

Norway

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

The COVID pandemic initially brought both education and research to a halt at universities and research institutes in Norway. While education overall adapted quite quickly to online teaching, research was in a different situation due to subject-specific challenges (laboratory vs. season-dependent, field-based research). Different institutions had also very different policies governing return to laboratory-based research activities, which was not helpful for the community as a whole. In addition, the policies supporting PhD students and postdoctoral researchers differed significantly. While PhD students are eligible for salaried extensions to compensate for problems caused by COVID, this is not the case for postdoctoral researchers with obvious negative consequences. Publication outputs seem to have increased similarly like the number of grant applications submitted to the research council. Unfortunately, there's no reliable data available regarding possible gender-specific impacts of COVID on the Norwegian plant biology research community.

Planned events for 2021 and 2022

The Norwegian Plant Biology community will be hosting the biannual conference of the Scandinavian Plant Physiology Society at the end of August on Svalbard. Currently the conference is scheduled to go ahead in person

Selected Publications

- The Role of a Glucosinolate-Derived Nitrile in Plant Immune Responses. Ting HM, Cheah BH, Chen YC, Yeh PM, Cheng CP, Yeo FKS, Vie AK, Rohloff J, Winge P, Bones AM, Kissen R. *Front Plant Sci.* 2020; 11: 257. doi: 10.3389/fpls.2020.00257. eCollection 2020.

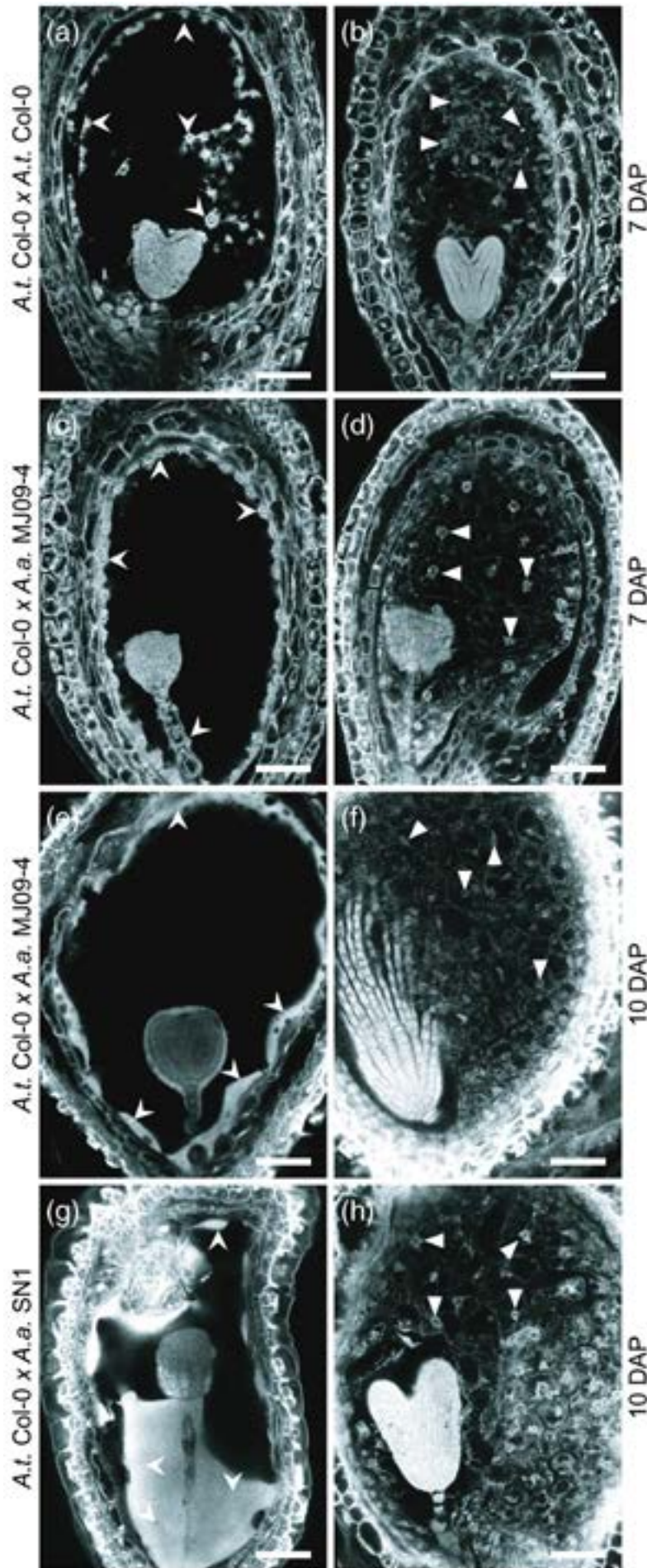
The article presents the results of a thorough and diligent investigation into the role of nitriles, whose role in plant defense is still not well understood.

- Genetic variation and temperature affects hybrid barriers during interspecific hybridization. Bjerkan KN, Hornslien KS, Johannessen IM, Krabberød AK, van Ekelenburg YS, Kalantarian M, Shirzadi R, Comai L, Brysting AK, Bramsiepe J, Grini PE. *Plant J.* 2020:122-140. doi: 10.1111/tpj.14523.

The article investigates elegantly the impact of genetic diversity and temperature on hybridization barriers between *Arabidopsis arenosa*, *A. lyrata*, and *A. thaliana* using AGL36-like genes.

- Metagenomic analysis of historical herbarium specimens reveals a post-mortem microbial community. Bieker VC, Sánchez Barreiro F, Rasmussen JA, Brunier M, Wales N, Martin MD. *Mol Ecol Resour.* 2020; 20(5):1206-1219. doi: 10.1111/1755-0998.13174.

The article presents interesting insights into opportunities to leverage knowledge from existing museum herbaria and highlights relevant pitfalls.



Variation in endosperm cellularization between *A. thaliana* and *A. arenosa* hybrids.

(a–h) Confocal scanning laser micrographs of endosperm cellularization in hybrid seeds visualized by Feulgen staining. For all crosses, both non-cellularized and cellularized endosperm is observed and micrographs representative for each class are presented in the left and right panels respectively. Open arrowheads point to syncytial endosperm nuclei while closed arrowheads point to cellularized endosperm nuclei. Scale bar = 50 μm . (a and b) *A. thaliana* control 7 days after pollination (DAP) typically at the embryo late heart stage in which most seeds display complete endosperm cellularization (b). (c, d) *A. thaliana* \times *A. arenosa* MJ09 hybrid seeds at 7 DAP. Embryo development is slower compared with *A. thaliana* controls. Both non-cellularized (c) and cellularized endosperm (d) was frequently observed. (e, f) *A. thaliana* \times *A. arenosa* MJ09 hybrid seeds at 10 DAP. Only a few seeds fail to cellularize (e) and most seeds exhibit completed endosperm cellularization (f). (g, h) *A. thaliana* \times *A. arenosa* SN1 hybrid seeds at 10 DAP. A higher fraction of seeds display syncytial stage endosperm (g) compared with *A. arenosa* MJ09 hybrid seeds (e, f), but some have completed endosperm differentiation (h).

Major Funding Sources

Norwegian Research Council https://www.forskningssradet.no/en/Home_page/1177315753906