

VERONIKA TOMKOVA

Personal information

Address (permanent) Dlhovského 283/50, 951 93 Topoľčianky, SR
Address (temporary) U Jezerky 2, Prague 4, CR
Phone number +420 603 358 387
E-mail veronika.tomkova@ibt.cas.cz
Birth date 3.12. 1990
Nationality Slovak

Education

2015 - present

Faculty of Science, Charles University in Prague, Czech Republic
Department of Cell Biology
Study program: Developmental and Cell Biology
Current status: PhD student
Doctoral thesis: Molecular mechanisms of tamoxifen resistance in breast cancer

2013 - 2015

Faculty of Science, Charles University in Prague, Czech Republic
Department of Cell Biology
Study program: Cell and Developmental Biology
Degree: Master
Diploma thesis: Expression and regulation of the ABC transporters in tumour cells

2010-2013

Faculty of Natural Sciences, Comenius University in Bratislava, Slovak Republic
Department of Genetics
Study program: Biology
Degree: Bachelor
Bachelor thesis: Non-conventional functions of telomerase

Work experience

2015 – present

Institute of Biotechnology, CAS, v.v.i., Prague, Czech Republic
PhD student, Laboratory of Tumour Resistance (head: Mgr. Jaroslav Truksa, Ph.D.)

2013 - 2015

Institute of Biotechnology, CAS, v.v.i., Prague, Czech Republic
Master student, Laboratory of Tumour Resistance (head: Mgr. Jaroslav Truksa, Ph.D.)

2012-2013

Faculty of Natural Sciences, Comenius University in Bratislava, Slovak Republic

Department of Biochemistry and Department of Genetics

Bachelor student, Laboratory of Functional and Comparative Genomics of Eukaryotic Organelles (head: Prof. RNDr. Lubomír Tomáška, DrSc.)

Language Skills

English - advanced

German - intermediate

Spanish - beginner

Publications

Tomková V., Sandoval-Acuña C., Torrealba N., Truksa J., Mitochondrial fragmentation, elevated mitochondrial superoxide and respiratory supercomplexes disassembly is connected with the tamoxifen-resistant phenotype of breast cancer cells. *Free Radic Biol Med.* (2019) 143:510-521. (5 year IF: 6.401)

Rychtarcikova Z., Lettlova S., **Tomkova V.**, Korenkova V., Langerova L., Simonova E., Zjablovskaja P., Alberich-Jorda M., Neuzil J., Truksa J.. Tumor-initiating cells of breast and prostate origin show alterations in the expression of genes related to iron metabolism. *Oncotarget* (2017) 8(4):6376-6398. (5 year IF 5.312)

Sandoval-Acuña C., Torrealba N., **Tomkova V.**, Jadhav S., Blazkova K., Merta L., Lettlova S., Rösel D., Brabek J., Neuzil J., Stursa J., Werner L., Truksa J. Repurposing an iron chelator: mitochondrially-targeted deferoxamine exhibits potent cytostatic, cytotoxic and migrastatic anti-cancer properties and induces mitophagy. *Autophagy*, submitted

Conference Presentations

Tomkova V., Sandoval-Acuña C., Lettlova S., Truksa J. Mitochondrial changes are important for the tamoxifen resistant cells to survive therapy. *Mitochondrial Biology*, Kyoto, Japan, 2018 (poster)

Tomkova V., Sandoval-Acuña C., Truksa J. The role of mitochondria in the resistance to tamoxifen. 8th Joint Meeting of Society for Free Radical Research Australasia and Japan, Tokyo, Japan, 2017. (poster)

Rychtarcikova Z., **Tomkova V.**, Lettlova S., Truksa J. Expression profiling of iron metabolism-related genes in tamoxifen resistant breast cancer cells. Bioiron, China, 2015 (poster)

Tomkova V., Lettlova S., Truksa J.: Tamoxifen resistant cells exhibit properties of stem cells and show alterations in the expression of the ABC transporters. EMBO Workshop: Cancer stem cells 20 years later: Achievements, controversies, emerging concepts and technologies. Catanzaro, Italy, 2015 (poster)

Tomkova V., Simonicova L., Tomaska L.: Identification of important regions of telomeric protein Tayl in the yeast *Yarrowia lipolytica*. Interactive Conference of Young Scientists 2013, Bratislava, Slovak Republic (online presentation)

Laboratory Techniques

Cell cultures, cell transfection, establishing of drug resistant cell lines, SDS-PAGE, blue native electrophoresis, high resolution clear native electrophoresis, western blotting, RNA and DNA isolation, RT-qPCR, Seahorse, FACS, confocal microscopy (basics), Oxygraph, molecular cloning

PUBLICATIONS

Tomkova V., Sandoval-Acuña C., Torrealba N., Truksa J. Mitochondrial fragmentation, elevated mitochondrial superoxide and respiratory supercomplexes disassembly is connected with the tamoxifen-resistant phenotype of breast cancer cells. *Free Radic Biol Med.* (2019) 143:510-521. (5 year IF: 6.401)

Author's contribution: VT performed most of the experiments and drafted and approved the original manuscript.

Rychtarcikova Z., Lettlova S., **Tomkova V.**, Korenkova V., Langerova L., Simonova E., Zjablovskaja P., Alberich-Jorda M., Neuzil J., Truksa J. Tumor-initiating cells of breast and prostate origin show alterations in the expression of genes related to iron metabolism. *Oncotarget* (2017) 8(4):6376-6398. (5 year IF 5.312)

Author's contribution: VT prepared RNA and protein samples from tamoxifen resistant cells and performed all western blotting of iron genes in this model. VT approved original manuscript.

Sandoval-Acuña C., Torrealba N., **Tomkova V.**, Jadhav S., Blazkova K., Merta L., Lettlova S., Rösel D., Brabek J., Neuzil J., Stursa J., Werner L., Truksa J. Repurposing an iron chelator: mitochondrially-targeted deferoxamine exhibits potent cytostatic, cytotoxic and migrastatic anti-cancer properties and induces mitophagy. *Autophagy*, submitted

Author's contribution: VT performed blue native and high-resolution clear native electrophoresis, aconitase in-gel activity, Oxygraph and Seahorse measurements. VT read and approved the manuscript.

.....
Student

.....
Supervisor

.....
Consultant