***TWAS-2022***

***Publication list***

Researcher’s name: Pablo Bolaños-Villegas

Birthday: March 15, 1979 (Age 43)

Institution: University of Costa Rica

Position: professor and researcher

E-mails: pablo.bolanosvillegas@ucr.ac.cr, pollux79@gmail.com

***Selected publications***

1. Víquez-Zamora, C., Castro-Pacheco, S., Viñas, and Bolaños-Villegas, P. 2022. Diversity in mitotic DNA repair efficiencies between commercial inbred maize lines and native Central American purple landraces. *CABI Agriculture and Bioscience* (Springer) 3(68): 1-11; https://doi.org/10.1186/s43170-022-00135-1
2. Bolaños-Villegas, P., and Chen, F.C. 2022. Advances and perspectives for polyploidy breeding in orchids. *Plants* (MDPI) 11(11): 1421; https://doi.org/10.3390/plants11111421
3. Scott-Moraga K, Rojas-Chaves M, and Bolaños-Villegas P. 2021. Mutation breeding in the cat and dwarf date palms. *Acta Horticulturae* 1334: 13-19; doi: 10.17660/ActaHortic.2022.1334.2
4. Li, X., Yu, M., Bolaños-Villegas, P., Zhang, J., Ni, D. A., Ma, H., and Wang, Y. 2021. Fanconi anemia ortholog FANCM regulates meiotic crossover distribution in plants. *Plant Physiology* 186(1): 344-360; https://doi.org/10.1093/plphys/kiab061
5. Bolaños-Villegas, P. 2021. The role of Structural Maintenance of Chromosomes complexes in meiosis and genome maintenance: translating biomedical and model plant research into crop breeding opportunities. *Frontiers in Plant Science* 12: 563; https://doi.org/10.3389/fpls.2021.659558
6. Bolaños-Villegas, P., Cabrerizo, F.M., Brown, F.D., Zancan, P., Barrera, J.F., González-Muñoz, P.A., Grecco, H.E., Kalergis, A.M., Paula-Lima, A., Vargas-Balda, R. and Gittens, R.A. 2020. Latin America: reduced S&T investment puts sustainable development at risk. *ScienceOpen* doi: 10.14293/S2199-1006.1.SOR-.PPBPKUJ.v3
7. Bolaños-Villegas, P., Chang, C., and Chen, F.C. 2020. The tiny twig epiphyte *Erycina pusilla*, a model for orchid genome and breeding research. *In*: The Orchid Genome, 41-47. Springer, Cham.
8. Yuan, S.C., Bolaños-Villegas, P., Tsao, C.Y., and Chen, F.C. 2020. The breeding of *Phalaenopsis* hybrids. *In*: The Orchid Genome, 29-40. Springer, Cham.
9. Huang, J. Z., Bolaños-Villegas, P., and Chen, F. C. 2021. Regulation of flowering in orchids. *In*: The Orchid Genome, 73-94. Springer, Cham.
10. Huang, J. Z., Bolaños-Villegas, P., Pan, I., and Chen, F. C. 2021 The roles of MADS-box genes during orchid floral development. *In*: The Orchid Genome, 95-115. Springer, Cham.
11. Acevedo-Benavides, M. and Bolaños-Villegas, P., 2021. Embryo development in *Carica papaya* Linn. *bioRxiv* 2021.03.11.434975; doi: https://doi.org/10.1101/2021.03.11.434975.
12. Rojas-Gómez, M., García, A., Bolaños-Villegas, P., Arrieta, G., and Fuchs, E.J. 2019. Genome size and chromosome number of *Psidium friedrichsthalianum* Ndz. (“Costa Rican Guava”) in six populations of Costa Rica. *Caryologia* 73(3): 55-63; doi:10.13128/caryologia-646.
13. Bolaños-Villegas, P. 2020. Chromosome engineering in tropical cash crops. *Agronomy* (MDPI) 10: 122; doi:10.3390/agronomy10010122.
14. Mora, J., Scott, K., and Bolaños-Villegas, P. 2020. Analysis of meiosis in non- model tropical plants, the case of *Carica papaya*. *In*: Plant Meiosis: Methods and Protocols, Methods in Molecular Biology (Nature Springer/Germany, 2061): 131-139; https://doi.org/10.1007/978-1-4939-9818-0\_10
15. Bolaños-Villegas, P., and Argüello-Miranda. 2019. Meiosis research in orphan tropical crops. *Frontiers in Plant Science* 10:74; doi: 10.3389/fpls.2019.00074
16. Bolaños-Villegas, P., Xu, W.Y., Martínez-García, M., Pradilllo, M., and Wang, Y.X. 2018 Insights into the role of ubiquitination in meiosis: fertility, adaptation, and plant breeding. The Arabidopsis Book: e0187. doi: 10.1199/tab.0187. Comai, L. (Ed). American Society of Plant Biologists, eISSN: 1543-8120.
17. Mora, J., Albertazzi, S. and Bolaños Villegas, P. 2018. Meiotic chromosome analysis in tropical orchid genus *Sobralia*. *Cahiers de la Société Française d’Orchidophilie* 9: 117-119. https://hdl.handle.net/10669/76279
18. Bolaños-Villegas, P., De, K., Pradillo, M., Liu, D., and Makaroff, C. 2017. In favor of establishment: regulation of chromatid cohesion in plants. *Frontiers in Plant Science* 8: 846. doi: 10.3389/fpls.2017.00846.
19. De, K., Bolaños-Villegas, P., Mitra, S., Yang, X., Homan, G., Jauh. G.Y., and Makaroff, C. 2016. The opposing actions of *Arabidopsis* CTF7 and WAPL1/2: differences in mitotic and meiotic cells. The Plant Cell 28: 521-536; doi: 10.1105/tpc.15.00781.
20. Bolaños-Villegas, P., Guo, C. L., and Jauh, G. Y. 2015. *Arabidopsis* Qc-SNARE genes *BET11* and *BET12* are required for fertility and pollen tube elongation*. Botanical Studies* (Springer) 56(1): 1-10; https://doi.org/10.1186/s40529-015-0102-x
21. Bolaños-Villegas, P. and Jauh, G.Y. 2015. Reduced activity of Arabidopsis chromosome-cohesion regulator gene *CTF7/ECO1* alters cytosine methylation status and retrotransposon expression. *Plant Signaling and Behavior* 10(5): e1013794; doi: 10.1080/15592324.2015.1013794.
22. Bolaños-Villegas, P., Yang, X., Makaroff, C., and Jauh, G.Y. 2014. Protocol for the preparation of *Arabidopsis* meiotic chromosome spreads and fluorescent *in situ* hybridization. *Bio-Protocol* 4 (8); 10.21769/BioProtoc.1102
23. Bolaños-Villegas, P., Yang, X.H., Wang, H.J., Juan, C.T., Chuan, M.H., Makaroff, C., and Jauh, G.Y. 2013. *Arabidopsis* CHROMOSOME TRANSMISSION FIDELITY 7 (AtCTF7/ECO1) is required for DNA repair, mitosis and meiosis. *Plant Journal* 75: 927-940; doi: 10.1111/tpj.12261.
24. Hsu, S.C., Cheng, T.C., Bolaños-Villegas, P., S.W. Chin, & F.C. Chen. 2010. Pollen meiotic behavior in relation to *Phalaenopsis* breeding. *Acta Horticulturae* 878:139-143.
25. Bolaños-Villegas, P., Jane, W.N., and Jauh, G.Y. 2010. Pollen development: a play with many actors. *Current Topics in Plant Biology* 11: 89-102; <https://hdl.handle.net/10669/11315>
26. Bolaños-Villegas, P., S.W. Chin, & F.C. Chen. 2008. Meiotic chromosome behavior and capsule setting in *Doritaenopsis* hybrids. *Journal of the American Society of Horticultural Science* 133(1):107-116; <https://doi.org/10.21273/JASHS.133.1.107>
27. Bolaños-Villegas, P., and Chen, F.C. 2008. Cytological identification of chromosomal rearrangements in *Doritaenopsis* and *Phalaenopsis*. *Journal of International Cooperation* (Taiwan) 2: 1-11; <https://hdl.handle.net/10669/11334>