# Curriculum Vitae

## PERSONAL INFORMATION


**Borikun Tetiana Viktorivna**

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Gender F
Date of birth 10/08/1991
Citizenship Ukraine


IEPOR
tumor process monitoring and therapy design department

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| Scientific degree (degree, specialty) | Candidate of Biological Sciences, "Oncology" |
| Position | Researcher of the tumor process monitoring and therapy design department |
| Institute | RE Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology National Academy of Sciences of Ukraine |

Educational disciplines in the teaching of which he participated:

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| In the current year | • "Fundamentals of cytomorphology and molecular biological markers of tumor growth" - EL Doctor of Philosophy in specialty 091 "Biology", branch of knowledge 09 "Biology"<br>• "Modern paradigms of personalized therapy in oncology" - EL Doctor of Philosophy in specialty 222 "Medicine", branch of knowledge 22 "Health care"<br>• Cytogenetic and molecular diagnostic methods, EL "Bachelor", specialty 091 "laboratory diagnostics", 4th year, practical lectures, seminars<br>• Analytical genetics, EL "Bachelor", specialty 091 "biology", 4th year, practical lectures, seminars |
| In previous years | • Laboratory practicum in genetics, EL "Bachelor", specialty 091 "Biology", 3rd year, practical, seminars<br>• Population genetics, Genetics of reproduction, EL "Master", specialty 091 "Biology", 1st year, lectures, seminars<br>• "Modern paradigms of personalized therapy in oncology" - Doctor of Philosophy in specialty 222 "Medicine", branch of knowledge 22 "Health care"<br>• "Fundamentals of cytomorphology and molecular biological markers of tumor growth" - EL Doctor of Philosophy in specialty 091 "Biology", branch of knowledge 09 "Biology"<br>• "Fundamentals of theoretical oncology", "Translational oncology" - EL Doctor of Philosophy in specialty 222 "Medicine", field of knowledge 22 "Health care" and 091 "Biology" |

## EXPERIENCE OF SCIENTIFIC AND SCIENTIFIC AND PEDAGOGICAL WORK

| Period | Stage |
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| From 2020 until now | Position: Researcher of the tumor process monitoring and therapy design department |
| | RE Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology National Academy of Sciences of Ukraine, Ukraine, 03022, м. Kyiv, str. Vasylkivska 45, https://iepor.org.ua/ |
| | Teaching and research activity: scientific management of students' course and diploma projects, research activity |
| | Field of activity or sector Education and science |
| From 2017 to 2020 | Position: Junior employee of the tumor process monitoring and therapy design department |
| | RE Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology National Academy of Sciences of Ukraine, Ukraine, 03022, м. Kyiv, str. Vasylkivska 45, https://iepor.org.ua/ |
| | Teaching and scientific activity: scientific activity |
| | Field of activity or sector: Education and science |
| From 2014 to 2017 | Position: Leading engineer of the tumor process monitoring and therapy design department |
| | RE Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology National Academy of Sciences of Ukraine, Ukraine, 03022, м. Kyiv, str. Vasylkivska 45, https://iepor.org.ua/ |

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| | Teaching and scientific activity: scientific activity |
| | Field of activity or sector Education and science |
| From 2011 to 2014 | Position: Engineer of the tumor process monitoring and therapy design department, |
| | RE Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology National Academy of Sciences of Ukraine, Ukraine, 03022, м. Kyiv, str. Vasylkivska 45, https://iepor.org.ua/ |
| | Teaching and scientific activity: scientific activity |
| | Field of activity or sector: Education and science |

## TRAINING AND INTERNSHIP

| Period | Stage |
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| 2020 | RE Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology National Academy of Sciences of Ukraine, Ukraine, 03022, Kyiv, st. Vasylkivska 45, https://iepor.org.ua/ |
| | Received qualification - candidate of biological sciences, specialty: oncology (14.01.07), dissertation "Molecular and biological signs associated with the degree of malignancy of prostate cancer", diploma DK No. 056778 |
| From 2014 to 2017 _ | Postgraduate course of the Institute of Experimental Pathology, Oncology and Radiobiology named after RE. Kavetsky National Academy of Sciences of Ukraine National Academy of Sciences of Ukraine, Ukraine, 03022, Kyiv, st. Vasylkivska 45, https://iepor.org.ua/ |
| From 2012 to 2014 _ | NSC "Institute of Biology" of Taras Shevchenko Kyiv National University; Kyiv, Ukraine |
| | Obtained qualification - Master of Genetics; KV №47473714 |
| From 2009 to 2013 _ | NSC "Institute of Biology" of Taras Shevchenko Kyiv National University; Kyiv, Ukraine |
| | Obtained qualification - Bachelor of Biology ; KV № 4317057 |
| 2022 | The 56th Annual Scientific Meeting of the European Society for Clinical Investigation (ESCI), Bari, Italy |
| 2020 _ | 24th EDUFI WINTER SCHOOL "Recognizing breath-taking links and structures around us" Twarminne, Finland |
| 2019 | 6th Black Sea International Immunology School (BSIIS2019) "The Game of Immunity: the players and the observers" Teteven, Bulgaria |
| 2018 | 8th EACR-OECI Joint Training Course: Molecular Pathology Approach to Cancer, Amsterdam, Netherlands |
| 2017 _ | VACTRAIN Training course "Dendrimers & small molecules applications" Department of General Biophysics, University of Lodz, Lodz, Poland |
| 2017 _ | 9th EFIS-EJI South East European Immunology School (SEEIS2017), Lviv, Ukraine |
| 2015 _ | The Good Clinical Practice (GCP) course (NIH online training) |

## PERSONAL SKILLS

| Name | Level |
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| Language knowledge | Ukrainian: In ilno<br>English: Level B 1 |
| Communication competence | She acquired communication skills during scientific and organizational work as a member of the Council of Young Scientists of the Institute of Experimental Pathology, Oncology and Radiobiology named after RE. Kavetsky National Academy of Sciences of Ukraine and the Council of Young Scientists of the Department of Biochemistry, Physiology and Molecular Biology of the National Academy of Sciences of Ukraine. |
| Organizational/ managerial competence | Management of the stages of the implementation of scientific projects within the framework of grants: predictive non-tumor markers of breast cancer (0115U001378), The role of the epithelial-mesenchymal transition in the mechanisms of the formation of drug resistance of human prostate cancer cells (0117U006124), Development and implementation of a prognostic panel of breast cancer biomarkers for personalized monitoring of tumor progression (0116U006053), Development and implementation of a panel of predictive miRNAs for personalized design of neoadjuvant therapy for breast cancer patients (0119U101242).<br>Iupervision of the scientific works of students interning at IEPOR named after RE. Kavetskyi, participation in the organization of scientific and practical conferences and events for the popularization of science. |
| Computer skills | Experienced user. Fluent in MS Office (Excel, Power Point, Word), use of Graph Pad Prism, Statistica, Adobe Photoshop and Adobe Illustrator programs. I have basic programming skills in Python. Work with the databases The Human Protein Atlas, Expression Atlas, HuRI (The Human Reference Protein Interactome Mapping Project), miRNet v. 2.0, DIANA-miRPath v3.0, miRTargetLink Human, NCBI |

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| Proffesional skills | Methodological arsenal: maintaining cell cultures, working with laboratory animals, methods of molecular biology (nucleic acid extraction, RT-PCR, Q-PCR, methyl-specific PCR, nucleic acid electrophoresis), DNA-comet method, transfection of eukaryotic cells, immunocyto- and histochemical methods, immunofluorescence methods. |
| Areas of professional interests | Study of expression levels of circulating microRNAs in the blood of cancer patients<br>- Study of miRNA expression in non-neoplastic diseases (diabetes, atherosclerosis, etc.) ex vivo<br>- Study of the effect of various materials on inflammatory processes in vitro and in vivo<br>- Epigenetic regulation of metabolism in tumor cells.<br>- Molecular profiling of breast and prostate cancer cells in vitro and ex vivo - search for epigenetic features of different cancer subtypes (DNA methylation, miRNA, lncRNA profile, protein expression).<br>- Prediction of chemosensitivity of tumor cells in vitro and ex vivo based on microRNA expression.<br>- Search for low-toxic substances capable of enhancing the effect of anticancer drugs in vitro and in vivo (toxicity studies) |

ADDITIONAL INFORMATION

| Name | (names of publications, presentations, projects, conferences, seminars, names of awards and prizes, membership in academies, professional and scientific associations , etc.) |
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| Publications | *Co-author of 118 scientific works, including 5 chapters in collective monographs, 49 articles, 6 utility model patents, 5 information sheets and 51 theses*<br><br>**Selected publications:**<br><br>1. Kutsevol N, Kuziv Y, Bezugla T, Virych P, Marynin A, **Borikun T,** Lukianova N , Virych P, Chekhun, V. (2021). Application of new multicomponent nanosystems for overcoming doxorubicin resistance in breast cancer therapy. *Applied Nanoscience* , 1-11. **Q2**<br>2. Lukianova N.Yu., **Borikun TV** ., Chekhun VF Tumor microenvironment-derived miRNAs as prognostic markers of breast cancer. (2019). *Experimental oncology,* 41 *(3),* 242-7.<br>3. Chekhun VF, Todor IN, Lukianova NY, **Borikun TV,** Horbyk DM, Lozovskaya YV, Burlaka AP Influence of ferromagnetic nanocomposite (Ferroplat) on human breast cancer cells of different malignancy degrees: pro/antioxidant balance and energy metabolism. (2018). *Experimental oncology,* 40 *(4),* 268-74. **Q3**<br>4. Chekhun VF, Storchai DM, Todor IN, Lukianova NY, **Borikun TV** Antitumor and genotoxic effects of lactoferrin in Walker-256 tumor-bearing rats. (2018). *Experimental oncology,* 40 *(3),* 200-4. **Q3**<br>5. Zadvornyi TV, **Borikun TV,** Lukianova NY, Chekhun VF Effects of exogenous lactoferrin on phenotypic profile and invasiveness of human prostate cancer cells (DU145 and LNCaP) in vitro. (2018). *Experimental oncology,* 40 *(3),* 184-9. **Q3**<br>6. Kutsevol N, Harahuts Y, Shton I, **Borikun T** , Storchai D, Lukianova N, Chekhun V. (2018). In vitro study of toxicity of hybrid gold-polymer composites . *Molecular Crystals and Liquid Crystals* 671( *1* ), 1-8 . **Q3**<br>7. Chekhun VF, Lukianova NY, Chekhun SV, Bezdieniezhnykh NO, **Borikun TV,** Zadvorniy TV, Polishchuk LZ, Klyusov O.M. Association of CD44+CD24-/low with markers of aggressiveness and plasticity of cell lines and tumors of patients with breast cancer. (2017). *Experimental oncology,* 39 *(3),* 203-11. **Q3**<br>8. Zalutskii IV, Lukianova NY, Storchai DM, Burlaka AP, Shvets YV, **Borikun TV** , Todor IM, Lukashevich VS, Rudnichenko YA, Chekhun VF Influence of exogenous lactoferrin on the oxidant/antioxidant balance and molecular profile of hormone receptor-positive and -negative human breast cancer cells in vitro. (2017). *Experimental oncology,* 39 *(2),* 106-11. **Q3**<br>9. Chekhun VF, Lukianova N.Yu., **Borikun TV,** Zadvorny TV, Mokhir A. Artemisinin modulating effect on human breast cancer cell lines with different sensitivity to cytostatics. (2017). *Experimental oncology,* 39 *(1),* 25-9. **Q3**<br>10. Chekhun VF, Lozovska YV , Naleskina LA, Burlaka AP, Todor IN, Demash DV, Yalovenko TM, Zadvornyi TV, Borikun TV, **Pavlova** AO, Storchay DM, Lukianova N.Yu. Modifying effects of 5-azacytidine on metal-containing proteins profile in Guerin carcinoma with different sensitivity to cytostatics. (2016). *Experimental oncology,* 38 *(4),* 283-7. **Q3**<br>11. Chekhun VF, Zalutskii IV , Naleskina LA, LukianovaN.Yu., **Borikun T.,** Yalovenko TM, SobchenkoS.O., Semak IV, Lukashevich VS Modifying effects of lactoferrin in vitro on molecular phenotype of human breast cancer cells. (2016). *Experimental oncology,* 37 *(3),* 181-6. **Q3** |
| Projects | Status in the project and method/form of participation: responsible executor<br>Name of the project: "The role of the epithelial-mesenchymal transition in the mechanisms of the formation of drug resistance of human prostate cancer cells"<br>Project level: All-Ukrainian |

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| | Organizer: NAS of Ukraine<br>Implementing institution: IEPOR named after RE. Kavetsky National Academy of Sciences of Ukraine, Kyiv, Ukraine<br>Implementation period: 2017-2018<br>Number of participants: 4<br>Funding source: NAS of Ukraine<br><br>Status in the project and method/form of participation: executor<br>Project name; Experimental assessment of the effectiveness of the application and biocompatibility testing algorithm of domestic implant materials based on calcium phosphates for restoring the function of the musculoskeletal system in the case of a malignant process (state registration number 0117U001729)<br>Name of the competition: Targeted program of scientific research of the National Academy of Sciences of Ukraine "Materials for medicine and medical equipment and technologies for their production and use" for 2017-2021.<br>Implementation period: 2017-2021<br>Number of participants: 8<br><br>Status in the project and method/form of participation: responsible executor<br>Project name: The role of markers of bone tissue remodeling in the formation of the degree of malignancy of the most common hormone-dependent neoplasms (state registration number 0118U005468)<br>Name of the competition: Fundamental scientific research on the most important problems of the development of scientific-technical, socio-economic, socio-political, human potential to ensure Ukraine's competitiveness in the world and sustainable development of society and the state<br>Implementation period: 2019-2023<br>Number of participants: 7<br><br>Status: responsible executor<br>Project name: "Development and implementation of a panel of predictive microRNAs for the personalized design of neoadjuvant therapy for breast cancer patients" (state registration number 0119U101242)<br>Name of the competition: Scientific and technical projects of institutions of the NAS of Ukraine in 2019<br>Implementation period: 2019<br>Number of participants: 5 |
| Conferences | 1. Tumor microenvironment - derived miRNAs as prognostic markers of malignant and benign breast disease. November 21-22, 2019 — II International Conference "Tumor and the Organism: New Aspects of an Old Problem" Kyiv. Lukianova N.Yu., **Borikun TV,** Chekhun VF (Publication of abstracts)<br>2. Expression of bone remodeling markers in human breast and prostate cancer cell lines. XIV congress of oncologists and radiologists of Ukraine: materials of the congress, Kyiv. September 30 - October 2, 2021 - K., 2021. - P. 364. **Borikun T.V.** , Zadvorny T.V., Lykhova O.O., Lukyanova N.Yu., Chehun V.F. (Oral report)<br>3. Diagnostic and prognostic value of tumor-associated miRNA-21, 125b and -221 in patients with the most common hormone-dependent malignant neoplasms. October 12-13, 2021 — Scientific and practical conference of young scientists "Modern oncology: from basic research to new therapeutic approaches. **Borikun T.V.,** Zadvorny T.V., Lukyanova N.Yu., Chehun V.F. (Oral report)<br>4. P reductive value of mirna-99b, -210 and -377 expression for targeting therapy in patients with RCC 4 1st Congress of the Société Internationale d'Urologie (SIU)&10th Emirates International Urological Conference of the Emirates Urological Society (EUS) 10-14 November 2021, Dubai, UAE. **Borikun T.** , Vitruk I., Semko S., Voylenko O., Stakhovsky E., Yalovenko T., Rossylna O. (Poster report)<br>5. Mast cells as a prognostic marker in prostate cancer EACR-Worldwide Cancer Research Meeting "The Structural Microenvironment: Breaking down the walls of cancer", Worldwide : 22 - 23 February 2022. Zadvornyi T, Borikun T, Lukianova N (Publication of **theses** )<br>6. The immunoregulatory genes expression in prostate cancer 7th Annual international remote conference Science and Society Conference 2022, Worldwide: 26-27 February & 5 March 2022. Zadvornyi T, Borikun **T** , Lukianova N (Oral presentation)<br>7. Prognostic value of miR-29b and miR-142 as markers of lymphocyte differentiation in marrow of patients with acute leukemia. 7th Annual international remote conference Science and Society Conference 2022, Worldwide: 26-27 February & 5 March 2022. **Borikun TV** , Lukianova |

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| | NY (Oral presentation)<br>8. Dysregulation of extracellular matrix genes expression as a prognostic marker of prostate cancer course. Riga Stradiņš University International Student Conference in "Health and Social Sciences" 2022: March 24-25, 2022 Riga, Latvia. **Borikun T** , Livandovska S, Selezinka A (Oral report)<br>9. Predictive significance of tumor-associated miRNA-21 and-221 expression in patients with prostate cancer. Meeting Abstract \| 2022 ASCO Annual Meeting I, Journal of Clinical Oncology 40, no. 16_suppl (June 01, 2022) e17015-e170151. Tryfonyuk L, **Borikun T** , Zadvornyi T, Rossylna O, Pavlukovich N (Publication of theses)<br>10. The features of the tumor microenvironment in patients with prostate cancer with different risk progression. The 56th Annual Scientific Meeting of the European Society for Clinical Investigation (ESCI), Bari, Italy, 08/06/2022-10/06/2022, Eur J Clin Invest. 2022; 52: 140: 6ASM-00051 Zadvornyi T, Lukianova N, **Borikun T** , Chekjun V (Oral report)<br>11. Association of MMP-8 Gene Expression and its regulatory Molecules with Clinical Pathological Features of Prostate Cancer Chance for Science Conference 2022, Sep 8-9, 2022. **Borikun T** , Livandovska S, Lukianova N (Oral presentation) |
| Awards | 2022-2023 Scholar of the National Academy of Sciences of Ukraine Scholarship for young scientists<br>2021 Laureate of the Prize of the President of Ukraine for young scientists<br>2020-2021 Scholar of the National Academy of Sciences of Ukraine Scholarship for young scientists<br>2020 Travel grant for participation at the 24th EDUFI WINTER SCHOOL "Recognizing breath-taking links and structures around us"<br>2019 Travel grant for participation at the 6th Black Sea International Immunology School (BSIIS2019) "The Game of Immunity: the players and the observers" ( Teteven , Bulgaria )<br>2018 EACR-Worldwide Cancer Research Meeting Bursary for participation at the 8th EACR-OECI Joint Training Course: Molecular Pathology Approach to Cancer ( Amsterdam , the Netherlands )<br>2018 Scholar Scholarships for young scientists from EFIS for participation at the 13th EFIS-EJI Tatra Immunology Conference ( Strabske Pleso , Slovakia )<br>2018 Gratitude of the Holosiiv District Administration of Kyiv for achievements in the development of sciences<br>2017 EFIS-EJI travel grant for participation at the 9th EFIS/EJI South East European Immunology School ( Lviv , Ukraine )<br>2017 Travel grant for participation in The III Swedish-Ukrainian meeting on cancer diseases ( Stockholm , Sweden )<br>2017-2018 Scholar of the Scholarship of the President of Ukraine for young scientists of the National Academy of Sciences of Ukraine |
| Membership in scientific societies | Since 2017 – Member of the Ukrainian Biochemical Society, indirectly Member of the Federation of the European Biochemical Societies ( FEBS ), Europe<br>Since 2017 - a member of the UKRAINIAN ASSOCIATION OF SPECIALISTS IN IMMUNOLOGY, ALLERGOLOGY AND IMMUNOREHABILITATION (UTIAI), indirectly Member of the European Federation of Immunological Societies (EFIS) |
| Citation | h-index (Scopus) 8, 169 citations |