

## DIRECTOR'S AWARD FOR EXCELLENCE 2017

### SCIENTIFIC PUBLICATIONS:

#### 1. Martina Kopečná

**Kopečná M**, Vigouroux A, Vilím J, Končítíková R, Briozzo P, Hájková E, Jašková L, von Schwartzberg K, Šebela M, Moréra S, Kopečný D (2017) The ALDH21 gene found in lower plants and some vascular plants codes for a NADP<sup>+</sup>-dependent succinic semialdehyde dehydrogenase. *Plant Journal* 92, 229-243.

IF = 5.901; journal ranking 13/212 (6 %)

#### 2. Ravindra Kale

**Kale R**, Hebert AE, Frankel LK, Sallans L, Bricker TM, Pospíšil P (2017) Amino acid oxidation of the D1 and D2 proteins by oxygen radicals during photoinhibition of photosystem II. *Proceedings of the National Academy of Sciences of the United States of America* 114, 2988-2993.

IF = 9.661; journal ranking 4/64 (6 %)

#### 3. Andrej Pavlovič

**Pavlovič A**, Jakšová J, Novák O (2017) Triggering a false alarm: wounding mimics prey capture in the carnivorous Venus flytrap (*Dionaea muscipula*). *New Phytologist* 216, 927-938.

IF = 7.33; journal ranking 9/212 (4 %)

#### 4. Nuria De Diego

**De Diego N**, Fürst T, Humplík JF, Ugena L, Podlešáková K, Spíchal L (2017) An automated method for high-throughput screening of Arabidopsis rosette growth in multi-well plates and its validation in stress conditions. *Frontiers in Plant Science* 8, Article Number 1702.

IF = 4.291; journal ranking 20/212 (9 %)

#### 5. Takáč T, Šamajová O

**Takáč T\***, **Šamajová O\***, Luptovčíak I, Pechan T, Šamaj J (2017) Feedback microtubule control and microtubule-actin cross-talk in Arabidopsis revealed by integrative proteomic and cell biology analysis of KATANIN 1 mutants. *Molecular & Cellular Proteomics* 16, 1591-1609.

IF = 6.540; journal ranking 5/77 (6 %)

\* shared first authorship

#### 6. Luptovčíak I, Samakovli D

**Luptovčíak I\***, **Samakovli D\***, Komis G, Šamaj J (2017) KATANIN 1 is essential for embryogenesis and seed formation in Arabidopsis. *Frontiers in Plant Science* 8, Article Number 728.

IF = 4.291; journal ranking 20/212 (9 %)

\* shared first authorship

#### 7. Vyplelová P, Ovečka M

**Vyplelová P\***, **Ovečka M\***, Šamaj J (2017) Alfalfa root growth rate correlates with progression of microtubules during mitosis and cytokinesis as revealed by environmental light-sheet microscopy. *Frontiers in Plant Science* 8, Article Number 1870.

IF = 4.291; journal ranking 20/212 (9 %)

\* shared first authorship

#### 8. Rostislav Halouzka

**Halouzka R**, Tarkowski P, Zwanenburg B, Čavar Zeljković S (2017) Stability of strigolactone analog GR24 toward nucleophiles. *Pest Management Science*, in press; DOI: 10.1002/ps.4782.

IF = 3.253; journal ranking: Agronomy 8/83 (10 %), Entomology 7/93 (8 %)

## 9. Michael Abrouk

**Abrouk M**, Balcárková B, Šimková H, Komínková E, Martis MM, Jakobson I, Timofejeva L, Rey E, Vrána J, Kilian A, Järve K, Doležel J, Valárik M (2017) The *in silico* identification and characterization of a bread wheat/*Triticum militinae* introgression line. *Plant Biotechnology Journal* 15, 249-256.  
IF = 7.443; journal ranking 7/212 (3 %)

## 10. Miroslav Valárik

Balcárková B, Frenkel Z, Škopová M, Abrouk M, Kumar A, Chao S, Kianian SF, Akhunov E, Korol AB, Doležel J, **Valárik M** (2017) A high resolution radiation hybrid map of wheat chromosome 4A. *Frontiers in Plant Science* 7, Article Number 2063.  
IF = 4.291; journal ranking 20/212 (9 %)

### PATENTS:

#### 1. Tomáš Gucký

**Gucký T**, Jorda R, Zatloukal M, Kryštof V, Rárová L, Řezníčková E, Mikulits W, Strnad M (2017) 2-substituted-6-biarylmethylamino-9-cyclopentyl-9H-purine derivatives, use thereof as medicaments and pharmaceutical compositions; EA028206

**Gucký T**, Jorda R, Zatloukal M, Kryštof V, Rárová L, Řezníčková E, Mikulits W, Strnad M (2017) N2-substituted-N6-(6-aryl-pyridine-3ylmethyl)9-cyclopentyl-9H-purine-2,6-diamine derivatives as tumor suppressor p53 activators for inhibiting angiogenesis and for treating cancer; EP2953951

### GRANTS:

#### 1. Petr Galuszka

GA CR, 17-07805S: CRISPR-Cas barley genome editing: prospective tool for modern breeding (2017 - 2019)

#### 2. Yoshihisa Ikeda

GA CR, 17-23702S: Distinct transcription factor families controlling meristem activity and organogenesis in *Arabidopsis* (2017-2019)

#### 3. Hana Šimková

GA CR, 17-17564S: Dynamics and evolution of multigene ribosomal RNA loci in *Triticeae* (2017-2019)

#### 4. Eva Hřibová

GA CR, 17-14048S: Spatial and temporal characterization of DNA replication in phylogenetically related plant species with contrasting genome sizes (2017-2019)

#### 5. David Kopecký

GA CR, 17-13853S: Nuclear architecture in interspecific plant hybrids (2017-2019)

### CONTRACTUAL RESEARCH:

#### 1. Ankush Prasad

**Ankush Prasad**, Pavel Pospíšil (2017) Testing of photo-activated, oxygen-rich gel formulations by foreign company, 2 contracts (total amount 13 800 EUR).