

DAFTAR PUSTAKA

- Abdullah, A. P. P., Syafrizal, & Susanto, D. (2019). Studi Ragam Morfologi Polen Mangga (*Mangifera* sp.) Di Kecamatan Loa Janan Kabupaten Kutai Kartanegara. *Bioprospek*, 14(1): 61–66. <https://fmipa.unmul.ac.id/jurnal/index/Bioprospek>
- Alhozaimy, G. A., Al-Sheddi, E., & Ibrahim, T. A. (2017). Biological Activity and Isolation of Compounds from Stem Bark of *Plumeria acutifolia*. *Pharmacognosy Magazine*, 13(51), S505–S511. https://doi.org/10.4103/pm.pm_22_17
- Althiab-Almasaud, R., Teyssier, E., Chervin, C., Johnson, M. A., & Mollet, J. C. (2024). Pollen Viability, Longevity, and Function in Angiosperms: Key Drivers and Prospects for Improvement. *Plant Reproduction*, 37(3): 273–293. <https://doi.org/10.1007/s00497-023-00484-5>
- Anitasari, S. D., Winingsih, A. R., Waris, Sari, D. N. R., Astarini, I. A., & Defiani, M. R. (2018). Pengaruh Variasi Media Terhadap Viabilitas Polen Taman Tebu (*Saccharum* Sp.). *Prosiding Seminar Nasional SIMBIOSIS III*, 153–162.
- Antesco, D. K. S., Balladares, M. C. E., San Pascual, A., Magdalita, P., & Sanchez, F. J. (2025). Morphological Characterization, Pollen Viability, and Germinability Evaluation of Two *Plumeria* Species in the University of the Philippines Los Baños. *The Philippine Agricultural Scientist*, 108(1): 91-99. <https://doi.org/10.62550/FD28036024>
- Aswath, C. R., Bhandari, N. S., & Gangola, S. (2022). SEM-based study for palynological and pollen germination of *Lilium longiflorum* cv. Pavia. *Journal of Applied Horticulture*, 24(3): 302-305. <https://doi.org/10.37855/jah.2022.v24i03.53>
- Azizah, N., Suedy, S. W. A., & Prihastanti, E. (2016). Keanekaragaman Tumbuhan Berdasarkan Morfologi Polen dan Spora dari Sedimen Telaga Warna Dieng, Kabupaten Wonosobo, Jawa Tengah. *Buletin Anatomi Dan Fisiologi*, 24(1): 66–75.
- Azka, N. A. (2021). Perkecambahan Polen Bunga Jengger Ayam (*Celosia argentea*). *Agrinova: Journal of Agrotechnology Innovation*, 4(2): 24–27. <https://jurnal.ugm.ac.id/Agrinova/>
- Bestari, I. A. P., & Riawan, I. M. O. (2024). Keanekaragaman Anatomi Epidermis Daun dan Indeks Stomata Jepun Cenana *Plumeria alba* var. cendana Berdasarkan Lingkungan Tumbuhnya di Bali Utara. *Jurnal Biologi UNAND*, 12(2): 106–113. <https://doi.org/10.25077/jbioua.12.2.106-113.2024>

- Bihani, T. (2021). *Plumeria rubra* L.– a Review on its Ethnopharmacological, Morphological, Phytochemical, Pharmacological and Toxicological Studies. *Journal of Ethnopharmacology*, 264, 113291. <https://doi.org/10.1016/j.jep.2020.113291>
- Borghi, M., & Fernie, A. R. (2017). Floral Metabolism of Sugars and Amino Acids: Implications for Pollinators' Preferences and Seed and Fruit Set. *Plant Physiology*, 175(4): 1510-1524. <https://doi.org/10.1104/pp.17.01164>
- Brewbaker, J. L., and Kwack, B. H. (1963). The Essential Role Ofcalcium Ion in Pollen Germination and Pollen Tube Growth. *Am. J. Bot.* 50:859. doi: 10.2307/2439772
- Breygina, M., Kochkin, D. V., Podobedova, A., Kushunina, M., Afonin, D., & Klimenko, E. (2025). Detection of Abscissic Acid and Jasmonates in Stigma Exudates and Their Role in Pollen Germination. *Horticulturae*, 11(9): 1146. <https://doi.org/10.3390/horticulturae11091146>
- Buchner, L., Eisen, A. K., Šikoparija, B., & Jochner-Oette, S. (2022). Pollen Viability of *Fraxinus Excelsior* in Storage Experiments and Investigations on the Potential Effect of Long-Range Transport. *Forests*, 13(4): 1–16. <https://doi.org/10.3390/f13040600>
- Cascallares, M., Setzes, N., Marchetti, F., López, G. A., Distéfano, A. M., Cainzos, M., Zabaleta, E., & Pagnussat, G. C. (2020). A Complex Journey: Cell Wall Remodeling, Interactions, and Integrity During Pollen Tube Growth. *Frontiers in Plant Science*, 11(1): 1–13. <https://doi.org/10.3389/fpls.2020.599247>
- Chauhan, M. S., Farooqui, A., & Trivedi, A. N. J. A. L. I. (2017). Plants Foraged by Bees for Honey Production in Northern India: The Diverse Flora of India and its Implications for Apiculture. *Acta palaeobotanica*, 57(1), 119-132. <https://doi.org/10.1515/acpa-2017-0003>
- Cui, D. L., Xu, C. X., Wang, P., Gao, T. Y., Wang, B., & Yu, T. Y. (2024). Male gametogenesis in flowering plants. *Frontiers in Sustainable Food Systems*, 7, 1333544. <https://doi.org/10.3389/fsufs.2023.1333544>
- Dafni, A., & Maués, M. M. (1998). A Rapid and Simple Method to Determine Stigma Receptivity. *Sex. Plant Reprod.* 11: 177–180.
- De Sa Barreto, A., Feliciano, G. D., Hastenreiter Da Costa Nascimento, C. C., Pinto, P. R., Resende, C. M., Da, A., & Pinto, C. (2014). Volatile composition of three Floral variety of *Plumeria rubra*. *Int.J.Curr.Microbiol.* 3(8), 598–607. <http://www.ijcmas.com>
- da Silva, T. A., Nascimento, G. Q. S. D. S., de Almeida, P. S., Cavalcante, B. P., Souza, F. V. D., Aona, L. Y. S., ... & de Souza, E. H. (2025). Pollen Morphology, Viability, and Stigma Receptivity of *Hohenbergia* (Bromeliaceae) Species Occurring in The Atlantic Forest Biome with

- Potential for Landscaping and Cut Flowers. *Genetic Resources and Crop Evolution*, 72(2): 2007-2029. <https://doi.org/10.1007/s10722-024-02077-1>
- Diharjo, D., & Nurmiyati, N. (2024). Keanekaragaman dan Hubungan Kekerbatan Fenetik Spesies Anggota Famili Apocynaceae di Kawasan Kampus Universitas Sebelas Maret, Surakarta. *Spizaetus: Jurnal Biologi Dan Pendidikan Biologi*, 5(1): 68–79. <https://doi.org/10.55241/spibio.v5i1.339>
- Dumas, C., Berger, F., Faure, J. E., & Matthys-Rochon, E. (1998). Gametes, Fertilization and Early Embryogenesis in Flowering Plants. In *Advances in botanical research*, 28: 231-261.
- Einhardt, P. M., Correa, E. R., & Raseira, M. D. C. B. (2006). Comparação entre métodos para testar a viabilidade de pólen de pessegueiro. *Revista Brasileira de Fruticultura*, 28: 5-7.
- Erdtman, G 1952. *Morphology and Taxonomy Angiospermae: An Introduction to Palynology*. The Botanica Company Wather, Massachusetts, USA.
- Faegri, K., & Iversen, J. (1989). *Textbook of Pollen Analysis*. Hafuer Press, New York: 328.
- Fagundes, A. C. A., Souza, E. H. S., Funch, L. S., Machado, I. C., Siqueira, Filho, J. A. (2024). Autogamy Ensures Reproductive Success in The Bromeliad *Dyckia dissitiflora* Schult.f., Endemic to The Brazilian Caatinga Domain. *Plant Species Biol*, 39 (3): 138–152. <https://doi.org/10.1111/1442-1984.12448>
- Fauziah, Q. N., & Susanti, S. (2022). Morphological Structure and Fertility of Melinjo (*Gnetum gnemon* L.) Pollen based on Microscopic Data. *Berkala Ilmiah Biologi*, 13(2): 1–12. <https://doi.org/10.22146/bib.v13i2.4380>
- Fitria, R., & Sofiyanti, N. (2024). Kajian Palinologi Famili Asteraceae di Lingkungan Universitas Riau, Pekanbaru, Riau. *Buletin Anatomi Dan Fisiologi*, 9(2): 121–129. <https://doi.org/ejournal2.undip.ac.id/index.php/baf/index>
- Fragallah, S. A. D. A., Lin, S., Li, N., Ligate, E. J., & Chen, Y. (2019). Effects of Sucrose, Boric Acid, pH, and Incubation Time on In Vitro Germination of Pollen and Tube Growth of Chinese fir (*Cunninghamia lanceolata* L. Forests, 10(2). <https://doi.org/10.3390/f10020102>
- Gallette, G. J. (1983). *Methods in Fruit Breeding*. West Lavayette: Purdue University Press.
- Goetz, M., Guivaréh, A., Hirsche, J., Bauerfeind, M. A., González, M. C., Hyun, T. K., Eom, S. H., Chriqui, D., Engelke, T., Großkinsky, D. K., & Roitsch, T. (2017). Metabolic Control of Tobacco Pollination by Sugars and

- Invertases. *Plant physiology*, 173(2), 984–997. <https://doi.org/10.1104/pp.16.01601>
- Gusmalawati, D., Faizul Huda, M., Munawaroh Fauziah, S., Efrice Banyo, Y., & Abidin, Z. (2021). Karakterisasi Morfologi Polen dari Sepuluh Jenis Tumbuhan dari Famili yang Berbeda. *G-Tech Jurnal Teknologi Terapan*, 4(2): 303–308.
- Haber, W. A. (1984). Pollination by Deceit in a Mass-flowering Tropical Tree *Plumeria rubra* L. (Apocynaceae). *Biotropica*, 16(4), 269–275. <https://doi.org/https://doi.org/10.2307/2387935>
- Halbritter, H., Ulrich, S., Grímsson, F., Weber, M., Zetter, R., Hesse, M., Buchner, R., Svojtka, M., & Frosch-Radivo, A. (2018). Pollen Morphology and Ultrastructure. In *Illustrated Pollen Terminology*. Springer International Publishing, (pp. 37–65). https://doi.org/10.1007/978-3-319-71365-6_3
- Hasanudin. (2009). Penentuan Viabilitas Polen dan Reseptif Stigma Oada Melon (*Cucumis melo* L.) Serta Hubungannya dengan Penyerbukan dan Produksi Buah. *Biologi Edukasi: Jurnal Ilmiah Pendidikan Biologi*, 1(2): 22–28.
- Hedhly, A., Vogler, H., Schmid, M. W., Pazmino, D., Gagliardini, V., Santelia, D., & Grossniklaus, U. (2016). Starch Turnover and Metabolism during Flower and Early Embryo Development. *Plant physiology*, 172(4), 2388–2402. <https://doi.org/10.1104/pp.16.00916>
- Hesse, M., Halbritter, H., Zetter, R., Weber, M., Buchner, R., Frosch–Radivo, A., & Ulrich, S. (2009). *Pollen Terminology*. An illustrated Handbook. Springer: Vienna.
- Hu, H., & Zeng, J. Z. (1984). Development of New Varieties Via Anther Culture. *Handbook of plant cell culture*, 3: 65-90.
- Huang, J., Dong, J., & Qu, L. J. (2021). From Birth to Function: Male Gametophyte Development in Flowering Plants. *Current Opinion in Plant Biology*, 63: 1–9. <https://doi.org/10.1016/j.pbi.2021.102118>
- Ihwanudin, A., Hartatik, S., Hariyono, K., & Arifandi, J. A. (2019). Pengaruh *Anthesis* Jantan dan Waktu Polinasi Terhadap Tingkat Keberhasilan Pembentukan Benih Semangka Tanpa Biji (*Citrullus lanatus* Thunberg.). *Jurnal Bioindustri*, 2(1), 364-373. <https://doi.org/10.31326/jbio.v2i1.484>
- Impe, D., Reitz, J., Köpnick, C., Rolletschek, H., Börner, A., Senula, A., & Nagel, M. (2020). Assessment of Pollen Viability for Wheat. *Frontiers in Plant Science*, 10(1): 1–13. <https://doi.org/10.3389/fpls.2019.01588>

- Iovane, M., & Aronne, G. (2022). High Temperatures During Microsporogenesis Fatally Shorten Pollen Lifespan. *Plant reproduction*, 35(1): 9–17. <https://doi.org/10.1007/s00497-021-00425-0>
- Kapp, R. O. (1969). *How to Know Pollen and Spores*. WMc. Brown Company Publisher. Dubuque, Iowa, USA: 249 p.
- Kapsah, K., Dorly, D., & Astuti, I. P. (2016). Uji Viabilitas Polen Pada Dua Spesies Belimbing Hutan (*Averrhoa Dolichocarpa* Dan *a. Leucopetala*). *Botanic Gardens Bulletin*, 19(2): 79-90. <https://doi.org/10.14203/bkr.v19i2.107>.
- Kumari, M., Prasad, A., ur Rahman, L., Mathur, A. K., & Mathur, A. (2022). In vitro germination, storage and microscopic studies of pollen grains of four *Ocimum* species. *Industrial Crops and Products*, 177: 114445. <https://doi.org/10.1016/j.indcrop.2021.114445>
- Kusmoro, J., Febrian, R. R., Shanida, S., Husodo, T., Mutaqin, A. Z., & Hermawan, W. (2024). Identifikasi Polen sebagai Indikator Keanekaragaman Tumbuhan Sumber Pakan Lebah Madu (*Apis cerana* F.) di Kawasan Konservasi Hutan Kota di Kabupaten Bandung, Jawa Barat. *Agrikultura*, 35(1), 103-111. <https://doi.org/10.24198/agrikultura.v35i1.42694>
- Lalanne, E., & Twell, D. (2002). Genetic Control of Male Germ Unit Organization in *Arabidopsis*. *Plant physiology*, 129(2): 865-875.
- Lenaini, I. (2021). Teknik Pengambilan Sampel Purposive dan Snowball Sampling. *HISTORIS: Jurnal Kajian, Penelitian dan Pengembangan Pendidikan Sejarah*, 6(1): 33–39. DOI: <https://doi.org/10.31764/historis.vXiY.4075>
- Lincoln, R. J., Boxshall, G. A., Clark, P. F. (1982). *Dictionary of Ecology, Evolution, and Systematics*. Cambridge University Press, pp. 298.
- Lord, E.M., & Kohorn, L. U. (1986). Gynoecial Development, Pollination, and The Path of Pollen Tube Growth in The Tepary Bean, *Phaseolus acutifolius*. *Amer. J. Bot.* 73(1): 70-78.
- Maita, S., & Sotomayor, C. (2015). The Effect of Three Plant Bioregulators on Pollen Germination, Pollen Tube Growth and Fruit Set in Almond [*Prunus dulcis* (Mill.) DA Webb] cvs. Non Pareil and Carmel. *Electronic Journal of Biotechnology*, 18(5): 381-386. <http://dx.doi.org/10.1016/j.ejbt.2015.07.004>
- Malaspina, P., Ingegneri, M., Betuzzi, F., Gristina, E. Di, Cornara, L., Trombetta, D., & Smeriglio, A. (2024). Beyond the Scent: New Evidence about Micromorphological, Phytochemical and Biological Features of *Plumeria rubra* ‘Tonda Palermitana’ (Apocynaceae). *Plants*, 13, 2479. <https://doi.org/https://doi.org/10.3390/plants13172479>

- Malik Al-Hamda, H., Swasti, E., & Satria, B. (2022). Fertilitas dan viabilitas polen tanaman jamblang (*Syzygium cumini* (L.) Skeels) asal Sumatera Barat. *Jurnal Pertanian Agros*, 24(1): 487–496.
- Migdałek, G., Kolczyk, J., Pliszko, A., Kościńska-Pajak, M., & Słomka, A. (2014). Reduced Pollen Viability and Achene Development in *Solidago xniederederi* Khek from Poland. *Acta Societatis Botanicorum Poloniae*, 83(3): 251–255. <https://doi.org/10.5586/asbp.2014.025>
- Miller, G., Frencken, M., Sapeta, H., Gidding, F., Geelen, D., Kumar, P., Rieu, I., & Lieberman-Lazarovich, M. (2026). Methodologies and Considerations in Evaluating Heat Stress Response and Thermotolerance of Pollen Grains. *Physiologia plantarum*, 178(1), e70731. <https://doi.org/10.1111/ppl.70731>
- Moore, P. D., & Webb, J. A. (1978). *An Illustrated Guide to Pollen Analysis*. The Ronald Press Company, New York, USA: 133 p.
- Muhlemann, J. K., Younts, T. L. B., & Muday, G. K. (2018). Flavonols Control Pollen Tube Growth and Integrity by Regulating ROS Homeostasis During High-Temperature Stress. *Proceedings of the National Academy of Sciences of the United States of America*, 115(47): E11188–E11197. <https://doi.org/10.1073/pnas.1811492115>
- Muroyama, A., & Bergmann, D. (2019). Plant Cell Polarity: Creating Diversity from Inside the Box. *Annual Review of Cell and Developmental Biology*, 35(1): 309–336.
- Nascimento, G. Q. S. D. S., Souza, F. V. D., Aona, L. Y. S., Costa, M. A. P. D. C., & Souza, E. H. D. (2025). Reproductive Systems and Hybridization for Ornamental Use of *Wittmackia* (Bromeliaceae) Endemic to Brazil and Occurring in the Atlantic Forest fragments. *Euphytica*, 221(4): 40. <https://doi.org/10.1007/s10681-025-03495-7>
- Oliveira, S. C. S., Santos Nascimento, G. Q. S. D., de Almeida, P. S., Rossi, M. L., Souza, F. V. D., Aona, L. Y. S., ... & de Souza, E. H. (2026). Pollen morphology, viability, and stigma receptivity of *Canistrum* (Bromelioideae: Bromeliaceae): implications for taxonomy and conservation: SCS Oliveira. *Brazilian Journal of Botany*, 49(1), 24. <https://doi.org/10.1007/s40415-026-01147-1>
- Ou, M., Yu, S., Gao, Z., Qiao, X., Wang, M., Zhao, P., & Li, M. (2025). The molecular and evolutionary basis of dichogamous reproductive strategies in flowering plants. *Seed Biology*, 4(1): e015. 10.48130/seedbio-0025-0015
- Owens, J. N., Sornsathapornkul, P., & Tangmiatcharoen, S. (1991). *Manual: Studying flowering and seed ontogeny in tropical forest trees*. ASEAN-Canada Forest Tree Seed Centre Project. Muak Lek. Saraburi. Thailand. 143 p.

- Patel, E., & Mankad, A. (2015). Sucrose Needs for Pollen Germination of *Impatiens balsamina* L. *International Journal of Innovative Research in Sci, Eng. and Tech*, 4(10): 10242-10244.
- Putri, M., T. (2025). Fenologi Pembungaan dan Karakterisasi Morfologis Bunga Telang (*Clitoria ternatea* L.). *Skripsi*. Universitas Jambi: Jambi.
- Raja, M. M., Vijayalakshmi, G., Naik, M. L., Basha, P. O., Sergeant, K., Hausman, J. F., & Khan, P. S. S. V. (2019). Pollen development and function under heat stress: from effects to responses. *Acta Physiologiae Plantarum*, 41(4): 47. <https://doi.org/10.1007/s11738-019-2835-8>
- Ridha, R. (2016). Uji Viabilitas Polen Beberapa Varitas Padi (*Oryza sativa* L.) Introduksi. *Jurnal Penelitian Agrosamudra*, 3: 81–89.
- Rihova, L., Hrabetova, E., & Tupy, J. (2000). Optimization of Condition of Condition for In Vitro Pollen Rowth in Potatos. *Int. J. Plant Sci*, 157(5): 561-566.
- Rounds, C. M., Winship, L. J., & Hepler, P. K. (2011). Pollen Tube Energetics: Respiration, Fermentation and The Race to the Ovule. *AoB PLANTS*, plr019. <https://doi.org/10.1093/aobpla/plr019>
- Sagili, R. R., Chakrabarti, P., Melathopoulos, A., Delaplane, K. S., Dag, A., Danka, R. G., ... & Steinhauer, N. (2025). Standard Methods for Pollination Research with *Apis mellifera* 2.0. *Journal of Apicultural Research*, 64(2): 612-646. <https://doi.org/10.1080/00218839.2024.2369284>
- Salonen, A., Ollikka, T., Gronlund, E., & Ruottinen, L. (2017). Polen Analyses of Honey from Finland. *Grana*, 48(4): 281–289.
- Samudra, W. C. P., & Herawati, M. M. (2020). Pengaruh Suhu dan Lama Simpan Terhadap Viabilitas Polen Petunia (*Petunia inflata*). *Jurnal Penelitian Pertanian Terapan*, 20(2): 135–141. <https://doi.org/10.25181/jppt.v20i1.1626>
- Sanjaya, I. K. A. A., Apsari, D. P., & Wahyudi, I. W. (2024). Karakteristik dan Hubungan Kekerabatan Ragam Tanaman Kamboja (*Plumeria* spp.) Di Pulau Bali Berdasarkan Morfologi. *Metamorfosa: Journal of Biological Sciences*, 11(01), 17–37. <https://doi.org/10.24843/metamorfosa.2024.v11.i01.p3>
- Sanjaya, I. K. A. A., Kriswiyanti, E., & Darmadi, A. A. K. (2020). Karakteristik Dan Viabilitas Serbuk Sari 38 Ragam Tanaman Kamboja (*Plumeria* spp.) Di Bali. *Metamorfosa: Journal of Biological Sciences*, 7(1), 40–47. <https://doi.org/10.24843/metamorfosa.2020.v07.i01.p06>
- Sari, N. L. G. C. T., Kriswiyanti, E., & Darsini, N. N. (2013). Perkembangan Mikrogametofit dan Uji Viabilitas Serbuk Sari Kelapa (*Cocos nucifera* L. “Ancak”). *Jurnal Simbiosis*, 1(2): 51–58.

- Satifa, I. R., Riyanta, A. B., & Sari, M. P. (2020). Formulasi dan Pembuatan Minyak Atsiri Bunga Kamboja (*Plumeria acuminata*, W. T. Ait) Pada Sediaan Lilin Aromaterapi. *Tegal: Politeknik Harapan Bersama Tegal*, 7(1): 1–8.
- Schwacke, R., Grallath, S., Breitzkreuz, K. E., Stransky, E., Stransky, H., Frommer, W. B., & Rentsch, D. (1999). LeProT1, a Transporter for Proline, Glycine Betaine, and γ -Amino Butyric Acid in Tomato Pollen. *The Plant Cell*, 11(3): 377-391.
- Setyantoro, A. S. (2025). Karakterisasi Morfologi Polen pada Taaman Berbunga di Kawasan Gunung Merapi. *Skripsi*. Universitas Atma Jaya Yogyakarta: Yogyakarta.
- Shao, W., & Dong, J. (2016). Polarity in Plant Asymmetric Cell Division: Division Orientation and Cell Fate Differentiation. *Developmental biology*, 419(1): 121-131.
- Shewale, S., Undale, V., Shelar, M., Pimple, B., Kuchekar, M., Bhalchim, V., & Warude, B. (2022). Morphological and Anatomical Characterization of *Plumeria obtusa* L.: An Ayurvedic Medicinal Plant. *Annals of Phytomedicine: An International Journal*, 11(2): 787–793. <https://doi.org/10.54085/ap.2022.11.2.97>
- Shinde, P. R., Patil, P. S., & Bairagi, V. A. (2014). Phytopharmacological Review of *Plumeria* species. *Scholars Academic Journal of Pharmacy (SAJP)*, 3(2), 217–227. www.saspublisher.com
- Sipahutar, A., Adelina, R., Lubis, E. S., & Pulungan, S. (2025). Perbungaan dan Uji Sterilitas Serbuk Sari Salak Sidimpuan (*Salacca sumatrana* Becc.). *Jurnal Agrium*, 22(1): 48–62. <https://ojs.unimal.ac.id/index.php/agrium>
- Skrzypkowski, W., Galek, R., Adamus, A., & Kielkowska, A. (2023). Pollen Development and Stainability in *Vicia faba* L. and *Lupinus angustifolius* L. *Agriculture (Switzerland)*, 13(11). <https://doi.org/10.3390/agriculture13112065>
- Soares, T. L., *et al.* (2018). Floral Development Stage and its Implications for the Reproductive Success of *Passiflora* L. *Sci. Hortic*, 238: 333–342.
- Souza, B. da S., Sales, A. C. S., Moita, L. A., Oliveira, N. V. de M., Silva, F. D. S. da, Barbosa, M. S., Souza, T. F. de, & Oliveira, J. S. de. (2024). *Plumeria* species: a Review of Morphology, Traditional Uses, Phytochemicals, and Pharmacological Activities. *Indian Journal of Traditional Knowledge*, 23(9): 882–897. <https://doi.org/10.56042/ijtk.v23i9.13619>
- Souza, E. H., *et al.* (2016). Stigma Structure and Receptivity in Bro-Meliaceae. *Sci. Hortic*. 203: 118–125.

- Souza, S. de O., de Oliveira, R. S., Souza, F. V. D., Aona, L. Y. S., Rossi, M. L., & de Souza, E. H. (2020). Morphoanatomy and Stigma Receptivity in *Tillandsia* L. (Bromeliaceae) Occurring in Bahia, Brazil. *Nordic Journal of Botany*, 38(9). <https://doi.org/10.1111/njb.02879>
- Stanley, R. G. & Linskersen, H. F. (1974). *Pollen: Biology Biochemistry and Management*, Springer, Berlin: pp: 13 – 213. ISBN: 978-3-642-65905-8S.
- Stokes, M., & Geitmann, A. (2024). Screening Methods for Thermotolerance in Pollen. *Annals of Botany*, 135: 71–88. <https://doi.org/10.1093/aob/mcae067>
- Suedy, S. W. (2012). Paleorekonstruksi Vegetasi Dan Lingkungan Menggunakan Fosil Polen Dan Spora Pada Formasi Tapak Cekungan Banyumas Kala Plio-Plistosen. *Sekolah sarjana Institut Pertanian Bogor, Bogor*, 225.
- Sulusoglu, M., & Cavusoglu, A. (2014). In Vitro Pollen Viability and Pollen Germination in Cherry Laurel (*Prunus laurocerasus* L.). *Scientific World Journal*, 2014(1): 1–7. <https://doi.org/10.1155/2014/657123>
- Sze, H., Klodová, B., Ward, J. M., Harper, J. F., Palanivelu, R., Johnson, M. A., & Honys, D. (2024). A Wave of Specific Transcript and Protein Accumulation Accompanies Pollen Dehydration. *Plant physiology*, 195(3): 1775–1795. <https://doi.org/10.1093/plphys/kiae177>
- Tel-Zur, N. (2023). Preventing Self-Fertilization: Insights from *Ziziphus* Species. *Frontiers in Plant Science*, 14: 1226502. <https://doi.org/10.3389/fpls.2023.1226502>
- Toma, M., Luchian, V., Petra, S., & Hoza, D. (2021). Morpho-anatomical Characters and Preliminary Pharmacological Evalution of *Plumeria* sp. *Scientific Papers*, 65(1): 788–798. <https://draxe.com/health/herbal/>
- Traverse, A. (1988). *Paleopalynology*. Boston: Department of Geosciences, College of Earth and Mineral Science, The Pennsylvania State University: 600 p.
- Tschudy, R.H, & Scott, R. A. (1969). *Aspect of Palynology*. John Willey and Sons, USA.
- Tushabe, D., & Rosbakh, S. (2021). A Compendium of in Vitro Germination Media for Pollen Research. *Frontiers in Plant Science*, 12(1), 1–14. <https://doi.org/10.3389/fpls.2021.709945>
- Twell, D., Oh, S. A., & Honys, D. (2006). Pollen Development, a Genetic and Transcriptomic View. *Plant Cell Monographs*, 3: 15–45. https://doi.org/10.1007/7089_042

- Twel, D., Park, S. K., & Lalanne, E. (1998). Asymmetric Division and Cell-Fate Determination in Developing Pollen. *Trends in Plant Science*, 3(8): 305-310. <https://doi.org/10.1016/S1360-1385%2898%2901277-1>
- Ulfah, S. M., Dorly, D., & Rahayu, S. (2016). Perkembangan Bunga Dan Uji Viabilitas Serbuk Sari Bunga Lipstik *Aeschynanthus Radicans* Var. 'Monalisa' Di Kebun Raya Bogorflower Development and Pollen Viability of *Aeschynanthus Radicans* Var. 'Monalisa' at Bogor Botanical Garden. *Botanic Gardens Bulletin*, 19(1): 21-32.
- Vijayalakshmi, A., Kumar, P. R., & Sakthi, P. S. (2014). Pharmacognostic and Phytochemical Evaluation of the Root Bark of *Plumeria acutifolia* Poir. *Journal of Pharmacognosy and Phytochemistry*, 2(6):134–139.
- Vogler, H., Santos-Fernandez, G., Mecchia, M. A., & Grossniklaus, U. (2019). To Preserve or to Destroy, That is the Question: The Role of The Cell Wall Integrity Pathway in Pollen Tube Growth. *Current Opinion in Plant Biology*, 52: 131-139. <https://doi.org/10.1016/j.pbi.2019.09.002>
- Wan, X., Sun, D., & Gao, C. (2024). Flower Opening Dynamics, Pollen-Ovule Ratio, Stigma Receptivity and Stigmatic Pollen Germination (in-vivo) in *Chaenomeles speciosa* (Sweet) Nakai. *Scientific Reports*, 14(1), 7127. <https://doi.org/10.1038/s41598-024-57655-1>
- Wang, Q., Lu, L., Wu, X., Li, Y., & Lin, J. (2003). Boron Influences Pollen Germination and Pollen Tube Growth in *Picea meyeri*. *Tree physiology*, 23(5): 345-351. <https://doi.org/10.1093/treephys/23.5.345>
- Warcup, K., Robertson, B., Kral-O'Brien, K., & Harmon, J. (2023). Acetolysis Modifications to Process Small Pollen Samples Swabbed from Live Bees. *Journal of Insect Science*, 23(6): 1. <https://doi.org/10.1093/jisesa/iead098>
- Weng, Z., Deng, Y., Tang, F., Zhao, L., Zhao, L., Wang, Y., Dai, X., Zhou, Z., & Cao, Q. (2023). Screening and Optimisation of in Vitro Pollen Germination Medium for Sweetpotato (*Ipomoea batatas*). *Plant Methods*, 19(1): 1–12. <https://doi.org/10.1186/s13007-023-01050-w>
- Win, P. S., Oo, S. S., & Win, O. Y. (2024). Study on Morphology and Flower Anatomy of *Plumeria alba* L. 4th Myanmar Korea Conference Research Journal, 4(1): 277–286.
- Yao, Q., Li, P., Wang, X., Liao, S., Wang, P., & Huang, S. (2024). Molecular Mechanisms Underlying the Negative Effects of Transient Heatwaves on Crop Fertility. *Plant communications*, 5(9): 101009. <https://doi.org/10.1016/j.xplc.2024.101009>
- Yohana, N. Y., Nakano, A., & Hoshino, Y. (2025). Effects of the sucrose concentrations and incubation periods on in vitro pollen germination and pollen tube growth in three rice cultivars. *Plant biotechnology*

- (Tokyo, Japan), 42(1): 9–15.
<https://doi.org/10.5511/plantbiotechnology.24.1017a>
- Yudistira, L., Swandari, T., & Setyorini, T. (2020). Kajian Fenologi Bunga Dan Uji Reseptivitas Stigma Serta Morfologi Polen Anggrek Kalajengking (*Arachnis Flosaeris*) di Maguwoharjo, Sleman. *Agritrop: Jurnal Ilmu-Ilmu Pertanian (Journal of Agricultural Science)*, 18(2): 171–178.
<https://doi.org/10.32528/agritrop.v18i2.3805>
- Zahrina, Hasanuddin, & Wardiah. (2017). Studi Morfologi Serbuk Sari Enam Anggota Familia Rubiaceae. *Jurnal Ilmiah Mahasiswa Fakultas Keguruan Dan Ilmu Pendidikan Unsyiah*, 2(1): 114–123.
- Zhang, Y., & Dong, J. (2018). Cell Polarity: Compassing Cell Division and Differentiation in Plants. *Current opinion in plant biology*, 45: 127–135.
<https://doi.org/10.1016/j.pbi.2018.06.003>
- Zheng, R. H., de Su, S., Xiao, H., & Tian, H. Q. (2019). Calcium: A Critical Factor in Pollen Germination and Tube Elongation. *International Journal of Molecular Sciences*, 20(2): 1–12.
<https://doi.org/10.3390/ijms20020420>