

Vaidotas STANKEVICIUS, PhD



CONTACT INFO

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MAIN RESEARCH INTERESTS

Epigenetics, DNA modification,
DNA methyltransferases, Chemical
biology, Genome editing

Scientific Skills

- Primary, cancer, mouse embryonic cell line maintenance
- 3D cell culture models
- Mouse xenografts
- CRISPR/Cas9 genome editing
- Electroporation
- Fluorescence microscopy
- Directed mutagenesis
- HPLC-MS analysis
- Protein purification
- RNA, DNA, and protein isolation from cell lines, tumors, other tissues, and blood plasma
- RT-qPCR analysis
- Western blot analysis
- Sanger bisulfite analysis
- miRNA-seq library preparation
- RRBS-seq library preparation
- TOP-seq library preparation
- Illumina platform sequencing
- Ion Torrent platform sequencing
- Functional genome-wide miRNA, mRNA, DNA methylation analysis

Education

2016 – Ph.D. in Biochemistry, Vilnius University

Doctoral thesis: “Dose delivery and microenvironment dependent transcriptomic profiles of tumor cells exposed to ionizing radiation”

2011 – Master’s degree in Biochemistry, Vilnius University

2009 – Bachelor’s degree in Biochemistry, Vilnius University

Scientific Work Experience

2020–present Senior research scientist

Vilnius University, Life Sciences Center, Institute of Biotechnology,
Department of Biological DNA modification

2017–2020 Research scientist

Vilnius University, Life Sciences Center, Institute of Biotechnology,
Department of Biological DNA modification

2016–2017 Junior research scientist

Vilnius University, Life Sciences Center, Institute of Biotechnology,
Department of Biological DNA modification

2011 -2017 Junior research scientist

National Cancer Institute, Laboratory of molecular biology

2011 Senior specialist

Vilnius University, Department of Biochemistry and Molecular biology

Teaching and other commitments

Supervision of Bachelor’s degree students:

Indrė Malalatė. Vilnius university, Biochemistry, 2012;
Linas Kunigėnas. Vilnius university, Molecular biology, 2012;
Rimantė Čeponytė. Vilnius university, Biochemistry, 2014;
Gintautas Vasauskas. Vilnius university, Biochemistry, 2015;
Karolina Kuodytė. Vilnius university, Molecular biology, 2016;
Greta Gudoitytė. Vilnius university, Molecular biology, 2016;
Aurimas Mockus Vilnius university, Molecular biology, 2016;
Elzbieta Budginaitė. Vilnius university, Biochemistry, 2017;
Rimvilė Prokarenkaitė. Vilnius university, Biochemistry, 2017;
Radvilas Bendorys. Vilnius University, Biochemistry, 2022;
Aleksandras Čečkauskas. Vilnius University, Biochemistry, present.

Supervision of Master’s degree students:

Gintautas Vasauskas. Vilnius university, Biochemistry, 2017;
Karolina Kuodytė Vilnius university, Molecular biology, 2018;
Rimvilė Prokarenkaitė. Vilnius university, Biochemistry, 2019;
Bernadeta Masiulionytė. Vilnius university, Molecular biology, 2020 m.
Vincenta Mikulėnaitė. Vilnius university, Biochemistry, 2022;
Radvilas Bendorys. Vilnius University, Biochemistry, present;

Assistant in Molecular Biotechnology laboratory course training

Vilnius University

Reviewer of bachelor’s and Master’s defense works

Biochemistry and Molecular Biology's studies, Vilnius University

Scientific dissemination

“Epigenetic mechanism of aortic wall remodeling in the journal „Cardiology Practice“ Patamsytė V, Butkytė S, **Stankevičius V**, Žukovas G, Vilkaitis G, Lesauskaitė V.

International Conferences

2022 - 4th Danube Conference on Epigenetics

Budapest, Hungary

2020 – Open Readings, Lithuania, Vilnius.

2015 – 21st century genetics: Genes at work, Cold Spring Harbor Laboratory, New York, USA

2014 - EMBO/EMBL Symposium: Tumour microenvironment and signalling Heidelberg, Germany

Project implementer

2017–2022 – ERC-2016-AdG/742654, European Science Council funded project for experienced researchers, "Single-cell temporal tracking of epigenetic DNA marks - Epitrack". The financing institution is EU. Principal investigator prof. S. Klimašauskas. 2017-2020 – research scientist, since 2020 - senior research scientist.

2016-2018 - SEN-16081, "Permanent remodeling of the aorta and dilatative pathology of the ascending aorta: search for epigenetic biomarkers", financing institution - Lithuanian Science Council, principal investigator - habil. Dr. prof. Vaiva Lesauskaite. 2016-2018. Researcher.

2014-2016 MIP-14139, project funded by the Lithuanian Science Council "Spatial cell culture models for tumor research". Project implementer: National Cancer Institute. Junior Researcher.

2013-2015 – VP1-3.1-ŠMM-10-V-02-027 EU structural funding project "Use of cell programming and tumor microenvironment management for personalized therapy in oncology LASTER". Project implementer: National Cancer Institute. Junior Researcher.

2012–2014 – VPI-3.1-ŠMM-08-K-001-005 "Biotechnology and biopharmacy: fundamental and applied research", Human resources development action program project funded by EU structural funds. Junior Researcher.

Project leader

2021-07/08 – 09.3.3.-LMT-K-712–24-0111, "Education of students' abilities to carry out R&D (art research) activities" funded by the Lithuanian Science Council. The project "Study of mouse DNA methyltransferase Dnmt3c activity in vitro".

2018-07 – 2019-04 – 09.3.3-LMT-K-712-10-0107, the scientific project "Education of students' abilities to carry out R&D (art research) activities" funded by the Lithuanian Science Council during the semester. The project „Investigations of the mechanisms of action of bacterial small non-coding RNAs that confer antibiotic resistance to probiotic Lactobacillus casei bacteria."

2018-07/08 – 09.3.3.-LMT-K-712-09-0093, "Education of students' abilities to carry out R&D (art research) activities" funded by the Lithuanian Science Council. The project "Studies of bacterial small non-coding RNAs that confer resistance to antibiotics affecting the cell wall of probiotic L. casei bacteria".

International internships

2013-06/07 - National Center for Radiation Research in Oncology, Dresden, Germany. Laboratory of Molecular and Cellular Radiobiology, group leader prof. Dr. Nils Cordes. Approaching 3D cell culture models and related techniques.

Awards

2009 Reimond, Alberta and Wanda Yunkun Scholarship for outstanding academic achievements

2011 Eileen and Vincent Cadis Foundation Scholarship for outstanding academic achievements

2012 Lithuanian Science Council doctoral scholarship for academic achievements

2013 Lithuanian Science Council doctoral scholarship for academic achievements

2021 Best young scientist award by Lithuanian academy of sciences

Journal editorial board

Guest editor in Applied sciences (<https://www.mdpi.com/journal/applsci>)

Journal peer-reviewing

Cancers (IF=6,13); Cells (IF=4,37); International Journal of Molecular Sciences (IF=4,56); Biomolecules (IF=4,08); Genes (IF=3,76); Molecular Oncology (IF=6,57); International Journal of Environmental Research and Public Health (IF=2,47);

List of publications

1. **Stankevičius V**, Povilas Gibas P, Masiulionytė B, Gasiulė L, Masevičius V, Klimašauskas S, Vilkaitis G. Selective chemical tracking of Dnmt1 catalytic activity in live cells. *Molecular cell* 82(5): 1053-1065. e8
2. Licyte J, Gibas P, Skardziute K, **Stankevičius V**, Ruksenaite A, Kriukiene E. A bisulfite-free approach for base-resolution analysis of genomic 5-carboxylcytosine. *Cell Reports* 32(11): 108155.
3. *Kunigenas L, ***Stankevičius V**, Dulskas A, Budginaite E, Alzbutas G, Stratilatovas E, Cordes N, Suziedelis K. 3D Cell Culture-Based Global miRNA Expression Analysis Reveals miR-142-5p as a Theranostic Biomarker of Rectal Cancer Following Neoadjuvant Long-Course Treatment. *Biomolecules*. 2020; 10(4):613.
4. Gasiulė S, Dreize N, Kaupinis A, Ražanskas R, Čiupas L, **Stankevičius V**, Kapustina Ž, Laurinavičius A, Valius M, Vilkaitis G. Molecular Insights into miRNA-Driven Resistance to 5-Fluorouracil and Oxaliplatin Chemotherapy: miR-23b Modulates the Epithelial–Mesenchymal Transition of Colorectal Cancer Cells. *Journal of Clinical Medicine*. 2019; 8(12):2115.
5. *Gasiulė S, ***Stankevičius V**, Patamsytė V, Ražanskas R, Žukovas G, Kapustina Ž, Žaliaduonytė D, Benetis R, Lesauskaitė V, Vilkaitis G. Tissue-Specific miRNAs Regulate the Development of Thoracic Aortic Aneurysm: The Emerging Role of KLF4 Network. *Journal of Clinical Medicine*. 2019; 8(10):1609.
6. Kuciauskas D, Dreize N, Ger M, Kaupinis A, Zemaitis K, **Stankevičius V**, Suziedelis K, Cicenias J, Graves LM, Valius M. Proteomic Analysis of Breast Cancer Resistance to the Anticancer Drug RH1 Reveals the Importance of Cancer Stem Cells. *Cancers*. 2019; 11(7):972.
7. Rynkeviciene R, Simiene J, Strainiene E, **Stankevičius V**, Usinskiene J, Miseikyte Kaubriene E, Meskinyte I, Cicenias J, Suziedelis K. Non-Coding RNAs in Glioma. *Cancers*. 2019; 11(1):17.
8. Skeberdytė A, Sarapiniene I, Aleksander-Krasko J, **Stankevičius V**, Sužiedėlis K, Jarmalaitė S. Dichloroacetate and salinomycin exert a synergistic cytotoxic effect in colorectal cancer cell lines. *Scientific reports*. 2018; 8(1): 17744.
9. Strainiene E, Binkis M, Urnikyte S, **Stankevičius V**, Sasnauskiene A, Kundrotas G, Kazlauskas A and Suziedelis K. Microenvironment dependent gene expression signatures in reprogrammed human colon normal and cancer cell lines. *BMC Cancer*. 2018 Feb 27; 18:222.
10. Baltruskeviciene E, Schveigert D, **Stankevičius V**, Mickys U, Zvirblis T, Bublevic J, Suziedelis K and Aleknavicius E. Down-regulation of miRNA-148a and miRNA-625-3p in colorectal cancer is associated with tumor budding. *BMC Cancer*. 2017 Sept 1; 17: 607.
11. **Stankevičius V**, Vasauskas G, Rynkeviciene R, Venius J, Pasukoniene V, Aleknavicius E and Suziedelis K. Microenvironment and Dose-Delivery-Dependent Response after Exposure to Ionizing Radiation in Human Colorectal Cancer Cell Lines. *Radiation Research*. 2017 July 7; 188(3):291-302.
12. **Stankevičius V**, Kuodyte K, Schveigert D, Bulotiene D, Paulauskas T, Daniunaite K, Suziedelis K. Gene and miRNA expression profiles of mouse Lewis lung carcinoma LLC1 cells following single or fractionated dose irradiation. *Oncology letters*. 2017 March 20; 13:4190-4200.
13. **Stankevičius V**, Kunigenas L, Stankunas E, Kuodyte K, Strainiene E, Cicenias J, Samalavicius E, Suziedelis K. The expression of cancer stem cell markers in human colorectal carcinoma cells in a microenvironment dependent manner. *Biochemical and Biophysical Research Communications*. 2017 March 18; 484(4):726-733.
14. Cicenias J, Tamosaitis L, Kvederaviciute K, Tarvydas R, Staniute G, Kalyan K, Meskinyte-Kausiliene E, **Stankevičius V**, Valius M. KRAS, NRAS and BRAF mutations in colorectal cancer and melanoma. *Medical Oncology*. January 2017; 34:26.

15. **Stankevicius V**, Vasauskas G, Bulotiene D, Butkyte S, Jarmalaite S, Rotomskis R, Suziedelis K. Gene and miRNA expression signature of Lewis lung carcinoma LLC1 cells in extracellular matrix enriched microenvironment. *BMC Cancer*. 2016 Oct 11;16(1):789.
16. **Stankevicius V**, Vasauskas G, Noreikiene R, Kuodyte K, Valius M, Suziedelis K. Extracellular matrix-dependent pathways in colorectal cancer cells lines reveal targets for anticancer therapies. *Anticancer Research*. Sep 2016. 36(9):4559-67.
17. Cicenas J, Kalyan K, Sorokinas A, Stankunas E, Levy J, Meskinyte I, **Stankevicius V**, A. Kaupinis and Valius M. Roscovitine in cancer and other diseases." *Annals of translational medicine*. 2015; 3(10): 135-135.
18. Dabkeviciene D, Sasnauskiene A, Leman E, Kvietkauskaitė R, Daugelaviciene N, **Stankevicius V**, Jurgelevicius V, Juodka B, Kirveliėne V. mTHPC-mediated photodynamic treatment up-regulates the cytokines VEGF and IL-1 α . *Photochem Photobiol*. 2012 Mar-Apr;88(2):432-9.
19. Dabkeviciene D, **Stankevicius V**, Grazeliene G, Markuckas A, Didziapetriene J, Kirveliėne V. mTHPC-mediated photodynamic treatment of Lewis lung carcinoma in vitro and in vivo. *Medicina (Kaunas)*. 2010;46(5):345-50