

DAFTAR PUSTAKA

- Ahmad, H., and Chowdhury, M. A. N., 2019, A Short Review on Anti-diabetics for Uncontrolled Type 2 Diabetes Mellitus, *Med. Today*, 2(31), 120-127.
- Al Mazroea, A., Alharby, M. A., Almughatwai, A. A., Al-Remaiti, S. M., Saeed, R. M., Alharbi, A. F., and Saeed, H. M., 2018, Comparison between Nutritional Values in Cow's Milk, and Goat Milk Infant Formulas, *Int. J. Pharm. Res. Allied Sci.*, 4(7), 190-195.
- Barati, M., Javanmardi, F., Jabbari, M., Mokari-Yamchi, A., Farahmand, F., Es, I., Farhadnejad, H., Davoodi, S. H., and Khaneghah, A. M., 2020, An In-silico Model to Predict and Estimate Digestion-Resistant and Bioactive Peptide Content of Dairy Products: A Primarily Study of a Time-Saving and Affordable Method for Practical Research Purposes, *LWT-Food Sci.*, 130, 1-12.
- Berraquero-Garcia, C., Rivero-Pino, F., Ospina, J. L., Pèrez-Galvez, R., Espejo-Carpio, F. J., Guadix, A., Garcia-Moreno, P. J., and Guadix, E. M., 2023, Activity, Structural Features and In Silico Digestion of Antidiabetic Peptides, *Food Biosci.*, 55.
- Bhowmick, A., and Banu, S., 2017, Therapeutic Targets of Type 2 Diabetes: An Overview, *MOJ Des. Dev. Ther.*, 1(3), 60-64.
- Cagney, G., Amiri, S., Premawaradena, T., Lindo, M., and Emili, A., 2003, In Silico Proteome Analysis to Facilitate Proteomics Experiments Using Mass Spectrometry, *Proteome Sci.*, 1(5), 1-15.
- Campos, M. I. F., Barbosa, P. P., Camargo, L. J., Pinto, L. D., Mataribu, B., Serrao, C., Marques-Santos, L. F., Lopes, J. H., Oliveira, J. M. G., Gadelha, C. A., and Santi-Gadelha, T., 2022, Characterization of Goat Whey Proteins and Their Bioactivity and Toxicity Assay, *Food Biosci.*, 46, 1-11.
- Ceballos, L. S., Morales, E. V., Adarve, G., Castro, J. D., Martinez, L. P., and Sampelayo, M. R. S., 2009, Composition of Goat and Cow Milk Produced Under Similar Conditions and Analyzed by Identical Methodology, *J. Food Compos. Anal.*, 22, 322-329.
- Chandrasekaran, P., and Weiskirchen, R., 2024, The Role of Obesity in Type 2 Diabetes Melitus – An Overview, *Int. J. Mol. Sci.*, 25(1882), 1-21.
- Chen, D., Oezguen, N., Urvil, P., Ferguson, C., Dann, S. M., and Savidge, T. C., 2016, Regulation of Protein-Ligand Binding Affinity by Hydrogen Bond Pairing, *Sci. Adv.*, 2, 1-16.
- Ciemny, M., Kurcinski, M., Kamel, K., Kolinski, A., Alam, N., Schueler-Furman, O., and Kmiecik, S., 2018, Protein–Peptide Docking: Opportunities and Challenges, *Drug Discov. Today*, 23(8), 1530-1537.

- Coscueta, E. R., Batista, P., Gomes, J. E. G., da Silva, R., and Pintado, M. M., 2022, Screening of Novel Bioactive Peptides from Goat Casein: In Silico to In Vitro Validation, *Int. J. Mol. Sci.*, 2439(23), 1-9.
- Dujic, T. A., Causevic, T., Bego, M., Malenica, Z., Velija-Asimi, E. R., Pearson, and Semiz, S., 2015, Organic Cation Transporter 1 Variants and Gastrointestinal Side Effects of Metformin in Patients with Type 2 Diabetes, *Diabet Med.*, 33, 511-514.
- Esfandi, R., Seidu, I., Willmore, W., and Tsopmo, A., 2022, Antioxidant, Pancreatic Lipase, and α -Amylase Inhibitory Properties of Oat Bran Hydrolyzed Proteins and Peptides, *J. Food Biochem.*, 46(4), 1-11.
- Evaristus, N. A., Abdullah, W. N. W., and Gan, C., 2018, Extraction and Identification of α -Amylase Inhibitor Peptides from Nephelium lappacheum and Nephelium mutabile Seed Protein Using Gastro-Digestive Enzymes, *Peptides*, 102, 61-67.
- Fadimu, G. J., Farahnaky, A., Gill, H., Olalere, O. A., Gan, C., and Truong, T., 2022b, In-Silico Analysis and Antidiabetic Effect of α -Amylase and α -Glucosidase Inhibitory Peptides from Lupin Protein Hydrolysate: Enzyme-Peptide Interaction Study Using Molecular Docking Approach, *Foods*, 3375(11), 1-20.
- Fadimu, G. J., Gill, H., Farahnaky, A., and Truong, T., 2022a, Improving the Enzymolysis Efficiency of Lupin Protein by Ultrasound Pretreatment: Effect on Antihypertensive, Antidiabetic and Antioxidant Activities of the Hydrolysates, *Food Chem.*, 383, 1-10.
- Famuwagun, A. A., Alashi, A. M., Gbadamosi, O. S., Taiwo, K. A., Oyedele, D., Adebooye, O. C., and Aluko, R. E., 2021, Antioxidant and Enzymes Inhibitory Properties of Amaranth Leaf Protein Hydrolyzates and Ultrafiltration Peptide Fractions, *J. Food Biochem.*, 45(3), 1-13.
- Fuwa, H., 1954, A New Method for Microdetermination of Amylase Activity by the Use of Amylose as the Substrate, *J. Biochem.*, 5(41), 583-603.
- Huang, Y., Richardson, S. J., Brennan, C. S., and Kasapis, S., 2024, Mechanistic Insights into α -Amylase Inhibition, Binding Affinity and Structural Changes upon Interaction with Gallic Acid, *Food Hydrocoll.*, 148, 1-10.
- Kastritis, P. L., and Bonvin, A. M. J. J., 2013, On the Binding Affinity of Macromolecular Interactions: Daring to Ask Why Proteins Interact, *J. R. Soc. Interface.*, 10, 1-27.
- Keska, P., Stadnik, J., Lupawka, A., and Michalska, A., 2023, Novel α -Glucosidase Inhibitory Peptides Identified In silico from Dry-Cured Pork Loins with Probiotics through Peptidomic and Molecular Docking Analysis, *Nutrients*, 3539(15), 1-17.
- Khan, M. A. B., Hashim, M. J., King, J. K., Govender, R. D., Mustafa, H., and Kaabi, J. A., 2020, Epidemiology of Type 2 Diabetes – Global Burden of

- Disease and Forecasated Trends, *J. Epidemiol, Glob. Health.*, 1(10), 107-111.
- Lad, S. S., Aparnathi, K. D., Mehta, B., and Velpula, S., 2017, Goat Milk in Human Nutrition and Health – A Review, *Int. J. Curr. Microbiol. App. Sci.*, 5(6), 1781-1792.
- Li, W., Yang, S., An, J., Wang, M., Li, H., and Liu X., 2024, Statistical Characterization of Food-Derived α -Amylase Inhibitory Peptides: Computer Simulation and Partial Least Squares Regression Analysis, *Moleluces*, 395(29), 1-16.
- Liu, F., Wang, T., Dong, X., and Sun, Y., 2007, Rational Design of Affinity Peptide Ligand by Flexible Docking Simulation, *J. Chromatogr. A*, 1146, 41-50.
- Lu, D., Liu, R. Z., Izumi, V., Fenstermacher, D., Haura, E. B., Koomen, J., and Eschrich, S. A., 2008, IPEP: An In-Silico Tool to Examine Proteolytic Peptides for Mass Spectrometry, *J. Bioinform.*, 23(24), 2801-2802.
- Ma, H., Zhang, J., Li, C., dan Zou, L., 2023, Discovery of Anthraquinones as DPP-IV Inihibitors: Structure-Activity Relationships and Inhibitory Mechanism, *Fitoterapia*, 168, 1-9.
- Ma, I. T., and Madura, J. A., 2015, Gastrointestinal Complications After Bariatric Surgery, *JGH*, 8(11), 526-535.
- Marella, S., 2018, Antidiabetic Plant Proteins/Peptides as Complementary and Alternative Medicine – Analytical Perspectives, *Rev. Anal. Chem.*, 4(37), 1-20.
- Martini, S., Solieri, L., Cattivelli, A., Pizzamiglio, V., and Tagliazucchi, D., 2021, An Integrated Peptidomics and In Silico Approach to Identify Novel Anti-Diabetic Peptides in Parmigiano-Reggiano Cheese, *Biology*, 10(563), 1-17.
- Mourad, G., Bettache, G., and Samir, M., 2014, Composition and Nutritional Value of Raw Milk, *Biol. Sci. Pharm. Res.*, 10(2), 115-122.
- Mudgil, P., Al Dhaheri, M. K. O., Alsubousi, M. S. M, Khan, H., Redha, A., Yap, P., Gan, C., and Maqsood, S., 2023, Molecular Docking Studies on α -Amylase Inhibitory Peptides from Milk of Different Farm Animals, *J. Dairy Sci. TBC*, 1-21.
- Nagy, G., and Grubmuller, H., 2021, Implementation of a Bayesian Secondary Structure Estimation Method for The SESCA Circular Dichroism Analysis Package, *Comput. Phys. Commun.*, 1-21.
- Najafi, M. F., dan Kembhavi, A., 2005, One Step Purification and Characterization of an Extracellular α -Amylase from Marine *Vibrio* sp., *Enzyme Microb. Technol.*, 36, 535-539.
- Oktora, S. I., and Butar, D. B., 2022, Determinants of Diabetes Mellitus Prevalence in Indonesia, *KEMAS*, 2(18), 266-273.

- Payan, F., 2004, Structural Basis for the Inhibition of Mammalian and Insect α -Amylases by Plant Protein Inhibitors, *BBA*, 1696, 171-180.
- Proenca, C., Freitas, M., Ribeiro, D., Tome, S. M., Oliveira, E. F. T., Viegas, M. F., Araujo, A. N., Ramos, M. J., Silva, A. A. M., Fernandes, P. A., and Fernandes, E., 2019, Evaluation of a Flavonoids Library for Inhibition of Pancreatic α -Amylase towards a Structure–Activity Relationship, *J. Enzyme Inhib. Med. Chem.*, 1(34), 577-588.
- Rodhi, A. M., Yap, P. G., Olalere, O. A., and Gan, C. Y., 2024, Unveiling α -Amylase Inhibition: A Bioinformatics Perspective on Peptide Properties and Amino Acid Contributions, *J. Mol. Struct.*, 1305, 1-31.
- Sales, P. M. Souza, P. M., Simeoni, L. A., Magalhaes, P. O., and Silveira, D., 2012, α -Amylase Inhibitors: A Review of Raw Material and Isolated Compounds from Plant Source, *J. Pharmaceut. Sci.*, 1(15), 141-183.
- Simeone, J. C., Shah, S., Ganz, M. L., Sullivan, S., Koralova, A., LeGrand, J., and Bushman, J., 2020, Healthcare Resource Utilization and Cost Among Patients with Type 1 Diabetes in The United States, *JMCP*, 26(11), 1399-1410.
- Singh, B. P., Paul, S., and Goel, 2024, Shotgun Proteomics and Molecular Simulations on Multifunctional Bioactive Peptides Derived from The Whey of Unexplored “Gaddi” Goat of Himalayas, *Food Chem.*, 430, 1-10.
- Soeatmadji, D. W., Rosandi, R., Saraswati, M. R., Sibarani, R. P., and Tarigan, W. O., 2023, Clinicodemographic Profile and Outcomes of Type 2 Diabetes Mellitus in The Indonesian Cohort of DISCOVER: A 3-Year Prospective Cohort Study, *J. ASEAN Fed. Endocr. Soc.*, 1(38), 68-74.
- Tannock, G. W., Lawley, B., Munro, K., Pathmanathan, S. G., Zhou, S. J., Makrides, M., Gibson, R. A., Sullivan, T., Prosser, C. G., Lowry, D., and Hodgkinson, A. J., 2013, Comparison of the Compositions of the Stool Microbiotas of Infants Fed Goat Milk Formula, Cow Milk-Based Formula, or Breast Milk, *Appl. Environ. Microbiol.*, 9(79), 3040-3048.
- Trabuco, L. G., Lise, S., Petsalaki, E., and Russel, R. B., PepSite: Prediction of Peptide-binding Sites from Protein Surfaces, *NAR*, 40, 423-427.
- Tundis, R., Loizzo, M., and Menichini, F., 2010, Natural Products as α -Amylase and α -Glucosidase Inhibitors and Their Hypoglycaemic Potential in The Treatment of Diabetes: An Update, *Mini-Rev. Med. Chem.*, 4(10), 315-331.
- Urrutia-Baca, V. H., Chuck-Hernandez, C., Gutierrez-Urbe, J., Ramos-Parra, P. A., and Licon-Gassani, G., 2023, Development and validation of a versatile analytical method for absolute quantification of seven oligosaccharides in human, bovine, and goat milk, *Heliyon*, 9, 1-11.
- Wang, Z., Jiang, S., Ma, C., Huo, D., Peng, Q., Shao, Y., and Zhang, J., 2018, Evaluation of Nutrition and Function of the Cow and Goat Milk Based on

- Intestinal Microbiota by Metagenomic-wide Analysis, *Food Funct.*, 4(9), 2320-2327.
- Weng, G., Gao, J., Wang, Z., Wang, E., Hu, X., Yao, X., Cao, D., and Hou, T., 2020, Comprehensive Evaluation of Fourteen Docking Programs on Protein–Peptide Complexes, *J. Chem. Theory Comput.*, 16, 3959-3969.
- Xiao, Z., Storms, R., and Tsang, A., 2006, A Quantitative Starch–Iodine Method for Measuring Alpha-Amylase and Glucoamylase Activities, *Anal. Biochem.*, 351, 146-148.
- Yu, Z., Yin, Y., Zhao, W., Yu, Yiding, Liu, B., Liu, J., and Chen, F., 2011, Novel Peptides Derived from Egg White Protein Inhibiting Alpha-Glucosidase, *Food Chem.*, 129, 1376-1382.
- Zhang, B., Xing, Y., Wen, C., Yu, X., Sun, W., Xiu, Z., and Dong, Y., 2017, Pentacyclic Triterpenes as α -Glucosidase and α -Amylase Inhibitors: Structure-Activity Relationships and The Synergism with Acarbose, *Bioorg. Med. Chem. Lett.*, 27, 5065-5070.
- Zhang, Y., Wang, N., Wang, W., Wang, J., Zhu, Z., and Li, X., 2016, Molecular Mechanisms of Novel Peptides from Silkworm Pupae that Inhibit α -Glucosidase, *Peptides*, 76, 45-50.
- Zhao, C., Chen, N., and Ashaolu, T. J., 2022, Whey Proteins and Peptides in Health-Promoting Functions – A review, *Int. Dairy J.*, 126, 1-14.