

DIRECTOR'S AWARD FOR EXCELLENCE 2019

SCIENTIFIC PUBLICATION:

1. Tomáš Takáč and Dominik Novák

Takáč T*, **Novák D***, Šamaj J (2019) Recent advances in the cellular and developmental biology of phospholipases in plants. *Frontiers in Plant Science* 10:362. *equal first authors

IF 4.106; journal ranking 20/228 (9 %)

Takáč T, Pechan, T, Šamajová O, Šamaj J (2019) Proteomic analysis of Arabidopsis pld α 1 mutants revealed an important role of phospholipase D alpha 1 in chloroplast biogenesis. *Frontiers in Plant Science* 10:89.

IF 4.106; journal ranking 20/228 (9 %)

2. Tereza Vavrdová

Vavrdová T, Šamaj J, Komis G (2019) Phosphorylation of plant microtubule-associated proteins during cell division. *Frontiers in Plant Science* 10:238.

IF 4.106; journal ranking 20/228 (9 %)

Vavrdová T, Šamajová O, Křenek P, Ovečka M, Floková P, Šnaurová R, Šamaj J, Komis G (2019) Multicolour three dimensional structured illumination microscopy of immunolabeled plant microtubules and associated proteins. *Plant Methods* 15:22.

IF 3.170; journal ranking 43/228 (19 %)

3. Zuzana Tulpová

Tulpová Z, Toegelová H, Lapitan NLV, Peairs FB, Macas J, Novák P, Lukaszewski AJ, Kopecký D, Mazáčová M, Vrána J, Holušová K, Leroy P, Doležel J, Šimková H (2019) Accessing a Russian Wheat Aphid Resistance Gene in Bread Wheat by Long-Read Technologies. *The Plant Genome* 12:180065.

IF 4.042; journal ranking 21/228 (9 %)

Tulpová Z, Luo MC, Toegelová H, Visendi P, Hayashi S, Vojta P, Paux E, Kilian A, Abrouk M, Bartoš J, Hajdúch M, Batley J, Edwards D, Doležel J, Šimková H (2019) Integrated physical map of bread wheat chromosome arm 7DS to facilitate gene cloning and comparative studies. *New Biotechnology* 48: 12-19.

IF 3.739; journal ranking 17/79 (Biochem Res Meth) (22 %)

4. Mahmoud Said

Said M, Kubaláková M, Karafiátová M, Molnár I, Doležel J, Vrána J (2019) Dissecting the complex genome of crested wheatgrass by chromosome flow sorting. *The Plant Genome* 12:180096.

IF 4.042; journal ranking 21/228 (9 %)

5. David Kopečný

Korasick DA, Končítíková R, Kopečná M, Hájková E, Vigouroux A, Moréra S, Becker DF, Šebela M, Tanner JJ, **Kopečný D** (2019) Structural and biochemical characterization of aldehyde dehydrogenase 12, the last enzyme of proline catabolism in plants, *Journal of Molecular Biology* 431, 576-592.

IF 5.067; journal ranking 47/299 (Biochem Mol Biol) (16 %)

6. Pavel Jaworek

Jaworek P, Kopečný D, Zalabák D, Šebela M, Kouřil S, Hluska T, Končítíková R, Podlešáková K, Tarkowski P (2019) Occurrence and biosynthesis of cytokinins in poplar. *Planta* 250, 229-244. IF 3.060; journal ranking 45/228 (20 %)

7. Cintia F. Marchetti and Nuria De Diego

Marchetti CF, Ugena L, Humplík JF, Polák M, Zeljković SĆ, Podlešáková K, Fürst T, **De Diego N**, Spíchal L (2019) A Novel Image-Based Screening Method to Study Water-Deficit Response and Recovery of Barley Populations Using Canopy Dynamics Phenotyping and Simple Metabolite Profiling. *Frontiers in Plant Science* 10:1252.

IF 4.106; journal ranking 20/228 (9 %)

8. Jakub Hrdlička

Hrdlička J, Gucký T, Novák O, Kulkarni M, Gupta S, van Staden J, Doležal K (2019) Quantification of karrikins in smoke water using ultra-high performance liquid chromatography-tandem mass spectrometry. *Plant Methods* 15:81.

IF 3.170; journal ranking 43/228 (19 %)

9. Andrej Pavlovič and Jana Jakšová

Pavlovič A, Libiaková M, Bokor B, Jakšová J, Petřík I, Novák O, Baluška F (2019) Anaesthesia with diethyl ether impairs jasmonate signalling in the carnivorous plant Venus flytrap (*Dionaea muscipula*). *Annals of Botany*, *in press*.

IF 3.454; journal ranking 36/228 (16 %)

Jakšová J, Libiaková M, Bokor B, Petřík I, Novák O, **Pavlovič A** (2020). Taste for protein: Chemical signal from prey stimulates enzyme secretion through jasmonate signalling in the carnivorous plant Venus flytrap. *Plant Physiology and Biochemistry* 146, 90-97.

IF 3.404; journal ranking 38/228 (17 %)

Pavlovič A, Mithöfer A (2019) Jasmonate signalling in carnivorous plants: copycat of plant defence mechanisms. *Journal of Experimental Botany* 70, 3379-3389.

IF 5.360; journal ranking 14/228 (6 %)

10. Aditya Kumar

Kumar A, Prasad A, Sedlářová M, Pospíšil P (2019) Organic radical imaging in plants: Focus on protein radicals. *Free Radical Biology and Medicine* 130, 568-575.

IF 5.657; journal ranking 43/299 (Biochem Mol Biol) (14 %)

GRANTS:

1. Aleš Pečinka

GA ČR, 19-13848S - Analýza oprav toxických DNA-proteinových komplexů u huseníčku rolního (2019 - 2021)

2. Jan Bartoš

MŠ MT ČR, INTER EXCELLENCE, LTT19007 - Spolupráce s CIMMYT při studiu diverzity a evoluce B chromozomu kukuřice (2019 - 2023)

3. Eva Hřibová

MŠ MT ČR, INTER EXCELLENCE, LTT19009 - Spolupráce s Mezinárodním ústavem tropického zemědělství na komparativní genetické a epigenetické analýze plantainů (AAB banánovníků) (2019 - 2023)

4. Tomáš Takáč

GA ČR, 19-00598S, Studium vývojových rolí superoxid dismutázy FeSOD1 s využitím mezioborových metod (2019 - 2021)

5. Martina Kopečná

Functional characterization of aldehyde dehydrogenases putatively associated with the evolutionary transition from water to land. Juniorský grant UP v Olomouci, kategorie „Přírodní vědy, matematika, informatika“ (PřF) (2020 - 2022)

CONTRACTUAL RESEARCH:

Roman Kouřil

Contractual research for Groningen University, Netherlands (1st November 2019 – 31st October 2020): Structural analysis of biological samples using electron microscopy.

Total amount received: € 38, 472.