

Switzerland

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Please provide a paragraph describing the general impact of the COVID19 pandemic on the scientific community in your country

Like many labs worldwide, we experienced massive challenges due to the restrictions announced in relation to COVID19. We have lost many months of work because many plants had to be thrown away and therefore experiments could not be conducted to the end. This will also have an impact on our publications in 2021 and future years. As an indirect effect, some kits and consumables are not available - especially NGS library kits, PCR plates or filter tips are in shortage. Due to this shortage, research will be delayed.

Planned events for 2021 and 2022

Conferences:

Conferences and meetings based on the CUSO network (Universities from Western Switzerland)
[https://biologie.cuso.ch/molecular-plant-sciences/welcomeE.g.\)](https://biologie.cuso.ch/molecular-plant-sciences/welcomeE.g.)

Plant Development – a Combined on-Site and Virtual Workshop, 03 Sep 2021, University of Lausanne, Lausanne

-PSC Symposium 2021, Patterns in Nature and Plant Sciences, 08 Dec 2021, ETH Zurich, Zurich-
<https://www.plantsciences.uzh.ch/en/outreach/conferences/patterns.html>-SwissPLANT Symposium, 24 - 26 Jan 2022,

Les Diablerets

[https://swissplantscienceweb.unibas.ch/en/swissplant/Summer schools-\(Not exclusively for Arabidopsis\)](https://swissplantscienceweb.unibas.ch/en/swissplant/Summer%20schools-(Not%20exclusively%20for%20Arabidopsis))

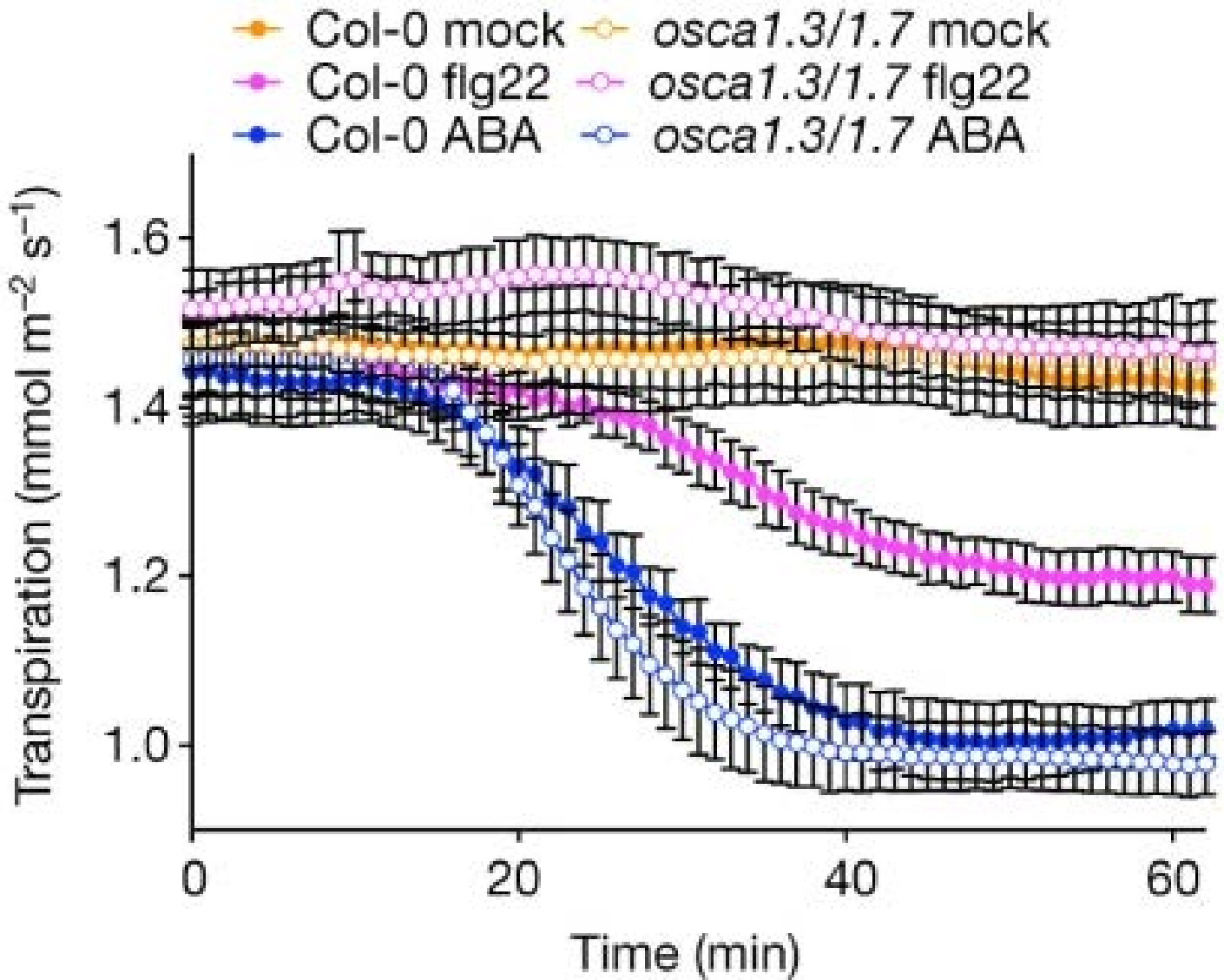
Summer Schools in Plant Sciences

<https://swissplantscienceweb.unibas.ch/en/education/summer-schools/>

Outreach Activities

- Plant Science at School Continuing Education Program in Plant Sciences for Secondary School Teachers Over the past four years, this program has become a national example of successful collaboration between researchers, teachers and regional learning centers.<http://www.plantsciences.uzh.ch/outreach/atschool.html>

- PSC Discovery Program for Youth – new Agora project In collaboration with educators of the ETH MINT Lernzentrum, the Zurich-Basel Plant Science Center (PSC) offers workshops for school classes at the secondary school level.<http://www.plantsciences.uzh.ch/de/outreach/discovery.html><http://www.snf.ch/en/funding/science-communication/agora/Pages/default.aspx>



Leaf transpiration recorded in excised intact leaves of wild-type and *osca1.3/1.7* plants. Stimuli were added to the solution at the petioles at concentrations of 10 μM flg22 and 10 μM ABA, with 0.01% ethanol as control. Data are mean \pm s.e.m. for $n = 4$ (Col-0 mock, *osca1.3/1.7* flg22 and Col-0 ABA) or $n = 5$ (*osca1.3/1.7* mock, Col-0 flg22 and *osca1.3/1.7* ABA) leaves. The experiment was performed twice with similar results.

Selected Publications

- Nat Commun. 2020 Jun 8;11(1):2885. doi: 10.1038/s41467-020-16679-7. Adaptive reduction of male gamete number in the selfing plant *Arabidopsis thaliana* Tsuchimatsu T., Kakui H., Yamazaki M., Marona C., Tsutsui H., Hedhly A., Meng D., Sato Y., Städler T., Grossniklaus U., Kanaoka M. M., Lenhard M., Nordborg M., Shimizu K. K.

This study clearly showed the natural selection on the gamete number by analysing the natural variations; the results along with the used technique might help to design the agricultural and livestock breeding.

- Nat Commun. 2020 Mar 12;11(1):1323. doi: 10.1038/s41467-020-15133-y. Cryptochrome-mediated blue-light signalling modulates UVR8 photoreceptor activity and contributes to UV-B tolerance in *Arabidopsis* Tissot N., Ulm R.

Photoreceptors for both visible light and UV-B regulate UV-B tolerance through an intricate interplay allowing the integration of diverse sunlight signals.

- Nature . 2020 Sep;585(7826):569-573. doi: 10.1038/s41586-020-2702-1 The calcium-permeable channel OSCA1.3 regulates plant stomatal immunity Thor K., Jiang S., Michard E., George J., Scherzer S., Huang S., Dindas J., Derbyshire P., Leitão N., DeFalco T. A., Köster P., Hunter K., Kimura S., Gronnier J., Stransfeld L., Kadota Y., Bücherl C. A., Charpentier M., Wrzaczek M., MacLean D., Oldroyd G. E. D., Roelfsema R. G., Hedrich R., Menke F. L. H., Feijó J., Zipfel C.

This study identifies a long sought-after calcium-permeable channel involved in stomatal immunity and its regulatory mechanism.

Highly cited researchers 2020, members of the Swiss Plant Science Web
<https://swissplantscienceweb.unibas.ch/en/news/details/highly-cited-researchers-2020/>

Major Funding Sources

- a. Swiss National Science Foundation (SNSF) <http://www.snf.ch/en/Pages/default.aspx>
- b. European Research Council (ERC), <https://erc.europa.eu/>
- c. ERA-CAPS SICOPID: <http://www.era-caps.org/joint-calls/era-caps-funded-projects/era-caps-third-call-%E2%80%93-2017/activation-and-regulation-plasma>
- d. Syngenta (Plant Science Center - Syngenta Fellowship), <https://www.plantsciences.uzh.ch/en/research/fellowships/syngenta.html>
- e. Horizon 2020 <https://ec.europa.eu/programmes/horizon2020/en>
- f. State Secretariat for Education, Research, and Innovation (SERI), <https://www.sbfi.admin.ch/sbfi/en/home.html>
- g. University Research Priority Program of Evolution in Action: From Genomes to Ecosystems (directors: Beat Keller, Ueli Grossniklaus, Kentaro K. Shimizu, University of Zurich) <http://www.evolution.uzh.ch/en.html>
- h. Japan Science and Technology Agency (JST), Core Research for Evolutional Science and Technology (CREST) <https://www.jst.go.jp/kisoken/crest/en/>
- i. The Human Frontier Science Program (HFSP) <https://www.hfsp.org/>