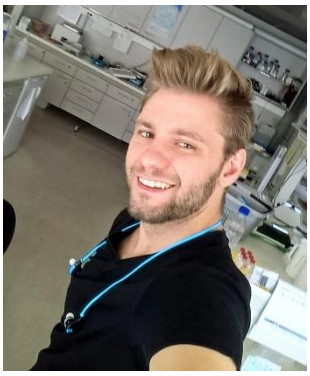
CV



Personal data

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Date of birth: 21.07.1988.
From Tatabánya
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Education

2016-	***University of Debrecen Faculty of Medicine (DE ÁOK)***
	"Molecular Cell and Immunobiology Doctoral School" Doctoral candidate status /scientific assistant status Debrecen
2013-2016	Faculty of Medicine, University of Debrecen (DE ÁOK)
	PhD course "Doctoral School of Molecular Cell and Immunobiology", Debrecen
2011-2013	Faculty of Science and Technology, University of Debrecen (DE TTK)
	"Biotechnology MSc Specialisation Pharmaceutical Biotechnology", Debrecen
2010-2012	Faculty of Science and Technology, University of Debrecen (DE TTK)
	"MSc In Biology, Debrecen
2007-2010	Faculty of Science and Technology, University of Debrecen (DE TTK)
	"Biology BSc Biologist-Ecologist Operator Specialization", Debrecen
2003-2007	László Bárdos Grammar School and Vocational Secondary School
	"German Faculty", Tatabánya
1995-2003	István Széchenyi German Nationality Primary School, Tatabánya

Language

State English Complex (Type C) secondary (B2) Language exam	[898451]
State German complex (C) secondary (B2) Language exam	[617301]

Professional experience

During my BSc years, I joined research early in my sophomore year, in addition to the basic methodological courses needed to obtain a diploma. From the second half of the 2008/2009 academic year, I did my research in the Department of Botanicals of DE TEK TTK. I prepared my thesis "Effects of microcystin-LR on the organization of chromatin and cytoskeletal system in model plants".

During my BSc work, I was able to work in experiments from which I could learn most of the above-mentioned biological methods (preparation, cellular microscopic examinations with light, electro- and confocal microscopes, use of evaluation programs, immunofluorescent processes, staining mechanisms).

In addition to preparing my thesis, after I entered the DETEP programme, it was also possible to deepen my knowledge on a subject close to my thesis but still of a different orientation. In DETEP training, I dealt with the topic " Examination of changes in the cytoskeletal and microtubular system in protoplast cultures", in connection with which I became familiar with the maintenance of suspension cultures, fixation techniques for cellular systems, separate preparation of cells, micropropagation techniques, tissue culture techniques, enzyme extraction, apoptosis detecting techniques (Tunel method, Comet assay), chromatin stock/chromosomes (Carmine acetic chromosome extraction, preparation) techniques.

From 2010 on, I continued my studies in the aforementioned department, where my thesis on Biology MSc Plant Biology was " Study of the cellular and growth inhibitory effects of microcystin-LR cyanobacterial toxin in goosegrass (*Arabidopsis thaliana*)". During the preparation of the thesis, I was introduced to whole-mount fixation and preparation techniques, immuno-histochemical methods and cytology testing procedures.

In 2011 I was admitted to the de TEK TTK Biotechnology MSc Pharmaceutical Biotechnology course. My thesis was prepared at the DEOEC Institute of Biochemistry and Molecular Biology "Study of all-trans retinoic acid and arsenic trioxide combined treatment on NB4 acute promyelocytic leukaemia cell lines". Methods for maintaining human cellular systems (cell culture procedures), protein, DNA, and RNA isolation steps (TRISOL/column based on chromatography), cytospin preparations, protein detection (WB, SDS-PAGE), flow cytometric (FACS apoptosis/surface marker expression),

densitometric evaluation, gene expression studies (PCR, RT-PCR, Real-Time qPCR). I am currently doing my research at the Institute of Biochemistry and Molecular Biology at DE ÁOK on NB4 cell lines.

2008-2013 DETEP Talent Management Program Student

2009 DE TEK TTK Autumn Science Student Conference *2nd place*

2009-2010 DE TEK TTK Department of Botanicals Demonstrator Scholarship

DE TEK TTK Department of Botanology Summer Scholarship

XII. Plant Anatomical Symposium first-time Hungarian poster

"Study of the inhibitory and cellular effects of microcystin-LR growth in model plants"

2010-2011 DE TEK TTK Department of Botanicals Featured Professional Fellowship

DE TEK TTK Spring Science Student Conference *3rd place*

Jubilee OTDK conference Budapest *2nd place*

2011 2nd Gordon Conf. on "Transglutaminases in Human Disease Processes"

„Silencing of TG2 expression attenuates LPS induced pro-inflammatory response of NB4 neutrophil granulocytes through the TLR4 – NF-kB pathway"

2012 *„Microcystin-LR, a protein phosphatase inhibitor, induces alterations in mitotic chromatin and microtubule organization leading to the formation of micronuclei in Vicia faba"*

6th Molecular Cell and Immune Biology Winter Symposium poster

„Therapeutic advantages of TG2 silencing in As_2O_3 (ATO) and All-Trans Retinoic Acid (ATRA) Induced Differentiation Program of Acute Promyelocytic Leukaemia (APL) Cell Line NB4"

DE OEC Local TDK *3rd place*

OTDK Medicine/Oncology Section Szeged *2nd place*

2013 Molecular Life Science Conference poster

„The role of tissue-transglutaminase (TGM2) in retinoic acid and arsenic trioxide induced differentiation program of acute promyelocytic leukaemia cells"

2014 7th Molecular Cell and Immune Biology Winter Symposium presentation

„Role of transglutaminase 2 (TG2) in the differentiation, death and cytokine production of all-trans retinoic acid (ATRA) and arsenic-trioxide (ATO) treated NB4 leukaemic cells"

Annual Meeting of HBS, Debrecen, 24-27 August first-time English poster

„Role of tissue transglutaminase 2 (TGM2) in the differentiation. death and cytokine production of all-trans retinoic acid (ATRA) and arsenic-trioxide (ATO) treated NB4 leukaemic cells"

3nd Gordon Conf. on "Transglutaminases in Human Disease Processes" poster

„Role of tissue transglutaminase 2 (TGM2) in the differentiation. death and cytokine production of all-trans retinoic acid (ATRA) and arsenic-trioxide (ATO) treated NB4 leukaemic cells"

2015 9th Molecular Cell and Immune Biology Winter Symposium presentation

„Effect of arsenic trioxide on reactive oxygen species (ROS) generation of all-trans-retinoic induced differentiated NB4 and NB4 TG2-KD cells and generation of NB4 TG2 knock out cell lines"

2016 4th Gordon Conf. on "Transglutaminases in Human Disease Processes" poster

„Generation of TG2 Knockout NB4 cell lines using TALEN technology"

10th Molecular Cell and Immune Biology Winter Symposium presentation

„Role of transglutaminase 2 (TG2) in the differentiation and apoptotic processes of all-trans retinoic acid (ATRA) and arsenic trioxide (ATO) treated NB4 leukaemic cells"

2017 *11th Molecular Cell and Immune Biology Winter Symposium presentation*

Transglutaminase conference Debrecen, English lecture

Award-winning tool application for the Young Scholarship programme for national talent

2018 5th Gordon Conf. on "Transglutaminases in Human Disease Processes" poster
„Role of tissue transglutaminase 2 (TGM2) in the differentiation. death and cytokine production of all-trans retinoic acid (ATRA) and arsenic-trioxide (ATO) treated NB4 leukaemic cells"

2019 *12th Molecular, Cell and Immune Biology Winter Symposium presentation*
„Role of transglutaminase 2 (TG2) in the differentiation and apoptotic processes of all-trans retinoic acid (ATRA) and arsenic trioxide (ATO) treated NB4 leukaemic cell lines"

2020 *1st Molecular, Cell and Immune Biology Summer Symposium*

2021 *Best PhD dissertation of the year award from the University of Debrecen*

Publication list

Volkó J, Kenesei Á, Zhang M, Várnai P, Mocsár G, Petrus MN, **Jambrovics K**, Balajthy Z, Müller G, Bodnár A, Tóth K, Waldmann TA, Vámosi G. IL-2 receptors preassemble and signal in the ER/Golgi causing resistance to antiproliferative anti-IL-2Rα therapies. Proc Natl Acad Sci U S A. 2019 Oct 15;116(42):21120-21130. doi: 10.1073/pnas.1901382116. Epub 2019 Sep 30. PMID: 31570576; PMCID: PMC6800387.

Jambrovics K, Uray IP, Keillor JW, Fésüs L, Balajthy Z. Benefits of Combined All-Trans Retinoic Acid and Arsenic Trioxide Treatment of Acute Promyelocytic Leukemia Cells and Further Enhancement by Inhibition of Atypically Expressed Transglutaminase 2. Cancers (Basel). 2020 Mar 11;12(3):648. doi: 10.3390/cancers12030648. PMID: 32168763; PMCID: PMC7139906.

Jambrovics K, Uray IP, Keresztessy Z, Keillor JW, Fésüs L, Balajthy Z. Transglutaminase 2 programs differentiating acute promyelocytic leukaemia cells in all-trans retinoic acid treatment to inflammatory stage through NF-κB activation. Haematologica. 2019 Mar;104(3):505-515. doi: 10.3324/haematol.2018.192823. Epub 2018 Sep 20. PMID: 30237268; PMCID: PMC6395331.

Beyer D, Tándor I, Kónya Z, Bátori R, Roszik J, Vereb G, Erdodi F, Vasas G, M-Hamvas M, **Jambrovics K**, Máthé C. Microcystin-LR, a protein phosphatase inhibitor, induces alterations in mitotic chromatin and microtubule organization leading to the formation of micronuclei in Vicia faba. Ann Bot. 2012 Sep;110(4):797-808. doi: 10.1093/aob/mcs154. Epub 2012 Jul 20. PMID: 22819947; PMCID: PMC3423812.