

Curriculum vitae

Personal details:

Name: Zsuzsanna Kolostyák

Place and time of birth: Debrecen; February 8, 1995

Elérhetőség: kolostyak.zsuzsanna@med.unideb.hu

University: University of Debrecen, Faculty of Medicine,
general medicine, 4th year



Education:

University of Debrecen, Faculty of Medicine, general medicine (2013 -)

Árpád Tóth Secondary Grammar School (2009-2013)

Languages:

english - complex intermediate language exam

Research activity:

Supervisor: László Nagy, MD., Ph.D

Institute: University of Debrecen, Faculty of Medicine, Department of Biochemistry and Molecular Biology, Nuclear Hormone Receptor Research Laboratory

Participations in Conference of Students' Research Societies:

- Medical and Health Science Section of the 33rd National Conference of Students' Research Societies, Pécs, 2017, 2nd place
- Medical and Health Science Section of the Conference of Students' Research Societies, Debrecen, 2017, 3rd place
- Medical and Health Science Section of the Conference of Students' Research Societies, Debrecen, 2016, 2nd place
- Medical and Health Science Section of the 33rd National Conference of Students' Research Societies, Budapest, 2015
- Medical and Health Science Section of the Conference of Students' Research Societies, Debrecen, 2015, special award
- 13th Research Student Conference, Tatabánya, 2013, 1st place

Publications:

Ixchelt Cuaranta-Monroy, Zoltan Simandi, **Zsuzsanna Kolostyák**, Quang-Minh Doan-Xuan, Szilard Poliska, Attila Horvath, Gergely Nagy, Zsolt Bacso, Laszlo Nagy; Highly efficient differentiation of embryonic stem cells into adipocytes by ascorbic acid; Stem Cell Research 2014;13:88–97

Oral presentations:

Ixchelt Cuaranta-Monroy, Zoltan Simandi, **Zsuzsanna Kolostyak**, Doan Xuan Quang Minh, Szilard Poliska, Attila Horvath, Gergely Nagy, Zsolt Bacso, Laszlo Nagy; Highly efficient differentiation of embryonic stem cells into adipocytes by ascorbic acid; Annual Meeting of the Hungarian Biochemical Society, Debrecen, 2014

Posters:

Zoltan Simandi, Krisztian Pajer, Heja Aga, **Zsuzsanna Kolostyak**, Katalin Karolyi, Zsanett Sari, Xiao-Kun Zhang, Andreas Patsalos, Xiufang Guo, Attila Horvath, James Hickman, Paul Coen, Antal Nogradi, Laszlo Nagy; Arginine methyltransferase PRMT8 is a neuroprotective regulator of stress response in spinal cord motoneurons; Lake Nona Medical City Research Day, Orlando, 2016

Zoltan Simandi, Krisztian Pajer, Attila Pap, **Zsuzsanna Kolostyak**, Andreas Patsalos, Greta Kiss, Gerardo Alvarado-Contreras, Attila Horvath, Zsolt Keresztessy, Miklos Antal, Antal Nogradi, Laszlo Nagy; In vivo characterization of PRMT8, a novel epigenomic gatekeeper in neurodegenerative diseases; Common Mechanisms of Neurodegeneration, Keystone, 2016

Zsuzsanna Kolostyak, Zoltan Simandi, Attila Horvath, Gergely Nagy, Zsanett Sari, Ixchelt Cuaranta-Monroy, Laszlo Nagy; Analysis of all-trans retinoic acid induced epigenetic and transcriptomic changes in human glioblastoma multiforme cell line; 8th Molecular Cell and Immune Biology Winter Symposium, Debrecen, 2015

Zoltan Simandi, Zsanett Sari, Erik Czipa, **Zsuzsanna Kolostyak**, Endre Barta, Laszlo Nagy; Activation of LXR signaling modulates neural differentiation of mouse embryonic stem cells; 7th Molecular Cell and Immune Biology Winter Symposium, Galyatető, 2014

Zsuzsanna Kolostyak, Zoltan Simandi, Ixchelt Cuaranta Monroy, Laszlo Nagy; Enhanced adipocyte differentiation of mouse embryonic stem cell; 7th Molecular Cell and Immune Biology Winter Symposium, Galyatető, 2014

Cuaranta-Monroy Ixchelt, Simandi Zoltan, **Kolostyak Zsuzsanna**, Xuan Quang Minh Doan, Poliska Szilard, Bacso Zsolt, Laszlo Nagy; Highly efficient differentiation of embryonic stem cells into adipocyte; Metabolic Origins of Disease, Orlando, 2014

Zsuzsanna Kolostyák, Zoltán Simándi, Attila Horváth, Zsanett Sári, Ixchelt Cuaranta-Monroy, László Nagy; Activation of RAR pathway induces migration of cells derived from human glioblastoma multiforme; Annual Meeting of the Hungarian Biochemical Society, Debrecen, 2014

Honors and awards:

- Stephen W. Kuffler Research Scholarship, 2017
- National Secondary Grammar School Science Competition (biology), 2013, 10th place
- University of Szeged, Szent-Györgyi Science Competition, Szeged, 2013, 1st place
- Avram Heshko National Science Competition, Karcag, 2013, 1st place
- Scholarship of Prime Minister, 2014
- „The most successful student of the school” (Árpád Tóth Secondary Grammar School), 2013
- International Biology Olympiad, Bern, 2013, bronze medal
- European Union Science Olympiad, Vilnius, 2012, silver medal
- MOL Talent Support Programme 2011, Art – science

- European Union Science Olympiad, Pardubice, 2011, gold medal

Research interest:

Glioblastoma multiforme (GBM) is an astrocyte-derived primary brain tumor with high malignant potential. The recently available therapies against GBM have low efficiency, specific target oriented compounds are not used in the clinical practise. All-*trans* retinoic acid (ATRA) has known regulatory effect in cell cycle that makes it a potential agent in treatment of different type of tumors. ATRA is an activator of retinoic acid receptor (RAR) which forms obligate heterodimer with retinoic x receptor (RXR). RAR:RXR heterodimers are able to modulate the transcription of ATRA responsive genes. In our research, we focus on the ATRA-induced functional, epigenetic and transcriptomic changes in U251 human GBM cell line. Application of genome wide approaches gives opportunity to examine direct targets of retinoid signalling and help to understand the mechanisms of action. Based on primary human tumor samples we would like to identify relevant correlations which might be useful prognostic and diagnostic tools. Our results help to define the benefits of ATRA application highlighting the clinical oriented potentials.