First name Arseniy

Second Name Yuzhalin

Contact information

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Personal information

Sex Male

Age 22

Marital status: Single

Education

- **Bachelor of Science in Biology (with honours), 2012**

  Kemerovo State University, Kemerovo, Russia

  Major: Molecular Epidemiology of Cancer, Cancer Biology

  Thesis: "The Role of Polymorphisms of IL and TLR Genes in the Context of Cancer Prevention"

- **Master of Science by Research in Oncology, 2014 expected**

  University of Oxford, Oxford, UK

Thesis: “Determination and Characterization of Extracellular Matrix Proteome in Liver Metastasis”

Research experience

- **Research Center for Medical Genetics, Moscow, Russia.**

  Summer internship 2010.

I worked for 3 weeks as a research associate in the Laboratory of Population Genetics led by Balanovska E. The lab collaborates with key population genetics laboratories around the world and participates in worldwide projects, including “The Genographic Project”, which studies the genomes of indigenous populations to answer fundamental questions about human origins and their population of the Earth. As a research associate, I studied markers of inheritance within the genome of indigenous populations of Siberia, comparing their distribution to persons of other Asian descent. My duties included performing DNA extraction, qrt-polymerase chain reaction (PCR) analysis, and analysis of biofluids.

- **Institute of Protein Research Russian Academy of Sciences, Pushchino, Russia.**

  Summer internship 2011.

I spent 3 weeks working as a research associate at the Laboratory of Mechanisms of Protein Biosynthesis led by the renowned Russian biochemist Spirin AS. Here I studied the biochemistry of nucleic acids, and protein biosynthesis. and acquired skills including *in silico* molecular modeling of DNA and nucleic acids, gel electrophoresis of proteins and nucleic acids and protein synthesis in cell-free translation systems.

- **Bachelor of Science in Biology…Kemerovo State Medical Academy, Kemerovo, Russia**

  Feb 2010 – May 2012

My BSc project, supervised by professor Elena Brusina was a case-control study

performed in order to explore the role of 6 single nucleotide polymorphisms within SOD1, TLR4, IL-1B, and IL-17A genes in the susceptibility of colorectal, gastric and ovarian cancers. 684 patient samples were analysed using DNA extraction, PCR and gel electrophoresis. The results from our research provided evidence that *IL1B*_1473G/C and *TLR4*_896A/G polymorphisms are implicated in the increased risk of rectal cancer development in the Russian population. A forthcoming publication is expected in the near future.

- **Gray Institute for Oncology and Radiation Biology, Oxford, UK**

Oct 2013 – present

I am currently investigating the biology of the development of hepatic metastasis the laboratory of Professor Ruth Muschel. My project aims to determine whether there are differences between extracellular matricesof metastasis-bearing and tumour free livers. Thus far I have revealed profound changes in the expression pattern of certain proteins from tumor extracellular matrix as compared to normal matrix. These findings could clarify the mechanisms of metastatic formation and cancer development as concurrent work by others in our lab has reported a pro-metastatic role of various extracllular metrix proteins including those of the Laminin family. I have learned several new techniques and methods, including: cell culture skills, tissue staining, immunostaining, cryotom skills, spectrophotometry, mass-spectrometry and chromatography. Furthermore, Ihave recently completed an official program for animal care allowing me to work with laboratory animals. This project has also enabled me to develop further my skills in experimental planning as well as a broader understanding of the field of cancer biology.

Work experience

- **Pleiades Publishing ltd., and International Academic Publishing Company "Nauka/Interperiodica"**

Aug 2011 – Oct 2012.

Title:

Translator

Duties:

Translation of articles in major Russian academic journals from Russian to English for English versions of these journals. The scope of journals was (1) molecular biology of cancer, (2) epidemiology of cancer, and (3) cancer genetics.

- **Institute for Complex Issues of Cardiovascular Diseases, Siberian Branch of the Russian Academy of Medical Sciences, Kemerovo, Russia**

  Aug 2012 – May 2013.

  Title:

  Junior Researcher

  Duties:

  As a junior researcher, I worked under a project in the field of molecular epidemiology of atherosclerosis. In particular, I investigated the impact of TLR and TREM gene polymorphisms in etiology of atherosclerosis and infective endocarditis. Our findings are to be published soon.

Selected Bibliography

- **Articles**

1. **Yuzhalin A**. The role of interleukin DNA polymorphisms in gastric cancer. Hum Immunol. 2011; 72(11): 1128-36. PMID: 21871937
2. **Yuzhalin AE**, Kutikhin AG. Inherited variations in the SOD and GPX gene families and cancer risk. Free Radic Res. 2012; 46(5): 581-99. PMID: 22257147
3. Kutikhin AG, Brusina EB, **Yuzhalin AE**. The role of calcifying nanoparticles in biology and medicine. Int J Nanomedicine. 2012; 7: 339-50. PMID: 22287843
4. Kutikhin AG, **Yuzhalin AE**. Inherited variation in pattern recognition receptors and

cancer: dangerous liaisons? Cancer Manag Res. 2012; 4: 31-8. PMID: 22427729

5. Kutikhin AG, **Yuzhalin AE**. Are Toll-like receptor gene polymorphisms associated with cancer? Cancer Manag Res. 2012; 4: 21-9. PMID: 22359464
6. Kutikhin AG, **Yuzhalin AE**. C-type lectin receptors and RIG-I-like receptors: new points on the oncogenomics map. Cancer Manag Res. 2012; 4: 39-53. PMID: 22427730
7. Kutikhin AG, **Yuzhalin AE**, Brusina EB, Briko NI. Role of infectious agents in the emergence of malignant tumors. Zh Mikrobiol Epidemiol Immunobiol. 2012; 5: 104-14. PMID: 23163048
8. **Yuzhalin AE**, Kutikhin AG. Interleukin-12: clinical usage and molecular markers of cancer susceptibility. Growth Factors. 2012; 30(3): 176-91. PMID: 22515181
9. **Yuzhalin AE**, Kutikhin AG. Integrative systems of genomic risk markers of cancer and other diseases: the future of predictive medicine. Cancer Manag Res. 2012; 4: 131-135. PMID: 22740773
10. **Yuzhalin AE**, Kutikhin AG. Common Genetic Variants in the Myeloperoxidase and Paraoxonase Genes and the Related Cancer Risk: a Review. J Environ Sci Health C Environ Carcinog Ecotoxicol Rev. 2012; 30(4): 287-322. PMID: 23167629
11. Kutikhin AG, **Yuzhalin AE**, Brailovskiy VV, Zhivotovskiy AS, Magarill YuA, Brusina EB. Analysis of cancer incidence and mortality in the industrial region of South-East Siberia from 1991 through 2010. Asian Pac J Cancer Prev. 2012; 13(10): 5189-93. PMID: 23244133
12. Zhivotovskiy AS, Kutikhin AG, Azanov AZ, **Yuzhalin AE**, Magarill YuA, Brusina EB. Colorectal cancer risk factors among the population of South-East Siberia: a case-control study. Asian Pac J Cancer Prev. Asian Pac J Cancer Prev. 2012; 13(10): 5183-8. PMID: 23244132
13. **Yuzhalin AE**, Kutikhin AG. ABO and Rh blood groups in relation to ovarian,

endometrial and cervical cancer risk among the population of South-East Siberia. Asian Pac J Cancer Prev. 2012. Asian Pac J Cancer Prev. 2012; 13(10): 5091-6. PMID: 23244116

- **Under review**

1. Golovkin AS, Ponasenko AV, **Yuzhalin AE**, Salakhov RR, Khutornaya MV, Kutikhin AG, Rutkovskaya NV, Savostyanova YuYu, Barbarash LS. Lack of association between single nucleotide polymorphisms within *TLR* and *TREM-1* genes and infective endocarditis. Int J Immunogenet. Submitted to journal.
2. Golovkin AS, Ponasenko AV; Khutornaya MV, Kutikhin AG, Salakhov RR, **Yuzhalin AE**; Zhidkova II, Barbarash OL, Barbarash LS. Association of TLR and TREM-1 Gene Polymorphisms with Risk of Coronary Artery Disease in Russian Population. Gene. Submitted to journal.
3. Kutikhin AG, **Yuzhalin AE**, Mikhailova AS, Kudrov GA, Lazareva AV, Brusina EB. Giant viruses and virophages with regard to healthcare-associated infections of the lower respiratory tract. GMS Hyg Infect Control. Submitted to journal.
4. Kutikhin AG, Yuzhalin AE, Volkov AN, Zhivotovskiy AS, Brusina EB. Correlation between genetic polymorphisms within IL-1B and TLR4 genes and cancer risk in Russian population: a case-control study. Tumor Biology. Submitted to journal.

- **Books**

1. Kutikhin AG, **Yuzhalin AE**, Brusina EB. Infectious Agents and Cancer. Springer Netherlands; 2013. DOI - 10.1007/978-94-007-5955-8. ISBN – 9400759541.
2. Kutikhin AG, **Yuzhalin AE**. Genomics of Pattern Recognition Receptors: Applications in Oncology and Cardiovascular Diseases. Springer Basel; 2013. DOI - 10.1007/978-3-0348-0688-6. ISBN - 9783034806879.
3. Kutikhin AG, **Yuzhalin AE**, Brusina EB. Viruses and atherosclerosis. Springer New York; 2014. ISBN - 9781461488620.

4. **Yuzhalin AE**, Kutikhin AG. Interleukins in Cancer Biology: State of the Art. Elsevier. 2014. In press.

Membership of Editorial Boards

- **Frontiers in Immunology**, Guest Associate Editor, 2013-
- **Frontiers in Microbiology**, Guest Associate Editor, 2013-

Honors/Awards

- **Scholarship of the Academic Council** of Kemerovo State University, Fall semester 2011.
- **Personal award of the Rector** of Kemerovo State University for high achievements in the scientific research - 2010, 2011
- **High State Academic Scholarship** of Kemerovo State University, Fall semester 2011.

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