & Doss, C. G. P. (2015). Molecular Dynamics : New Frontier in Personalized Medicine. In *Personalized medicine* (1st ed.). Elsevier Inc. <https://doi.org/10.1016/bs.apcsb.2015.09.004>
- Somboon, T., Mahalapbutr, P., Sanachai, K., Maitarad, P., Lee, V. S., Hannongbua, S., & Rungrotmongkol, T. (2021). Computational study on peptidomimetic inhibitors against SARS-CoV-2 main protease. *Journal of Molecular Liquids*,

322, 114999. <https://doi.org/10.1016/j.molliq.2020.114999>

- Sporikova, Z., Koudelakova, V., Trojanec, R., & Hajdich, M. (2018). Genetic Markers in Triple-Negative Breast Cancer. *Clinical Breast Cancer*, 18(5), e841–e850. <https://doi.org/10.1016/j.clbc.2018.07.023>
- Sulistiani, H. R., Handayani, S., & Pangastuti, A. (2014). Karakterisasi senyawa bioaktif isoflavon dan uji aktivitas antioksidan dari ekstrak etanol tempe berbahan baku kedelai hitam (Glycine soja), koro hitam (Lablab purpureus), dan koro kratok (Phaseolus lunatus). *Journal Biofarmasi*, 12(2), 62–72. <https://doi.org/10.13057/biofar/f120203>
- Sun, Y. S., Zhao, Z., Yang, Z. N., Xu, F., Lu, H. J., Zhu, Z. Y., Shi, W., Jiang, J., Yao, P. P., & Zhu, H. P. (2017). Risk factors and preventions of breast cancer. *International Journal of Biological Sciences*, 13(11), 1387–1397. <https://doi.org/10.7150/ijbs.21635>
- Suryani, Y. (2020). Monograf Kanker Payudara. In *Jurnal Penelitian Pendidikan Guru Sekolah Dasar* (Vol. 6, Issue August).
- Syahputra, G., Ambarsari L, & T, S. (2014). Simulasi docking kurkumin enol, bisdemetoksikurkumin dan analognya sebagai inhibitor enzim 12-lipoksigenase. *Journal Biofisika*, 10(1), 55–67.
- Taparia, S. S., & Khanna, A. (2016). Procyanidin-rich extract of natural cocoa powder causes ROS-mediated caspase-3 dependent apoptosis and reduction of pro-MMP-2 in epithelial ovarian carcinoma cell lines. *Biomedicine and Pharmacotherapy*, 83, 130–140. <https://doi.org/10.1016/j.biopha.2016.06.019>
- Terefe, E. M., & Ghosh, A. (2022). Molecular Docking, Validation, Dynamics Simulations, and Pharmacokinetic Prediction of Phytochemicals Isolated From Croton dichogamus Against the HIV-1 Reverse Transcriptase. *Bioinformatics and Biology Insights*, 16. <https://doi.org/10.1177/11779322221125605>
- Varela-Rial, A., Majewski, M., & De Fabritiis, G. (2022). Structure based virtual screening: Fast and slow. *Wiley Interdisciplinary Reviews: Computational Molecular Science*, 12(2), 1–17. <https://doi.org/10.1002/wcms.1544>
- Wei, W., Cherukupalli, S., Jing, L., Liu, X., & Zhan, P. (2020). Fsp3: A new parameter for drug-likeness. *Drug Discovery Today*, 25(10), 1839–1845. <https://doi.org/10.1016/j.drudis.2020.07.017>
- WHO. (2020). The Global Cancer Observatory - All cancers. *International Agency for Research on Cancer - WHO*, 419, 199–200. <https://gco.iarc.fr/today/home>
- Wu, Q., Kroon, P. A., Shao, H., Needs, P. W., & Yang, X. (2018). Differential Effects of Quercetin and Two of Its Derivatives, Isorhamnetin and Isorhamnetin-3-glucuronide, in Inhibiting the Proliferation of Human Breast-Cancer MCF-7 Cells. *Journal of Agricultural and Food Chemistry*, 66(27), 7181–7189. <https://doi.org/10.1021/acs.jafc.8b02420>

- Xie, H., Li, Y., Yu, F., Xie, X., Qiu, K., & Fu, J. (2015). An investigation of molecular docking and molecular dynamic simulation on imidazopyridines as B-raf kinase inhibitors. *International Journal of Molecular Sciences*, 16(11), 27350–27361. <https://doi.org/10.3390/ijms161126026>
- Yuniar, Rachman, & Soedjanaatmadja. (2018). *Chimica et Natura Acta. Chimica et Natura Acta*, 6(3),.
- Zubair, M. S., Maulana, S., & Mukaddas, A. (2020). Penambatan Molekuler dan Simulasi Dinamika Molekuler Senyawa Dari Genus Nigella Terhadap Penghambatan Aktivitas Enzim Protease HIV-1. *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy) (e-Journal)*, 6(1), 132–140. <https://doi.org/10.22487/j24428744.2020.v6.i1.14982>