

Seznam publikační činnosti

RNDr. David Kopecký, Ph.D.

1. vědecké monografie

není

2. kapitoly v monografiích

není

3. původní práce a práce v recenzovaných sbornících (* korespondující autor)

články v časopisech s impakt faktorem (od roku 2006)

- **Kopecký, D.***, Loureiro, J., Zwierzykowski, Z., Ghesquiere, M. and Doležel, J. (2006). Genome constitution and evolution in *Lolium* × *Festuca* hybrid cultivars (*Festulolium*). *Theoretical and Applied Genetics* 113: 731-742.
- Loureiro, J., **Kopecký, D.**, Castro, S., Santos, C., Silveira, P. (2007). Flow cytometric and cytogenetic analyses of Iberian Peninsula fescues. *Plant Systematics and Evolution* 269: 89-105.
- **Kopecký, D.**, Allen, D.C., Doležel, J., Lukaszewski, A.J. (2007). Condensation of rye chromatin in somatic interphase nuclei of Ph1 and ph1b wheat. *Cytogenetics and Genome Research* 119: 263-267.
- **Kopecký, D.***, Lukaszewski, A.J. and Doležel, J. (2008). Cytogenetics of *Festulolium* (*Festuca* × *Lolium* hybrids). *Cytogenetics and Genome Research* 120: 370-383.
- Bartoš, J., Paux, E., Kofler, R., Havránková, M., **Kopecký, D.**, Suchánková, P., Šafář, J., Šimková, H., Town, C.D., Lelley, T., Feuillet, C. and Doležel, J. A first survey of the rye (*Secale cereale*) genome composition through BAC end sequencing of the short arm of chromosome 1R. *BMC Plant Biology* 8:95.
- **Kopecký, D.***, Lukaszewski, A.J. and Doležel, J. (2008). Meiotic behavior of individual chromosomes of *Festuca pratensis* in tetraploid *Lolium multiflorum*. *Chromosome Research* 16: 987-998.
- **Kopecký, D.***, Bartoš, J., Zwierzykowski, Z. and Doležel, J. (2009). Chromosome pairing of individual genomes in tall fescue (*Festuca arundinacea* Schreb.), its progenitors, and hybrids with Italian ryegrass (*Lolium multiflorum* Lam.). *Cytogenetics and Genome Research* 124: 170-178.
- **Kopecký, D.***, Bartoš, J., Lukaszewski, A.J., Baird, J.H., Černoch, V., Kölliker, R., Rognli, O.A., Blois, H., Caig, V., Lübberstedt, T., Studer, B., Shaw, B., Doležel, J. and Kilian, A. (2009). Development and mapping of DArT markers within the *Festuca* – *Lolium* complex. *BMC Genomics* 10:473.
- Luo, M.-C., Ma, Y., You, F.M., Anderson, O.D., **Kopecký, D.**, Šimková, H., Šafář, J., Doležel, J., Gill, B., McGuire, P.E. and Dvorak, J. (2010). Feasibility of physical map construction from fingerprinted bacterial artificial chromosome libraries of polyploid plant species. *BMC Genomics* 11: 122.

- Mahelka, V. and **Kopecký, D.** (2010). Gene Capture from Across the Grass Family in the Allohexaploid *Elymus repens* (L.) Gould (Poaceae, Triticeae) as Evidenced by ITS, GBSSI, and Molecular Cytogenetics. *Molecular Biology and Evolution* 27: 1370-1390.
- Lukaszewski, A.J. and **Kopecký, D.** (2010). The Ph1 locus from wheat controls meiotic chromosome pairing in autotetraploid rye (*Secale cereale* L.). *Cytogenetic and Genome Research* 129: 117-123.
- **Kopecký, D.***, Havráňková, M., Loureiro, J., Castro, S., Lukaszewski, A.J., Bartoš, J., Kopecká, J. and Doležel, J. (2010). Physical distribution of homoeologous recombination in individual chromosomes of *Lolium multiflorum*/*Festuca pratensis* substitutions. *Cytogenetic and Genome Research* 129: 162-172.
- **Kopecký, D.***, Bartoš, J., Christelová, P., Černoch, V., Kilian, A. and Doležel, J. Genomic constitution of *Festuca* x *Lolium* hybrids revealed by the DARTFest array. *Theoretical and Applied Genetics* 122: 355-363.
- Bartoš, J., Sandve, S.R., Kölliker, R., **Kopecký, D.**, Christelová, P., Stočes, Š., Ostrem, L., Larsen, A., Kilian, A., Rognli, O.A. and Doležel, J. (2011). Genetic mapping of DART markers in the *Festuca-Lolium* complex and their use in freezing tolerance association analysis. *Theoretical and Applied Genetics* 122: 1133-1147.
- Mahelka, V., **Kopecký, D.** and Paštová, L. (2011). On the genome constitution and evolution of intermediate wheatgrass (*Thinopyrum intermedium*: Poaceae, Triticeae). *BMC Evolutionary Biology* 11:127
- Baird, J.H., **Kopecký, D.**, Lukaszewski, A.J., Green, R.L., Bartoš, J. and Doležel, J. (2012). Genetic Diversity of Turf-Type Tall Fescue Using Diversity Arrays Technology. *Crop Science* 52: 408-412.
- Tomaszewski, C., Byrne, S.L., Foito, A., Kildea, S., **Kopecký, D.**, Doležel, J., Heslop-Harrison, J.S., Stewart, D., Barth, S. (2012). Genetic linkage mapping in an F2 perennial ryegrass population using DART markers. *Plant Breeding* 131: 345-349.
- Lukaszewski, A.J., **Kopecký, D.**, Linc, G. (2012). Inversions of chromosome arms 4AL and 2BS in wheat invert the patterns of chiasma distribution. *Chromosoma* 121: 201-208.
- Mahelka, V., **Kopecký, D.**, Baum, B.R. (2013). Contrasting patterns of evolution of 45S and 5S rDNA families uncover new aspects in the genome constitution of the agronomically important grass *thinopyrum intermedium* (Triticeae). *Molecular Biology and Evolution* 30: 2065 – 2086.
- **Kopecký, D.***, Martis, M., Číhalíková, J., Hřibová, E., Vrána, J., Bartoš, J., Kopecká, J., Cattonaro, F., Stočes, S., Novák, P., Neumann, P., Macas, J., Šimková, H., Studer, B., Asp, T., Baird, J.H., Navrátil, P., Karafiátová, M., Kubaláková, M., Šafář, J., Mayer, K., Doležel, J. (2013). Flow Sorting and Sequencing Meadow Fescue Chromosome 4F. *Plant Physiology* 163: 1323-1337.
- Karafiátová, M., Bartoš, J., **Kopecký, D.**, Ma, L., Sato, K., Houben, A., Stein, N., Doležel, J. (2013). Mapping nonrecombining regions in barley using multicolor FISH. *Chromosome Research* 21: 739-751.
- **Kopecký, D.**, Studer, B. (2014). Emerging technologies advancing forage and turf grass genomics. *Biotechnology Advances* 32: 190 – 199.
- Barnes, B.D., **Kopecký, D.**, Lukaszewski, A.J., Baird, J.H. (2014). Evaluation of Turf-type Interspecific Hybrids of Meadow Fescue with Perennial Ryegrass for Improved Stress Tolerance. *Crop Science* 54: 355-365.

- Burešová, V., **Kopecký, D.***, Bartoš, J., Martinek, P., Watanabe, N., Vyhnánek, T., Doležel, J. (2015). Variation in genome composition of blue-aleurone wheat. *Theoretical and Applied Genetics* 128: 273-282.
- Dierking, R., Azhaguvel, P., Kallenbach, R., Saha, M., Bouton, J., Chekhovskiy, K., **Kopecký, D.**, Hopkins, A. (2015). Linkage Maps of a Mediterranean x Continental Tall Fescue Population and their Comparative Analysis with Other Poaceae Species. *Plant Genome* 8: 1 doi: 10.3835/plantgenome2014.07.0032
- Stočes, S., Ruttink, T., Bartoš, J., Studer, B., Yates, S., Zwierzykowski, Z., Abrouk, M., Roldán-Ruiz, I., Książczyk, T., Rey, E., Doležel, J., **Kopecký, D.*** (2016). Orthology guided transcriptome assembly of Italian ryegrass and meadow fescue for single nucleotide polymorphisms discovery. *Plant Genome* 9: 1 doi:10.3835/plantgenome2016.02.0017
- Mahelka, V., Krak, K., **Kopecký, D.**, Fehrer, J., Šafář, J., Bartoš, J., Hobza, R., Blavet, N., Blattner, F.R. (2017). Multiple horizontal transfers of nuclear ribosomal genes between phylogenetically distinct grass lineages. *PNAS* 114: 1726-1731.
- Ezquerro-López, D., **Kopecký, D.**, Inda, L.Á. (2017). Cytogenetic relationships within the Maghrebian clade of *Festuca* subgen. *Schedonorus* (Poaceae), using flow cytometry and FISH. *Anales del Jardín Botánico de Madrid* 74: e052.
- **Kopecký, D.***, Šimoníková, D., Ghesquière, M., Doležel, J. (2017). Stability of genome composition and recombination between homoeologous chromosomes in *Festulolium* (*Festuca* × *Lolium*) cultivars. *Cytogenetic and Genome Research* 151: 106-114.
- Křivánková, A., **Kopecký, D.**, Stočes, Š., Doležel, J., Hřibová, E. (2017). Repetitive DNA: A versatile tool for karyotyping in *Festuca pratensis* Huds. *Cytogenetic and Genome Research* 151: 96-105.
- Majka, J., Książczyk, T., Kiebowicz-Matuk, A., Kopecký, D., Kosmala, A. (2017). Exploiting repetitive sequences and BAC clones in *Festuca pratensis* karyotyping. *PLoS ONE* 12: e0179043.
- Banfi, E., Galasso, G., Foggi, B., Kopecký, D., Ardenghi, N.M.G. (2017). From *Schedonorus* and *Micropyropsis* to *Lolium* (Poaceae: Loliinae): New combinations and typifications. *Taxon* 66: 708-717.
- Begheyn, R.F., Roulund, N., Vangsgaard, K., **Kopecký, D.**, Studer, B. (2017). Inheritance patterns of the response to in vitro doubled haploid induction in perennial ryegrass (*Lolium perenne* L.). *Plant Cell Tissue and Organ Culture* 130: 667-679.
- **Kopecký, D.***, Felder, T., Schubiger, F.X., Mahelka, V., Bartoš, J., Doležel, J., Boller, B. (2018). Frequent occurrence of triploid hybrids *Festuca pratensis* × *F. apennina* in the Swiss Alps. *Alpine Botany* 128: 121-132.
- **Kopecký, D.**, Lukaszewski, A.J. (2019a). Misdivision of Telocentrics and Isochromosomes in Wheat. *Cytogenetic and Genome Research* 157: 179-188.
- **Kopecký, D.***, Talukder, S.K., Zwyrteková, J., Trammell, M., Doležel, J., Saha, M.C. (2019b). Inter-morphotype hybridization in tall fescue (*Festuca arundinacea* Schreb.): exploration of meiotic irregularities and potential for breeding. *Euphytica* 215: 97.
- Perníčková, K., Kolářková, V., Lukaszewski, A. J., Fan, Ch., Vrána, J., Duchoslav, M., Jenkins, G., Phillips, D., Šamajová, O., Sedlářová, M., Šamaj, J., Doležel, J., **Kopecký, D.*** (2019a). Instability of Alien Chromosome Introgressions in Wheat Associated with

Improper Positioning in the Nucleus. International Journal of Molecular Sciences 20: 1448.

- Perníčková, K., Linc, G., Gaal, E., **Kopecký, D.**, Šamajová, O., Lukaszewski, A.J. (2019b). Out-of-position telomeres in meiotic leptotene appear responsible for chiasmate pairing in an inversion heterozygote in wheat (*Triticum aestivum* L.). *Chromosoma* 128: 31-39.
- Tulpová, Z., Toegelová, H., Lapitan, N.L.V., Peairs, F.B., Macas, J., Novák, P., Lukaszewski, A.J., **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. *Plant Genome* 12: 2 doi:10.3835/plantgenome2018.09.0065

články v mezinárodních recenzovaných časopisech registrovaných v databázi WOS

- **Kopecký, D.**, Harper, J., Bartoš, J., Gasior, D., Vrána, J., Hříbová, E., Boller, B., Ardenghi, N., Šimoníková, D., Doležel, J., Humphreys, M.W. (2016). An increasing need for productive and stress resilient *Festulolium* amphiploids: what can be learnt from the stable genomic composition of *Festuca pratensis* subsp. *apennina* (De Not.) Hegi? *Frontiers in Environmental Science* 4:66 doi: 10.3389/fenvs.2016.00066

články ve sbornících z mezinárodních konferencí

- **Kopecký, D.***, Bartoš, J., Doležel, J. (2006). Genome mapping within *Festuca-Lolium* complex (Mapování genomů v rámci komplexu *Festuca-Lolium*). Sborník z seminára VÚRV „Nové poznatky z genetiky a šlechtění polnohospodářských rostlin“, VÚRV Piešťany, s. 57-61.
- **Kopecký, D.***, Bartoš, J., Lukaszewski, A.J., Baird, J.H., Černoch, V., Kölliker, R., Sandve, S.R., Rognli, O.A., Blois, H., Caig, V., Doležel, J., Kilian, A. (2009). DARtFest – A platform for high-throughput genome profiling within the *Festuca-Lolium* complex. - In: Huyghe, C. (Ed.): Sustainable Use of Genetic Diversity in Forage and Turf Breeding. Springer-Verlag, Dordrecht, Heidelberg, London, New York, pp. 443-448.
- **Kopecký, D.***, Číhalíková, J., Kopecká, J., Vrána, J., Havráňková, M., Stočes, Š., Bartoš, J., Šimková, H., Šafář, J., Kubaláková, M., Navrátil, P., Doležel, J. (2013). Establishing Chromosome Genomics in Forage and Turf Grasses. In: Barth, S., Milbourne, D. (ed.) Breeding strategies for sustainable forage and turf grass improvement, Springer, Dordrecht, Heidelberg, London, New York, pp. 105-113.
- Boller, B., Felder, T., **Kopecký, D.** (2018). Tetraploid *Festuca apennina* is prone to produce triploid hybrid progeny when crossed with diploid *Festuca pratensis*. – In: Brazauskas, G., Statkeviciute, G., Jonaviciene, K. (eds.): Breeding grasses and protein crops in the era of genomics. Springer-Verlag, Dordrecht, Heidelberg, London, New York, pp. 33-38.
- **Kopecký, D.***, Baert, J., Barth, S., Bartoš, J., Černoch, V., Doležel, J., Grogan, D., Harper, J., Humphreys, M., Książczyk, T., Østrem, L., Paszkowski, E., Sokolovič, D., Zwierzykowski, Z., Ghesquière, M. (2018). Genotyping of *Festulolium* cultivars involved in EUCARPIA multi-site trial using DARt markers and GISH. – In: Brazauskas, G., Statkeviciute, G., Jonaviciene, K. (eds.): Breeding grasses and protein crops in the

era of genomics. Springer-Verlag, Dordrecht, Heidelberg, London, New York, pp. 155-159.

4. učebnice a učební texty

není

5. různé závažné práce

- recenze článků pro časopisy: Molecular Cytogenetics, Crop Science, Euphytica, BMC Genetics, Plants, Biologia Plantarum, Journal of Applied Genetics, Annals of Botany, Chromosome Research, Cereal Research Communications, Plant Physiology and Biochemistry, Czech Journal of Genetics and Plant Breeding, Genome, Plant Systematics and Evolution, Plant Genome, BMC Plant Biology, Folia Geobotanica, Caryologia a BMC Genomics
- recenze návrhů projektů pro Executive government agency of National Science Centre (Polsko), Swiss National Science Foundation (Švýcarsko), Israel Science Foundation (Izrael) a U.S.-Israel Binational Science Foundation (USA-Izrael)

6. přednášky typu "invited speaker"

- zvané přednášky (invited speaker) na konferencích International Symposium of Forage Section of Czech Breeding Society (Kunín, Česká republika), XVIIIth Meeting of the Eucarpia Fodder Crops and Amenity Grasses Section (La Rochelle, Francie) a 58. Tagung des DLG-Ausschusses „Gräser, Klee und Zwischenfrüchte“ (Bonn, Německo)
- zvané přednášky na Noble Research Institute (Ardmore, Oklahoma), Institute of Plant Genetics (Poznan, Polsko) a Norwegian University of Life Sciences (As, Norsko)

7. přehledy a souborné referáty

není

8. patenty národní a zahraniční, objevy

není

9. disertační, rigorózní práce

Kopecký, D. (2005). Využití androgeneze in vitro pro tvorbu rostlinných hybridů a charakterizace hybridních rostlin. Disertační práce, Přírodovědecká fakulta, Univerzita Palackého v Olomouci, obor Botanika, školitel Doc. RNDr. Jiří Vagera, CSc.

10. účast na řešení grantů (pouze řešitel či spoluřešitel)

- Development of new breeding strains with genes of horizontal resistance to late blight, QF4133, NAZV, 2004-2007, spoluřešitel (v letech 2005-2007)
- Cytogenetic mapping of genome of meadow fescue (*Festuca pratensis* Huds.), 521/07/P479, GAČR, 2007-2009, řešitel
- Genome interactions in interspecific hybrids x*Festulolium*, 501/11/0504, GAČR, 2011-2014, řešitel
- Nuclear organization in interspecific plant hybrids, 17-13853S, GAČR, 2017-2019, řešitel

granty studentů (Mgr. Štěpán Stočes) se zapojením školitele

- Study on gene expression in intergeneric grass hybrids, Sciex Fellowship 14.099, 2014-2015, home mentor

cestovní granty

- Nadace Nadání Josefa, Marie a Zdeňky Hlávkových, 2004, 2005
- Nadace Sophia, 2004
- EMBO (European Molecular Biology Organization) short term fellowship No. ASTF 295-2006, 2006.

11. ostatní publikace

- **Kopecký, D.** (2015). Festulolium aneb dva pod jednou střechou. Agrární obzor 2015/VI.
- Stočes, Š., **Kopecký, D.*** (2016). Hippies našich luk: příběh mezirodových kříženců trav. Živa 4/2016, 158-161. (Cena časopisu Živa)

V Olomouci dne 24. 5. 2019