

DAFTAR PUSTAKA

- Aderibigbe, S. A., Adetunji, O. A., & Odeniyi, M. A. (2011). Antimicrobial and Pharmaceutical Properties of The Seed Oil of *Leucaena leucocephala* (Lam.) De Wit (Leguminosae). *African Journal of Biomedical Research*, 14(January), 63–68.
- Afify, A. E. M. R., El-beltagi, H. S., El-salam, S. M. A., & Omran, A. A. (2012). Protein solubility, digestibility and fractionation after germination of sorghum varieties. *Plos One*, 7(2), 1–6. <https://doi.org/10.1371/journal.pone.0031154>
- Akinola, J. O., Iji, P. A., Bonidefaiye, S. O., & Olorunju, S. A. S. (1999). Studies on seed germination and seedling emergence in *Leucaena Leucocephala* (Lam.) de Wit cv. Peru. *Seed Science and Technology*, 27(1), 123–129.
- Alberts, B., Johnson, A., Lewis, J., Morgan, D., Raff, M., Roberts, K., & Walter, P. (2016). *Molecular Biology of The Cell* (6th ed.). Garland Science.
- Alhadi, F. A., Al-Asbahi, A. A. S., Alhammadi, A. S. A., & Abdullah, Q. A. A. (2012). The Effects of Free Amino Acids Profiles on Seeds Germination/Dormancy and Seedlings Development of Two Genetically Different Cultivars of Yemeni Pomegranates. *Journal of Stress Physiology & Biochemistry*, 8(1), 114–137.
- Ali, A. S., & Elozeiri, A. A. (2017). Metabolic Processes During Seed Germination. In *Advances in Seed Biology* (pp. 141–166). IntechOpen. <https://www.intechopen.com/books/advanced-biometric-technologies/liveness-detection-in-biometrics>
- Almeida, C. C., Monteiro, M. L. G., Costa-Lima, B. R. C. da, Alvares, T. S., & Conte-Junior, C. A. (2015). In vitro digestibility of commercial whey protein supplements. *Lwt*, 61(1), 7–11. <https://doi.org/10.1016/j.lwt.2014.11.038>
- Aluko, R. E. (2015a). Antihypertensive peptides from food proteins. *Annual Review of Food Science and Technology*, 6, 235–262. <https://doi.org/10.1146/annurev-food-022814-015520>
- Aluko, R. E. (2015b). Structure and function of plant protein-derived antihypertensive peptides. *Current Opinion in Food Science*, 4, 44–50. <https://doi.org/10.1016/j.cofs.2015.05.002>
- Aluko, R. E. (2018). Food protein-derived peptides: Production, isolation, and purification. In *Proteins in Food Processing* (Second Edi, pp. 389–412). Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-100722-8.00016-4>
- Aluko, R. E., Girgih, A. T., He, R., Malomo, S., Li, H., Offengenden, M., & Wu, J. (2015). Structural and Functional Characterization of Yellow Field Pea Seed (*Pisum sativum* L.) Protein-derived Antihypertensive Peptides. *Food Research International*, 77(8), 10–16. <https://doi.org/10.1016/j.foodres.2015.03.029>
- Amenta, F., Buccioni, M., Ben, D. D., Lambertucci, C., Navia, A. M., Ngouadjeu Ngnintedem, M. A., Ricciutelli, M., Spinaci, A., Volpini, R., & Marucci, G.

- (2018). Ex-vivo absorption study of lysine R-lipoate salt, a new pharmaceutical form of R-ALA. *European Journal of Pharmaceutical Sciences*, 118(March), 200–207. <https://doi.org/10.1016/j.ejps.2018.03.025>
- Amoakoh, O. A., Nortey, D. D. N., Sagoe, F., Amoako, P. K., & Jallah, C. K. (2017). Effects of pre-sowing treatments on the germination and early growth performance of *Pouteria campachiana*. *Forest Science and Technology*, 13(2), 83–86. <https://doi.org/10.1080/21580103.2017.1315961>
- Andriamihaja, M., Guillot, A., Svendsen, A., Hagedorn, J., Rakotondratohanina, S., Tomé, D., & Blachier, F. (2013). Comparative efficiency of microbial enzyme preparations versus pancreatin for in vitro alimentary protein digestion. *Amino Acids*, 44(2), 563–572. <https://doi.org/10.1007/s00726-012-1373-0>
- Anonim. (2013). The Digestive System and How It Works. *National Institute of Diabetes and Digestive and Kidney Diseases*, 1–8.
- Anonim. (2014). Hipertensi. *Pusat Data Dan Informasi Kementerian Kesehatan RI*, 1–7. <https://doi.org/10.1177/109019817400200403>
- Anonim. (2017). Let's talk about high blood pressure and stroke. *American Heart Association*, 1–2.
- Anonim. (2019a). Laporan Nasional Riskesdas 2018. *Badan Penelitian Dan Pengembangan Kesehatan*, 1–647.
- Anonim. (2019b). *Summary for clan MA*. MEROPS-The Peptidase Database. <https://www.ebi.ac.uk/merops/cgi-bin/clansum?clan=MA>. Diakses pada 3 April 2020.
- Anonim. (2019c). *Summary for family M2*. MEROPS-The Peptidase Database. <https://www.ebi.ac.uk/merops/cgi-bin/famsum?family=M2>. Diakses pada 3 April 2020.
- Anonim. (2020). Consequences of high blood pressure. *American Heart Association*, 501(c), 1.
- Anonim. (2023). *PubChem Compound Summary for CID 440473, L-mimosine*. National Center for Biotechnology Information. <https://pubchem.ncbi.nlm.nih.gov/compound/L-mimosine>
- Avilés-Gaxiola, S., Chuck-Hernández, C., & Serna Saldívar, S. O. (2018). Inactivation Methods of Trypsin Inhibitor in Legumes: A Review. *Journal of Food Science*, 83(1), 17–29. <https://doi.org/10.1111/1750-3841.13985>
- Awasthi, P., Karki, H., Vibhuti, V., Bargali, K., & Bargali, S. S. (2016). Germination and Seedling Growth of Pulse Crop (*Vigna* Spp.) as Affected by Soil Salt Stress. *Current Agriculture Research Journal*, 4(2), 159–170. <https://doi.org/10.12944/carj.4.2.05>
- Bains, K., Uppal, V., & Kaur, H. (2014). Optimization of Germination Time and Heat Treatments for Enhanced Availability of Minerals from Leguminous Sprouts. *Journal Food Science Technology*, 51(May), 1016–1020.

<https://doi.org/10.1007/s13197-011-0582-y>

- Bamdad, F., Dokhani, S., Keramat, J., & Zareie, R. (2009). The impact of germination and in vitro digestion on the formation of Angiotensin converting enzyme (ACE) inhibitory peptides from lentil proteins compared to whey proteins. *International Journal of Biological and Life Science*, 5(2), 2009.
- Barbana, C., & Boye, J. I. (2011). Angiotensin I-converting enzyme inhibitory properties of lentil protein hydrolysates: Determination of the kinetics of inhibition. *Food Chemistry*, 127(1), 94–101. <https://doi.org/10.1016/j.foodchem.2010.12.093>
- Bau, H., Villaume, C., Nicolas, J., Me, L., & Alimentaire, C. (1997). Effect of Germination on Chemical Composition , Biochemical Constituents and Antinutritional Factors of So y a Bean (*Glycine max*) Seeds. *Journal of The Science of Food and Agriculture*, 73(1), 1–9.
- Bejjani, S., & Wu, J. (2013). Transport of IRW, an ovotransferrin-derived antihypertensive peptide, in human intestinal epithelial caco-2 cells. *Journal of Agricultural and Food Chemistry*, 61(7), 1487–1492. <https://doi.org/10.1021/jf302904t>
- Berdutina, A. V., Neklyudov, A. D., Ivankin, A. I., Karpo, B. S., & Mitaleva, S. I. (2000). Comparison of proteolytic activities of the enzyme complex from mammalian pancreas and pancreatin. *Applied Biochemistry and Microbiology*, 36(4), 363–367. <https://doi.org/10.1007/BF02738043>
- Bewley, J. D. (1997). Seed Germination and Dormancy. *The Plant Cel*, 9(July), 1055–1066.
- Bewley, J. D., & Black, M. (1994). *Seeds*. Springer Science+business Media.
- Botcha, S., & Prattipati, S. (2020). Role of amylase and protease in germinating *Sterculia urens* Roxb. *Bangladesh Journal of Scientific and Industrial Research*, 55(2), 107–112. <https://doi.org/10.3329/bjsir.v55i2.47631>
- Bouglé, D., & Bouhallab, S. (2017). Dietary bioactive peptides: Human studies. *Critical Reviews in Food Science and Nutrition*, 57(2), 335–343. <https://doi.org/10.1080/10408398.2013.873766>
- Boyce, S., & College, T. (2001). Enzyme Classification and Nomenclature. In *Encyclopedia of Life Science* (Issue January, pp. 1–11). Nature Publishing Group. <https://doi.org/10.1038/npg.els.0000710>
- C. Martinez-Villaluenga, E. Peñas, J. F. (2017). Bioactive Peptides in Fermented Foods: Production and Evidence for Health Effects. In *Fermented Foods in Health and Disease Prevention* (pp. 21–47). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-802309-9.00002-9>
- Caessens, P. W. J. R., Visser, S., Gruppen, H., & Voragen, A. G. J. (1999). β -Lactoglobulin hydrolysis. 1. Peptide composition and functional properties of hydrolysates obtained by the action of plasmin, trypsin, and *Staphylococcus aureus* V8 protease. *Journal of Agricultural and Food Chemistry*, 47(8),

2973–2979. <https://doi.org/10.1021/jf981229p>

- Carlson, B. M. (2019). The Digestive System. The human body. In *The human body*. <https://doi.org/10.1016/B978-0-12-804254-0.00012-0>
- Carolina, S., Kaplan, A. P., & Joseph, K. (2014). Pathogenic Mechanisms of Bradykinin Mediated Diseases : Dysregulation of an Innate Inflammatory Pathway. In *Advances in Immunology* (1st ed., Vol. 121). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-800100-4.00002-7>
- Chanwitheesuk, A., Teerawutgulrag, A., & Rakariyatham, N. (2005). Screening of antioxidant activity and antioxidant compounds of some edible plants of Thailand. *Food Chemistry*, 92(3), 491–497. <https://doi.org/10.1016/j.foodchem.2004.07.035>
- Charoenphun, N., Cheirsilp, B., Sirinupong, N., & Youravong, W. (2013). Calcium-binding Peptides Derived from Tilapia (*Oreochromis niloticus*) Protein Hydrolysate. *European Food Research and Technology*, 236, 57–63. <https://doi.org/10.1007/s00217-012-1860-2>
- Chauhan, D., Kumar, K., Ahmed, N., Thakur, P., Rizvi, Q. U. E. H., Jan, S., & Yadav, A. N. (2022). Impact of soaking, germination, fermentation, and roasting treatments on nutritional, anti-nutritional, and bioactive composition of black soybean (*Glycine max* L.). *Journal of Applied Biology and Biotechnology*, 10(5), 186–192. <https://doi.org/10.7324/JABB.2022.100523>
- Coscueta, E. R., Pintado, M. E., Picó, G. A., Knobel, G., Boschetti, C. E., Malpiedi, L. P., & Nerli, B. B. (2017). Continuous method to determine the trypsin inhibitor activity in soybean flour. *Food Chemistry*, 214, 156–161. <https://doi.org/10.1016/j.foodchem.2016.07.056>
- Cupp-Enyard, C. (2008). Sigma's Non-specific Protease Activity Assay - Casein as A Substrate. *Journal of Visualized Experiments*, 19, 4–5. <https://doi.org/10.3791/899>
- Cushman, D. W., & Cheung, H. S. (1971). Spectrophotometric assay and properties of the Angiotensin-converting enzyme of rabbit lung. *Biochemical Pharmacology*, 20(7), 1637–1648. [https://doi.org/10.1016/0006-2952\(71\)90292-9](https://doi.org/10.1016/0006-2952(71)90292-9)
- Da Silva Santos-Moura, S., Dos Santos Silva, R., Alves, E. U., Gonçalves, E. P., De Araújo, L. D. A., Alves, M. M., & Araujo, P. C. (2019). Morphology of seeds, seedlings, and young plants of *Dimorphandra gardneriana* Tul. *Semina: Ciencias Agrarias*, 40(3), 1063–1078. <https://doi.org/10.5433/1679-0359.2019v40n3p1063>
- Dai, Z., Wu, Z., Jia, S., & Wu, G. (2014). Analysis of amino acid composition in proteins of animal tissues and foods as pre-column o -phthaldialdehyde derivatives by HPLC with fluorescence detection. *Journal of Chromatography B*, 964(8), 116–127. <https://doi.org/10.1016/j.jchromb.2014.03.025>
- Damayanti, S. S., & Murtini, E. S. (2018). The Innovation of Soybean Sprouts-

- Substituted Almond Milk as the Source of Vegetable Protein. *Jurnal Pangan Dan Agroindustri*, 6(3), 70–77.
- Daskaya-Dikmen, C., Yucetepe, A., Karbancioglu-Guler, F., Daskaya, H., & Ozcelik, B. (2017). Angiotensin-I-converting Enzyme (ACE)-inhibitory Peptides from Plants. *Nutrients*, 9(4), 1–19. <https://doi.org/10.3390/nu9040316>
- de Castro, R. J. S., Bagagli, M. P., & Sato, H. H. (2015). Improving the functional properties of milk proteins: Focus on the specificities of proteolytic enzymes. *Current Opinion in Food Science*, 1(1), 64–69. <https://doi.org/10.1016/j.cofs.2014.12.004>
- de Castro, R. J. S., & Sato, H. H. (2015). Biologically active peptides: Processes for their generation, purification and identification and applications as natural additives in the food and pharmaceutical industries. *Food Research International*, 74, 185–198. <https://doi.org/10.1016/j.foodres.2015.05.013>
- Devi, V. N. M., Ariharan, V. N., & Nagendra, P. P. (2013). Nutritive Value and Potential Uses of *Leucaena leucocephala* as Biofuel – A Mini Review. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 4(1), 515–521.
- Dey, T. K., Chatterjee, R., Mandal, R. S., Roychoudhury, A., Paul, D., Roy, S., Pateiro, M., Das, A. K., Lorenzo, J. M., & Dhar, P. (2021). Ace inhibitory peptides from bellamyia bengalensis protein hydrolysates: In vitro and in silico molecular assessment. *Processes*, 9(8), 1–13. <https://doi.org/10.3390/pr9081316>
- Ding, L., Wang, L., Yu, Z., Zhang, T., & Liu, J. (2016). Digestion and absorption of an egg white ACE-inhibitory peptide in human intestinal Caco-2 cell monolayers. *International Journal of Food Sciences and Nutrition*, 67(2), 111–116. <https://doi.org/10.3109/09637486.2016.1144722>
- Ding, L., Wang, L., Zhang, T., Yu, Z., & Liu, J. (2018). Hydrolysis and transepithelial transport of two corn gluten derived bioactive peptides in human Caco-2 cell monolayers. *Food Research International*, 106(July 2017), 475–480. <https://doi.org/10.1016/j.foodres.2017.12.080>
- Dougall, I. G., & Unitt, J. (2015). Evaluation of the Biological Activity of Compounds: Techniques and Mechanism of Action Studies. In *The Practice of Medicinal Chemistry: Fourth Edition* (Fourth Edi, pp. 15–43). Elsevier Ltd. <https://doi.org/10.1016/B978-0-12-417205-0.00002-X>
- Fairweather-Tait, S. J., & Southon, S. (2015). Bioavailability of Nutrients. In *Encyclopedia of Food Science and Nutrition* (pp. 478–484). Academic Press. <https://doi.org/10.1016/B978-0-12-384947-2.00068-4>
- Fan, H., Liao, W., & Wu, J. (2018). Molecular Interactions, Bioavailability, and Cellular Mechanisms of Angiotensin-converting Enzyme Inhibitory Peptides. *Journal of Food Biochemistry*, 43(1), 1–8. <https://doi.org/10.1111/jfbc.12572>

- Fellows, P. (2000). *Food Processing Technology* (second edi). Woodhead Publishing Limited and CRC Press LLC.
- Fernández-Musoles, R., Salom, J. B., Castelló-Ruiz, M., Contreras, M. del M., Recio, I., & Manzanares, P. (2013). Bioavailability of antihypertensive lactoferricin B-derived peptides: Transepithelial transport and resistance to intestinal and plasma peptidases. *International Dairy Journal*, 32(2), 169–174. <https://doi.org/10.1016/j.idairyj.2013.05.009>
- Ferreira, R. B., Melo, T. S., & Teixeira, A. N. (1995). Catabolism of the seed storage proteins from *Lupinus albus*: Fate of globulins during germination and seedling growth. *Australian Journal of Plant Physiology*, 22(3), 373–381. <https://doi.org/10.1071/PP9950373>
- Fitriani, A., Santoso, U., & Supriyadi, S. (2021). Conventional Processing Affects Nutritional and Antinutritional Components and In Vitro Protein Digestibility in Kabau (*Archidendron bubalinum*). *International Journal of Food Science*, 2021.
- Forghani, B., Zarei, M., Ebrahimpour, A., Philip, R., Bakar, J., Abdul Hamid, A., & Saari, N. (2016). Purification and characterization of angiotensin converting enzyme-inhibitory peptides derived from *Stichopus horrens*: Stability study against the ACE and inhibition kinetics. *Journal of Functional Foods*, 20, 276–290. <https://doi.org/10.1016/j.jff.2015.10.025>
- Freeman, H. J., & Kim, Y. S. (1978). Digestion and absorption of protein. *Annual Review of Medicine*, 29, 99–116. <https://doi.org/10.1146/annurev.me.29.020178.000531>
- Fu, Y., Alashi, A. M., Young, J. F., Therkildsen, M., & Aluko, R. E. (2017). Enzyme inhibition kinetics and molecular interactions of patatin peptides with angiotensin I-converting enzyme and renin. *International Journal of Biological Macromolecules*, 101, 207–213. <https://doi.org/10.1016/j.ijbiomac.2017.03.054>
- Fujita, H., Yokoyama, K., & Yoshikawa, M. (2000). Classification and antihypertensive activity of angiotensin I-converting enzyme inhibitory peptides derived from food proteins. *Journal of Food Science*, 65(4), 564–569. <https://doi.org/10.1111/j.1365-2621.2000.tb16049.x>
- Fujita, H., & Yoshikawa, M. (1999). LKPNM: A prodrug-type ACE-inhibitory peptide derived from fish protein. *Immunopharmacology*, 44(1–2), 123–127. [https://doi.org/10.1016/S0162-3109\(99\)00118-6](https://doi.org/10.1016/S0162-3109(99)00118-6)
- Gepstein, S., & Ilan, I. (1980). Evidence for the involvement of cytokinins in the regulation of proteolytic activity in cotyledons of germinating beans. *Plant and Cell Physiology*, 21(1), 57–63. <https://doi.org/10.1093/oxfordjournals.pcp.a075990>
- Gleeson, J. P., Brayden, D. J., & Ryan, S. M. (2017). Evaluation of PepT1 transport of food-derived antihypertensive peptides, Ile-Pro-Pro and Leu-Lys-Pro using in vitro, ex vivo and in vivo transport models. *European Journal of*

- Pharmaceutics and Biopharmaceutics*, 115, 276–284.
<https://doi.org/10.1016/j.ejpb.2017.03.007>
- Godber, J. S. (1990). Nutrient Bioavailability in Humans and Experimental Animals. *Journal of Food Quality*, 13(1), 21–36.
<https://doi.org/10.1111/j.1745-4557.1990.tb00003.x>
- Gonçalves, R. N., Duarte, S., Barbosa, G., & Silva-lópez, R. E. (2016). Proteases from *Canavalia ensiformis*: Active and Thermostable Enzymes with Potential of Application in Biotechnology. *Biotechnology Research International*, 2016, 1–11.
- Gotardo, A. T., Dipe, V. V., Almeida, E. R. M. de, Hueza, I. M., Pfister, J. A., & Górniak, S. L. (2021). Potential toxic effects produced by L-mimosine in the thyroid and reproductive systems. Evaluation in male rats. *Toxicon*, 203(October), 121–128. <https://doi.org/10.1016/j.toxicon.2021.10.003>
- Guang, C., Phillips, R. D., Jiang, B., & Milani, F. (2012). Three key proteases — angiotensin-I-converting enzyme (ACE), ACE2 and renin — within and beyond the renin-angiotensin system. *Archives of Cardiovascular Diseases*, 105(6–7), 373–385. <https://doi.org/10.1016/j.acvd.2012.02.010>
- Gupta, S., Kapoor, P., Chaudhary, K., Gautam, A., Kumar, R., & Raghava, G. P. S. (2013). In Silico Approach for Predicting Toxicity of Peptides and Proteins. *PLoS ONE*, 8(9). <https://doi.org/10.1371/journal.pone.0073957>
- Halmer, P. (1975). Enzyme to break down lettuce endosperm cell wall during gibberellin-and light-induced germination. *Nature*, 258, 716–718.
- Harifah, C. S. (2017). Perubahan Zat Gizi, Senyawa Antigizi, serta nilai Cerna Protein secara *In Vitro* serta Profil Asam Amino Biji Lamtoro Gung (*Leucaena leucocephala*) Kukus dan Rebus. *Thesis*.
- Harifah, C. S., Suupriyadi, S., & Santoso, U. (2018). Antinutrient and In Vitro Protein Digestibility Lamtoro Gung Seed *Leucaena leucocephala* Steamed and Boiled. *Seminar Nasional PATPI 2017*, 539–545.
- Hartree, E. F. (1972). Determination of protein: A modification of the Lowry method that gives a linear photometric response. *Analytical Biochemistry*, 48, 422–427. <https://doi.org/10.1007/BF01412567>
- He, R., Wang, Y., Yang, Y., Wang, Z., Ju, X., & Yuan, J. (2019). Rapeseed protein-derived ACE inhibitory peptides LY, RALP and GHS show antioxidant and anti-inflammatory effects on spontaneously hypertensive rats. *Journal of Functional Foods*, 55(October 2018), 211–219.
<https://doi.org/10.1016/j.jff.2019.02.031>
- Helrich, K. (1990). *Official Methods of Analysis* (Edisi Keli, Vol. 1).
- Henda, Y. Ben, Labidi, A., Arnaudin, I., Bridiau, N., Delatouche, R., Maugard, T., Piot, J. M., Sannier, F., Thiéry, V., & Bordenave-Juchereau, S. (2013). Measuring angiotensin-I converting enzyme inhibitory activity by micro plate assays: Comparison using marine cryptides and tentative threshold

- determinations with captopril and losartan. *Journal of Agricultural and Food Chemistry*, 61(45), 10685–10690. <https://doi.org/10.1021/jf403004e>
- Hong, F., Ming, L., Yi, S., Zhanxia, L., Yongquan, W., & Chi, L. (2008). The antihypertensive effect of peptides: A novel alternative to drugs? *Peptides*, 29(6), 1062–1071. <https://doi.org/10.1016/j.peptides.2008.02.005>
- Hornbuckle, W. E., Simpson, K. W., & Tennant, B. C. (2008). Gastrointestinal Function. In *Clinical Biochemistry of Domestic Animals* (Issue 1, pp. 413–457). Elsevier Inc.
- Huang, H., Kwok, K. C., & Liang, H. H. (2008). Inhibitory activity and conformation changes of soybean trypsin inhibitors induced by ultrasound. *Ultrasonics Sonochemistry*, 15(5), 724–730. <https://doi.org/10.1016/j.ultsonch.2007.10.007>
- Ilham, Z., Hamidon, H., Rosji, N. A., Ramli, N., & Osman, N. (2015). Extraction and Quantification of Toxic Compound Mimosine from *Leucaena leucocephala* Leaves. *Procedia Chemistry*, 16(January 2016), 164–170. <https://doi.org/10.1016/j.proche.2015.12.029>
- Jang, A., & Lee, M. (2005). Purification and identification of angiotensin converting enzyme inhibitory peptides from beef hydrolysates. *Meat Science*, 69(4), 653–661. <https://doi.org/10.1016/j.meatsci.2004.10.014>
- Jang, J.-H., Jeong, S.-C., Kim, J.-H., Lee, Y.-H., Ju, Y.-C., & Lee, J.-S. (2011). Characterisation of a new antihypertensive angiotensin I-converting enzyme inhibitory peptide from *Pleurotus cornucopiae*. *Food Chemistry*, 127(2), 412–418. <https://doi.org/10.1016/j.foodchem.2011.01.010>
- Jood, S., Chauhan, B. M., & Kapoor, A. C. (1989). Protein digestibility (in vitro) of chickpea and blackgram seeds as affected by domestic processing and cooking. *Plant Foods for Human Nutrition*, 39(2), 149–154. <https://doi.org/10.1007/BF01091894>
- Joshi, R. (2018). Role of Enzymes in Seed Germination. *International Journal of Creative Research Thoughts*, 6(2).
- Joye, I. (2019). Protein digestibility of cereal products. *Foods*, 8(6), 1–14. <https://doi.org/10.3390/foods8060199>
- Kesari, V., & Rangan, L. (2011). Coordinated Changes in Storage Proteins during Development and Germination of Elite Seeds of *Pongamia pinnata*, Aversatile Biodiesel Legume. *AoB PLANTS*, 11(1), 1–16. <https://doi.org/10.1093/aobpla/plr026>
- Khan, M. Y., & Kumar, V. (2019). Mechanism & inhibition kinetics of bioassay-guided fractions of Indian medicinal plants and foods as ACE inhibitors. *Journal of Traditional and Complementary Medicine*, 9(1), 73–84. <https://doi.org/10.1016/j.jtcme.2018.02.001>
- Kırmızı, S., & Güleriyüz, G. (2006). Protein Mobilization and Proteolytic Enzyme Activities during Seed Germination of Broad Bean (*Vicia faba* L.). *Journal of*

Bioscience.

- Komari. (1995). Biji lamtoro gung (*Leucaena leucocephala* (Lamk.) DeWit) sebagai sumber protein. *Jurnal Biologi Indonesia*, 1(3).
- Latimer, G. W. (2019). *Official Methods of Analysis of AOAC International: Vol. Volume 1* (Edisi 21).
- Lee, D. H., Kim, J. H., Park, J. S., Choi, Y. J., & Lee, J. S. (2004). Isolation and characterization of a novel angiotensin I-converting enzyme inhibitory peptide derived from the edible mushroom *Tricholoma giganteum*. *Peptides*, 25(4), 621–627. <https://doi.org/10.1016/j.peptides.2004.01.015>
- Lee, J. K., Jeon, J., & Byun, H. (2011). Effect of Angiotensin I Converting Enzyme Inhibitory Peptide Purified from Skate Skin Hydrolysate. *Food Chemistry*, 125(2), 495–499. <https://doi.org/10.1016/j.foodchem.2010.09.039>
- Lee, S. Y., & Hur, S. J. (2017). Antihypertensive peptides from animal products, marine organisms, and plants. *Food Chemistry*, 228, 506–517. <https://doi.org/10.1016/j.foodchem.2017.02.039>
- Li, H., Prairie, N., Udenigwe, C. C., Adebisi, A. P., Tappia, P. S., Aukema, H. M., Jones, P. J. H., & Aluko, R. E. (2011). Blood pressure lowering effect of a pea protein hydrolysate in hypertensive rats and humans. *Journal of Agricultural and Food Chemistry*, 59(18), 9854–9860. <https://doi.org/10.1021/jf201911p>
- Liao, W., Jahandideh, F., Fan, H., Son, M., & Wu, J. (2018). Egg Protein-Derived Bioactive Peptides : Preparation, Efficacy, and Absorption. In *Advances in Food and Nutrition Research* (1st ed., Vol. 85, pp. 1–58). Elsevier Inc. <https://doi.org/10.1016/bs.afnr.2018.02.001>
- Lichtenfeld, C., Manteuffel, R., Müntz, K., Neumann, D., Scholz, G., & Weber, E. (1979). Protein Degradation and Proteolytic Activities in Germinating Field Beans (*Vicia faba* L., var. minor). *Biochemie Und Physiologie Der Pflanzen*, 174(4), 255–274. [https://doi.org/10.1016/s0015-3796\(17\)30587-5](https://doi.org/10.1016/s0015-3796(17)30587-5)
- Lineweaver, H., & Burk, D. (1934). The Determination of Enzyme Dissociation Constants. *Journal of the American Chemical Society*, 56(3), 658–666. <https://doi.org/10.1021/ja01318a036>
- Liu, S., Li, Z., Yu, B., Wang, S., Shen, Y., & Cong, H. (2020). Recent advances on protein separation and purification methods. *Advances in Colloid and Interface Science*, 284, 102254. <https://doi.org/10.1016/j.cis.2020.102254>
- Liu, W., Pan, H., Zhang, C., Zhao, L., Zhao, R., Zhu, Y., & Pan, W. (2016). Developments in methods for measuring the intestinal absorption of nanoparticle-bound drugs. *International Journal of Molecular Sciences*, 17(7). <https://doi.org/10.3390/ijms17071171>
- Mamilla, R. K., & Mishra, V. K. (2017). Effect of germination on antioxidant and ACE inhibitory activities of legumes. *LWT - Food Science and Technology*, 75(1), 51–58. <https://doi.org/10.1016/j.lwt.2016.08.036>

- Mariod, A., Cheng, S. F., & Abdelwahab, S. (2012). Effect of germination periods and conditions on chemical composition, fatty acids and amino acids of two black cumin seeds. *Acta Scientiarum Polonorum*, 11(4), 401–410.
- Masuyer, G., Douglas, R. G., Sturrock, E. D., & Acharya, K. R. (2015). Structural basis of Ac-SDKP hydrolysis by Angiotensin-I converting enzyme. *Nature Publishing Group*, 5(13742), 1–12. <https://doi.org/10.1038/srep13742>
- Matthews, D. M. (1972). Symposium on “Protein metabolism and hormones.” *Proc. Nutr. Soc.*, 31, 171–177.
- Matthews, D. M., Crampton, R. F., & Lis, M. T. (1971). Sites of Maximal Intestinal Absorptive Capacity for Amino Acids and Peptides: Evidence for an Independent Peptide Uptake System or Systems. *Journal Clinical Pathology*, 24.
- Matthews, D. M., Frcpath, M. D., & Adibi, S. A. (1976). Peptide Absorption. *Gastroenterology*, 71(1), 151–161. [https://doi.org/10.1016/S0016-5085\(76\)80117-5](https://doi.org/10.1016/S0016-5085(76)80117-5)
- Mayer, A. M., & Poljakoff-Mayber, A. (1979). The Structure of Seeds and Seedlings. In *The Germination of Seed* (Third, pp. 1–9). Pergamon Press. <https://doi.org/10.1016/B978-0-08-028853-6.50008-5>
- Mccarthy, A. L., Callaghan, Y. C. O., & Brien, N. M. O. (2013). Protein Hydrolysates from Agricultural Crops—Bioactivity and Potential for Functional Food Development. *Agriculture*, 3, 112–130. <https://doi.org/10.3390/agriculture3010112>
- Meisenberg, G., & Simmons, W. H. (2017). *Principles of Medical Biochemistry* (Fourth). Elsevier Ltd.
- Meulen, U., Struck, S., Schulke, E., & Harith, E. A. El. (1979). A Review on The Nutritive Value and Toxic Aspects of *Leucaena Leucocephala*. *Trop Anim Prod*, 4(2), 113–126.
- Miguel, M., Dávalos, A., Manso, M. A., De La Peña, G., Lasunción, M. A., & López-Fandiño, R. (2008). Transepithelial transport across Caco-2 cell monolayers of antihypertensive egg-derived peptides. PepT1-mediated flux of Tyr-Pro-Ile. *Molecular Nutrition and Food Research*, 52(12), 1507–1513. <https://doi.org/10.1002/mnfr.200700503>
- Minekus, M., Alming, M., Alvito, P., Ballance, S., Bohn, T., Bourlieu, C., Carrière, F., Boutrou, R., Corredig, M., Dupont, D., Dufour, C., Egger, L., Golding, M., Karakaya, S., Kirkhus, B., Le Feunteun, S., Lesmes, U., MacIerzanka, A., MacKie, A., ... Brodtkorb, A. (2014). A standardised static in vitro digestion method suitable for food-an international consensus. *Food and Function*, 5(6), 1113–1124. <https://doi.org/10.1039/c3fo60702j>
- Miner-williams, W. M., Stevens, B. R., & Moughan, P. J. (2019). Are intact peptides absorbed from the healthy gut in the adult human? *Nutrition Research Reviews*, 27(2014), 308–329. <https://doi.org/10.1017/S0954422414000225>

- Minkiewicz, P., Iwaniak, A., & Darewicz, M. (2019). BIOPEP-UWM database of bioactive peptides: Current opportunities. *International Journal of Molecular Sciences*, 20(23). <https://doi.org/10.3390/ijms20235978>
- Natesh, R., Schwager, S. L. U., Sturrock, E. D., & Acharya, K. R. (2003). Crystal Structure of The Human Angiotensin-converting Enzyme – Lisinopril Complex. *Nature Publishing Group*, 421(1), 551–554.
- Ni, H., Li, L., Liu, G., & Hu, S.-Q. (2012). Inhibition Mechanism and Model of an Angiotensin I- Converting Enzyme (ACE) -Inhibitory Hexapeptide from Yeast (*Saccharomyces cerevisiae*). *PLoS ONE*, 7(5). <https://doi.org/10.1371/journal.pone.0037077>
- Nonogaki, H., Bassel, G. W., & Bewley, J. D. (2010). Plant Science Germination — Still a mystery. *Plant Science*, 179, 574–581. <https://doi.org/10.1016/j.plantsci.2010.02.010>
- Noviyanti, E., Supriyadi, A., Arum, L. S., Akbar, R. R., & Siswoyo, T. A. (2020). Effect of Germination on Free Radical Scavenging Activities and Angiotensin I-Converting Enzyme Inhibitory of Melinjo (*Gnetum gnemon* L.) Seed Proteins. *Journal of Microbiology, Biotechnology and Food Sciences*, 9(4), 809–812. <https://doi.org/10.15414/JMBFS.2020.9.4.809-812>
- Nursiwi, A., Dwikiputra, B. I., Ishartani, D., & Sari, A. M. (2019). Changes on microbial growth during Mlanding tempeh (*Leucaena leucocephala*) over fermentation. *IOP Conference Series: Earth and Environmental Science*, 379(1), 1–6. <https://doi.org/10.1088/1755-1315/379/1/012001>
- Nursiwi, A., Ishartani, D., Sari, A. M., & Nisyah, K. (2018). Study on *Leucaena leucocephala* Seed during Fermentation: Sensory Characteristic and Changes on Anti Nutritional Compounds and Mimosine Level. *IOP Conference Series: Earth and Environmental Science*, 102(1).
- Ohanenye, I. C., Sun, X., Sarteshnizi, R. A., & Udenigwe, C. C. (2021). Germination alters the microstructure, in vitro protein digestibility, α -glucosidase and dipeptidyl peptidase-IV inhibitory activities of bioaccessible fraction of pigeon pea (*Cajanus cajan*) seeds. *Legume Science*, 3(1), 1–12. <https://doi.org/10.1002/leg3.79>
- Pal, R. S., Bhartiya, A., ArunKumar, R., Kant, L., Aditya, J. P., & Bisht, J. K. (2016). Impact of dehulling and germination on nutrients, antinutrients, and antioxidant properties in horsegram. *Journal of Food Science and Technology*, 53(1), 337–347. <https://doi.org/10.1007/s13197-015-2037-3>
- Pamungkas, B. F. (2019). *Hidrolisat kolagen sisik ikan haruan (*Channa striatus*) dan potensinya sebagai inhibitor Angiotensin I-Converting Enzyme (ACE)*. Universitas Gadjah Mada.
- Pamungkas, B. F., Supriyadi, Murdiati, A., & Indrati, R. (2018). Ekstraksi dan Karakterisasi Kolagen Larut Asam dan Pepsin dari Sisik Ikan Haruan (*Channa striatus*) Kering. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 21(3), 465–473.

- Patadiya, N., Panchal, N., & Vaghela, V. (2021). A review on enzyme inhibitors. *International Research Journal Of Pharmacy*, 12(6), 60–66. <https://doi.org/10.7897/2230-8407.1206145>
- Pebrianti, S. A. (2019). *Aktivitas penghambatan Angiotensin Converting Enzyme (ACE) dari peptida inhibitor ACE yang dihasilkan selama fermentasi tempe gude (Cajanus cajan)*. Universitas Gadjah Mada.
- Pebrianti, S. A., Cahyanto, M. N., & Indrati, R. (2019). Angiotensin I-converting Enzyme (ACE) Inhibitory Activity of ACE Inhibitory Peptides Produced during the Fermentation of Pigeon Pea (*Cajanus cajan*) Tempe. *Journal of Indonesian Food and Nutrition Progress*, 16(2), 47–52. <https://doi.org/10.22146/ifnp.46921>
- Pedroche, J., Yust, M. M., Giron-Calle, J., Alaiz, M., Millan, F., & Vioque, J. (2002). Utilisation of Chickpea Protein Isolates for Production of Peptides with Angiotensin I-Converting Enzyme (ACE) -Inhibitory Activity. *Journal of The Science of Food and Agriculture*, 965(September), 960–965. <https://doi.org/10.1002/jsfa.1126>
- Pertiwi, M. G. P., Marsono, Y., & Indrati, R. (2019). In Vitro Gastrointestinal Simulation of Tempe Prepared from Koro Kratok (*Phaseolus lunatus* L.) as An Angiotensin-converting Enzyme Inhibitor. *Journal of Food Science and Technology*, 57(5), 1847–1855. <https://doi.org/10.1007/s13197-019-04219-1>
- Pihlanto, A. (2013). Lactic Fermentation and Bioactive Peptide. In *R&D for Food, Health and Livestock Purposes* (pp. 309–332).
- Pina, A. S., & Roque, A. C. A. (2009). Studies on the molecular recognition between bioactive peptides and angiotensin- converting enzyme. *Journal of Molecular Recognition*, 2008(September 2008), 162–168. <https://doi.org/10.1002/jmr.905>
- Puspitojati, E., Cahyanto, M. N., Marsono, Y., & Indrati, R. (2019a). Changes in Amino Acid Composition during Fermentation and Its Effects on The Inhibitory Activity of Angiotensin-I-converting Enzyme of Jack Bean Tempe Following In vitro Gastrointestinal Digestion. *Journal of Food and Nutrition Research*, 58(4), 319–327.
- Puspitojati, E., Cahyanto, M. N., Marsono, Y., & Indrati, R. (2019b). Production of Angiotensin-I-Converting Enzyme (ACE) Inhibitory Peptides during the Fermentation of Jack Bean (*Canavalia ensiformis*) Tempe. *Pakistan Journal of Nutrition*, 18(5), 464–470. <https://doi.org/10.3923/pjn.2019.464-470>
- Putra, I. D., Marsono, Y., & Indrati, R. (2020). Effect of Simulated Gastrointestinal Digestion of Bioactive Peptide from Pigeon Pea (*Cajanus cajan*) Tempe on Angiotensin-I Converting Enzyme Inhibitory Activity. *Nutrition and Food Science*, 51(2), 244–254. <https://doi.org/10.1108/NFS-03-2020-0071>
- Quirós, A., Dávalos, A., Lasunción, M. A., Ramos, M., & Recio, I. (2008). Bioavailability of the antihypertensive peptide LHLPLP: Transepithelial flux of HLPLP. *International Dairy Journal*, 18(3), 279–286.

<https://doi.org/10.1016/j.idairyj.2007.09.006>

- Rahman, M. M., Banu, L. A., Rahman, M. M., & Shahjadee, U. F. (1970). Changes of the Enzymes Activity During Germination of Different Mungbean Varieties. *Bangladesh Journal of Scientific and Industrial Research*, 42(2), 213–216. <https://doi.org/10.3329/bjsir.v42i2.474>
- Ramakrishna, V., & Rao, P. R. (2005). Purification of Acidic Protease from The Cotyledons of Germinating Indian Bean (*Dolichos lablab* L. var *lignosus*) Seeds. *African Journal of Biotechnology*, 4(July), 703–707.
- Ranal, M. A., & Santana, D. G. de. (2006). How and Why to Measure The Germination Process? *Revista Brasil. Bot.*, 29, 1–11.
- Ratnayani, K., Suter, I. K., Antara, N. S., & Putra, I. N. K. (2019a). Angiotensin converting enzyme (ACE) inhibitory activity of peptide fraction of germinated Pigeon Pea (*Cajanus cajan* (L.) Millsp.). *Indonesian Journal of Chemistry*, 19(4), 900–906. <https://doi.org/10.22146/ijc.37513>
- Ratnayani, K., Suter, I. K., Antara, N. S., & Putra, I. N. K. (2019b). Effect of in vitro Gastrointestinal Digestion on The Angiotensin Converting Enzyme (ACE) Inhibitory Activity of Pigeon Pea Protein Isolate. *International Food Research Journal*, 26(4), 1397–1404.
- Rawlings, N. D., & Salvesen, G. (2013). Peptidyl-Dipeptidase A/Angiotensin I-Converting Enzyme. In *Handbook of Proteolytic Enzyme* (Third, pp. 480–494). Elsevier.
- Rivero-cruz, J. F., Granados-pineda, J., Pedraza-chaverri, J., & Rivero-cruz, B. E. (2020). Phytochemical Constituents, Antioxidant, Cytotoxic, and Antimicrobial Activities of the Ethanolic Extract of Mexican Brown Propolis. *Antioxidants*, 9, 1–11.
- Rizvi, Q. U. E. H., Kumar, K., Ahmed, N., Yadav, A. N., Chauhan, D., Thakur, P., Jan, S., & Sheikh, I. (2022). Influence of soaking and germination treatments on the nutritional, anti-nutritional, and bioactive composition of pigeon pea (*Cajanus cajan* L.). *Journal of Applied Biology and Biotechnology*, 10(3), 127–134. <https://doi.org/10.7324/JABB.2022.100317>
- Rosida, D. F., Djajati, S., Nilamayu, Z. A., & Rosida. (2018). Antibacterial Activity of *Leucaena leucocephala* Extracts on Growth of *Escherichia coli*. *Advanced Science Letters*, 23(12), 12268–12271. <https://doi.org/10.1166/asl.2017.10618>
- Rui, X., Boye, J. I., Simpson, B. K., & Prasher, S. O. (2013). Purification and Characterization of Cngiotensin I-converting Enzyme Inhibitory Peptides of Small Red Bean (*Phaseolus vulgaris*) Hydrolysates. *Journal of Functional Foods*, 5(3), 1116–1124. <https://doi.org/10.1016/j.jff.2013.03.008>
- Sánchez-Bayo, F., & King, G. W. (1994). Imbibition and germination of seeds of three *Acacia* species from Ethiopia. *South African Journal of Plant and Soil*, 11(1), 20–25. <https://doi.org/10.1080/02571862.1994.10634287>
- Sánchez, A., & Vázquez, A. (2017). Bioactive Peptides : A review. *Food Quality*

- and Safety*, 1(January), 29–46. <https://doi.org/10.1093/fqs/fyx006>
- Sangronis, E., & Machado, C. J. (2007). Influence of germination on the nutritional quality of *Phaseolus vulgaris* and *Cajanus cajan*. *Lwt*, 40(1), 116–120. <https://doi.org/10.1016/j.lwt.2005.08.003>
- Sangsawad, P., Choowongkamon, K., Kitts, D. D., Chen, X. M., Li-Chan, E. C. Y., & Yongsawatdigul, J. (2018). Transepithelial transport and structural changes of chicken angiotensin I-converting enzyme (ACE) inhibitory peptides through Caco-2 cell monolayers. *Journal of Functional Foods*, 45(November 2017), 401–408. <https://doi.org/10.1016/j.jff.2018.04.020>
- Saremi, S., Atyabi, F., Akhlaghi, S. P., Ostad, S. N., & Dinarvand, R. (2011). Thiolated chitosan nanoparticles for enhancing oral absorption of docetaxel: Preparation, in vitro and ex vivo evaluation. *International Journal of Nanomedicine*, 6(1), 119–128. <https://doi.org/10.2147/IJN.S15500>
- Sayudi, S., Herawati, N., & Ali, A. (2015). Potensi biji lamtoro gung dan biji kedelai sebagai bahan baku pembuatan tempe komplementasi. *Journal Online Mahasiswa Universitas Riau*, 2(1), 1–9.
- Schönfeldt, H. C., Pretorius, B., & Hall, N. (2015). Bioavailability of Nutrients. *Encyclopedia of Food and Health*, January 2019, 401–406. <https://doi.org/10.1016/B978-0-12-384947-2.00068-4>
- Segura-Campos, M., Chel-Guerrero, L., Betancur-Ancona, D., & Hernandez-Escalante, V. M. (2011). Bioavailability of Bioactive Peptides. *Food Reviews International*, July. <https://doi.org/10.1080/87559129.2011.563395>
- Sethi, P., & Kulkarni, P. R. (1995). *Leucaena leucocephala* A nutrition profile. *Food and Nutrition Bulletin*, 16(3), 1–16. <https://doi.org/https://doi.org/10.1177/156482659501600307>
- Shen, W., & Matsui, T. (2019). Intestinal absorption of small peptides : a review. *International Journal of Food Science and Technology*, 54, 1942–1948. <https://doi.org/10.1111/ijfs.14048>
- Shih, F. F., & Campbell, N. F. (1993). Enzymatic Modification of Soy Proteins To Improve Their Functional Properties for Food Use. In *Food Flavor and Safety* (pp. 181–191).
- Shimizu, M., Tsunogai, M., & Arai, S. (1997). Transepithelial transport of oligopeptides in the human intestinal cell, Caco-2. *Peptides*, 18(5), 681–687. [https://doi.org/10.1016/S0196-9781\(97\)00002-8](https://doi.org/10.1016/S0196-9781(97)00002-8)
- Shutov, A. D., & Vaintraub, I. A. (1987). Degradation of Storage Proteins in Germinating Seeds. *Phytochemistry*, 26(6).
- Sibian, M. S., Saxena, D. C., & Riar, C. S. (2017). Effect of germination on chemical, functional and nutritional characteristics of wheat, brown rice and triticale: A comparative study. *Journal of the Science of Food and Agriculture*, 97(13), 4643–4651. <https://doi.org/10.1002/j>

- Singh, B. P., Vij, S., & Hati, S. (2014). Functional significance of bioactive peptides derived from soybean. *Peptides*, 54. <https://doi.org/10.1016/j.peptides.2014.01.022>
- Singh, S., Singh, A., & Bahadur, R. (2011). Effect of cadmium on germination and seedling growth of tomato (*Lycopersicon esculentum* Mill). *Plant Archives*, 11(2), 859–862.
- Srinivasan, V. S. (2001). Bioavailability of nutrients: A practical approach to in vitro demonstration of the availability of nutrients in multivitamin-mineral combination products. *Journal of Nutrition*, 131(4 SUPPL.), 1349–1350. <https://doi.org/10.1093/jn/131.4.1349s>
- Supriyadi, S., Indrati, R., & Santoso, U. (2017). *Eksplorasi dan Pengembangan Bumbu Asli Indonesia Sumber “Umami” sebagai Bentuk Pelestarian dan Mendukung Ketahanan Pangan*.
- Susanti, E. F. A., Susilowati, E., & Siswoyo, T. A. (2022). Effect of germination period on the antioxidant activities and angiotensin-I converting enzyme inhibitory of Indonesian black rice. *Food Research*, 6(4), 59–67. [https://doi.org/10.26656/fr.2017.6\(4\).439](https://doi.org/10.26656/fr.2017.6(4).439)
- Thakur, P., Kumar, K., Ahmed, N., Chauhan, D., Eain Hyder Rizvi, Q. U., Jan, S., Singh, T. P., & Dhaliwal, H. S. (2021). Effect of soaking and germination treatments on nutritional, anti-nutritional, and bioactive properties of amaranth (*Amaranthus hypochondriacus* L.), quinoa (*Chenopodium quinoa* L.), and buckwheat (*Fagopyrum esculentum* L.). *Current Research in Food Science*, 4, 917–925. <https://doi.org/10.1016/j.crfs.2021.11.019>
- Thankappan, S., Sufin, S. S., Vinod, V., Aswathy, A., & Mohan, G. (2018). The Effect of Light , Darkness and Salinity on Seed germination of *Vinga radiata* (L.) R. Wilczek. *Journal of Advances in Biological Science*, 5(2). <https://jabscience.in/jabs2018-1/006.pdf>
- Thewissen, B. G., Pauly, A., Celus, I., Brijs, K., & Delcour, J. A. (2011). Inhibition of angiotensin I-converting enzyme by wheat gliadin hydrolysates. *Food Chemistry*, 127(4), 1653–1658. <https://doi.org/10.1016/j.foodchem.2010.11.171>
- Tian, Y., Guan, B., Zhou, D., Yu, J., Li, G., & Lou, Y. (2014). Responses of Seed Germination, Seedling Growth, and Seed Yield Traits to Seed Pretreatment in Maize (*Zea mays* L.). *Scientific World Journal*, 2014. <https://doi.org/10.1155/2014/834630>
- Toutain, P. L., & Bousquet-Mélou, A. (2004). Bioavailability and Its Assessment. *Journal of Veterinary Pharmacology and Therapeutics*, 27(6), 455–466. <https://doi.org/10.1111/j.1365-2885.2004.00604.x>
- Uhlig, T., Kyprianou, T., Giancarlo, F., Alberto, C., Heiligers, D., Hills, D., Ribes, X., & Verhaert, P. (2014). The emergence of peptides in the pharmaceutical business: From exploration to exploitation. *European Proteomics Association*, 4, 58–69. <https://doi.org/10.1016/j.euprot.2014.05.003>

- Uppal, V., & Bains, K. (2012). Effect of Germination Periods and Hydrothermal Treatments on In Vitro Protein and Starch Digestibility of Germinated Legumes. *Journal of Food Science and Technology*, 49(2), 184–191. <https://doi.org/10.1007/s13197-011-0273-8>
- Urbano, G., Aranda, P., Vílchez, A., Aranda, C., Cabrera, L., Porres, J. M., & López-Jurado, M. (2005). Effects of Germination on The Composition and Nutritive Value of Proteins in *Pisum sativum*, L. *Food Chemistry*, 93(4), 671–679. <https://doi.org/10.1016/j.foodchem.2004.10.045>
- Ussing, H. H., & Zerahn, K. (1950). Active transport of sodium as the source of electric current in the short-circuited isolated frog skin. *Journal of the American Society of Nephrology*, 10(9), 2056–2065.
- Valadez-Vega, C., Lugo-Magaña, O., Figueroa-Hernández, C., Bautista, M., Betanzos-Cabrera, G., Bernardino-Nicanor, A., González-Amaro, R. M., Alonso-Villegas, R., Morales-González, J. A., & González-Cruz, L. (2022). Effects of Germination and Popping on the Anti-Nutritional Compounds and the Digestibility of *Amaranthus hypochondriacus* Seeds. *Foods*, 11(14). <https://doi.org/10.3390/foods11142075>
- Venegas-Ortega, M. G., Flores-Gallegos, A. C., Martinez-Hernandez, J. L., Aguilar, C. N., & Nevarez-Moorillon, G. V. (2019). Production of Bioactive Peptides from Lactic Acid Bacteria: A Sustainable Approach for Healthier Foods. *Comprehensive Reviews in Food Science and Food Safety*, 18, 1039–1051.
- Verma, S. (2016). A Review Study on *Leucaena leucocephala*: A Multipurpose Tree. *International Journal of Scientific Research in Science, Engineering and Technology*, 2(2), 103–105. <https://doi.org/10.1186/1754-1611-3-14>.
- Vij, R., Reddi, S., Kapila, S., & Kapila, R. (2016). Transepithelial transport of milk derived bioactive peptide VLPVPQK. *Food Chemistry*, 190, 681–688. <https://doi.org/10.1016/j.foodchem.2015.05.121>
- Walker, K. A. (1974). Changes in Phytic Acid and Phytase during Early Development of *Phaseolus vulgaris* L. *Planta*, 116(2), 91–98.
- Wardatun, S., Harahap, Y., Mun'im, A., Saputri, F. C., & Sutandyo, N. (2020). Removal of Mimosine from *Leucaena leucocephala* (Lam.) de Wit Seeds to Increase Their Benefits as Nutraceuticals. *Pharmaceutical Sciences and Research*, 7(3), 159–165. <https://doi.org/10.7454/psr.v7i3.1099>
- Washa, W. B. (2015). Potential of the Dark as a Factor affecting Seed Germination. *International Journal of Science and Technology*, 5(2), 28–36. <http://www.ejournalofsciences.org>
- Wheeler, E. ., & Ferrel R, E. (1971). A method for Phytic Acid Determination in Wheat and Wheat Fractions. In *Cereal Chemistry* (Vol. 48, pp. 312–320).
- Wilson, K. A. (1988). The Proteolysis of Trypsin Inhibitor in Legume Seeds. *CRC Critical Reviews in Biotechnology*, 8(3).

- Wilson, T. H., & Wiseman, G. (1954). The use of sacs of everted small intestine for the study of the transference of substances from the mucosal to the serosal surface. *The Journal of Physiology*, 123(1), 116–125. <https://doi.org/10.1113/jphysiol.1954.sp005036>
- Wu, S., Feng, X., Lan, X., & Xu, Y. (2015). Purification and identification of Angiotensin-I Converting Enzyme (ACE) inhibitory peptide from lizard fish (*Saurida elongata*) hydrolysate. *Journal of Functional Foods*, 13, 295–299. <https://doi.org/10.1016/j.jff.2014.12.051>
- Xiao, H. W., Pan, Z., Deng, L. Z., El-Mashad, H. M., Yang, X. H., Mujumdar, A. S., Gao, Z. J., & Zhang, Q. (2017). Recent Developments and Trends in Thermal Blanching – A Comprehensive Review. *Information Processing in Agriculture*, 4(2), 101–127. <https://doi.org/10.1016/j.inpa.2017.02.001>
- Xu, F., Wang, L., Ju, X., Zhang, J., Yin, S., Shi, J., He, R., & Yuan, Q. (2017). Transepithelial Transport of YWDHNNPQIR and Its Metabolic Fate with Cytoprotection against Oxidative Stress in Human Intestinal Caco-2 Cells. *Journal of Agricultural and Food Chemistry*, 65(10), 2056–2065. <https://doi.org/10.1021/acs.jafc.6b04731>
- Xu, Q., Fan, H., Yu, W., Hong, H., & Wu, J. (2017). Transport Study of Egg-Derived Antihypertensive Peptides (LKP and IQW) Using Caco-2 and HT29 Coculture Monolayers. *Journal of Agricultural and Food Chemistry*, 65(34), 7406–7414. <https://doi.org/10.1021/acs.jafc.7b02176>
- Xu, Q., Hong, H., Wu, J., & Yan, X. (2019). Bioavailability of bioactive peptides derived from food proteins across the intestinal epithelial membrane: A review. *Trends in Food Science and Technology*, 86(February), 399–411. <https://doi.org/10.1016/j.tifs.2019.02.050>
- Xu, Q., Yan, X., Zhang, Y., & Wu, J. (2018). Current understanding of transport and bioavailability of bioactive peptides derived from dairy proteins: a review. *International Journal of Food Science and Technology*, 54(6), 1930–1941. <https://doi.org/10.1111/ijfs.14055>
- Yang, Y., Marczak, E. D., Yokoo, M., Usui, H., & Yoshikawa, M. (2003). Isolation and antihypertensive effect of angiotensin I-converting enzyme (ACE) inhibitory peptides from spinach Rubisco. *Journal of Agricultural and Food Chemistry*, 51(17), 4897–4902. <https://doi.org/10.1021/jf026186y>
- Zaharuddin, N. D., Barkia, I., Wan Ibadullah, W. Z., Zarei, M., & Saari, N. (2022). Identification, molecular docking, and kinetic studies of six novel angiotensin-I-converting enzyme (ACE) inhibitory peptides derived from Kenaf (*Hibiscus cannabinus* L.) seed. *International Journal of Biological Macromolecules*, 220(April), 1512–1522. <https://doi.org/10.1016/j.ijbiomac.2022.09.142>
- Zhang, Y., Pechan, T., & Chang, S. K. C. (2018). Antioxidant and angiotensin-I converting enzyme inhibitory activities of phenolic extracts and fractions derived from three phenolic-rich legume varieties. *Journal of Functional Foods*, 42(October 2017), 289–297. <https://doi.org/10.1016/j.jff.2017.12.060>

- Zhao, Y., & Xu, C. (2008). Structure and Function of Angiotensin Converting Enzyme and Its Inhibitors. *Chinese Journal of Biotechnology*, 24(2), 171–176.
- Zhou, M., Du, K., Ji, P., & Feng, W. (2012). Molecular mechanism of the interactions between inhibitory tripeptides and angiotensin-converting enzyme. *Biophysical Chemistry*, 168–169, 60–66.
<https://doi.org/10.1016/j.bpc.2012.05.002>