

## DAFTAR PUSTAKA

- Aboraia AS, Makowski B, Bahja A, Prosser D, Brancale A, Jones G, Simons C, 2010. Synthesis and CYP24A1 inhibitory activity of (E)-2-(2-substituted benzylidene) and 2-(2-substituted benzyl)-6-methoxy-tetralones. *European Journal of Medicinal Chemistry*, 45(10): 4427-34.
- Adyanita VA, Widajanti N, Wibisono S, 2020. Comparison of the 25(OH)D Levels Between Sarcopenia and Frailty in Elder Women: A Cross-Sectional Observation Analytic Study in Elderly Community in Surabaya. *Systematic Review of Pharmacology*; 11(4): 359-64.
- AKG, 2019. Angka Kecukupan Gizi yang di Anjurkan untuk Masyarakat Indonesia. *Permenkes RI*, Nomor 28 Tahun 2019.
- Albert MR, Ostheimer KG, 2003. The evolution of current medical and popular attitudes toward ultraviolet light exposure: part 3. *Journal of e American Academy of Dermatology*, 49(6): 1096-106.
- Amarya S, Singh K, Sabharwal M, 2015. Changes during aging and their association with malnutrition. *Journal of Clinical Gerontology & Geriatrics*, 6: 78-84.
- Arifin Z, Hestiantoro A, Baziad A, 2010. Pemberian susu yang difortifikasi kalsium kadar tinggi dan vitamin D dalam memperbaiki turnover tulang perempuan pascamenopause. *Majalah Obstetri dan Ginekologi Indonesia*, 34(1): 31-8.
- Baeke F, Takiishi T, Korf H, Gysemans C, Mathieu C, 2010. Vitamin D: modulator of the immune system. *Current Opinion in Pharmacology*, 10: 482-96.
- Bikle DD, 2014. Vitamin D Metabolism, Mechanism of Action, and Clinical Applications. *Chemistry & Biology*, 21(3): 319-29.
- Bikle DD & Schwartz J, 2019. Vitamin D Binding Protein, Total, and Free Vitamin D Levels in Different Physiological and Pathophysiological Conditions. *Frontiers in Endocrinology*, 10(317): 1-12.
- Bischoff-Ferrari HA, Giovannucci E, Willett WC, Dietrich T, Dawson-Hughes B, 2006. Estimation of optimal serum concentrations of 25- hydroxyvitamin D for multiple health outcomes. *American Journal of Clinical Nutrition*, 84: 18-28.
- Brownie S, 2006. Why are elderly individuals at risk of nutritional deficiency?. *International Journal of Nursing Practice*, 12(2): 110-18.
- Buta B, Choudhury PP, Xue Q, Chaves P, Bandeen-Roche K, Shardell M, Semba RD, Walston J, Michos ED, Appel LJ, McAdams-DeMarco M, Gross A, Yasar S, Ferrucci L, Fried LP, & Kalyani RR, 2016. The Association of Vitamin D Deficiency and Incident Frailty in Older Women: The Role of Cardiometabolic Diseases. *Journal of American Geriatrics Society*: 65(3): 619-24.

- Chang CC and Roberts BL, 2008. Feeding difficulty in older adults with dementia. *Journal of Clinical Nursing*, 17(17): 2266-74.
- Chiu KC, Chu A, Go VLW, Saad MF, 2004. Hypovitaminosis D is associated with insulin resistance and  $\beta$  cell dysfunction. *American Journal of Clinical Nutrition*, 79: 820-5.
- Christakos S, 2017. In search of regulatory circuits that control the biological activity of vitamin D. *Journal of Biological Chemistry*, 292(42): 17559-60.
- Dahlan S, 2019. *Besar sampel dalam penelitian kedokteran dan kesehatan*, Edisi 5, Jakarta: Epidemiologi Indonesia.
- Danckert B, Ferlay J, Engholm G, Hansen HL, Johannesen TB, Khan S, Køtlum JE, Ólafsdóttir E, Schmidt LKH, Virtanen A, Storm HH, 2015. Nordcan: Cancer Incidence, Mortality, Prevalence and Survival in the Nordic Countries, Version 7.2 (16.12.2015). Association of the Nordic Cancer Registries, *Danish Cancer Society*.
- Darnton-Hill I, 1992. Psychosocial aspects of nutrition and aging. *Nutrition Reviews*, 50(12): 476-9.
- Dean M, Raats MM, Grunert KG, Lumbers M, 2009. Factors influencing eating a varied diet in old age. *Public Health Nutrition*, 12(12): 2421-27.
- Diffey BL, 2002. Sources and measurement of ultraviolet radiation. *Methods*, 28(1): 4-13.
- Donini LM, Scardella P, Piombo L, Neri B, Asprino R, Proietti AR, Carcaterra S, Cava E, Cataldi S, Cucinotta D, Di Bella G, Barbagallo M, Morrone A, 2013. Malnutrition in elderly: social and economic determinants. *The Journal of Nutrition, Health & Aging*, 17(1): 9-15.
- Elizondo-Montemayor L, Castillo EC, Rodríguez-López C, Villarreal-Calderón JR, Gómez-Carmona M, Tenorio-Martínez S, Nieblas B, and García-Rivas G, 2017. Seasonal Variation in Vitamin D in Association with Age, Inflammatory Cytokines, Anthropometric Parameters, and Lifestyle Factors in Older Adults. *Mediators of Inflammation*, 1-14.
- Engelsen O, 2010. The Relationship between Ultraviolet Radiation Exposure and Vitamin D Status. *Nutrients*, 2: 482-495.
- Evans C, 2005. Malnutrition in the Elderly: A Multifactorial Failure to Thrive. *The Permanente Journal*, 9(3): 38-41.
- Exebio JC, Zarini GG, Ajabshir S, Antwi J, Huffman FG, 2016. Validation of a Sun Exposure Questionnaire Among Subjects with Type 2 Diabetes Residing in South Florida. *Journal of Immigrant Minority Health*, 18: 228–233.
- FAO, 2018. Dietary Assessment: A resource guide to method selection and application in low resource settings. *Food and Agriculture Organization of the United Nations*, Rome.

- Gallieni M, Cozzolino M, Fallabrino G, PashoS, Olivi L, Brancaccio D, 2009. Vitamin D: Physiology and pathophysiology. *The International Journal of Artificial Organs*, 32(2): 87-94.
- Gibson RS, 2005. *Principles of Nutritional Assesment*, 2<sup>nd</sup> ed, New York: Oxford University Press.
- Gil A, Diaz JD, Mesa MD, 2018. Vitamin D: Classic and Novel Actions. *Annals of Nutrition and Metabolism*, 72: 87-95.
- Gonzalez Pardo V, Boland R, de Boland AR, 2008. Vitamin D receptor levels and binding are reduced in aged rat intestinal subcellular fractions. *Biogerontology*, 9: 109-18.
- Gouni-Berthold I, Krone W, Berthold HK, 2009. Vitamin D and Cardiovascular Disease. *Current Vascular Pharmacology*, 4(7): 414-2.
- Hansen L, Tjønneland A, Køster B, Brot C, Andersen R, Lundqvist M, Christensen J, Olsen A, 2016. Sun Exposure Guidelines and Serum Vitamin D Status in Denmark: The Status D Study. *Nutrients*, 8(266): 1-14.
- Hanwell HEC, Vieth R, Cole DEC, Scillitani A, Modoni S, Frusciante V, Ritrovato G, Chiodini I, Minisola S, Carnevale V, 2010. Sun exposure questionnaire predicts circulating 25-hydroxyvitamin D concentrations in Caucasian hospital workers in southern Italy. *The Journal of Steroid Biochemistry and Molecular Biology*, 121(1-2): 334-7.
- Harahap IMA, 2017. Hubungan Asupan Vitamin D Terhadap Kadar 25(OH)D Serum pada Perempuan Usia 20-40 Tahun di Desa Aman Damai Kecamatan Sirapit Kabupaten Langkat. *Skripsi Sarjana*, Universitas Sumatera Utara.
- Hirani V, Mosdol A, Mishra G, 2009. Predictors of 25-hydroxyvitamin D status among adults in two british national surveys. *The British Journal of Nutrition*, 101(5): 760-4.
- Hoel DG, Berwick M, Gruijl FR, Holick MF, 2016. The risks and benefits of sun exposure. *Dermato-Endocrinology*, e1248325: 1-17.
- Hoge A, Donneau AF, Streel S, Kolh P, Chapelle JP, Cavaller E, Guillaume M, 2015. Vitamin D deficiency is common among adults in Wallonia (Belgium, 51°30' North): findings from the Nutrition, Environment and Cardio-Vascular Health study. *Nutrition Research*, 35(8): 716-25.
- Holick MF, 2006. High prevalence of vitamin D inadequacy and implications for health. *Mayo Clinic Proceedings*, 81(3): 353-73.
- Holick MF, 2007. Vitamin D deficiency. *The New England Journal of Medicine*, 357(3): 266-81.
- Holick MF, 2009. Vitamin D status: measurement, interpretation, and clinical application. *Annals of Epidemiology*, 19(2): 73-8.

- Holick MF, Binkley NC, Bischoff-Ferrari HA, Gordon CM, Hanley DA, Heaney RB, Murad MH, weaver CM, 2011. Evaluation, treatment, and prevention of vitamin D deficiency: an Endocrine Society Clinical Practice Guideline. *The Journal of Clinical Endocrinology & Metabolism*, 96: 1911-30.
- Horneck G, 1995. Quantification of the biological effectiveness of environmental UV radiation. *Journal of Photochemistry and Photobiology B: Biology*, 31: 43-49.
- Hosseini-Nezhad A and Holick MF, 2013. Vitamin D for Health: A Global Perspective. *Mayo Clinic Proceedings*, 88(7): 720-55.
- Huang CH, Huang YTA, Lai YC, Sun CK, 2017. Prevalence and predictors of hypovitaminosis D among the elderly in subtropical region. *PLoS ONE*, 12(7): e0181063.
- Ichwani J dan Widajanti N, 2015. Gizi pada Usia Lanjut. Dalam: (Tjokroprawiro A, Setiawan PB, Effendi C, Santoso D, Soegiarto G, editor). *Buku Ajar Ilmu Penyakit Dalam*, Fakultas Kedokteran Universitas Airlangga Rumah sakit Pendidikan Dr. Soetomo Surabaya, Edisi 2, Surabaya: Airlangga University Press, 774-9.
- Indirayani HW, Widajanti N, Firdausi H, 2020. Hubungan Defisiensi Kalsidiol Serum dan Derajat Sarkopenia pada Komunitas Usia Lanjut di Surabaya. *Jurnal Penyakit Dalam Indonesia*, 7(1): 29-33.
- Kemenkes RI, 2017. Analisis lansia di Indonesia. *Pusat Data dan Informasi*, 1-8.
- Kiely M, Collins A, Lucey AJ, Andersen R, Cashman KD, Hennessy A, 2016. Validation of a quantitative food frequency questionnaire to assess habitual vitamin D intake using the method of triads. *Journal of Human Nutrition and Dietetics*, 29(4), 495-504.
- Konradsen S, Ag H, Lindberg F, Hexeberg S, Jorde R, 2008. Serum 1,25-dihydroxy vitamin D is inversely associated with body mass index. *European Journal of Nutrition*, 47(2): 87-91.
- Køster B, Thorgaard C, Philip A, Clemmensen IH, 2010. Prevalence of sunburn and sun-related behavior in the Danish population: A cross-sectional study. *Scandinavian Journal of Public Health*, 0: 1-5.
- Kuchuk NO, Pluijm SM, van Schoor NM, Looman CWN, Smit JH, & Lips P, 2009. Relationships of serum 25-hydroxyvitamin D to bone mineral density and serum parathyroid hormone and markers of bone turnover in older persons. *The Journal of Clinical Endocrinology & Metabolism*, 94(4): 1244-50.
- Kusharto CM dan Supariasa IDN, 2014. *Survei Konsumsi Gizi*, Yogyakarta: Graha Ilmu.
- Lechowski L, de Stampa M, Denis B, Tortrat D, Chassagne P, Robert P, Teillet L, Vellas B, 2007. Patterns of loss of abilities in instrumental activities of daily living in Alzheimer's disease: the REAL cohort study. *Dementia & Geriatric Cognitive Disorder*, 25(1): 46-53.

- Lee SH, Park SJ, Kim KM, Lee DJ, Kim WJ, Park RW, Joo NS, 2012. Effect of Sunlight Exposure on Serum 25-Hydroxyvitamin D Concentration in Women with Vitamin D Deficiency: Using Ambulatory Lux Meter and Sunlight Exposure Questionnaire. *Korean Journal of Family Medicine*, 33(6): 381-9.
- Lips P, 2001. Vitamin D deficiency and secondary hyperparathyroidism in the elderly: consequences for bone loss and fractures and therapeutic implications. *Endocrine Reviews*, 22(4): 477-501.
- Lips P, Duong T, Oleksik A, Black D, Cummings S, Cox D, Nickelsen T, 2001. A global study of vitamin D status and parathyroid function in postmenopausal women with osteoporosis: baseline data from the multiple outcomes of raloxifene evaluation clinical trial. *The Journal of Clinical Endocrinology & Metabolism*, 86(3): 1212-21.
- Lucas R, McMichael T, Smith W, Armstrong B, 2006. Solar Ultraviolet Radiation: Global burden of disease from solar ultraviolet radiation. Dalam : (Prüss-Üstün A, Zeeb H, Mathers C, Repacholi M, eds). *Environmental Burden of Disease Series*, No. 13, Geneva: WHO Library.
- Lydia A, Marbun MB, 2014. Sindrom Nefrotik. Dalam: (Setiati S, Alwi I, Sudoyo AW, Simadibrata M, Setiyohadi B, Syam AF, editor). *Buku Ajar Ilmu Penyakit Dalam*, Edisi VI, Jilid II, Jakarta: Interna Publishing, 2080-87.
- MacLaughlin J and Holick MF, 1985. Aging decreases the capacity of human skin to produce vitamin D<sub>3</sub>. *Journal of Clinical Investigation*, 76: 1536-8.
- Maddah M, Sharami SH, Neyestani TR, 2009. Vitamin D Insufficiency Among Postmenopausal Women in Urban and Rural Areas in Guilan, Northern Iran. *Journal of Nutrition for The Elderly*, 28(4): 386-93
- Madiyono B, Moeslichan, Sastroasmoro S, Budiman I, Purwanto SH, 2014. Perkiraan besar sampel. Dalam: (Sastroasmoro S, Ismael S, editor). *Dasar-Dasar Metodologi Penelitian Klinis*, Edisi 5, Jakarta: Sagung Seto, 352-86.
- Marcinowska-Suchowierska E, Kupisz-Urbanska M, Łukaszkiwicz J, Płudowski P, Jones G, 2018. Vitamin D Toxicity - A Clinical Perspective. *Frontiers in Endocrinology*, 9(550): 1-7.
- Matsuoka LY, Wortsman J, Dannenberg MJ, Hollis BW, Lu Z, Holick MF, 1992. Clothing prevents ultraviolet-B radiation-dependent photosynthesis of vitamin D<sub>3</sub>. *The Journal of Clinical Endocrinology & Metabolism*, 75(4): 1099-103.
- McAdler MM, 2013. The Relationship Between Vitamin D status of Adult Women and Diet, Sun Exposure Skin Reflectance, Body Composition, and Insulin Sensitivity. *Thesis*, California Polytechnic State University, San Luis Obispo.

- Meehan M and Penckofer S, 2014. The Role of Vitamin D in the Aging Adult. *Journal of Aging & Gerontology*, 2(2): 60-71
- Mithal A, Wahl DA, Bonjour JP, Buckardt P, Dawson-Hughes B, Eisman JA, Fuleihan GE, Jose RG, Lips P, Morales-Torres J, 2009. Global vitamin D status and determinants of hypovitaminosis D. *Osteoporosis International*, 20(11): 1807-20.
- Mitri J, Muraru MD, Pittas AG, 2011. Vitamin D and type 2 diabetes: a systematic review. *European Journal of Clinical Nutrition*, 65(9), 1005-15.
- Møller U, Strey M, Jensen L, Mosekilde L, Schoenmakers I, Nigdikar S, Rejnmark L, 2013. Increased plasma concentrations of vitamin D metabolites and vitamin D binding protein in women using hormonal contraceptives: A cross-sectional study. *Nutrients*, 5(9): 3470-80.
- Moore CE, Radcliffe JD, Liu Y, 2014. Vitamin D intakes of adults differ by income, gender and race/ethnicity in The USA, 2007 to 2010. *Public Health Nutrition*, 17(4): 756-63.
- Moy FM, 2011. Vitamin D status and its associated factors of free living Malay adults in a tropical country, Malaysia. *Journal of Photochemistry and Photobiology B: Biology*, 104: 444-8.
- Muis SF & Puruhita N, 2014. Gizi Pada Lansia. Dalam (Martono H, Pranaka K, editor). *Buku Ajar Boedhi-Darmojo: Geriatri Ilmu Kesehatan Usia Lanjut*, Edisi 5, Jakarta: Balai Penerbit FK UI, 634-52.
- Nahas A, 2020. Informasi Indeks Ultraviolet (UV) dalam masa pandemi Covid-19 di Indonesia. *Badan Meteorologi Klimatologi dan Geofisika*, 1-11.
- Nakamura K, 2002. Fish as a major source of vitamin D in the Japanese diet. *Nutrition*, 18: 415-6.
- Napiórkowska L, Budlewski T, Jakubas-Kwiatkowska W, Hamzy V, Gozdowski D, Franek E, 2009. Prevalence of low serum vitamin D concentration in an urban population of elderly women in Poland. *Polskie Archiwum Medycyny Wewnętrznej*, 119(11): 699-703.
- Nass R and Thorner MO, 2002. Impact of the GH-cortisol ratio on the age-dependent changes in body composition. *Growth Hormone & IGF Research*, 12:1 47-61.
- Naugler C, Zhang J, Henne D, Woods P, Hemmelgarn BR, 2013. Association of vitamin D status with socio-demographic factors in Calgary, Alberta: an ecological study using Census Canada data. *BMC Public Health*, 13(1): 316.
- Nimitphong H and Holick MF, 2013. Vitamin D status and sun exposure in Southeast Asia. *Dermato-Endocrinology*, 5(1): 34-7.
- Nurbazlin M, Chee WSS, Rokiah PR, Tan ATB, Chew YY, Nusaibah ARS, Chan SP, 2013. Effects of sun exposure on 25(OH) vitamin D concentration in urban and rural women in Malaysia. *Asia Pacific Journal of Clinical Nutrition*, 22(3): 391-9.

- Nurdjanah S, 2014. Sirosis Hati. Dalam: (Setiati S, Alwi I, Sudoyo AW, Simadibrata M, Setiyohadi B, Syam AF, editor). *Buku Ajar Ilmu Penyakit Dalam*, Edisi VI, Jilid II, Jakarta: Interna Publishing, 1978-83.
- Oliveria SA, Saraiya M, Geller AC, Heneghan MK, Jorgensen C, 2006. Sun exposure and risk of melanoma. *Archives of Disease in Childhood*, 91: 131-138.
- Oudshoorn C, van der Cammen TJM, McMurdo MET, van Leeuwen JP, Colin EM, 2009. Ageing and vitamin D deficiency: effects on calcium homeostasis and considerations for vitamin D supplementation. *British Journal of Nutrition*, 1-10.
- Pasuruankab.go.id, 2018. Gambaran umum Kabupaten pasuruan. Diakses pada 3 Mei 2020, dari <https://www.pasuruankab.go.id/pages-12-gambaran-umum-kabupaten-pasuruan-2018>.
- Rayinda T, Putra PB, Radiono S, Wirohadidjojo YW, 2019. The Role of Sunlight in Vitiligo: Study in Disease Severity and Progresivity. *Periodical of Dermatology and Venereology*, 31(3): 116-121.
- Reid IR, Gallagher DJA, Bosworth J, 1986. Prophylaxis against vitamin D deficiency in the elderly by regular sunlight exposure. *Age & Ageing*, 15(1): 35-40.
- Rimahardika R, Subagio HW, Wijayanti HS, 2017. Asupan vitamin D dan paparan sinar matahari pada orang yang bekerja di dalam ruangan dan di luar ruangan. *Journal of Nutrition Collage*, 6(4): 333-42.
- Rolland Y, de Souto Barreto P, Abellan Van Kan G, Annweiler C, Beauchet O, Bischoff-Ferrari H, Berrut G, Blain H, Bonnefoy M, Cesari M, Duque G, Ferry M, Guerin O, Hanon O, Lesourd B, Morley J, Raynaud-Simon A, Ruault G, Souberbielle JC & Vellas B, 2013. Vitamin D Supplementation in Older Adults: Searching for Specific Guidelines in Nursing Homes. *The Journal of Nutrition, Health & Aging*, 17(4): 402-12.
- Ross AC, Manson JE, Abrams SA, Aloia JF, Brannon PM, Clinton SA, Durazo-Arvizu RA, Gallagher JC, Gallo RL, Jones G, Kovacs CS, Mayne ST, Rosen CJ, Shapses SA, 2011. The 2011 report on dietary reference intakes for calcium and vitamin D from the Institute of Medicine: what clinicians need to know. *The Journal of Clinical Endocrinology & Metabolism*, 96(1): 53-8.
- Roy CR, Lugg DJ, Gies HP, Toomey S, Tomlinson DW, 1998. The measurement of solar ultraviolet radiation. *Mutation Research*, 422(1): 7-14.
- Santos A, Amaral TF, Guerra RS, Sousa AS, Alvares L, Moreira P, Padrao P, Afonso C, Borges N, 2017. Vitamin D status and associated factors among Portuguese older adults: results from the Nutrition UP 65 cross-sectional study. *BMJ Open*, 7: 1-13.
- Sari DK, Damanik HA, Lipoeto NI, Lubis Z, 2014. Occurence of vitamin D deficiency among woman in North Sumatera, Indonesia. *Malaysian Journal of Nutrition*, 20(1): 63-70.

- Sari DK, Tala ZZ, Lestari S, Hutagalung SV, Ganie RA, 2017. Lifestyle Differences in Rural and Urban Areas Affected the Level of Vitamin D in Women with Single Nucleotide Polymorphism in North Sumatera. *Asian Journal of Clinical Nutrition*, 9 (2): 57-63.
- Savastano S, Barrea L, Savanelli MC, Nappi F, Di Somma C, Orio F, Colao A, 2017. Low vitamin D status and obesity: role of nutritionist. *Reviews of Endocrine and Metabolic Disorders*, 18(2): 215-25.
- Sebbar E, Sam H, Saalaoui E, Choukri M, 2018. Dietary Intake of Vitamin D in the Moroccan Elderly. *International Journal of Medical Research & Health Sciences*, 7(1): 53-6.
- Setiati S, Oemardi M, Sutrisna B, Supartondo, 2007. The role of ultraviolet B from sun exposure on vitamin D3 and parathyroid hormone level in elderly women in Indonesia. *Asian Journal of Gerontology & Geriatrics*, 2 (3): 126-32.
- Setiati S, 2008. Vitamin D status among Indonesian elderly women living in institutionalized care units. *Acta Medica Indonesiana-The Indonesian Journal of Internal Medicine*, 40 (2): 78-83.
- Setiati S, Harimurti K, Govinda A, 2014. Proses menua dan implikasi klinisnya. Dalam: (Setiati S, Alwi I, Sudoyo AW, Simadibrata M, Setiyohadi B, Syam AF, editor). *Buku Ajar Ilmu Penyakit Dalam*, Edisi VI, Jilid III, Jakarta: Interna Publishing, 3669-79.
- Silva MC and Furlanetto TW, 2017. Intestinal absorption of vitamin D: a systematic review. *Nutrition Reviews*, 76(1): 60-76.
- Soldin OP, Makambi KH, Soldin SJ, O'Mara DM, 2011. Steroid hormone levels associated with passive and active smoking. *Steroids*, 76(7): 653-9.
- Supariasa IDN, Bakri B, Fajar I, 2001. *Penilaian Status Gizi*, Jakarta: EGC.
- Tsiaras W, Weinstock M, 2011. Factors Influencing Vitamin D Status. *Acta Dermato Venereologica*, 91(2): 115-24.
- Vera, Setiati S, Govinda A, 2015. Determinan diagnostik klinis defisiensi vitamin D pada wanita berusia lebih dari 50 tahun. *Jurnal Penyakit Dalam Indonesia*, 2(1): 38-48.
- Vidyani A, Vianto D, Widodo B, Kholili U, Maimunah U, Sugihartono T, Purbayu H, Setiawan PB, Nusi IA, Adi P, 2011. Faktor risiko terkait perdarahan varises esofagus berulang pada penderita sirosis hati. *Jurnal Penyakit Dalam Indonesia*, 12(3): 169-74.
- Webb AR, 2006. Who, what, where and when – influences on cutaneous vitamin D synthesis. *Progress in Biophysics and Molecular Biology*, 92: 17-25.
- WHO, 1994. Environmental Health Criteria 160 - Ultraviolet radiation. *World Health Organization*, diunduh dari <http://www.inchem.org/documents/ehc/ehc/ehc160.htm> pada tanggal 15 November 2020.



- WHO, 2002. Global Solar UV Index: A practical guide. A joint recommendation of the World Health Organization, World Meteorological Organization, United Nations Environment Programme, and the International Commission on Non-Ionizing Radiation Protection. *World Health Organisation*.
- Wortsman J, Matsuoka LY, Chen TC, Lu Z, Holick MF, 2000. Decreased bioavailability of vitamin D in obesity. *American Journal of Clinical Nutrition*, 72(3): 690-3.
- Yoo K, Cho J, Ly S, 2016. Vitamin D Intake and Serum 25-Hydroxyvitamin D Levels in Korean Adults: Analysis of the 2009 Korea National Health and Nutrition Examination Survey (KNHANES IV-3) Using a Newly Established Vitamin D Database. *Nutrients*, 8(610): 1-13.
- Yosephin B, Khomsan A, Briawan D, Rimbawan, 2014. Peranan ultraviolet B sinar matahari terhadap status vitamin D dan tekanan darah pada wanita usia subur. *Jurnal Kesehatan Masyarakat Nasional*, 8(6): 256-60.
- Zerwekh JE, 2008. Blood biomarkers of vitamin D status. *American Journal of Clinical Nutrition*, 87(4): 1087S-91S.