Curriculum vitae (CV)

Personal information

First name, last name	UNA RIEKSTIŅA
Birth data	15.09.1973.

Education

31.05.2002.
Karolinska Institutet, Stockholm, Sweden
PhD in Medical Sciences

01.08.2002.
Recognition as Dr.biol.
University of Latvia, Latvia
ISCED 860

June 1997
Faculty of Biology, University of Latvia, Latvia,
MSc in Biochemistry and Molecular Biology
ISCED 740

June 1995
Faculty of Biology, University of Latvia, Latvia,
BSc in Biology
ISCED 640

Current employment

Associate professor, Pharmacy study programm, Faculty of Medicine, University of Latvia, Latvia

Principal investigator, Pharmacy study programm, Faculty of Medicine, University of Latvia, Latvia

Previous employment

2004- 2012	Assistant professor, Faculty of Medicine, University of Latvia, Latvia
2010-2012	Principal investigator, Faculty of Biology, University of Latvia, Latvia. European Social fund grant „Capacity building for interdisciplinary biosafety research"
2009-2010	Investigator, Latvian Science Council grant No. 09.1037 „Neuropeptide, growth factor and chemokine effect on cell migration, differentiation and functionality in vitro", Faculty of Medicine, University of Latvia
2008-2009	Principal investigator, Faculty of Medicine, University of Latvia, Latvia. LU research grant „Characterization of natural substances in skin-derived stem cell cultures", Faculty of Medicine, University of Latvia
2006-2008	Investigator, ERDF grant „Development of isolation and in vitro expansion techniques for autologous stem cells with the potential for biomedical applications", Faculty of Biology, University of Latvia, Latvia.
2006-2008	Investigator ESF Project "Support of PhD student and young scientists research at University of Latvia" scholarship, Faculty of Medicine,

	University of Latvia
2004-2007	Investigator, Latvian Science Council grant No. 04.1139 „Characterization of interaction between Hepatitis B core antigen and the immune system". Biomedical research and study center, Latvia
2002-2004	Lecturer, Faculty of Biology, University of Latvia, Latvia
1998-2002	PhD student, Division of Clinical Virology, Huddinge University Hospital, Karolinska Institutet, Stockholm, Sweden

Research experience

Ongoing research projects

1. Principal investigator, Latvian Council of Sciences, Collaboration project No.625 "Cancer-derived exosomes – a source of novel biomarkers and therapeutic targets for gastrointestinal cancers", 2014-2017

2. Principal investigator, Ukraine-Latvia bilateral collaboration research project "Optimisation of main algorithm for express control by biosensors of biochemical parameters of the progression of cancer lesions and the effectiveness of treatment", 2016-2018

3. Principal investigator, Project No. 1.1.1.1/16/A/047 "Genus Vaccinium berry processing using "green" technologies and innovative, pharmacologically characterized biopharmaceutical products", supported by the European Regional Development Fund, 2017-2019

Research projects 2004-2012

2010-2012	Principal investigator, Faculty of Biology, University of Latvia, Latvia. European Social fund grant „Capacity building for interdisciplinary biosafety research", development in safety and ethics procedures for human stem cell research
2009-2010	Investigator, Latvian Science Council Grant No. 09.1037 „Neuropeptide, growth factor and chemokine effect on cell migration, differentiation and functionality in vitro", study on neuropeptide biological properties
2008-2009	Principal investigator, Faculty of Medicine, University of Latvia, Latvia. LU research grant „Characterization of natural substances in skin-derived stem cell cultures", development of screening assays in skin stem cell cultures
2006-2008	Investigator, Faculty of Biology, University of Latvia, Latvia. ERDF grant „Development of isolation and in vitro expansion techniques for autologous stem cells with the potential for biomedical applications", establisment of methods for human skin stem cell isolation, propagation and characterization
2006-2008	ESF Project "Support of PhD student and young scientists research at University of Latvia" scholarship, support on research activities on immunological assays against viral antigens
2004-2007	Investigator, Latvian Science Council grant No. 04.1139

„Characterization of interaction between Hepatitis B core antigen and the immune system", research activities on immunological assays against viral antigens.

Research papers 2011-2017

1. Saulite L, Vavers E, Zvejniece L, Dambrova M, **Riekstina U**. The Differentiation of Skin Mesenchymal Stem Cells Towards a Schwann Cell Phenotype: Impact of Sigma-1 Receptor Activation. Mol Neurobiol. 2017 Apr 28. doi: 10.1007/s12035-017-0511-9.
2. Viter R, Jekabsons K, Kalnina Z, Poletaev N, Hsu SH, **Riekstina U**. Bioanalytical system for detection of cancer cells with photoluminescent ZnO nanorods. Nanotechnology. 2016 Nov 18;27(46):465101.
3. Muceniece R, Namniece J, Nakurte I, Jekabsons K, **Riekstina U**, Jansone B. Pharmacological research on natural substances in Latvia: Focus on lunasin, betulin, polyprenol and phlorizin. Pharmacol Res. 2016 Nov;113(Pt B):760-770. doi: 10.1016/j.phrs.2016.03.040.
4. Endzeliņš E, Melne V, Kalniņa Z, Lietuvietis V, **Riekstiņa U**, Llorente A, Linē A. Diagnostic, prognostic and predictive value of cell-free miRNAs in prostate cancer: a systematic review. Mol Cancer. 2016 May 18;15(1):41. doi: 10.1186/s12943-016-0523-5.
5. Egbert Flory, Paolo Gasparini, Veronika Jekerle, Tiina Palomäki, Patrick Celis, Tomáš Boráň, James W McBlane, John Joseph Borg, Jan Kyselovic, Metoda Lipnik–Stangelj, Toivo Maimets, Margarida Menezes-Ferreira, Guido Pante, Stefanie Prilla, **Una Riekstina**, Christian K Schneider, Asterios Tsiftsoglou and Paula Salmikangas. Regulatory viewpoints on the development of advanced stem cell–based medicinal products in light of the first EU-approved stem cell product. *Cell Gene Therapy Insights* 2015; 1(1), 109-127. DOI**:**10.18609/cgti.2015.010
6. Simona Steponkiene, Dominyka Dapkute, **Una Riekstina**, Ricardas Rotomskis Accumulation and distribution of non-targeted and anti-CD44-conjugated quantum dots in distinct phenotypes of breast cancer. J Nanomed Nanotechnol 6:341. doi:10.4172/2157-7439.1000341.
7. Vecbiskena L, Gross KA, **Riekstina U**, Yang TC. Crystallized nano-sized alpha-tricalcium phosphate from amorphous calcium phosphate: microstructure, cementation and cell response. Biomed Mater. 2015 Apr 17;10(2).
8. Cakstina I, **Riekstina U**, Boroduskis M, Nakurte I, Ancans J, Zile MH, Muiznieks I. Primary culture of avian embryonic heart forming region cells to study the regulation of vertebrate early heart morphogenesis by vitamin A. BMC Dev Biol. 2014 Feb 19;14:10. doi: 10.1186/1471-213X-14-10.
9. Jackson TR, Salmina K, Huna A, Inashkina I, Jankevics E, **Riekstina U**, Kalnina Z, Ivanov A, Townsend PA, Cragg MS, Erenpreisa J. DNA damage causes TP53-dependent coupling of self-renewal and senescence pathways in embryonal carcinoma cells. Cell Cycle. 2012, 1;12(3).
10. Tracevska T., Liduma I., Bers U., **Riekstina U**., Zilevica A. Evaluation of the expression of luxS gene in clinical isolates of Staphylococcus epidermidis from bloodstream infections.

Innovative Journal of Medical and Health Science [IJMHS], 2012, 2(4), 59-62.

11. V. Parfejevs, M. Gavare, L. Cappiello, M. Grube, R. Muceniece, **U. Riekstina**. Evaluation of biochemical changes in skin-derived mesenchymal stem cells during in vitro neurodifferentiation by FT-IR analysis. Spectroscopy: An International Journal Volume 27, 2012, Issue 5-6, 315-320.

12. Jekabsons K, **Riekstina U**, Parfejevs V, Laizane A, Pavasare M, Lencberga N, Jansone B, Muceniece R. Culture-expanded human dermal stem cells exhibit donor to donor differences in cAMP generation. Cell Tissue Res. 2011, 345(2):253-63.

13. Skapare E, **Riekstina U**, Liepinsh E, Konrade I, Makrecka M, Maurina B, Dambrova M. Flow cytometric analysis of glyoxalase-1 expression in human leukocytes. Cell Biochem Funct. 2011, 29(2):171-4.

Scientific conferences (2013-2016)

1. Una Riekstiņa[1], Dominyka Dapkyte[2], Līga Saulīte[1], Kaspars Jēkabsons[1], Ineta Popēna[1], Kārlis Pleiko[1], Simona Steponkiene[2], Ričardas Rotomskis[2]. Characterization of Qdot625 and Qdot655 carbxyl uptake and functional effects on human mesenchymal stem cells. Conference Current Trends in Cancer Theranostics, Druskininkai, Lietuva, 19.-23. jūnijs, 2016, postera prezentācija.

2. Roman Viter[1], Kaspars Jekabsons[2], Zane Kalnina[3], Nikolay Poletaev[4], Shan-hui Hsu[5] and **Una Riekstina[2]**. Biofunctionalized ZnO nanorods detect glycosphingolipid SSEA-4 expressing breast and colorectal carcinoma cells. Conference Current Trends in Cancer Theranostics, Druskininkai, Lietuva, June 19-23, 2016, oral presentation.

3. **Una Riekstina**, Liga Saulite, Vadims Parfejevs, Liga Zvejniece, Ruta Muceniece. Skin-derived mesenchymal stem cell neurodifferentiation as *in vitro* model for drug testing. Drug discovery conference 2015, Riga, Latvia, August 25-27, 2015. Abstract book pp. 49.

4. L. Saulite, E. Vavers, L. Zvejniece, M. Dambrova, **U. Riekstina**. Sigma-1 receptor ligands impact the neurodifferentiation of skin mesenchymal stem cells. Drug discovery conference 2015, Riga, Latvia, August 25-27, 2015. Abstract book pp.137.

5. L. Saulite, E. Vavers, L. Zvejniece, M. Dambrova, **U. Riekstina**. Sigma-1 receptor ligands improve the differentiation of skin mesenchymal stem cells towards the Schwann cell phenotype. Tissue engineering 2015, London, United Kingdom, October 8-10, 2015. Abstract book pp.27.
6. Dapkute, Simona Steponkiene, Vytautas Kaseta, **Una Riekstina**, Ricardas Rotomskis. Quantum dot-loaded mesenchymal stem cells for tumor-tropic therapy. Dominyka International student's conference Open readings 2015 Vilnius, Lithuania March 24-27, 2015. Abstract book pp.77.
7. Kaspars Jekabsons, Liga Saulite, Ilva Nakurte, Arturs Abols, Aija Line, Ruta Muceniece, **Una Riekstina**. Hypoxic colorectal cancer-derived exosome influence on mesenchymal stem cell functionality. Drug Discovery conference, InnovaBalt, 2015, Riga, 28-29.Aug., 2015.
8. Kaspars Jekabsons, Ilva Nakurte, Arturs Abols, Liga Saulite, Jana Namniece, Ruta Muceniece, Aija Line, **Una Riekstina**. Uptake of hypoxic colorectal cancer-derived exosomes by mesenchymal stem cells and monocytes. Frontiers in Stem cells&cancer, Heidelberg, Germany, March 29-31, 2015.
9. Ilva Nakurte, Kaspars Jēkabsons, **Una Riekstina**, Arturs Abols, Liga Saulite, Matiss

Otersbergs, Aija Line, Ruta Muceniece. Protein analysis of exosomes. 58th Scientific Conference for students of physics and natural science. Open readings 2015, Vilnius, Lithuania, 2015, March 24-27.

10. Popena I, Svirksts K, Jekabsons K, Saulite L, Grube M, Hsu SH, **Riekstina U**. Skin-derived mesenchymal stem cells form spheroids on chitosan and increase SSEA-1 expression. EMBO conference Stem Cells in Cancer and Regenerative Medicine. Heidelberg, Germany, October 9.-12, 2014.
11. **Una Riekstina** "Mesenchymal stem cell therapy biosafety issues" oral presentation at International conference "From bench to bed: challenges in cancer care", dedicated to 80TH anniversary of Lithuanian society of oncology, Druskininki, Lithiania, September 20-21, 2013.

Awards and scholarships

L'OREAL scholarship „For women in science" in Latvia, 2010

Thesis work led

Supervisor to Vadims Perfejevs doctoral thesis, defended 19.05.2017
Supervisor to Ineta Popena doctoral thesis, expected to defend in 2018
Supervisor to Liga Saulite doctoral thesis, expected to defend 2019

Pedagogical work

Lecture courses in Pharmacy study program, Faculty of Medicine, University of Latvia:

1) Drug metabolism 3 ECTS
2) Pharmaceutical cell biology 3 ECTS
3) Molecular pharmacy 3 ECTS
4) Medical microbiology and immunology 4.5 ECTS

Supervisor of 25 bachelor thesis in Pharmacy and Biology study programms, University of Latvia

Supervisor of 15 master thesis in Pharmacy and Biology study programms, University of Latvia

Participation in scientific bodies

1. Latvian Science Council expert
2. Latvia State Agency of Medicines expert
3. Member of Cell Biology Society, Latvia
4. Member of Pharmacology Society, Latvia
5. Member of Committee of Advanced Therapies (CAT), European Medicine Agency (EMA), representative delegate nominated by Ministry of Health, Republic of Latvia

Institutional positions

1. Member of Promotion board in Medicine, Biology and Pharmacy, Faculty of Medicine, University of Latvia
2. Member of bachelor and master thesis defense board in Pharmacy, Faculty of Medicine, University of Latvia