

## **Dmytryi Zubov**

**Head of Vitality laboratory. Biologist-biotechnologist for the production of stem cells products.**



**Experience:** 22 years

**Professional skills:**

- Planning, arrangement, launch and management of biotechnology laboratory for the production of biomedical products based on human or animal cells.
- Possession (work with hands) and formulation (training of personnel) of methods for culturing human or animal cells (primary cultures, transplanted lines).
- Possession and setting (training of personnel) of techniques for the production of biomedical products based on human or animal cells with the establishment of quality criteria for such a product.

**Education:**

- Donetsk State University (Donetsk), department of biology, specialist diploma with honors, graduated in 1999.
- NMAPO them. P.L. Shupika, specialty "Laboratory genetics" graduated in 2018.
- Institute of Molecular Biology and Genetics of the National Academy of Sciences of Ukraine, Certificate of Senior • Researcher, degree in Biotechnology, 2014
- PhD in "Immunology", 2009
- Diploma of candidate of biological sciences DK No. 053864 in the specialty "Immunology" (Kiev)  
Year of completion 2009
- Specialized Academic Council of Kiev National University named after Taras Shevchenko

**Work experience:**

- Laboratory doctor at State Institution "V.K. Gusk Institute of Emergency and Reconstructive Surgery of the National Academy of Medical Sciences of Ukraine" since Jul 1999 up to Nov 2007.
- Leading Researcher at the State Institution "Institute of Genetic and Regenerative Medicine of the National Academy of Medical Sciences of Ukraine" since Nov 2007
- Head of the Biotechnology Laboratory for the Production of Human Stem Cell Products Ilaya medical company (AA Partners LLC) since May 2011 up to Nov 2019

**Participation in conferences, membership in medical communities:**

- He planned / launched / set up production in three biotechnological laboratories for the production of biomedical products based on human cells: State Institution "Institute of Emergency and Reconstructive Surgery named after V.K. ilaya (AA Partners LLC, Kiev).
- Co-author of 18 declarative patents of Ukraine for an invention or utility model.
- Co-author of over 130 scientific publications on professional topics.

## PUBLICATIONS LIST

**Dr. Dmytryi Zubov, PhD (Immunology) Senior Researcher (Biotechnology)**

**Head of Vitality laboratory. Biologist-biotechnologist for the production of stem cells products.**

1. Role polypeptide growth factors in regulation of keratinocyte proliferation, *Cytology and Genetics*. – 2001. – № 6. – P. 64-73. [in Russian]
2. Optimization of the method of primary keratinocytes isolation for burns treatment, *New Technologies in Surgery*. – 2002. – № 2. – P. 195-198. [in Russian]
3. Dermal equivalent preparation method for wound defects treatment, *Transplantology*. – 2003. – Vol.4., № 1. – P. 264-266. [in Russian]
4. Development of the 3D cartilage equivalent in vitro: chondrocyte growth kinetics and use of the agarose hydrogel as carrier, *Bulletin of orthopedics, traumatology and prosthetics*. – 2011. – № 4. – P. 45-48. [in Ukrainian]
5. Effect of tripeptides on lymphoid and stem cells, *Bulletin of Experimental Biology and Medicine*. – 2011. – Vol. 151, № 3. – P. 772-775.
6. Effect of transplanted bone marrow-derived MSCs on reparative osteogenesis in longterm fracture-nonunion treatment in experiment, 7th Annual Congress of the German Society for Stem Cell Research associated with Fraunhofer Life Science Symposium 2012 «Stem Cells and Clinical Applications», 29- 30 November 2012 : poster presentations. - Leipzig, 2012. - P. 90-91.
7. Application of dermal equivalent engineered with collagen and fibrin hydrogels and cultured adipose-derived MSCs for fullthickness burn treatment: an experimental study, 7th Annual Congress of the German Society for Stem Cell Research associated with Fraunhofer Life Science Symposium 2012 «Stem Cells and Clinical Applications», 29-30 November 2012 : poster presentations. - Leipzig, 2012. - P. 89-90.
8. Influence of cultured chondrocytes in agarose carrier implantation on reparative chondrogenesis (an experimental study), 7th Annual Congress of the German Society for Stem Cell Research associated with Fraunhofer Life Science Symposium 2012 «Stem Cells and Clinical Applications», 29- 30 November 2012 : poster presentations. - Leipzig, 2012. - P. 91-92.
9. Immune system regeneration with fetal liver cells stimulated by contact with thymic multipotent stromal cells in lethally irradiated mice, 7th Annual Congress of the German Society for Stem Cell Research associated with Fraunhofer Life Science Symposium 2012 «Stem Cells and Clinical Applications», 29- 30 November 2012 : poster presentations. - Leipzig, 2012. - P. 74.
10. Membrane affinity of lymphocytes and multipotent stromal cells (fibroblastlymphocyte rosettes), 7th Annual Congress of the German Society for Stem Cell Research associated with Fraunhofer Life Science Symposium 2012 «Stem Cells and Clinical Applications», 29- 30 November 2012 : poster presentations. - Leipzig, 2012. - P. 73-74.
11. *Galanthus panjutinii* sp. nov.: a new name for an invalidly published species of *Galanthus* (Amaryllidaceae) from the northern Colchis area of Western Transcaucasia, *Phytotaxa*. – 2012. – Vol. 50. – P. 55-63.
12. Biological properties of the neural crest-derived multipotent stem cells from a bulge region of adult hair follicle at clonal level, ISSCR regional meeting “Stem Cells in Translation”, Florence, September 15-18, 2013. Abstract 215, P.52- 53.
13. Use of cultured autologous BMMSCs for altered post-traumatic reparative osteogenesis treatment: nonrandomized clinical trial, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2013 : abstracts. - Supplement of Regenerative Medicine, 2013. - P. 47-48.
14. Clinical use of human-cultured, autologous, bone marrowderived MSCs for treatment of the femoral head avascular necrosis, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2013 : abstracts. - Supplement of Regenerative Medicine, 2013. - P. 226-227.
15. Dermal equivalents` modeling and application for treatment of the experimental skin woundsy, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2013 : abstracts. - Supplement of Regenerative Medicine, 2013. - P. 384-385.
16. Clonal multipotency, selfrenewal and spherogenesis of the neural crest-derived multipotent stem cells from a bulge region of adult hair follicle, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2013 : abstracts. - Supplement of Regenerative Medicine, 2013. - P. 174-175.
17. Human endometrial stromal cells: in vitro biological properties under conventional and low oxygen cell culture conditions, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2013 : abstracts. - Supplement
18. of Regenerative Medicine, 2013. - P. 176-177
19. Study of the nanostructure and cytotoxicity of ZrO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> ceramic implants, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2013 : abstracts. - Supplement of Regenerative Medicine, 2013. - P. 191-192.
20. Agarose-based tissue equivalent for treatment of the experimental acute full-thickness articular cartilage defects, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2013 : abstracts. - Supplement of Regenerative Medicine, 2013. - P. 328-329.
21. Application of Dermal Equivalent Accelerates the Healing of Thermal Injuries (Experimental Study), *Problems of Cryobiology and Cryomedicine*. – 2013. – Vol. 23, №. 3. – P. 287– 291.
22. Snowdrops falling slowly into place: An improved phylogeny for *Galanthus* (Amaryllidaceae), *Molecular Phylogenetics and Evolution*. – 2013. – Vol. 69. – P. 205-217.

23. Neural Crest-Derived Multipotent Stem Cells of Adult Mammals: Biological Properties, Optimization of Culture Conditions and Potential Medical Use, 6th World Congress on Preventive and Regenerative Medicine (13-16 November 2013, Bhubaneswar, India). P.37.
24. In vitro properties of neural crest-derived multipotent stem cells from a bulge region of whisker follicle, *Biotechnologia Acta*. – 2014. – Vol. 7, № 4. – P. 71-79.
25. Biological properties of neural crest-derived multipotent stem cells from the bulge region of whisker follicle expanded under new culture conditions, *Biopolymers and Cell*. – 2014. – Vol. 30, №6. – P. 469–476
26. 3D cultivation of neural crest-derived multipotent stem cells in collagen and fibrin hydrogels: effects on cell viability and proliferation, *Biotechnologia Acta*. – 2014. – Vol. 7, № 5. – P. 50-54.
27. Cell technologies for treatment of the consequences of civil and combat bone lesions, Central European Conference on Regenerative Medicine 2015, Bydgoszcz (Poland), 14-15 March 2015 : abstract book. – Bydgoszcz : Association for the development of regenerative medicine “Aksolotl”, 2015. – P. 28- 29.
28. Expansion and directed differentiation of human endometrial stromal cells under conventional and low-oxygen cell culture conditions, Central European Conference on Regenerative Medicine 2015, Bydgoszcz (Poland), 14-15 March 2015 : abstract book. – Bydgoszcz : Association for the development of regenerative medicine “Aksolotl”, 2015. – P. 78- 79.
29. Adipose derived stem cells application for burns, skin wounds, scars and ulcers cure: preclinical and preliminary clinical results, ISCT Regional Meeting, Seville (Spain), 24-26 September 2015 : abstracts. – P. 68.
30. Stem cell-based therapy and tissue engineering for traumatology and orthopedics : our experience in civil and war time, ISCT Regional Meeting, Seville (Spain), 24-26 September 2015 : abstracts. – P. 66-67.
31. Bone tissue engineering : biotechnological aspects and clinical results in treatment of combat-related injuries, CYS : Conference for Young Scientists, Kyiv, 21- 25 September 2015 : abstract book, Lutsk : Vezha-Print, 2015. – P. 29- 30.
32. Explore of neural crest-derived multipotent stem cells therapeutic potential for the application in the regenerative medicine, CYS : Conference for Young Scientists, Kyiv, 21- 25 September 2015 : abstract book, Lutsk : Vezha-Print, 2015. – P. 129.
33. Endometrial stromal and epithelial cells : obtaining, culturing, morphological and functional properties, CYS : Conference for Young Scientists, Kyiv, 21- 25 September 2015 : abstract book, Lutsk : Vezha-Print, 2015. – P. 168.
34. Functional features and therapeutic availability of cultured adult multipotent mesenchymal stromal cells of different tissue origin, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2015 : Meeting Abstracts. - *Regenerative Medicine*. – Vol. 10, №07s. - P. 95.
35. Neural crest-derived multipotent stem cells from bulge region of adult hair follicle. Biotechnological aspects of use in regenerative medicine, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2015 : Meeting Abstracts. - *Regenerative Medicine*. – 2015. – Vol. 10, №07s. - P. 109.
36. Tissue-engineered bone equivalent for combat casualty cure, World Conference on Regenerative Medicine, Leipzig, 21-23 October 2015 : Meeting Abstracts. - *Regenerative Medicine*. – 2015. – Vol. 10, №07s. - P. 159.
37. Bone tissue engineering: biotechnological aspects and clinical results in treatment of combat-related trauma, 15th Biennial Conference of the International Society of Fracture Repair, Munich, 07-10 June 2016 : Abstract Book. – 2016. – ISFR 2016 Abstracts of oral presentations, OP 05.
38. Therapeutic potential of neural crest-derived multipotent stem cells in an in vitro model of ischemic injury of hippocampus, European Chapter Meeting of the Tissue Engineering and Regenerative Medicine International Society 2016, Uppsala, 28 June – 01 July 2016. – *European Cells and Materials*. – 2016. – Vol. 31, Suppl. 1. – P. 311.
39. Bone tissue engineering for critical sized bone defects, European Chapter Meeting of the Tissue Engineering and Regenerative Medicine International Society 2016, Uppsala, 28 June – 01 July 2016. – *European Cells and Materials*. – 2016. – Vol. 31, Suppl. 1. – P. 410.
40. Large-scale expansion and characterization of human adult neural crest-derived multipotent stem cells from hair follicle for regenerative medicine applications, *Exp Oncol*. – 2017. – Vol. 39, № 3. – P. – 171-180.
41. Postnatal extra-embryonic tissues as a source of multiple cell types for regenerative medicine applications, *Exp Oncol*. – 2017. – Vol. 39, № 3. – P. – 186-190.
42. Tissue-engineered bone for treatment of combat related limb injuries, *Exp Oncol*. – 2017. – Vol. 39, № 3. – P. – 191-196.
43. Endometrial stromal cells: isolation, morphological and functional properties, *Exp Oncol*. – 2017. – Vol. 39, № 3. – P. – 197-202.
44. The few who made it: Commercially and clinically successful innovative bone grafts, *Frontiers in Bioengineering and Biotechnology* – 2020. – Vol. 8. – p. 952.