

Curriculum vitae (CV)

Personal information	
First name, last name	RUTA MUCENIECE
Birth data	24.03.1950
Education	
1976	Provizor, Riga Medical institute, Faculty of Pharmacy
1979-1982	Doctoral studies at Latvian Institute of Organic Synthesis
1992.11.11	Defense: 1982, Tartu University, Estonia, degree of candidate of science in biology
doctor in biology	Decision of Promotion Board of University of Latvia to rename degree as science
1999.18.01	Thesis "Melanocortin receptors: from cloning to selective ligands" Defense for Dr. habil. biol., University of Latvia, Riga, Latvia.
ISCED-2011	
ESCED-A	
860	
Current employment	
Since 2005	Professor in pharmacy, Faculty of Medicine, University of Latvia
Previous employment	
2001-2005	Associated professor, Faculty of Medicine, University of Latvia
1993-2000	Guest researcher Uppsala University, Sweden
1992:1993	Guest researcher, Umeå University, Sweden
1999-2000	Senior researcher of Latvian Institute of Organic Synthesis
1982-1999	Researcher of Latvian Institute of Organic Synthesis
Research experience	
<u>Main research directions:</u> studies on biological activities of synthetic and natural compounds, in vitro pharmacological assays, stem cells, basic pharmacology, ligand-receptor binding.	
2014 up to now	Collaboration project "Cancer exosomes - a new source of gastrointestinal tumor biomarkers and therapeutic targets for identifying a cancer", leading researcher.
2012-2015	National Research Centre "Pharmacy and Biomedicine" scientific leader in the project of University of Latvia (coordinator O. Pugovics, Latvian Institute of Organic Synthesis).
2010-2012	European Social Fund co-financed project Nr.2009/0218/1DP/1.1.1.2.0/09/APIA/VIAA/099 "Environmentally friendly and sustainable crop varieties breeding technology development, development and implementation in practice," senior researcher.
2010-2012	European Social Fund co-financed project 2009/0217/1DP/1.1.1.2.0/09/APIA/VIAA/031 Neuroimmuno regulatory options in the treatment of neurodegenerative diseases with a new type of privileged structures" senior researcher
2009-2012	Latvian Scientific board financed project "Neuropeptides, growth factor and chemokine effects on cell migration, differentiation and functionality in vitro" leader.
<i>International academic research projects:</i>	
2014 up to now	Project "Medical technology education for pharmacy students and practicing pharmacists in the Nordic and Baltic countries" (11 universities), leading

researcher.

2009 up to now PHARMINE I and PHARMINE II project member in Latvia (pharmacy programs of 39 EU state universities)

In Pubmed data basis 71 paper, in SCOPUS – 91 paper,

Recent publications, 2011-2016:

1. Muceniece R, Namniece J, Nakurte I, Jekabsons K, Riekstina U, Jansone B. Pharmacological research on natural substances in Latvia: Focus on lunasin, betulin, polyphenol and phlorizin. *Pharmacol Res.* 2016 Apr 21. pii: S1043-6618(16)30007-X. doi: 10.1016/j.phrs.2016.03.040 (*Thomson Reuters, ISI Web of Science, Pubmed, SCOPUS*)

2. Jansone, B., Dzirkale Z, Jekabsons, K, Pilipenko, V, Beitnere, U, Magure, I., Skumbiņš, R., Kletnieks, U, Vanaga, I., **Muceniece, R.**, Kluša, V.

Spruce needle polyphenols protect against atorvastatin-induced muscle weakness and do not influence central nervous system functions in rats (Article) *Proceedings of the Latvian Academy of Sciences, Section B: Natural, Exact, and Applied Sciences* Vol 70, Issue 1, 1 February 2016, Pages 13-20 (SCOPUS)

3. Rucins, M., Kaldre, D., Pajuste, K., Fernandes, M.A.S., Vicente, J.A.F., Klimaviciusa, L., Jaschenko, E., Kanepe-Lapsa, I., Shestakova, I., Plotniece, M., Gosteva, M., Sobolev, A., **Jansone, B., Muceniece, R., Klusa, V.**, Plotniece, A. Synthesis and studies of calcium channel blocking and antioxidant activities of novel 4-pyridinium and/or N-propargyl substituted 1,4-dihydropyridine derivatives. *Comptes Rendus Chimie* Volume 17, Issue 1, January 2014, Pages 69-80. (*Thomson Reuters, ISI Web of Science, SCOPUS*)

4. Legzdina L., Nakurte I., Kirhnere I., Namniece J., Krigere L., Saleniece K., Beinarovica I., **Muceniece R.** Up to 92 % increase of cancer-preventing lunasin in organic spring barley. *Agronomy for Sustainable Development* January 2014. DOI 10.1007/s13593-013-0203-4. (*Thomson Reuters, ISI Web of Science, SCOPUS*)

5. Legzdiņa, L., Strazdiņa, V., Beinaroviča, I., **Muceniece, R.** Effect of genotype and farming system on concentration of mineral elements in organically and conventionally grown cereals (Article) *Proceedings of the Latvian Academy of Sciences, Section B: Natural, Exact, and Applied Sciences* Volume 68, Issue 3-4, 1 August 2014, Pages 148-157 (SCOPUS).

6. Dzirkale Z, Rumaks J, Svirskis S, Mazina O, Allikalt A, Rinken A, Jekabsons K, **Muceniece R**, Klusa V. Lunasin-induced behavioural effects in mice: Focus on the dopaminergic system. *Behav Brain Res.* 2013 Aug 8;256C:5-9. doi: 10.1016/j.bbr.2013.08.002. (*Thomson Reuters, ISI Web of Science, Pubmed, SCOPUS*)

7. Klusa V, **Muceniece R**, Isajevs S, Isajeva D, Beitnere U, Mandrika I, Pupure J, Rumaks J, Jansone B, Kalvinsh I, Vinters HV. Mildronate enhances learning/memory and changes hippocampal protein expression in trained rats. *Pharmacol Biochem Behav.* 2013 May;106:68-76. doi: 10.1016/j.pbb.2013.03.012. (*Thomson Reuters, ISI Web of Science, Pubmed, SCOPUS*)

8. Nakurte I, Kirhnere I., Namniece J., Saleniece K., Krigere L., Mekss P., Vicupe Z., Bleidere M., Legzdina L., **Muceniece R.** Detection of the lunasin peptide in oats (*Avena sativa* L) Journal of Cereal Science, 2013, 57(3), 319-324. (*Thomson Reuters, ISI Web of Science, SCOPUS*)

9. Skrabule, I., **Muceniece, R.**, Kirhnere, I. Evaluation of Vitamins and Glycoalkaloids in Potato Genotypes Grown Under Organic and Conventional Farming Systems (Article in press) *Potato Research* 2013, Pages 1-18.. (*Thomson Reuters, ISI Web of Science, SCOPUS*)

10. Nakurte, I., Klavins, K., Kirhnere, I., Namniece, J., Adlere, L., Matvejevs, J., Kronberga, A., Kokare, A., Strazdina, V., Legzdina, L., **Muceniece, R.** Discovery of lunasin peptide in triticale (X *Triticosecale* Wittmack). *Journal Cereal Science*, 2012, 56, 510-514. (*Thomson Reuters, ISI Web of Science, SCOPUS*)

11. Parfejevs, V ; Gavare M, Cappiello, L., Grube, M. **Muceniece, R;** Riekstina, U. Evaluation of Biochemical Changes in Skin-Derived Mesenchymal Stem Cells during In Vitro

Neurodifferentiation by FT-IR Analysis. SPECTROSCOPY-AN INTERNATIONAL JOURNAL 2012, Volume: 27 Issue: 5-6 Pages: 315-320(Thomson Reuters, ISI Web of Science, SCOPUS)

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

13. Svalbe B, Zvejniece L, Vavers E, Pugovics O, **Muceniece R**, Liepinsh E, Dambrova M. Mildronate treatment improves functional recovery following middle cerebral artery occlusion in rats. Behav Brain Res. 2011 Sep 12;222(1):26-3(PubMed, Web of Science, SCOPUS).

Conferences

1. V. Klusa, U. Beitnere, V. Pilipemko, J. Pupure, J. Rumaks, S. Svirskis, B. Jansone, R. **Muceniece**, Z. Dzirkale, S. Isajevs, T. van Groen, I. Kadish. Neurodegenerative diseases: problems, drugs, pharmacotherapeutic strategies. International conference in Neuroscience and Pharmacology, ICNP 2015, Riga, Latvia, April 23-24, L6, 16 pp.
2. U. Riekstina, L. Saulite, V. Parfejevs, **R. Muceniece**. Neuroglial properties of skin-derived mesenchymal stem cells and development of in vitro model for drug testing. International conference in Neuroscience and Pharmacology, ICNP 2015, Riga, Latvia, April 23-24, L16, 26 pp.
3. 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. EMBL Heidelberg, Germany, 29 - 31 March 2015 [Frontiers in Stem Cells & Cancer](#)
4. I. Nakurte, K. Jekabsons, U. Riekstina, A. Abols, L. Saulite, M. Otersbergs, A. Line, **R. Muceniece**. Protein analysis of exosomes. Open Readings 2015, 58th Scientific Conference for Students of Physics and Natural Sciences, March 24-27, Vilnius, Lithuania, 102.lpp.
5. Ilona Vanaga, Ilva Nakurte, Ewa Swiezewska, Ausma Korica, Ugis Kletnieks, **Ruta Muceniece**. Separation of polyprenols isolated from *Picea abies* L. spruce needles by ultra-fast liquid chromatography-time of flight massspectrometry. InnovaBalt 28-29. August, Riga, Latvia. 154.lpp.
6. **Ruta Muceniece**, Vladimirs Pilipenko, Raimonds Skumbins, Kaspars Jekabsons, Ilva Nakurte, Zane Dzirkale, Ulrika Beitnere, Jolanta Pupure, Baiba Jansone, Ilona Vanaga, Vija Klusa. Influence of polyprenols on stressed rats' behaviour. XXXV Workshop on Stress, Behaviour and the Heart, Erice, October 1-6, Italy.
7. Ilona Vanaga, Baiba Jansone, Gustavs Latkovskis, Vita Šaripo, Vija Klusa, **Ruta Muceniece**, Ugis Kletnieks. Polyprenol effects on blood biochemical parameters in statin myopathy model rats and humans with statin-induced myopathies. 12th NuGOweek 2015: 7-9th September. MECHANISMS OF A LONG-LIFE HEALTH Barcelona, Spain. 9.
8. Z. Dzirkale, K. Jekabsons, J. Namniece, I. Nakurte, S. Svirskis, J. Rumaks, **R. Muceniece**, V. Klusa. Biologically active seed peptide lunasin and its influence on the CNS. World Congress of Pharmacy & Pharmaceutical Sciences, 73rd International Congress of FIP, Aug 31 – Sept 5, 2013, Dublin, Ireland. Poster N^o.NPR-P-16.
9. Klusa V., **Muceniece R.**, Dzirkale Z., Rumaks J., Svirskis S. Central effects of the peptide lunasin. 45th meeting of the European Brain and Behaviour Society (EBBS), Munich, Germany, September 6 to 9, 2013. P276.
10. Beitnere, U.; Mandrika, I.; Isajevs, S.; Isajeva, D.; Pupure, J.; Svarcbahts, R.; Rumaks, J.; Svirskis, S.; Jansone, B.; **Muceniece, R.**; Kluša, V. INFLUENCE OF MILDRODATE, AN AZA-BUTYROBETAINE ANALOGUE, ON THE EXPRESSION OF TRAINED-RAT HIPPOCAMPAL PROTEINS. 7th International Symposium on Neuroprotection Neurorepair. 2012 The Magdeburg meeting series, May 2-5, 2012, Potsdam, Germany, PP III - 33.

Awards and scholarships

2014	LR Ministry of Health Certificate of Recognition
2009	An original research results, prize of University of Latvia
2009	Pharmacist 2009, prize from Latvian Pharmacists Society
2007	Grindelis Brotherhood Medal for contribution to education of pharmacists and

2005	scientific achievements. L'OREAL, UNESCO and Latvian Academy of Sciences prize "Women in science"
Thesis work led	
<ol style="list-style-type: none"> 1. Edgars Liepinsh. "Studies of pharmacological mechanism of new type of cardioprotective compounds" thesis defended Riga, 2005, 10.June. Pharmacy, pharmaceutical pharmacology 2. Liga Krigere. "Melanocortin receptors and studies on their ligands in vitro" Riga, 2007, 14.December. Pharmacy, pharmaceutical pharmacology 3. Reinis Vilskersts. "Studies of Mildronate protective activity in diabetes-related cardiovascular disease models". thesis defended Riga, 2009, 8.May , Pharmacy, pharmaceutical pharmacology 4. Kristine Saleniece. "Potato and birch bark biologically active substances: the content and the pharmacological mechanism of action", thesis defended Riga, 2010, 10. December. Pharmacy, pharmacognozy. 5. Kristine Vrublevska. "Pharmacovigilance and consumption of psychotropic drugs in Latvia." thesis defended Riga, 2011, 29.April. Pharmacy, pharmaceutical pharmacology 6. Baiba Svalbe. "Studies on neurotropic effects of L-carnitine biosynthesis inhibitor mildronate in experimental models", thesis defended 2014, April 4. Pharmacy, pharmaceutical pharmacology 	
<i>Presently supervised doctoral works</i>	
<ol style="list-style-type: none"> 1. Kaspars Jekabsons "Characterization of human skin mezenchymal cells", Pharmacy, pharmaceutical pharmacology 2. Jana Namniece "Presence of lunasin in cereal genotypes and its pharmacological characterization" Pharmacy, pharmacognozy. Defence planned in 2016. 3. Klavs Pajuste "Synthesis of dihydropyridine analogues with liposomal properties" Pharmacy, pharmaceutical chemistry. 4. Martins Rucins "Synthesis of dihydropyridine analogues with calcium channel antagonist properties", Pharmacy, pharmaceutical chemistry. Defence planned in 2016. 	
Pedagogical work	
<p><i>Supervised master thesis</i> - 53 pharmacy master thesis <i>Supervised bachelor thesis</i> - 32 pharmacy bachelor thesis and 1 biology bachelor thesis. Study courses and credit points (ECTS) Pharmacognozy 6 ECTS Pharmaceuticals 6 ECTS Pharmacokinetics 3 ECTS Pharmaceutical practice 36 ECTS Bachelor thesis 15 ECTS Master thesis 30 ECTS Lectures at Doctoral School and the New Medical School. <i>Curriculum of study programs (accredited)</i> Prepared, licensed and accredited two programs: the Pharmacy bachelor's program and Pharmacy masters program. Accredited pharmacy doctoral study program as an component of the accredited program "Medicine and Pharmacy"</p>	
Participation in scientific bodies	
<p>Since 1991</p> <ol style="list-style-type: none"> 1. Member of Latvian Society of Pharmacologists and a member of the European Society of pharmacologists Federation Association Member (EPHAR), research reports, dissemination of scientific information, participation in seminars and conferences, work at organizing committees of conferences. <p>Since 2002</p> <ol style="list-style-type: none"> 2.Latvian Science Council expert, duties - project expertise. <p>Since 2000</p> <ol style="list-style-type: none"> 3. Member of Latvian University Professors Association , participation in meetings and conferences 	

Since 2007

4 Member of SIA "Grindel brotherhood", participation in seminars and meetings with pharmacy professionals.

Since 2015

5. Member of Educational body of Latvian Pharmacists society, expertise in recognition of pharmacists diploma.

Since 2008

6. Full member of Latvian Academy of Sciences.

Institutional positions

2016 Member of Senate of University of Latvia

Member of Academic Commission of Senate of University of Latvia

Since 2000 Director of pharmacy programs of Faculty of Medicine of University of Latvia

Since 2000 Member of Doctoral council of Faculty of Medicine of University of Latvia

Since 2000 Member of Promotion Council of Faculty of Medicine of University of Latvia

2004-2015 Co-chairmen and member of Trade union committee of University of Latvia

Since 2013 Member of Scientific Committee of Faculty of Medicine of University of Latvia

Since 2000 Member of Faculty of Medicine Study Program Board of University of Latvia

Since 2005 Member of the Professors Council of faculty of Medicine and faculty of Chemistry of University of Latvia.

Since 2003

Co-chairmen of bachelor and master thesis defence board in Pharmacy, Faculty of Medicine, University of Latvia