

Curriculum Vitae

Zoltan Simandi

Personal details:

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Date of birth: October 12, 1984

Place of Birth: Debrecen, Hungary

Sex: Male

Marital status: Single

Citizenship: Hungarian

Languages: Hungarian – native
English – State Exam, Intermediate Level
"A": A136175 #105144, 2001
"B": A270281 #202064, 2002

Education

PhD student (from October 1, 2008)

Program: Molecular Cell and Immune Biology
Department of Biochemistry and Molecular Biology
University of Debrecen, Faculty of Medicine
Advisor: László Nagy, M.D., Ph.D., Dr.habil., MHAS
Topic: Nuclear receptors and its coregulators in embryonic stem cell differentiation

MSc in Molecular Biology (2008)

Faculty of Sciences, University of Debrecen, Hungary

Title of thesis (1): *Preventive effect of PPARα ligands in hypoxic induced cardiomyocyte damage*

Advisor: Balint Balint L., M.D., Ph.D. and Laszlo Nagy, M.D., Ph.D

Title of thesis (2): *Tuning of the Stem Cell Niche by Physical Parameters via mTOR - preparation of mTOR knockdown keratinocytes*

Advisor: Yann Barrandon, M.D., Ph.D.

High-school graduation (2003)

Tóth Árpád Gimnázium, Debrecen, Hungary (1999-2003)

Research activity

Studies on nuclear hormone receptors in differentiating mouse embryonic stem cells
Nuclear Hormone Receptor Research Laboratory (Leader: Laszlo Nagy, M.D., Ph.D.)
Department of Biochemistry and Molecular Biology
University of Debrecen, Medical and Health Science Center

Awards

1. 3rd prize in the Molecular Biology Section of the Faculty of Natural Sciences of the Scientific Student Conference, Debrecen, Hungary 2006
2. 3rd prize in the Biochemistry Section of the Faculty of Medical Sciences of the National Scientific Student Conference, Debrecen, Hungary, 2007
3. 1st prize in the Molecular Biology Section of the Faculty of Natural Sciences of the Scientific Student Conference, Debrecen, Hungary 2008
4. 2nd prize in the Biochemistry Section of the Faculty of Medical Sciences of the National Scientific Student Conference, Debrecen, Hungary, 2008
5. Special prize from the Hungarian Atherosclerosis Society, 2007
6. Award of the Hungarian Republic, 2008
7. Special award for talented students of the University of Debrecen, 2005-2008

International workshops and short research visits

1. SRP2007, EPFL, Lausanne, Switzerland (July 15 – Sept 16, 2007)
2. Human embryonic stem cell training, CHOC, USA (March 2-13, 2009)
3. Microarray, EMBL, Heidelberg, Germany (July 26-31, 2009)
4. Wellcome Trust Advanced Course, Hinxton, UK (Nov.15-28, 2010)

Memberships in professional societies

Hungarian Biochemical Society, member since 2006.

Lectures on International and National Conferences

1. Annual meeting of the Biochemical Society (Szeged, aug. 30-sept.3, 2008)
Title: Studying the role of PRMT1 in retinoid induced differentiation of mouse embryonic stem cells (in hungarian)
2. 2nd Molecular Cell and Immune Biology Winter School (Krompachy, Slovakia, Jan. 6-9, 2009)
Title: New research objects and tools: ES and iPS
3. 3rd Molecular Cell and Immune Biology Winter School (Mariazell, Austria, Jan. 7-10, 2010)
Title: Role of PRMT1 in retinoid signaling during stem cell differentiation
4. 4th Molecular Cell and Immune Biology Winter School (Galyatető, Jan. 11-14, 2011)
Title: Retinoid signaling in embryonic stem cell differentiation
5. In focus the stem cell research (Debrecen, March 10-11, 2011)
Title: Arginine methylation in stem cell derived neurons
6. 5th Molecular Cell and Immune Biology Winter School (Galyatető 2012. jan. 4-7)
Title: The nuclear receptor coactivator PRMT1 is a context-dependent repressor
7. 75th anniversary of Albert Szent-Györgyi's Nobel prize award (Szeged, March 22-25, 2012)
Title: PRMT1 and 8 control cell fate specification of differentiating embryonic stem cells via selectively tuning retinoid-induced gene expression
8. 6th Molecular Cell and Immune Biology Winter School (Galyatető, Jan. 8-11, 2013)
Title: Genes and development
9. 23rd Wilhelm Bernhard Workshop (Debrecen, aug 19-23, 2013)
Title: PRMT1 and PRMT8 coordinately regulates retinoic acid-driven differentiation of mouse embryonic stem cells
10. Annual meeting of the Biochemical Society (Debrecen, aug 24-27, 2014)
Title: PRMT1 and PRMT8 regulate retinoic acid dependent neuronal differentiation with implications to neuropathology
11. MTA Ünnepe - Bioinformatika az agyutatóásban (Budapest, november 11, 2014)
Title: *In vitro* neuron, *in silico* PRMT8, *in vivo* glioma (in hungarian)

Posters

1. **Simándi Z.**, Brouard M., Nanba D., Barrandon Y
Tuning of the Stem Cell Niche by Physical Parameters via mTOR - preparation of mTOR *knockdown* keratinocytes, Lausanne, Switzerland, Sept 2007
2. **Simándi Z.**, Bálint L.B., Nagy L: Role of PRMT1 in embryonic stem cell differentiation (in hungarian), Biokémia Vándorgyűlés, Budapest, Hungary, 2008

3. Balint L. B., **Simandi Z.**, Czimmerer Zs., Ophir Keret, Nagy L.: Epigenetic components of embryonic stem cell differentiation
Cold Spring Harbor Symposium on Stem Cells, Cold Spring Harbor, US 2008 May
4. **Simandi Z.**, Balint L. B., Nagy L: Role of PRMT1 in mouse embryonic stem cell
EMBO Dubrovnik, Croatia, Sept 25-29, 2009
5. **Simandi Z.**, Balint B. L., Poliska Sz., Nagy L: Role of a nuclear receptor coregulator in embryonic stem cell differentiation
The EMBO Meeting, Barcelona, Sept 4-7, 2010
6. **Simandi Z.**, Balint L. B., Nagy L: Arginine methylation in stem cell derived neurons
3rd Conference on “A FOCUS ON STEM CELLS”, Debrecen, March 10-11, 2011
7. Beregi Tímea, Czimmerer Zsolt, **Simándi Zoltán**, Nagy László: SMRT/NCoR korepresszor komplexet felépítő fehérjék kifejeződésének vizsgálata a neuronális differenciáció során (in hungarian) Biokémia Vándorgyűlés, Pécs, Hungary, 2011
8. Zsolt Czimmerer, Szilard Poliska, Istvan Nemet, Attila Szanto, **Zoltan Simandi**, Zsuzsanna S. Nagy, Laszlo Nagy: CD180/RP105 is a marker of human alternative macrophage activation
EMDS 2011, Brussels, Sept 22-24, 2011
9. **Zoltan Simandi**, Balint Laszlo Balint, Szilard Poliska, Ralph Ruhl, Laszlo Nagy: Retinoid signaling in mouse embryonic stem cells
Retinoids 2011, Strasbourg, Sept 21-24
10. **Zoltan Simandi**, Balint L. Balint, Laszlo Nagy: Role of asymmetric arginine methylation in mouse embryonic stem cell differentiation
Cell Symposia, Stem Cell Programming and Reprogramming, Lisboa, Dec 8-10, 2011
11. **Zoltan Simandi**, Balint Laszlo Balint, Szilard Poliska, Bence Daniel, Laszlo Nagy: PRMT1 produced arginine methylation and PRMT8 coordinately regulates retinoic acid-driven differentiation of mouse embryonic stem cells
1st Hungarian Epigenetics Meeting, Budapest, Sept 20-21, 2012
12. Istvan Fedor, **Zoltan Simandi**, Zsanett Sari, Laszlo Nagy
LXR signaling is inducible in glioma cell lines and is a putative regulator of cell migratory capacity
7th Molecular Cell and Immune Biology Winter Symposium, Galyatető, January 7-10, 2014
13. **Z Simandi**, Zs Sari, E Czipa, Zs Kolostyak, E Barta, L Nagy
Activation of LXR signalling modulates neural differentiation of mouse embryonic stem cells
7th Molecular Cell and Immune Biology Winter Symposium, Galyatető, January 7-10, 2014
14. **Zoltan Simandi**, Szilárd Póliska, István Juhász, László Imre, Balázs Dezso, Gábor Szabó, Álmos Klekner, Bálint Bálint L. and Laszlo Nagy
PRMT1 and PRMT8 are regulators of retinoid-induced neural differentiation
Metabolic origins of disease, Orlando, Florida, USA, March 3-5, 2014
15. Ixchelt Cuaranta-Monroy, **Zoltan Simandi**, Zsuzsanna Kolostyak, Doan Xuan Quang Minh, Szilard Poliska, Zsolt Bacso and Laszlo Nagy
Highly efficient differentiation of embryonic stem cells into adipocytes
Metabolic origins of disease, Orlando, Florida, USA, March 3-5, 2014

16. **Zoltan Simandi**, Attila Horvath, Ixchelt Cuaranta-Monroy, Erik Czipa, László Imre, Gábor Szabó, Endre Barta, Sascha Sauer, Bálint L.Bálint and Laszlo Nagy: Epigenetic regulation of retinoic acid dependent embryonic stem cell differentiation
Danube Scientific conferences on epigenetics, Budapest, November 19-22, 2014

Publications

1. **Simandi Z**, Balint BL, Poliska S, Ruhl R, Nagy L (2010). Activation of retinoic acid receptor signaling coordinates lineage commitment of spontaneously differentiating mouse embryonic stem cells in embryoid bodies. *FEBS Lett* 584: 3123-30.
2. Czimmerer Z, Hulvely J, **Simandi Z**, Varallyay E, Havelda Z, Szabo E, Varga A, Dezso B, Balogh M, Horvath A, Domokos B, Torok Z, Nagy L, Balint BL. (2013). A versatile method to design stem-loop primer-based quantitative PCR assays for detecting small regulatory RNA molecules. *PLoS One* 8:e55168.
3. **Simandi Z**, Cuaranta-Monroy I, Nagy L. (2013). Nuclear receptors as regulators of stem cell and cancer stem cell metabolism. *Semin Cell Dev Biol.* 2013 Dec;24(10-12):716-23.
4. Cuaranta-Monroy I, **Simandi Z**, Kolostyak Z, Doan-Xuan QM, Poliska S, Horvath A, Nagy G, Bacso Z, Nagy L. (2014). Highly efficient differentiation of embryonic stem cells into adipocytes by ascorbic acid. *Stem Cell Res.* 2014 Jul;13(1):88-97.
5. **Simandi Z**, Czipa E, Horvath A, Koszeghy A, Bordas C, Póliska S, Juhász I, Imre L, Szabó G, Dezso B, Barta E, Sauer S, Karolyi K, Kovacs I, Hutóczki G, Bognár L, Klekner A, Szucs P, Bálint BL, Nagy L.(2014). PRMT1 and PRMT8 regulate retinoic acid dependent neuronal differentiation with implications to neuropathology. *Stem Cells.* (in press)

Book chapters

1. Book title: Embryonic Stem Cells / Book 3 (angol nyelven)
ISBN 979-953-307-218-9
Chapter title: Retinoid signaling is a context-dependent regulator of embryonic stem cells
Zoltan Simandi and Laszlo Nagy
Edited by: Dr. Michael S. Kallos, Ph.D. P.Eng.