

Maciej Wnuk, Ph.D, D.Sc.

Associate professor

Department of Biology

University of Rzeszow

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Education and scientific career:

2015, Academic degree: Habilitation (Doctor of Science) in biological sciences (with honors), University of Warmia and Mazury, Faculty of Biology and Biotechnology, Olsztyn

2008, Academic degree: Ph.D. (doctor degree) in agricultural sciences, National Research Institute of Animal Production, Cracow-Balice.

2004, Academic degree: M.Sc. (Master of Science in biology) (with honors), Faculty of Mathematics and Nature, University of Rzeszow, Rzeszow.

2002, Academic degree: B.Sc. (Bachelor of Science), Faculty of Mathematics and Nature, University of Rzeszow, Rzeszow.

Information on employment in scientific institutions

2021 until now - Associate professor, Department of Biology, University of Rzeszow

2016-2021- Associate professor, Department of Biotechnology, University of Rzeszow.

2008-2016 - Assistant professor, Department of Genetics, Institute of Applied Biotechnology and Basic Sciences, University of Rzeszow.

2004-2008 - Research and teaching assistant, Department of Genetics, Faculty of Biotechnology, University of Rzeszow.

2008-2019 Head of Genetics Department and several other administration function (v-ce dean, v-ce director, director, dean)

2009 - 2015 - Coordinator of European Union Project entitled 'Centre of Applied Biotechnology and Basic Sciences' within Operational Program Development of Eastern Poland, Action I.3, amount of funding 19 600 000 Polish zloty.

2009-2013 - Coordinator of European Union Project entitled 'Students of biotechnology program as an accelerator of knowledge-based economy' within Operational Program Human Capital 4.1.2, amount of funding 2 500 000 Polish zloty.

Selected Participation as PI in research projects (last 5 years)

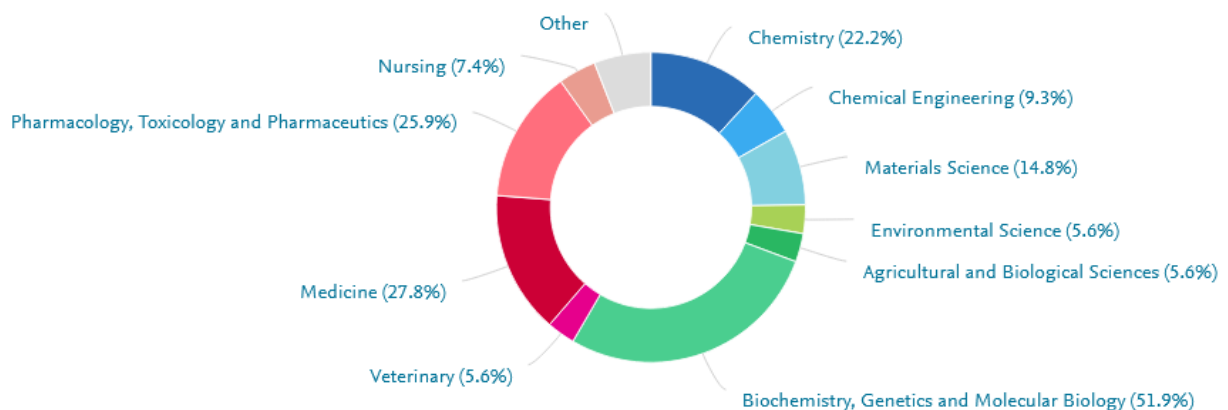
On-going projects

- The role of DNMT2 methyltransferase in the regulation of genomic plasticity in cancer cells. No. 2017/25/B/NZ2/01983, Founding organization: NCN, Amount of funding: 1 432 920 PLN Period of the project: from 2018-01-03 to 2022
- Electrospun nanofiber-based nanoplatform for delivery of new nutraceutical derivatives to eliminate chemotherapy-induced senescent breast cancer cells 2021/43/B/NZ7/02129 Founding organization: NCN, Amount of funding: 1 441 400 PLN Period of the project: from 2022-07-15 to 2026

Finished

- Genetic characteristic of selected yeast *Saccharomyces cerevisiae* strains including genomic instability analysis and chromosome aberration WND-RPPK-01 .03. 00-18-038/13 Marshal the Sub-Carpathian Governments. Founding organization: Regional Operational Programme of Podkarpackie Voivodeship for 2007-2013 years. Priority 1: Competitive and Innovative Economy. Action 1.3 Regional Innovation System Amount of funding 534 899 PLN. Period of the project: from 2014-05-30 to 2015-07-30
- Identification of new risks associated with the use of gold, silver, silica nanoparticles and nanodiamonds on the process of premature senescence of human cells 19/POIG/GP/2013 Founding organization: Ministry of Science and Higher Education, Generation of the Future (student project - my role as a supervisor) Amount of funding : 88 100 PLN: . Period of the project from 2013-06-11 to 2014-12-11
- Construction and application of a panel of whole chromosome painting probes (WCPPs) to study aging process in a model organism *Saccharomyces cerevisiae*. Iuventus Plus 0607/IP1/2011/71. Founding organization: Ministry of Science and Higher Education amount of funding: 250 000 PLN, Period of the project: from 2012-03-30 to 2014-03-29

Main research subject area (Topics & Topic Clusters)



Performance indicators

Outputs in Top Citation Percentiles

[+ Add to Reporting](#)

Publications in top 10% most cited worldwide

Show as field-weighted



[> Analyze in more detail](#)

International Collaboration

[+ Add to Reporting](#)

Publications co-authored with researchers in other countries/regions



[> Analyze in more detail](#)

Publications in Top Journal Percentiles

[+ Add to Reporting](#)

Publications in top 10% journals

by



[> Analyze in more detail](#)

Academic-Corporate Collaboration

[+ Add to Reporting](#)

Publications with both academic and corporate affiliations



[> Analyze in more detail](#)

Author or co-author over 100 publications in peer-reviewed international scientific journals (number of citations according to Scopus 1823, H index =24).

1. Betlej G, Błoniarczyk D, Lewińska A, **Wnuk M**. Non-targeting siRNA-mediated responses are associated with apoptosis in chemotherapy-induced senescent skin cancer cells. *Chem Biol Interact*. 2022 Nov 5;369:110254. doi: 10.1016/j.cbi.2022
2. Kulpa-Greszta M, **Wnuk M**, Tomaszewska A, Adamczyk-Grochala J, Dziedzic A, Rzeszutek I, Zarychta B, Błoniarczyk D, Lewińska A, Pązik R. Synergic Temperature Effect of Star-like Monodisperse Iron Oxide Nanoparticles and Their Related Responses in Normal and Cancer Cells. *J Phys Chem B*. 2022 Oct 27;126(42):8515-8531. doi: 10.1021/acs.jpcc.2c06061
3. Gierlicka I, Rattan SIS, **Wnuk M**. Perspectives on using bacteriophages in biogerontology research and interventions. *Chem Biol Interact*. 2022 Oct 1;366:110098. doi: 10.1016/j.cbi.2022.110098
4. Betlej G, Ząbek T, Lewińska A, Błoniarczyk D, Rzeszutek I, **Wnuk M**. RNA 5-methylcytosine status is associated with DNMT2/TRDMT1 nuclear localization in osteosarcoma cell lines. *J Bone Oncol*. 2022 Jul 30;36:100448. doi: 10.1016/j.jbo.2022.100448
5. Lewińska A, Wróbel K, Błoniarczyk D, Adamczyk-Grochala J, Wołowicz S, **Wnuk M**. Lapatinib- and fulvestrant-PAMAM dendrimer conjugates promote apoptosis in chemotherapy-induced senescent breast cancer cells with different receptor status. *Biomater Adv*. 2022 Sep;140:213047. doi: 10.1016/j.bioadv.2022.213047
6. Onorato G, Fardella F, Lewinska A, Gobbo F, Tommasini G, **Wnuk M**, Tino A, Moros M, Antognazza MR, Tortiglione C. Optical Control of Tissue Regeneration through Photostimulation of Organic Semiconducting Nanoparticles. *Adv Healthc Mater*. 2022 Oct;11(19):e2200366. doi: 10.1002/adhm.202200366
7. Machnicki MM, Rzepakowska A, Janowska JI, Pepek M, Krop A, Pruszczyk K, Stawinski P, Rydzanicz M, Grzybowski J, Gornicka B, **Wnuk M**, Ploski R, Osuch-Wojcikiewicz E, Stoklosa T. Analysis of Mutational Profile of Hypopharyngeal and Laryngeal Head and Neck Squamous Cell Carcinomas Identifies *KMT2C* as a Potential Tumor Suppressor. *Front Oncol*. 2022 May 19;12:768954. doi: 10.3389/fonc.2022.768954
8. Filip K, Lewińska A, Adamczyk-Grochala J, Marino Gammazza A, Cappello F, Lauricella M, **Wnuk M**. 5-Azacytidine Inhibits the Activation of Senescence Program and Promotes Cytotoxic Autophagy during Trdmt1-Mediated Oxidative Stress Response in Insulinoma β -TC-6 Cells. *Cells*. 2022 Apr 4;11(7):1213. doi: 10.3390/cells11071213
9. Gierlicka I, Kasprzyk I, **Wnuk M**. Imaging Flow Cytometry as a Quick and Effective Identification Technique of Pollen Grains from *Betulaceae*, *Oleaceae*, *Urticaceae* and *Asteraceae*. *Cells*. 2022 Feb 9;11(4):598. doi: 10.3390/cells11040598
10. Lewińska A, Przybylski P, Adamczyk-Grochala J, Błoniarczyk D, Litwinienko G, **Wnuk M**. Senolysis-Based Elimination of Chemotherapy-Induced Senescent Breast Cancer Cells by Quercetin Derivative with Blocked Hydroxy Groups. *Cancers (Basel)*. 2022 Jan 25;14(3):605. doi: 10.3390/cancers14030605
11. Betlej G, Lewińska A, Adamczyk-Grochala J, Błoniarczyk D, Rzeszutek I, **Wnuk M**. Deficiency of TRDMT1 impairs exogenous RNA-based response and promotes retrotransposon activity during long-term culture of osteosarcoma cells. *Toxicol In Vitro*. 2022 Apr;80:105323. doi: 10.1016/j.tiv.2022.105323
12. Deregowska A, **Wnuk M**. RAP1/TERF2IP-A Multifunctional Player in Cancer Development. *Cancers (Basel)*. 2021 Nov 27;13(23):5970. doi: 10.3390/cancers13235970
13. Antoniuk MA, Pązik R, Bazylińska U, Wiwatowski K, Tomaszewska A, Kulpa-Greszta M, Adamczyk-Grochala J, **Wnuk M**, Maćkowski S, Lewińska A, Nyk M. Multimodal polymer

- encapsulated CdSe/Fe₃O₄ nanoplatform with improved biocompatibility for two-photon and temperature stimulated bioapplications. *Mater Sci Eng C Mater Biol Appl*. 2021 Aug;127:112224. doi: 10.1016/j.msec.2021.112224
14. Potocki L, Karbarz M, Adamczyk-Grochala J, Kasprzyk I, Pawlina-Tyszko K, Lewinska A, **Wnuk M**. Silver birch pollen-derived microRNAs promote NF-κB-mediated inflammation in human lung cells. *Sci Total Environ*. 2021 Aug 8;800:149531. doi: 10.1016/j.scitotenv.2021.149531
 15. Bloniarz D, Adamczyk-Grochala J, Lewinska A, **Wnuk M**. The lack of functional DNMT2/TRDMT1 gene modulates cancer cell responses during drug-induced senescence. *Aging (Albany NY)*. 2021 Jun 17;13(12):15833-15874. doi: 10.18632/aging.203203
 16. Rogóż J, Podbielska M, Szpyrka E, **Wnuk M**. Characteristics of Dietary Fatty Acids Isolated from Historic Dental Calculus of the 17th- and 18th-Century Inhabitants of the Subcarpathian Region (Poland). *Molecules*. 2021 May 15;26(10):2951. doi: 10.3390/molecules26102951
 17. Wnuk, M., Lewinska, A. Imaging flow cytometry-based analysis of bacterial profiles in milk samples. *Food and Bioproducts Processing*, 2021, 128: 102–108
 18. Domin A, Zabek T, Kwiatkowska A, Szmatoła T, Deregowska A, Lewinska A, Mazur A, **Wnuk M**. The Identification of a Novel Fucosidosis-Associated FUCA1 Mutation: A Case of a 5-Year-Old Polish Girl with Two Additional Rare Chromosomal Aberrations and Affected DNA Methylation Patterns. *Genes (Basel)*. 2021 Jan 8;12(1):74. doi: 10.3390/genes12010074
 19. **Wnuk M**, Slipek P, Dziedzic M, Lewinska A. The Roles of Host 5-Methylcytosine RNA Methyltransferases during Viral Infections. *Int J Mol Sci*. 2020 Oct 31;21(21):8176. doi: 10.3390/ijms21218176.
 20. Ząbek T, Semik-Gurgul E, Ropka-Molik K, Szmatoła T, Kawecka-Grochocka E, Zalewska M, Kościuczuk E, **Wnuk M**, Bagnicka E. Short communication: Locus-specific interrelations between gene expression and DNA methylation patterns in bovine mammary gland infected by coagulase-positive and coagulase-negative staphylococci. *J Dairy Sci*. 2020 Nov;103(11):10689-10695. doi: 10.3168/jds.2020-18404.
 21. Deregowska A, Pepek M, Pruszczyk K, Machnicki MM, **Wnuk M**, Stokłosa T. Differential Regulation of Telomeric Complex by BCR-ABL1 Kinase in Human Cellular Models of Chronic Myeloid Leukemia-From Single Cell Analysis to Next-Generation Sequencing. *Genes (Basel)*. 2020 Sep 29;11(10):1145. doi: 10.3390/genes11101145
 22. Moros M, Lewinska A, Merola F, Ferraro P, **Wnuk M**, Tino A, Tortiglione C. Gold Nanorods and Nanoprisms Mediate Different Photothermal Cell Death Mechanisms In Vitro and In Vivo. *ACS Appl Mater Interfaces*. 2020;12(12):13718-13730. doi:10.1021/acsami.0c02022
 23. Lewinska A, Sodagam L, Bloniarz D, Siems K, **Wnuk M**, Rattan SIS. Plant-Derived Molecules α-Boswellic Acid Acetate, Praeruptorin-A, and Salvianolic Acid-B Have Age-Related Differential Effects in Young and Senescent Human Fibroblasts In Vitro. *Molecules*. 2019;25(1):141. Published 2019 Dec 29. doi:10.3390/molecules25010141
 24. Lewinska A, Adamczyk-Grochala J, Bloniarz D, Horeczy B, Zurek S, Kurowicki A, Woloszczuk-Gebicka B, Widenka K, **Wnuk M**. Remifentanyl preconditioning protects against hypoxia-induced senescence and necroptosis in human cardiac myocytes in vitro. *Aging (Albany NY)*. 2020;12(14):13924-13938. doi:10.18632/aging.103604
 25. Pązik R, Lewińska A, Adamczyk-Grochala J, Kulpa-Greszta M, Kłoda P, Tomaszewska A, Dziedzic A, Litwienienko G, Noga M, Sikora D, **Wnuk M**. Energy Conversion and Biocompatibility of Surface Functionalized Magnetite Nanoparticles with Phosphonic Moieties [published correction appears in *J Phys Chem B*. 2020 Sep 2;:]. *J Phys Chem B*. 2020;124(24):4931-4948. doi:10.1021/acs.jpccb.0c02808

26. Kuna E, Bocian A, Hus KK, Petrilla V, Petrillova M, Legath J, Lewinska A, **Wnuk M**. Evaluation of Antifungal Activity of *Naja pallida* and *Naja mossambica* Venoms against Three *Candida* Species. *Toxins (Basel)*. 2020;12(8):E500. Published 2020 Aug 4. doi:10.3390/toxins12080500
27. Adamczyk-Grochala J, **Wnuk M**, Duda M, Zuczek J, Lewinska A Treatment with Modified Extracts of the Microalga *Planktochlorella nurekis* Attenuates the Development of Stress-Induced Senescence in Human Skin Cells. *Nutrients*. 2020;12(4):1005. Published 2020 Apr 6. doi:10.3390/nu12041005
28. Szpyrka E, Broda D, Oklejewicz B, Podbielska M, Slowik-Borowiec M, Jagusztyn B, Chrzanowski G, Kus-Liskiewicz M, Duda M, Zuczek J, **Wnuk M**, Lewinska A. A Non-Vector Approach to Increase Lipid Levels in the Microalga *Planktochlorella nurekis*. *Molecules*. 2020;25(2):270. Published 2020 Jan 9. doi:10.3390/molecules25020270
29. Lewinska A, Adamczyk-Grochala J, Bloniarz D, Olszowka J, Kulpa-Greszta M, Litwinienko G, Tomaszewska A, **Wnuk M**, Pazik R. AMPK-mediated senolytic and senostatic activity of quercetin surface functionalized Fe₃O₄ nanoparticles during oxidant-induced senescence in human fibroblasts. *Redox Biol*. 2020 Jan;28:101337. doi: 10.1016/j.redox.2019.101337.
30. Schwarzbacherová V, **Wnuk M**, Deregowska A, Holečková B, Lewinska A. In vitro exposure to thiacloprid-based insecticide formulation promotes oxidative stress, apoptosis and genetic instability in bovine lymphocytes. *Toxicol In Vitro*. 2019 Dec;61:104654. doi: 10.1016/j.tiv.2019.104654]
31. Lewinska, A., **Wnuk, M**. Yeast models in biogerontological studies *Encyclopedia of Biomedical Gerontology*, 2019, pp. 443–452
32. Szychowski KA, Kaminsky DV, Leja ML, Kryshchshyn AP, Lesyk RB, Tobiasz J, **Wnuk M**, Pomianek T, Gmiński J. Anticancer properties of 5Z-(4-fluorobenzylidene)-2-(4-hydroxyphenylamino)-thiazol-4-one. *Sci Rep*. 2019 Jul 23;9(1):10609. doi: 10.1038/s41598-019-47177-6.
33. Potocki L, Kuna E, Filip K, Kasprzyk B, Lewinska A, **Wnuk M**. Activation of transposable elements and genetic instability during long-term culture of the human fungal pathogen *Candida albicans*. *Biogerontology*. 2019 Aug;20(4):457-474. doi: 10.1007/s10522-019-09809-2. Epub 2019 Apr 15.
34. Lewinska A, Klukowska-Rötzler J, Deregowska A, Adamczyk-Grochala J, **Wnuk M**. c-Myc activation promotes cofilin-mediated F-actin cytoskeleton remodeling and telomere homeostasis as a response to oxidant-based DNA damage in medulloblastoma cells. *Redox Biol*. 2019 Jun;24:101163. doi: 10.1016/j.redox.2019.101163. Epub 2019 Mar 13.
35. Sodagam L, Lewinska A, Kwasniewicz E, Kokhanovska S, **Wnuk M**, Siems K, Rattan SIS. Phytochemicals Rosmarinic Acid, Ampelopsin, and Amorfrutin-A Can Modulate Age-Related Phenotype of Serially Passaged Human Skin Fibroblasts in vitro. *Front Genet*. 2019 Feb 21;10:81. doi: 10.3389/fgene.2019.00081. eCollection 2019.
36. Potocki L, Depciuch J, Kuna E, Worek M, Lewinska A, **Wnuk M**. FTIR and Raman Spectroscopy-Based Biochemical Profiling Reflects Genomic Diversity of Clinical *Candida* Isolates That May Be Useful for Diagnosis and Targeted Therapy of Candidiasis. *Int J Mol Sci*. 2019 Feb 25;20(4). pii: E988. doi: 10.3390/ijms20040988.
37. Lewinska A, Bocian A, Petrilla V, Adamczyk-Grochala J, Szymura K, Hendzel W, Kaleniuk E, Hus KK, Petrillova M, **Wnuk M**. Snake venoms promote stress-induced senescence in human fibroblasts. *J Cell Physiol*. 2019 May;234(5):6147-6160. doi: 10.1002/jcp.27382. Epub 2018 Oct 14
38. Semik-Gurgul E, Ząbek T, Fornal A, **Wnuk M**, Pawlina-Tyszko K, Gurgul A, Klukowska-Rötzler J, Koch C, Mählmann K, Bugno-Poniewierska M. DNA methylation patterns of the

- S100A14, POU2F3 and SFN genes in equine sarcoid tissues. *Res Vet Sci.* 2018 Aug;119:302-307. doi: 10.1016/j.rvsc.2018.07.006.
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 40. Molon M, Panek A, Molestak E, Skoneczny M, Tchorzewski M, **Wnuk M**. 2018. Daughters of the budding yeast from old mothers have shorter replicative lifespans but not total lifespans. Are DNA damage and rDNA instability the factors that determine longevity? *Cell Cycle.* <https://doi.org/10.1080/15384101.2018.1464846>
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 42. Moros, M., Lewinska, A., Onorato, G., Antognazza, M.R., Di Maria, F., Blasio, M., Lanzani, G, Tino, A., **Wnuk, M.**, Tortiglione, C. Light-triggered modulation of cell antioxidant defense by polymer semiconducting nanoparticles in a model organism MRS *Communications* 2018; 8(3): 918-925
 43. Lewińska A, Adamczyk-Grochala J, Deręgowska A, **Wnuk M**. 2017. Sulforaphane-induced cell cycle arrest and senescence are accompanied by DNA hypomethylation and changes in microRNA profile in breast cancer cells.. *Theranostics.* 7(14):3461-3477.
 44. Sodagam L, Lewińska A, **Wnuk M**, Rattan S. 2017. Chronic exposure to rapamycin and episodic serum starvation modulate ageing of human fibroblasts in vitro. *Biogerontology.* Oct;18(5):841-854.
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 48. Lewińska A, **Wnuk M**. 2017. Helicobacter pylori-induced premature senescence of extragastric cells may contribute to chronic skin diseases. *Biogerontology.* Apr;18(2):293-299.
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Registered patents

- **Maciej Wnuk**, Anna Lewinska. 2013-07-01 (date of registration). An in situ type genetic probe to detect yeast chromosome XII on microscopic slide and its preparation [in Polish]. Applicants: University of Rzeszów. Polish Patent Office, Poland, registration number P.404526, patent number Pat.229404

- **Maciej Wnuk**, Aleksandra Kwiatkowska, Beata Miedziak, Jakub Kaplan, Adam Jaworski, Mariusz Worek. 2013-07-29 (date of registration). Diagnostic genomic in situ probe to detect nuclear DNA Trichophyton mentagrophytes, its preparation and visualization of Trichophyton mentagrophytes on microscopic slide [in Polish]. Applicants: University of Rzeszów, Polish Patent Office, Poland, registration number P.404901, Patent number Pat.229862
- Żuczek Janusz; Potocki Leszek; Oklejewicz Bernadetta; Kuna Ewelina; Szpyrka Ewa ; Podbielska Magdalena; Broda Daniel; Chrzanowski Grzegorz; Wojtuń Alicja; Karbarz Małgorzata; Kozirowski Marek; Duda Magdalena; **Wnuk Maciej**. 16.12.2019 r A method of producing a natural biocomposite from unicellular microalgae of the genus Planktochlorella sp. As a modulator of the growth of microorganisms using the phenomenon of metabolism photo reprogramming. Applicants: Bioorganic Technologies sp. z o.o. Polish Patent Office, Poland, registration number P.429620.
- Oklejewicz Bernadetta; Jagusztyn Bartosz; Broda Daniel; Kuna Ewelina; Potocki Leszek; Lewińska Anna; Kus-Liśkiewicz Małgorzata; Adamczyk-Grochala Jagoda; Szpyrka Ewa; Podbielska Magdalena; Stawarczyk Kinga; Kozioł Katarzyna; Karbarz Małgorzata; Kozirowski Marek; Duda Magdalena; Żuczek Janusz, **Wnuk Maciej**. 27.06.2018 The method of non-vector modification of eukaryotic unicellular algae with a mixture of colchicine and cytochalasin B towards increasing the size of cells, Applicants: Bioorganic Technologies sp. z o.o. P.426103 (WIPO ST 10/C PL426103) Patent number: Pat.236542

Patent applications (in the field of biotechnology),

- P.436255. Ruchała Justyna, Nikiel Antoni, **Wnuk Maciej**. Obtaining and using a pigment product based on Serratia marcescens extract as a plastic and artistic material 12/04/2020 (registration date). Applicants: University of Rzeszów.
- P.437257 Ząbek Tomasz, Domin Agnieszka, Mazur Artur, **Wnuk Maciej** Test detecting a homozygous CTTACCTGT deletion in the human FUCA1 gene and the method of its execution. 10.03 2021 2020 (date of registration) Applicants: Institute of Animal Production / University of Rzeszów
- P.442574 Andrzej Hudecki, Aleksandra Kolano-Burian, Gabriela Betlej, Iwona Rzeszutek, Anna Lewinska, **Maciej Wnuk**. Method of obtaining bioactive woven for use in anti-cancer bandage material 19.10.2022

Member of editorial board and research organization

- Ordinary member of the Committee of Biotechnology of the Polish Academy of Sciences 2020-2022
- Biogerontology member of editorial board
- Genes member of editorial board
- Member of PTBIOCH

Short term scholarship

- Instituto de Nanociencia y Materiales de Aragón(INMA) (granted visiting scholarship 01.03.2022-30.03.2022) supported by Uniform Program Integrated at the University of Rzeszów (title of research "Functionalized nanomaterials for targeting and clearance senescent cells as a new tool in precision medicine" supervisor Dr Maria Moros)
- 2012 Guelph University, Canada, 2012, two week scientific training in embryo culture and in vitro fertilization (IVF) supported by European Union project "University of Rzeszow – "Modernity and Future of the Region"

- University of Pecs, Faculty of Sciences, Department of General and Environmental Microbiology, Pecs, Hungary, 2012, one month scientific training within Polish-Hungarian scientific project "Redox status as an important determinant of yeast biology" supported by MNiSW
- National Research Institute of Animal Production (performed researches to PhD thesis) 2004-2008

Prizes:

- Prize for invention: silver medal Brussels Innova, the International Exhibition of Invention, Research and New Technologies (13-15 November 2014, Brussels, Belgium) - (for invention entitled "An in situ type genetic probe to detect yeast chromosome XII on microscope slide and its preparation [in Polish]")
- Award for young researcher, Foundation for Polish Science - programme START, Warsaw, 2011
- Award for young researcher, Foundation for Polish Science - programme START, Warsaw, 2010

PhD supervisor

- Anna Deręgowska "Evaluation of the telomeric complex as a potential prognostic and / or predictive markers in chronic myeloid leukemia" (second co-supervisor prof Tomasz Stokłosa) on-going
- Ewelina Kuna "The role of non-enzymatic post-translational protein modifications in promoting chromosomal instability in *Candida albicans*" 2020

PhD Co-supervisor

Mariusz Worek "Molecular diagnostics and epidemiology of dermatophytes isolated from patients of the Podkarpackie province " 2015