

PROFESSIONAL CURRICULUM VITAE

Magdalena Lučanová (née Kubešová)

Date and place of birth

4. 11. 1981 České Budějovice, Czech Republic

Employment and university education:

od 2017: researcher at the Department of Botany, Faculty of Science at the Charles University in Prague (part time job at the projects of prof. RNDr. Karol Marhold, CSc. and RNDr. Filip Kolář, Ph.D.)

from 2017: researcher at the Department of Botany, Faculty of Science at the University of South Bohemia in České Budějovice (part time job at the projects of RNDr. Petr Koutecký, Ph.D.)

from 2014: maternity leave (only 15% job at the project of prof. Karol Marhold)

from 2012: researcher at the Department of Botany, Faculty of Science at the Charles University in Prague (Laboratory of flow cytometry - part time job at the projects of prof. Jan Suda and prof. Karol Marhold)

2007 – 2018: PhD. studies at the Department of Botany, Faculty of Science at the Charles University in Prague and at the Botanical institute, Academy of Sciences in Průhonice (part time job in Laboratory of flow cytometry)

2004 – 2007: MSc. studies of Botany (Systematics of higher plants) at the Biological Faculty at the University of South Bohemia in České Budějovice

2001 – 2004: Bc. studies of Biology at the Biological Faculty at the University of South Bohemia in České Budějovice

Professional activities:

supervision of bachelor and master theses

participation in teaching of Karyological and palynological practical class – teaching of practical fluorescent and classic karyology in botany

occasionally teaching of botany at the field practical classes and teaching practical class of morphology and system of higher plants

participation in many botanical excursions and workshops

participation in floristic research of South Bohemia

2013 - Prize of Josef Hlávka for the Best Students and Graduates

2003 – 2011 - member of Working group for Biological olympiad preparation for students of higher school

participation in preparation of biological competition Zelená stezka – Zlatý list for students of primary school

leading of field botanical excursions for secondary school teachers

leading of field botanical excursions for students of pedagogy

2002, 2004, 2008 – habitats mapping for Nature Conservation Agency of the Czech Republic – project Natura 2000

2001-2002 – breeding of aphidofagous insect – Institute of Entomology, Biology centre CAS

from 2001 – member of Southbohemian branch of Czech Botanical Society

from 2000 – member of Czech Botanical Society

1998 – 2001 - participation at the Ecological Olympiad:

member of winning team in national round

1997 – 2001: participation at the Biological Olympiad

2000: 4. place in national round

2001: 5. place in national round + participation at the International Biological Olympiad in Brussels;

Praemium Bohemiae Award (Bohuslav Jan Horáček Foundation) for secondary school students

Professional specialization

Systematics of higher plants (phylogeography, taxonomy), genome size in plants, polyploidy, cytogenetic methods (flow cytometry, karyology, FISH), reproductive modes, invasive plants, floristics

Experiences

Flow cytometry, karyology, grounding in fluorescent cytogenetics (FISH), vegetative scanning, experimental study of reprosystems

Grant projects

2017: Parallel adaptation to alpine environments in wild *Arabidopsis*.- GAČR 17-20357Y, RNDr. Filip Kolář, Ph.D. (researcher)

2017: Misunderstood patterns of cryptic variation in aquatic plants caused by hybridization and polyploidization events. GAČR 41-17-06825S, RNDr. Petr Koutecký (researcher)

2016: Pathways and consequences of polyploidy and chromosomal variation in plant evolution – three cases from the family Brassicaceae. GAČR 16-10809S, prof. Karol Marhold (researcher)

2012: Evolutionary patterns in polyploid complexes: congruent or distinct stories in three examples from the Brassicaceae family? GAČR P506/12/0668, prof. Karol Marhold (researcher)

2010: Immigrated vs. in situ created diversity in postglacial areas: A story of the polyploid complex *Galium pumilum* agg. GAČR P506/10/0704, prof. Jan Suda (researcher)

2005: Structure of populations of *Agrostis stolonifera* in the Czech Republic from the karyological point of view. Mattoni Awards for Studies of Biodiversity and Conservation Biology 2005. Magdalena Kubešová (main investigator)

2003: Biosystematic study of *Agrostis stolonifera* group. FRVŠ G4 b 1850/ 2003, Milan Štech, Magdalena Lučanová (co-investigator)

Synanthropic Flora of Villages in the Blanský les Protected Landscape Area. Mattoni Awards for Studies of Biodiversity and Conservation Biology, Jakub Těšitel, Magdalena Kubešová, Petr Koutecký (co-investigator)

SCI publications

- Pyšek P., Skálová H., Čuda J., Guo W.-Y., Suda J., Doležal J., Kauzál O., Lambertini C., **Lučanová M.**, Mandáková T., Moravcová L., Pyšková K., Brix H., Meyerson L. A. (2018): Small genome separates native and invasive populations in an ecologically important cosmopolitan grass. – *Ecology* 99(1): 79-90.
- Šrámková-Fuxová G., Závěská E., Kolář F., **Lučanová M.**, Španiel S., Marhold K. (2017): Range-wide genetic structure of *Arabidopsis halleri* (Brassicaceae): glacial persistence in multiple refugia and origin of the Northern Hemisphere disjunction. – *Botanical Journal of the Linnean Society* 185(3): 321-342.
- Kolář F., **Lučanová M.**, Závěská E., Fuxová G., Mandáková T., Španiel S., Senko D., Svitok M., Kolník M., Gudžinskas Z., Marhold K. (2016): Ecological segregation does not drive the intricate parapatric distribution of diploid and tetraploid cytotypes of the *Arabidopsis arenosa* group (Brassicaceae). – *Biological Journal of the Linnean Society* 119(3):673-688.
- Meyerson L. A., Cronin J. T., Bhattarai G. P., Brix H., Lambertini C., **Lučanová M.**, Rinehart S., Suda J., Pyšek P. (2016): Do ploidy level and nuclear genome size and latitude of origin modify the expression of *Phragmites australis* traits and interactions with herbivores? – *Biological Invasions* 18(9): 2531-2549.
- Kolář F.*, Fuxová G.*, Závěská E.*, Nagano A. J., Hyklová L., **Lučanová M.**, Kudoh H., Marhold K. (2016): Northern glacial refugia and altitudinal niche divergence shape genome-wide differentiation in the emerging plant model *Arabidopsis arenosa*. – *Molecular Ecology* 25(16): 3929-3949, *equal contribution.
- Pyšek P., Manceur A., Alba C., McGregor K., Pergl J., Štajerová K., Chytrý M., Danihelka J., Kartesz J., Klimešová J., **Lučanová M.**, Moravcová L., Nishino M., Sádlo J., Suda J., Tichý L. & Kühn I. (2015): Naturalization of central European plants in North America: species traits, habitats, propagule pressure, residence time. – *Ecology* 96: 762–774 (doi: 10.1890/14-1005.1).
- Hohmann N., Schmickl R., Chiang T.Y., **Lučanová M.**, Kolář F., Marhold K., Koch M.A. (2014): Taming the wild: resolving the gene pools of non-model *Arabidopsis* lineages. – *BMC Evolutionary Biology* 14: 224.
- Těšitel J., Těšitelová T., Bernardová A., Drdová-Janková E., **Lučanová M.**, Klimešová J. (2014): Demographic population structure and fungal associations of plants colonizing High Arctic glacier forelands, Petuniabukta, Svalbard. - *Polar Research* 33:20797.
- Kolář F., **Lučanová M.**, Koutecký P., Dortová M., Knotek A., Suda J. (2014): Spatio-ecological segregation of diploid and tetraploid cytotypes of *Galium valdepiilosum* in central Europe. - *Preslia* 86: 155-178.
- Kolář F., **Lučanová M.**, Fuxová G., Závěská E., Španiel S., Marhold K. (2013): Cytological variation of *Arabidopsis arenosa* in its Carpathian diversity centre. – *Acta Biologica Cracoviensia Series Botanica* 55:51.
- Fuxová G., Závěská E., Kolář F., **Lučanová M.**, Závěská E., Španiel S., Marhold K. (2013): Phylogeography and taxonomy of *Arabidopsis halleri* in the Carpathians. – *Acta Biologica Cracoviensia Series Botanica* 55:44.
- Krejčíková J., Sudová R., **Lučanová M.**, Trávníček P., Urfus T., Vít P., Weiss-Schneeweiss H., Kolano B., Oberlander K., Dreyer L. L. & Suda J. (2013): High ploidy diversity and distinct patterns of cytotype distribution in a widespread species of *Oxalis* in the Greater Cape Floristic Region. – *Annals of Botany* 111: 641–649.

- Kolář F., **Lučanová M.**, Vít P., Urfus T., Chrtek J., Fér T., Ehrendorfer F. & Suda J. (2013): Diversity and endemism in deglaciated areas: Ploidy, relative genome size and niche differentiation in the *Galium pusillum* complex (Rubiaceae) in Northern and Central Europe. – *Annals of Botany* 111: 1095–1108.
- Trávníček P., Jersáková J., Kubátová B., Krejčíková J., Bateman R. M., **Lučanová M.**, Krajníková E., Těšitelová T., Štípková Z., Amardeilh J.-P., Brzosko E., Jermakowicz E., Cabanne O., Durka W., Efimov P., Hedrén M., Hermosilla C. E., Kreutz K., Kull T., Tali K., Marchand O., Rey M., Schiestl F. P., Čurn V. & Suda J. (2012): Minority cytotypes in European populations of the *Gymnadenia conopsea* complex (Orchidaceae) greatly increase intraspecific and intrapopulation diversity. – *Annals of Botany* 110: 977–986.
- Kolář F., **Lučanová M.**, Těšitel J., Loureiro J. & Suda J. (2012): Glycerol-treated nuclear suspensions – an efficient preservation method for flow cytometric analysis of plant samples. – *Chromosome research* 20(2): 303–315.
- te Beest M., Le Roux J. J., Richardson D. M., Brysting A. K., Suda J., **Kubešová M.** & Pyšek P. (2012): The more the better? The role of polyploidy in facilitating plant invasions. – *Annals of Botany* 109: 19–45.
- Kubešová M.**, Moravcová L., Suda J., Jarošík V. & Pyšek P. (2010): Naturalized plants have smaller genomes than their non-invading relatives: a flow cytometric analysis of the Czech alien flora. – *Preslia* 82: 81–96
- Dušková E., Kolář F., Sklenář P., Rauchová J., **Kubešová M.**, Fér T., Suda J. & Marhold K. (2010): Genome size correlates with growth form, habitat and phylogeny in the Andean genus *Lasiocephalus* (Asteraceae). – *Preslia* 82: 127–148
- Hülber K., Sonnleitner M., Flatscher R., Berger A., Dobrovsky R., Niessner S., Nigl T., Schneeweiss G. M., **Kubešová M.**, Rauchová J., Suda J. & Schönswetter P. (2009): Ecological segregation drives fine-scale cytotype distribution of *Senecio carniolicus* in the Eastern Alps. – *Preslia* 81(3): 309–319
- Kolář F., Štech M., Trávníček P., Rauchová J., Urfus T., Vít P., **Kubešová M.** & Suda J. (2009): Towards resolving the *Knautia arvensis* agg. (Dipsacaceae) puzzle: primary and secondary contact zones and ploidy segregation at landscape and microgeographic scales. – *Annals of Botany* 103: 963–974
- Suda J., Loureiro J., Trávníček P., Rauchová J., Vít P., Urfus T., **Kubešová M.**, Dreyer L. L., Oberlander K. C., Wester P. & Roets F. (2009): Flow cytometry and its applications in plant population biology, ecology and biosystematics: New prospects for the Cape flora (*conference abstract*). – *South African Journal of Botany* 75(2): 389

Other publications

- Lepší P., Lepší M., Boublík K., Štech M., Hans V. [eds.] (2013): Červená kniha květeny jižní části Čech. – Jihočeské muzeum v Českých Budějovicích, 501 pp.
- Kolář F., Matějů J., **Lučanová M.**, Chlumská Z., Černá K., Prach J., Baláž V., Falteisek L. (2012): Ochrana přírody z pohledu biologa. – Dokořán, Praha. 216 pp. + 16 stran barevná příloha, ISBN 978-80-7363-414-8
- Baláž V., Falteisek L., Chlumská Z., Kolář F., **Kubešová M.**, Matějů J., Prach J. & Rezková K. (2010): Ochrana přírody z pohledu biologa. Biologická olympiáda 2010 – 2011, 45. ročník, přípravný

text pro kategorie A, B. – Česká zemědělská univerzita v Praze. Praha. 191 pp., ISBN 978-80-213-2085-7

- Karlík P., Ešnerová J., Urfus T., Kuneš I., Baláš M., Vítámvás J., Koňasová T., **Kubešová M.**, Fér T. & Vít P. (2010): Problematika určování druhů bříz *Betula L.* ve světle průtokové cytometrie. In: Bříza – strom roku 2010. Sborník z konference (Kostelec nad Černými lesy 23. září 2010). – Česká zemědělská univerzita v Praze, Praha. 117 pp., ISBN 978-80-213-2098-7
- Štajerová K., Kolář F., **Kubešová M.**, Sekerka L., Molem K. & Lepš J. (2008): Role nepůvodních druhů během sukcese na opuštěných políčkách Papuy Nové Guineje [The role of alien plants in succession in a shifting agriculture of Papua New Guinea] – Zpr. Čes. Botan. Společ. 43, Materiály 23: 63-72
- Kolář F., **Kubešová M.**, Těšitel J. & Koutecký P. (2007): Květena vesnic CHKO Blanský les [Synanthropic flora of villages in the Blanský les Protected Landscape Area] – Zpr. Čes. Botan. Společ., Praha, 42(1): 89-105
- Kubešová M.** (2007): Phenotypic plasticity and cytotypes of *Agrostis stolonifera* in the Czech Republic. – Ms. Thesis, in Czech – 46 p., Faculty of Biological Sciences, The University of South Bohemia, České Budějovice, Czech Republic
- Falteisek L., Fikáček M., Hodač L., Chmátal L., Jedelský P., Koutecká E., Koutecký P., Krtková J., **Kubešová M.**, Lišková J., Matějů J., Smýkal V., Šípek P. (2006): Organismy a abiotické faktory prostředí. Přípravný text Biologické olympiády kategorie A, B. – Národní institut dětí a mládeže MŠMT. Praha
- Lučan R. K., Radil J. & **Kubešová M.** (2006): Prostorová aktivita mateřské kolonie netopýra vodního (*Myotis daubentonii*) v různých fázích reprodukčního cyklu: telemetrické přiblížení. In: BRYJA J. & ZUKAL J. (eds.): *Zoologické dny. Brno 2006. Sborník abstraktů z konference 9.–10. února [2006]*. Ústav biologie obratlovců AV ČR, Brno, 268 pp.
- Lučan R. K., Radil J., Jahelková H., Pihartová T., **Kubešová M.**, Půža V., Šabacká M., Frantová D., Nedoma R. & Pech P. (2005): Spatial activity of maternity colonies of Daubenton's bats in different phases of the reproductive cycle as revealed by radiotracking. In: BRYJA J. & ZUKAL J. (eds.): *Zoologické dny. Brno 2006. Sborník abstraktů z konference 9.–10. února [2006]*. Ústav biologie obratlovců AV ČR, Brno, 268 pp.
- Čepička I., Jedelský P., **Kubešová M.**, Lišková J., Matějů J., Strádalová V. (2005): Pohyb. Přípravný text Biologické olympiády kategorie A, B. – Národní institut dětí a mládeže MŠMT. Praha
- Kubešová M.** (2004): Karyological study of *Agrostis stolonifera* in the Czech Republic. – Bc. Thesis, in Czech – 28 p., Faculty of Biological Sciences, The University of South Bohemia, České Budějovice, Czech Republic

Conference participations

- Fuxová, G., Závěska, E., Kolář, F., **Lučanová, M.**, Španiel, S. & Marhold, K.: Phylogeography and taxonomy of *Arabidopsis halleri* in the Carpathians. In: Anonymous, ed., Biogeography of the Carpathians: Evolution of biodiversity in a spatiotemporal context, September 26-28, 2013, Kraków, Poland. Acta Biol. Cracov., ser. Bot. 55 (Suppl. 1): 44. (poster)
- Kolář, F., **Lučanová, M.**, Fuxová, G., Závěská, E., **Španiel, S.** & Marhold, K.: Cytological variation of *Arabidopsis arenosa* in its Carpathian diversity centre. In: Anonymous, ed., Biogeography of the

Carpathians: Evolution of biodiversity in a spatiotemporal context, September 26-28, 2013, Kraków, Poland. Acta Biol. Cracov., ser. Bot. 55 (Suppl. 1): 51. (*poster*)

Kolář F., **Lučanová M.**, Pišová S., Fér T., Vít P., Urfus T., Chrtek J., Koutecký P., Suda J.: Evolutionary history of *Galium pumilum* agg. polyploid complex in deglaciated Europe. (*poster*) - BioSyst. EU 2013 Global systematics!, 18. - 22. 2. 2013, Vienna, Austria

Těšitel J., Bernardová A., Janková Drdová E., **Lučanová M.**, Těšitelová T., Klimešová J.: Brave pioneers: growth and flowering of plants colonizing glacier forelands in Petuniabukta, Svalbard. BES Annual Meeting, 17. – 20. 12. 2012, University of Birmingham, United Kingdom

Meyerson L. A., Pyšek P., Suda J., Lambertini C., Brix H., Cronin J. T., **Lučanová M.**: The hidden side of plant invasions: The role of genome-wide processes in plant success. (*oral*) – Ecological Society of America Annual Meeting, 5. – 10. 8. 2012, Portland, Oregon, USA

Lučanová M., Loureiro J., Suda J.: The dynamics and evolutionary consequences of intraspecific variation in genome size. (*poster*) – International Conference on Polyploidy, Hybridization, and Biodiversity, 7. – 10. 5. 2012, Průhonice, Česká Republika

Kolář F., **Lučanová M.**, Pišová S., Fér T., Vít P., Urfus T., Chrtek J., Koutecký P., Suda J.: Evolutionary history of *Galium pumilum* agg. polyploid complex in deglaciated Europe. (*poster*) – International Conference on Polyploidy, Hybridization, and Biodiversity, 7. – 10. 5. 2012, Průhonice, Česká Republika

Krejčíková J., Trávníček P., **Lučanová M.**, Kalůšková J., Weiss-Schneeweiss H., Dreyer L. L., Oberlander K. C., Suda J.: Hidden diversity of the Cape flora: Large ploidy variation in *Oxalis hirta* L. (*poster*) – International Conference on Polyploidy, Hybridization, and Biodiversity, 7. – 10. 5. 2012, Průhonice, Česká Republika

Temsch E. M., Jang T., **Lučanová M.**, Parker J., Speta F., Weiss-Schneeweiss H.: Genome size variation in *Prospero* (Hyacinthaceae). (*poster*) – International Conference on Polyploidy, Hybridization, and Biodiversity, 7. – 10. 5. 2012, Průhonice, Česká Republika

Suda J., Krejčíková J., **Lučanová M.**, Sudová R., Trávníček P., Urfus T., Vít P., Dreyer L., Oberlander K., Weiss-Schneeweiss H.: Understanding the whole genome processes in a world biodiversity hotspot: flow cytometric investigations of the Cape Flora. (*oral*) – International Conference on Polyploidy, Hybridization, and Biodiversity, 7. – 10. 5. 2012, Průhonice, Česká Republika

Kubešová M., Loureiro J. & Suda J. (2011): Genome size variation in *Taraxacum stenocephalum*. (*poster*) – BioSystematics Berlin, 21. – 27. 2. 2011, Německo

Suda J., Krejčíková J., **Lučanová M.**, Sudová R., Trávníček P., Urfus T., Vít P., Dreyer L., Oberlander K., Weiss-Schneeweiss H. (2011): Understanding the whole genome processes in a world biodiversity hotspot: flow cytometric investigations of the Cape flora. ČSAC

Suda J., Kolář F., **Kubešová M.**, Rauchová J., Trávníček P., Urfus T. & Vít P. (2010): The use of flow cytometry in plant biosystematics. – oral presentation of JS at “XIth Symposium of the International Organization of Plant Biosystematists“, Aurangabad, India.

Karlík P., Ešnerová J., Urfus T., Kuneš I., Baláš M., Vít P., Koňasová T., **Kubešová M.**, Fér T. & Vít P. (2010): Problematika určování druhů bříz *Betula* L. ve světle průtokové cytometrie. In: Bříza –

strom roku 2010. Sborník z konference (Kostelec nad Černými lesy 23. září 2010). – Česká zemědělská univerzita v Praze, Praha. 117 pp., ISBN 978-80-213-2098-7

Kubešová M., Kolář F., Loureiro J., Těšitel J., Trávníček P. & Suda J. (2009): Glycerol-based preservation technique of plant tissues for flow cytometric analyses. (*oral*) – Analytická cytometrie V – konference ČSAC, Olomouc, Česká republika

Kubešová M., Loureiro J., Trávníček P., Urfus T., Vít P. & Suda J. (2009): Patterns and dynamics of genome size variation in *Taraxacum stenocephalum* (Asteraceae). (*poster*) – International Conference on Polyploidy, Hybridization and Biodiversity, Saint Malo, France

Kolář F., Štech M., Trávníček P., Rauchová J., Urfus T., Vít P., **Kubešová M.** & Suda J. (2009): Primary and secondary contact zones of di- and tetraploid *Knautia arvensis* agg. (Dipsacaceae). (*poster*) – International Conference on Polyploidy, Hybridization and Biodiversity, Saint Malo, France

Urfus T., Krahulec F., Vít P., **Kubešová M.** & Trávníček P. (2009): Variation in *Pilosella officinarum* F. W. Schultz et Sch. Bip. In central Europe: ploidy levels, breeding systems and their correlation with morphology. (*poster*) – International Conference on Polyploidy, Hybridization and Biodiversity, Saint Malo, France

Vít P., Suda J., **Kubešová M.**, Urfus T. & Trávníček P. (2009): Hybridization of *Cerastium alsinifolium*: caryological and molecular evaluation of serpentine endemic species. (*poster*) – International Conference on Polyploidy, Hybridization and Biodiversity, Saint Malo, France

Suda J., Rauchová J., Trávníček P., **Kubešová M.** & Loureiro J. (2009): Applications of flow cytometry to plant invasion biology. (*přednáška*) – 10th International Conference on the Ecology and Management of Alien Plant Invasions, Stellenbosch, South Africa

Suda J., Loureiro J., Trávníček P., Rauchová J., Vít P., Urfus T., **Kubešová M.**, Dreyer L. L., Oberlander K. C., Wester P. & Roets, F. (2009): Flow cytometry and its applications in plant population biology, ecology and biosystematics: New prospects for the Cape flora. (*hlavní přednáška*) – 19.1.2009-22.1.2009. 35th Annual Conference of the South African Association of Botanists, Stellenbosch, JAR

Štajerová K., Kolář F., **Kubešová M.**, Sekerka L., Molem K. & Lepš J. (2007): The role of alien plants in a shifting agriculture in Papua New Guinea. (*poster*) – Conference of the Czech botanical society, Plant invasions in the Czech Republic: present state, research and management., Praha, Czech Republic

Těšitel J., Kolář F., **Kubešová M.** & Koutecký P. (2006): Factors Affecting Synanthropic Flora of Villages in Blanský Les, South Bohemia. (*poster*) – 12. Österreichisches Botanikertreffen, Kremsmünster, Austria. Beiträge zur Naturkunde Oberösterreichs 16: 636

Štech M., **Kubešová M.** & Horváthová V. (2004): Bemerkungen zur Gattung *Agrostis* in der Tschechischen Republik. (*poster*) – 11. Österreichisches Botanikertreffen, Wien, Austria. Kurzfassungen der Beiträge: 70

Meyerson L. A., Cronin J. T., Bhattarai G. P., Brix H., Lambertini C., **Lučanová M.**, Rinehart S., Suda J., Pysek P. (2016): Do ploidy level and nuclear genome size and latitude of origin modify the expression of *Phragmites australis* traits and interactions with herbivores? – Biological Invasions 18(9): 2531-2549

Educational stay

February + March, October + November 2011 – Plant Evolutionary Cytogenetics Group (laboratory of Hanna Schneeweiss), Department of Systematic and Evolutionary Botany, University of Vienna, Austria – cytogenomics (karyology, FISH)

Other interests

travelling: Austria, Slovakia, Slovenia, Hungary, Croatia, Monte Negro, Italy, France, Switzerland, Spain (+ Canary Islands), Portugal, Belgium, Germany, Norway (+ Svalbard), Finland, Estonia, Lithuania, Latvia, Poland, Ukraine, Romania, Cyprus, Turkey, Syria, Sweden, Jordan, Russian, Nepal, Malaysia, Papua-New Guinea, Egypt, Republic of South Africa, Venezuela, Great Britain, Bahrain

birdwatching