**Mgr. Dominik Vítek**

**Personal information**

Adress: Selské náměstí 172/7, 773 00 Olomouc

Contact information: dominik.vitek01@upol.cz  
 +420 731 045 840

Date of birth: 7. 9. 1994

**Education** 2019 – current **Palacký University Olomouc** Pediatrics (Ph.D.)

2017 – 2019 **Palacký University Olomouc** Experimental biology (Mgr.)

2014 – 2017 **Palacký University Olomouc** Molecular and cellular biology (Bc.)

**Work** 2019 – current **Ph.D. study  
experience** Neurodegeneration and aging study in model organisms Reference: Mgr. Jiří Voller, Ph.D. +420 585 634 855, jiri.voller@upol.cz

2019 **Part-time job** Maintenance of plant materials Reference: Mgr. Jan Bartoš, Ph. D. +420 585 238 711, bartos@ueb.cas.cz

2018 – 2019 **Diploma thesis** Selection of common wheat lines containing 3D chromosome deletion in disomic constitution Reference: Mgr. Jan Bartoš, Ph. D. +420 585 238 711, bartos@ueb.cas.cz

2017 – 2018 Cytometric analysis of cell populations  
 Reference: doc. Ing. Iva Kriegová, Dr.  
 +420 585 632 380, [eva.kriegova@fnol.cz](mailto:eva.kriegova@fnol.cz)

**Work**  2015 – 2017 **Bachelor thesis  
experience** Molecular genetic methods of MHC typingin high resulutionReference: doc. MUDr. František Mrázek, Ph. D.  
 +420 585 633 681, mrazekf@fnol.cz

**Courses** 2017 **First aid**

**Langueges Czech** Expert (C2), native speaker

**English** Advanced (C1)

**German** Beginner (A2)

**Laboratory methodology PCR, RT-PCR, Droplet digital PCR, PCR-SSOP**

**Primer optimalization**

**Gel elecrophoresis**

**Sanger sequencing**

**Preperation of mRNA libraries for NGS**

**Automated microscopy and image analysis**

**DNA isolation, RNA isolation**

**Flow cytometry**

**Human cell cultures**

**Cultivation and screening of nematodes (C. elegans, H. contortus, T. circumcincta)**

**Tardigrades cultivation, stress and stress resistance assays**

**Software knowledge Columbus – image storage and analysis system**

**Python – knowledge of libraries for image analysis (scikit-image) including the use convolutional neural networks (YOLOv5), data analysis and visualization (Pandas, matplotlib)**

**Microsoft Office - Openoffice**

**Graphical software GIMP 2**

**Publications:**

Svačina R, Karafiátová M, Malurová M, Serra H, **Vítek D**, Endo T R, Sourdille P, Bartoš J. Development of Deletion Lines for Chromosome 3D of Bread Wheat. Front. Plant Sci. 2020; 10:1756. DOI: [10.3389/fpls.2019.01756](http://dx.doi.org/10.3389/fpls.2019.01756). **IF = 6.627 (2022-2023)**

Maková B, Mik V, Lišková B, González G, **Vítek D**, Medvedíková M, Monfort B, Ručilová V, Kadlecová A, Khirsariya P, Barreiro Z G, Havlíček L, Zatloukal M, Soural M, Paruch K, D’Autréaux B, Hajdúch M, Strnad M, Voller J. Cytoprotective activities of kinetin purine isosteres. Bioorg Med Chem. 2021; In Press. DOI: [10.1016/j.bmc.2021.115993](https://doi.org/10.1016/j.bmc.2021.115993). **IF = 3.461 (2022-2023)**

**Teaching**

**Supervision of bachelor thesis:**

Bendová H (2022). Vývoj metodologie a studium odpovědi Hypsibius dujardini na stresové faktory [Successfully defended thesis]. Palacký University in Olomouc.

**Projects:**

**INTER-COST High-throughput identification of agents for therapy of Friedreich ataxia.** Member of the research team.

**INTER-COST High-throughput identification of new anthelmintics.** Member of the research team.

**Doctoral Student Grant competition (DSGC-2021-0085) A study of radiotolerance of a tardigrade and evaluation of the radioprotective activity of it’s extracts.** Principal researcher.

**Active conference participations:**

**Presentation: Vítek D**, Voller J, Fürst T, Hajdúch M. High-throughput screening of chemical compound libraries in C. elegans. IMTM Reactor Conference. 7. - 9. 9. 2020. Bystřice nad Pernštejnem, Czech Republic..

**Presentation: Vítek D**, Voller J, Fürst T, Valderas-García E, Gurská S, Hajdúch M. High-throughput screening of compound libraries in Nematodes. IMTM Reactor Conference. 6. - 8. 10. 2021. Bystřice nad Pernštejnem, Czech Republic..

**Presentation: Vítek D**, Fryčák T, Fürst T, Lacey M, Vavruša M, Voller J. Tardigrade phenotype classification using neural networks. 15th International Symposium on Tardigrada. 22. – 26. 8. 2022. Kraków, Poland.

**Presentation: D Vítek**, T Fryčák, T Fürst, M Lacey, M Vavruša, R Slavkovsky, M Hajdúch, J Voller. Stress response in Hypsibius exemplaris. IMTM Reactor conference. 3. – 5. 10. 2022. Velké karlovice, Czech Republic.

**Presentation: D Vítek**, S M Berger, T Fryčák, T Fürst, M Lacey, M Hajdúch, R Slavkovsky, J Pavlík, J Nováková, J Voller. Stress response in Hypsibius exemplaris. 7th Annual IMTM Reactor conference. 2. – 4. 10. 2023. Velké karlovice, Czech Republic.

**Interests** Computer and tabletop games, sci-fi, fantasy, oil and

acrylic painting

Dominik Vítek

28/12/2022