

Czech Republic

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

All research centers of both universities as well as academy of sciences are affected by different degrees of lock-down measures so that experimental activity was differentially hampered in different locations and times. It is impossible to assess how big is overall negative impact.

Planned events for 2021 and 2028

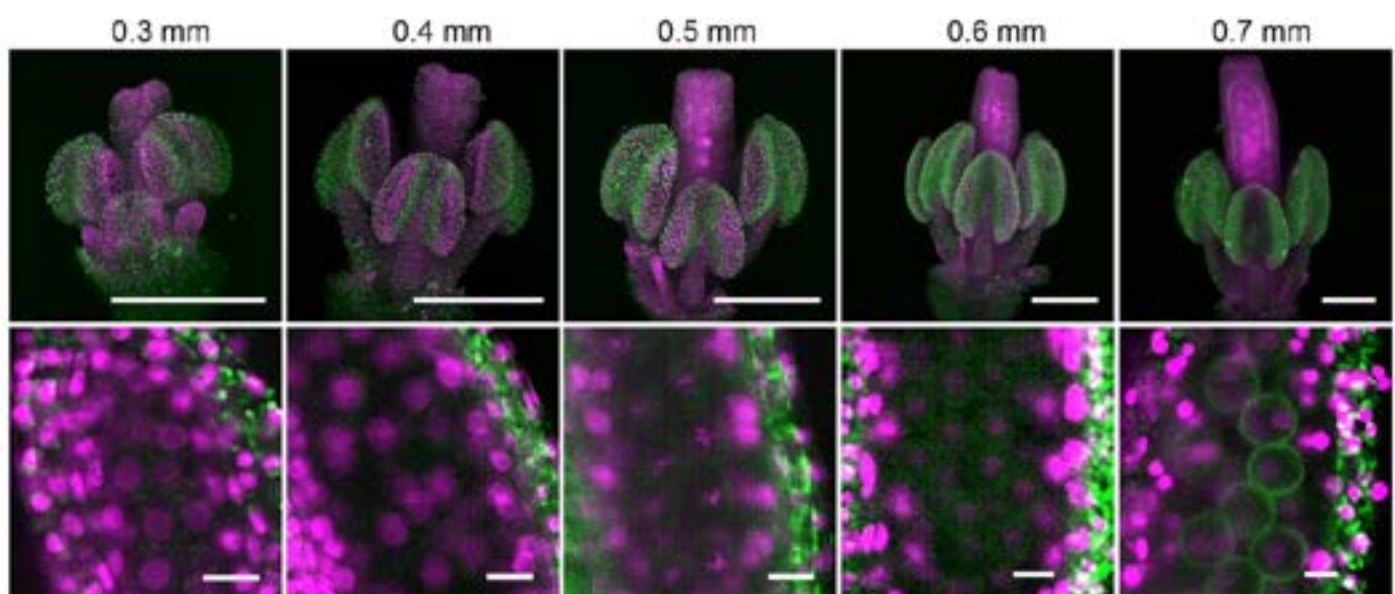
- 26th ICSPR Plant Reproduction conference June 20-24, 2022, at Prague (Czech Republic)

- 7th European Workshop on Plant Chromatin 2022 (EWPC 2022), Pr_honice, Prague, Date: 18.05.2022 - 20.05.2022

Selected Publications

- Valuchova S, Mikulkova P, Pecinkova J, Klimova J, Krumnikl M, Bainar P, Heckmann S, Tomancak P, Riha K. Imaging plant germline differentiation within *Arabidopsis* flowers by light sheet microscopy. *Elife* 9:e52546. doi: 10.7554/eLife.52546. 2020

New approach allowing detailed in vivo microscopy monitoring of *Arabidopsis* flower and germline development by light sheet microscopy is described.



Maximum intensity projections (MIPs) of micrographs of HTA10:RFP flowers dissected from buds of the indicated sizes (upper panel, scale bar 200 μ m). A detailed image of a single anther lobe with PMCs and microspores is shown in the lower panel (scale bar 10 μ m). HTA10:RFP in magenta, 488 nm autofluorescence in green.

- Kubiasová K, Montesinos JC, Samajová O, Nisler J, Mik V, Semerádová H, Plíhalová L, Novák O, Marhav_ P, Cavallari N, Zalabák D, Berka K, Dole_al K, Galuszka P, Samaj J, Strnad M, Benková E, Plíhal O, Spíchal L. Cytokinin fluoroprobe reveals multiple sites of cytokinin perception at plasma membrane and endoplasmic reticulum. *Nat Commun.* 11(1):4285. doi: 10.1038/s41467-020-17949-0. PMID: 32855390; PMCID: PMC7452891. 2020

Fluorescently labelled cytokinin pools of the ER-located cytokinin receptors can enter the secretory pathway and reach the PM in cells of the root apical meristem

- Mandáková T, Hlousková P, Koch MA, Lysak MA. Genome Evolution in Arabideae Was Marked by Frequent Centromere Repositioning. *Plant Cell.* 32(3):650-665. doi: 10.1105/tpc.19.00557. Epub 2020 Jan 9. PMID: 31919297; PMCID: PMC7054033. 2020

Centromere repositioning is proposed as the key mechanism differentiating overall conserved homoeologous chromosomes across the crown-group Arabideae subclades.

Major Funding Sources

Both major funding agencies for basic research

- Czech Science Foundation (GACR) and Ministry of Education of CR (MSMT CR) regularly support projects based on the use of *Arabidopsis* as a model plant.

1. Czech Science Foundation/GA_R, Prague (<http://www.gacr.cz>)

2. Ministry of Education, Youth and Sports of Czech Republic, Prague (<http://www.msmt.cz/research-and-development-1>) Both institutions support also bilateral projects with selected countries. Targeted or applied research is since recently supported also by the Technology Agency of the Czech Republic (TACR) and *Arabidopsis* model is accepted as a driver for applications.

3. Technology Agency of the Czech Republic (<http://www.tacr.cz/english/>) 4. Ministry of Agriculture, National Agency for Agricultural Research (NAZV) might support projects using *Arabidopsis* as a driver for the applied research (<http://eagri.cz/public/web/mze/poradenstvi-a-vyzkum/vyzkum-a-vyvoj/narodni-agentura-pro-zemedelsky-vyzkum/>)