Ancha Baranova, Ph.D, D.Sci

**EDUCATION:**

|  |  |  |
| --- | --- | --- |
| **Institution / Location** | **Degree / Year** | **Field of Study** |
|  |  |  |
| Vavilov Institute of General Genetics, Russian Academy of Science, Moscow, Russia | Doctor of Sciences (2004) | Genetics |
| Moscow State University (Lomonosov) Moscow, Russia | PhD(1998) | Virology/Molecular Biology |
|  |  |  |
| Moscow State University (Lomonosov) Moscow, Russia | BS/MS(1995) | Biochemistry(Concentration in Virology) |

**POSITIONS:**

**2017 – Current 2005 – Current**

**Professor** **Director,**

School of Systems Biology, Center for the Study of Chronic Metabolic

College of Science, and Rare Diseases, College of Science,

George Mason University, George Mason University,

Fairfax, Virginia Fairfax, Virginia

**2007 – - August 2017t**

**Associate Professor**

School of Systems Biology,

College of Science,

George Mason University,

Fairfax, Virginia

**June, 2002 – August, 2007**

**Assistant Professor**

Molecular Biology and Microbiology Department

College of Arts and Science,

George Mason University, Fairfax, VA

**1998 – 2002**

Leader of the Functional Genomics Group and Senior Scientist at Genome Analysis Laboratory, Vavilov Institute of General Genetics RAS, Moscow, Russia

**1996 – 1999**

Visiting Researcher Supported by Swedish Academy of Science at Prof. G. Klein Laboratory (MTC, Karolonska Institute, Stockholm, Sweden) and at Prof. S. Einhorn Laboratory (Cancer Centrum Karolinska, Karolinska Hospital)

**1996**

Visiting Researcher Supported by UNESCO at Prof. C. Buys Laboratory, Medical Genetics Department (Groningen University, the Netherlands)

**1995 – 1998**

Scientist, Genome Analysis Laboratory, Vavilov Institute of General Genetics, Russian Academy of Sciences, Moscow, Russia

**LIFETIME ACHIEVEMENT AWARDS:**

**Inducted as Honorary Member to the Golden Key Society** (GMU). Only five Honorary Members inducted annually.

**Memorial A.V. Itkes Young Oncologist Award**, 2007 (For series of studies of B-cell chronic lymphocytic leukemia). Awarded at 16th International Conference: “AIDS, Cancer and Public Health”, St. Petersburg, Russia) .

**SCIENTIFIC SOCIETY MEMBERSHIPS:**

**Human Genome Organization (HUGO),** Member

**American Society of Human Genetics**, Member

**Virginia Academy of Science**, Member

**Russian Biochemistry Society**, Part of Federation of European Biochemical Societies (FEBS) Organization Member

**Virginia Academy of Science,** Lifetime Member

**EDITORIAL BOARD MEMBER:**

**Molecular Biology** (Springer) (IF=0.718) [http://www.springer.com/life+sciences/journal/11008](http://www.springer.com/life%2Bsciences/journal/11008) **Biomarkers in Cancer** (Libertas) [http://www.la-press.com/ journal.php?pa=editorial\_board&journal\_id=154](http://www.la-press.com/%20journal.php?pa=editorial_board&journal_id=154).

**EDITORIAL AND REVIEWER FUNCTIONS:**

**2018-2019:** Co-Editor of Special issues of **“Frontiers in Genetics”.** Jointly with Prof. Orlov (Novosibirsk, Russia)

**2016-2019:** Co-Editor of Special issues of **“BMC Genomics”**, **“BMC Evolutionary Biology”**, **“BMC Medical Genomics”, “BMC Neuroscience”, “BMC Systems Biology”, “BMC Genetics”.** Jointly with Prof. Orlov (Novosibirsk, Russia)

**2015:** Co-Editor of Special issues of **“BMC Genomics”** (IF=3.99), **“BMC Microbiology”** (IF=1.35), **“BMC Genetics”** (IF=2.40), and **“BMC Systems Biology**” (IF=2.44) for 7th International Young Scientists School **"Systems Biology and Bioinformatics"**, SBB’2015 Akademgorodok, Novosibirsk, Russia, June 22-25, 2015. Jointly with Prof. Orlov (Novosibirsk, Russia)

**2015:** Co-Editor of Special issue: **“Roads to Mitochondrial Disfunction”** of **“Biomedical Research Investigations”** (BMRI) journal (IF=impact 1.579) Jointly with Roberto de Oliveira, Namasivayam Elangovan and Marko Ljubkovic.

**2014:** Co-Editor of Special issues of **“BMC Genomics”** (IF=4.04), **“BMC Genetics”** (IF=2.40), and **“BMC Systems Biology”** (IF=2.44) for the 9th International Conference on Bioinformatics of Genome Regulation and Structure/Systems Biology (BGRS\SB'2014), Novosibirsk, Russia, June 23—28, 2014. Jointly with Prof. Orlov (Novosibirsk, Russia)

**2013:** Co-Editor of the Special issue **“Extracting Evolutionary Insights Using Bioinformatics”** of **“International Journal of Genomics”** (Impact 0.953) Jointly with Profs. Yuri Panchin and Dmitry Sherbakov

**2010:** Co-Editor of Special Issue **"Biomarkers, the Pillars of Molecular Diagnostics and Personalized Medicine Revolution"** in **“CURRENT MOLECULAR MEDICINE”** (Impact 4.62) Jointly with Prof. Deigner, University of East Anglia, Norfolk, UK.

**2015:** Invited Reviewer for tentatively titled: **“*Case Studies in Cancer*”**, a Garland Science textbook which aims to serve as the unofficial clinical companion to Weinberg’s **“*The Biology of Cancer*”**

**2007:** Invited Reviewer for Benjamin Cummings publishers (2007) textbook entitled, **“*Cancer Genetics*”** by Mark Sanders (UC – Davis) and John Bowman (UC – Davis and Monash University).

***AD HOC* REVIEWER FOR THE FOLLOWING JOURNALS (2005-2019)**

|  |  |
| --- | --- |
| **Genome Biology** | **Impact factor: 9.036** |
| **Briefings in Bioinformatics**  | **Impact factor: 8.399** |
| **Diabetes**  | **Impact factor: 8.286** |
| **Nucleic Acid Research**  | **Impact factor: 8.026** |
| **Diabetologia**  | **Impact factor: 6.814** |
| **Clinical Cancer Research** | **Impact factor: 7.742** |
| **BMC Biology** | **Impact factor: 5.750** |
| **Human Mutation**  | **Impact factor: 5.686** |
| **European Journal of Cancer** | **Impact factor: 5.536** |
| **Bioinformatics** | **Impact factor: 5.468** |
| **International Journal of Cancer** | **Impact factor: 5.444** |
| **Bioessays** | **Impact factor: 4.954** |
| **International Journal of Obesity** | **Impact factor: 4.691** |
| **Toxicological Sciences** | **Impact factor: 4.652** |
| **Current Cancer Drug Targets** | **Impact factor: 4.327** |
| **Molecular and Cellular Endocrinology**  | **Impact factor: 4.192**  |
| **Journal of Cellular and Molecular Medicine** | **Impact factor: 4.125** |
| **Cancer Epidemiology, Biomarkers and Prevention** | **Impact factor: 4.123** |
| **PLOS One** | **Impact factor: 4.092** |
| **Molecular Biosystems** | **Impact factor: 3.859** |
| **Liver International** | **Impact factor: 3.824** |
| **Biology Letters** | **Impact factor: 3.762** |
| **Developmental Neurobiology** | **Impact factor: 3.551** |
| **FEBS Letters** | **Impact factor: 3.538** |
| **European Journal of Endocrinology**  | **Impact factor: 3.423** |
| **Neuroscience** | **Impact factor: 3.380** |
| **Biochimie**  | **Impact factor: 3.017** |
| **Leukemia Research** | **Impact factor: 2.923** |
| **BMC Molecular Biology** | **Impact factor: 2.857**  |
| **Journal of Gastroenterology & Hepatology** | **Impact factor: 2.865** |
| **BMC Gastroenterology**  | **Impact factor: 2.422** |
| **Molecules**  | **Impact factor: 2.386** |
| **Lipids in Health and Disease** | **Impact factor: 2.170** |
| **Biomarkers in Medicine** | **Impact factor: 2.163** |
| **Scandinavian Journal of Gastroeneterology** | **Impact factor: 2.019** |
| **Nutrition Research** | **Impact factor: 1.974** |
| **Journal of Women's Health** | **Impact factor: 1.569** |
| **Clinical Lipidology**  | **Impact factor: 0.754** |

**GRANT REVIEW PANEL MEMBER:**

United States:

NCI Clinical Translational R21 and Omnibus R03, ZCA1 SRB-P (M2) NCI Clinical and Translational R21 & Omnibus R03, February 1, 2019 – Panel Co-Chair

NCI Clinical Translational R21 and Omnibus R03, ZCA1 SRB-P (O1) NCI Clinical and Translational R21 & Omnibus R03: SEP-1, 2018

NCI Clinical Translational R21 and Omnibus R03, ZCA1 SRB-P (J1) NCI Clinical and Translational R21 & Omnibus R03: SEP-5 09/15/2018

Special Emphasis Panel/Scientific Review Group 2018/10 ZCA1 SRB-P (O1) SEP-1 05/17/2018

NCI’s Informatics Technology for Cancer Research (ITCR) 2018/05 ZCA1 SRB-X (M2) – 02/08/2018-02/08-2018

NCI Clinical and Translational R21 & Omnibus R03: SEP-3 ZCA1 SRB-P (J1) 09/25/17 -09/26/2017

NCI’s Informatics Technology for Cancer Research (ITCR) 2018/05 ZCA1 SRB-X (M2) – 02/08/2018-02/08-2018

NCI Clinical and Translational R21 & Omnibus R03: SEP-3 ZCA1 SRB-P (J1) 09/25/17 -09/26/2017

NCI Clinical & Translational R21 & R03 ZCA1 TCRB-J (O1) 06/19/2017-06/20/2017

NCI’s Informatics Technology for Cancer Research (ITCR) 2017/03, 03/09/2017-03/10/2017

NCI NIH Special Emphasis Panel/Scientific Review Group 2017/“U.S.-Russia Bilateral Collaborative Research Partnerships on Cancer”, 03/06/2017

NCI NIH Special Emphasis Panel/Scientific Review Group 2017/02 NCI-I R, 02/16/2017-01/17/2017

NCI NIH Special Emphasis Panel/Scientific Review Group 2017/01 NCI-I R, 10/18/2016-10/19/2016 NCI NIH Special Emphasis Panel/Scientific Review Group 2016/05 ZCA1 PCRB-C (M1) S, 03/31/2016-03/31/2016

NCI NIH Special Emphasis Panel/Scientific Review Group 2016/01 ZCA1 RPRB-O (J1) S, 10/07/2015-10/08/2015

NCI NIH Special Emphasis Panel/Scientific Review Group 2015/10 ZCA1 SRB-X (O1) S, 06/16/2015- 06/17/2015

 NCI NIH Special Emphasis Panel/Scientific Review Group 2015/05 ZCA1 RPRB-O (M2) S 03/18/2015-03/18/2015

NCI NIH Special Emphasis Panel/Scientific Review Group 2015/01 ZCA1 RPRB-B (J1) S 11/06/2014-11/07/2014

NCI NIH Special Emphasis Panel/Scientific Review Group 2014/05 ZCA1 PCRB-G (M1) S 05/01/2014-05/02/2014

 NCI NIH Special Emphasis Panel/Scientific Review Group 2014/05 ZCA1 SRLB-J (M2) S 03/27/2014-03/27/2014

NCI NIH Special Emphasis Panel/Scientific Review Group 2013/05 ZCA1 SRLB-J (M1) P 03/28/2013-03/29/2013

NIH “Integrative Physiology of Diabetes” (IPOD) Special Emphasis Panel/Scientific Review Group 06/21/2012

**2018:** Innovation Partnership Proposal Preparation Assistance Program for Phase I SBIR/STTR (IPART Solutions), Reviewer

**2018:** Inova Translational Research Funding Program (ITRF)

**2016-2017:** NDSEG (National Defense Science and Engineering Graduate) Fellowships Panel Member (Biosciences)

**2012-Current:** Kansas City Area Life Sciences Institute (KCALSI) Patton Trust Research Grant Program

**2010-Current:** James & Esther King Biomedical Research Program, Florida Department of Health

**2010-Current:** Bankhead Coley Cancer Research Program, Florida Department of Health

**2014:** Florida Health Equity Research Institute (HERI).

**2010:** University of Kansas Diabetes Institute Research Pilot Grant Program

**2010:** Executive Director Seed Grants, Inova Research Center Review

**2009-2010:** Mason-Inova Life Sciences Research Collaboration Fund

**2014, 2012, 2010, 2009, 2007:** NSF, Graduate Research Fellowship Program

(Genetics, Genomics & Proteomics Section)

**2005:** Hollings Scholarship of National Oceanic & Atmospheric Administration

International:

**2017-2019:** Al Jalila Foundation

**2018:** [**The Qatar National Research Fund (QNRF)**](http://secure-web.cisco.com/1ByS-U-d5PmFbAYbSP9AAA-3G0RvWa0-FfKn5qM6rzHK35ia6KRFJZndELqXp4yBK191MDeDr3oFgJIgObSWH1MEuKF2TjE3pvuI1i7B72KP1OQP2L2rBrFNM0wzmNxY59s7C192W2rVG0cMQ4Sk-IGGC1pdSyP-ycsuIf3IYdpfs6yzqScSG3T6Jz7mrT8TSdm4meUbJB8IDZjC1-WyL718PGRZYGLWgG8cUzzVXsFHyWPsnbm-CDf2uesZDCMcsJGsVHEOB4QNomI28tGYvRwA6paDztavcxD1-LKLSvWZiG68AxrEESZs2lm66ejc7bLxllvZRXrhxL0aVAOqQHvaNYZDEEHji6KAfQUKJlE_Pbh0J80wv6VrJ2QX6FvXlXNUh6znVvElRXmT7z5BPbK0xYW7UKZmL_DW3NRUS9XVnEXrdypu7xM2MUDU7BsukoIcjSub4sIO9XgMt7HVpVg/http%3A//www.qnrf.org/en-us/)**,** the [Undergraduate Research Experience Program (UREP)](http://secure-web.cisco.com/1MIpAk67fCeAHwB1bzXM41hw9zQ1cO85QCZ2QnceyH0Cy98QCKWkEV4NISnFNvvCSixEGFfXEDn8YXi2WGnCgvBzGomsi8qheYncCRGTSQwvhfjoMgcv0Y5QneGzJCtwFhv_0H4jN5m9G4XhAK8aJe8irKDymvh1JpIjZ8X4g8EibUNpyj8jLwbx0N4edcVPYHolGjNYFrnRCRi0wD5vnvNPPlg-ktzXl6LdegzHlA5wqnQ9_R8I-NscnhX9g-F9pTv9mWmx8ilU3DNQJzNVeEj1OjS-HSBTUgwJIedKBAvvaoYdHn8PDEuH87V2RLn7iEVWE1Hbi0Mvurku6Qs8Cb_mO3JqtJCWJl1KybNk93AalBSFQ_Eb8BGxaQEJYvuV8zKf6aUTZ0FEDqdjoNaN_vwNneScn8nBIIYVBZ2uXdARPuwFX4uwBhQVdXR3a-aEbgdKQakoffsn2ihB-88bdlQ/http%3A//www.qnrf.org/en-us/Funding/Capacity-Building-and-Development-Programs/Undergraduate-Research-Experience-Program-UREP), 23rd cycle – 2018

**2018:** [**The Qatar National Research Fund (QNRF)**](http://secure-web.cisco.com/1ByS-U-d5PmFbAYbSP9AAA-3G0RvWa0-FfKn5qM6rzHK35ia6KRFJZndELqXp4yBK191MDeDr3oFgJIgObSWH1MEuKF2TjE3pvuI1i7B72KP1OQP2L2rBrFNM0wzmNxY59s7C192W2rVG0cMQ4Sk-IGGC1pdSyP-ycsuIf3IYdpfs6yzqScSG3T6Jz7mrT8TSdm4meUbJB8IDZjC1-WyL718PGRZYGLWgG8cUzzVXsFHyWPsnbm-CDf2uesZDCMcsJGsVHEOB4QNomI28tGYvRwA6paDztavcxD1-LKLSvWZiG68AxrEESZs2lm66ejc7bLxllvZRXrhxL0aVAOqQHvaNYZDEEHji6KAfQUKJlE_Pbh0J80wv6VrJ2QX6FvXlXNUh6znVvElRXmT7z5BPbK0xYW7UKZmL_DW3NRUS9XVnEXrdypu7xM2MUDU7BsukoIcjSub4sIO9XgMt7HVpVg/http%3A//www.qnrf.org/en-us/)**,** 11th cycle - Standard (NPRP11S) -2018

**2017: Agence Nationale de la Recherche**, **France,** Convergence labs call Review Panel Member

**2013-2017: Research Competitiveness Program, American Association for the Advancement of Science (AAAS) advising King Abdulaziz City for Science and Technology (KACST),** Saudi Arabia - Review Panel Member

**2017: Review Panel Member,** Israel-Italy collaboration in Science, Israeli Ministry of Science, Technology & Space

**Review Panel Member,** Innovative Research Project Program at The Foundation for Development of the Center of Research & Commercializing of New Technologies, Skolkovo, Russia

**2015-Current:** Nazarbayev University Research Council (Astana, Kazakhstan) scientific proposals review managed by Oak Ridge Associated Universities (ORAU), 2015-16

**2014, 2016, 2017:** Agence Nationale de la Recherche, France

**2016, 2012:** Romanian National Council for Scientific Research

**2013-Current:** Review Panel Member, Research Competitiveness Program, American Association for the Advancement of Science (AAAS) advising King Abdulaziz City for Science and Technology (KACST), Saudi Arabia.

**2010-Current:** Innovative Research Project Program at The Foundation for Development of the

Center of Research & Commercializing of New Technologies, Skolkovo, Russia

**2013:** Research Cooperability Program, Crossing Borders Grants by Unity through Knowledge Fund (UKF) of the Croatian Ministry of Science, Education & Sports

**2013-2014:** TUBITAK Science, Service and Incentive Competition Extrenal Evaluator (Turkey)

**2013-2014:** Summary Report Writer for the California Institute of Regenerative Medicine (CIRM) Grant Review

**2012:** Austrian Science Fund (FWF)

**2010:** University of Leuven Senior Research Professor Position Applicants External Evaluator

(Similar to US Tenure Review)

**2008:** Nanyang Technological University (Singapore) PhD Candidate Dissertation External Evaluator

**2012-2013:** Bunyatian Biochemistry Institute, National Academy of Armenia PhD Candidates External Evaluator

**2002-2006:** International Association for the Promotion of Cooperation with Scientists from the

New Independent States (NIS) of the Former USSR (INTAS) Grants

**SPECIAL RECOGNITION OF PUBLISHED WORKS:**

1. **COS Publication Awards 2013** **and 2011**
2. **HIGHLY ACCESSED and MOST READ status marks**

a. Mehta R, Birerdinc A, Hossain N, Afendy A, Chandhoke V, Younossi Z, **Baranova A**. Validation of endogenous reference genes for qRT-PCR analysis of human visceral adipose samples. ***BMC Mol Biol.*** 2010 May 21;11:39. PMCID: PMC2886049. **Accessed 9950 times. Top 2% of access dynamics for this journal.**

b. **Baranova A**, Lal P, Birerdinc A, Younossi ZM. Non-Invasive Markers for Hepatic Fibrosis. ***BMC Gastroenterol.*** 2011 Aug 17;11(1):91. **Accessed 34644 times. Top 1% of access dynamics for this journal.**

**c.** Mayburd A, **Baranova A.** Knowledge-based compact disease models identify new molecular players contributing to early-stage Alzheimer's disease. BMC Syst Biol. 2013 Nov 7;7:121. Accessed **4306 times.**

d. Morozova I, Flegontov P, Mikheyev AS, Bruskin S, Asgharian H, Ponomarenko P, Klyuchnikov V, ArunKumar G, Prokhortchouk E, Gankin Y, Rogaev E, Nikolsky Y, **Baranova A**, Elhaik E, Tatarinova TV. Toward high-resolution population genomics using archaeological samples. ***DNA Res***. 2016 Aug;23(4):295-310 (DNA Research MOST READ ARTICLE 2016).

**3.** **TOP 10 Downloaded Papers in *Alimentary Pharmacology and Therapy***

Vernon G, **Baranova A**, Younossi ZM. Systematic review: the epidemiology and natural history of non-alcoholic fatty liver disease and non-alcoholic steatohepatitis in adults. ***Aliment Pharmacol Ther.*** 2011 Aug;34(3):274-85. PMID: 21623852. (**Cited 1735 times**)

1. **Selected for FRONT INSIDE COVER *in Bioessays***

Marakasova ES, Eisenhaber B, Maurer-Stroh S, Eisenhaber F, **Baranova A**. Prenylation of viral proteins by enzymes of the host: Virus-driven rationale for therapy with statins and FT/GGT1 inhibitors. ***Bioessays.*** 2017 Oct;39(10). PMID: 28885709.

**5.** **Selected as Editor’s Choice** in ***DNA Research***

Morozova I, Flegontov P, Mikheyev AS, Bruskin S, Asgharian H, Ponomarenko P, Klyuchnikov V, ArunKumar G, Prokhortchouk E, Gankin Y, Rogaev E, Nikolsky Y, Baranova A, Elhaik E, Tatarinova TV. Toward high-resolution population genomics using archaeological samples. **DNA Res.** 2016 Aug;23(4):295-310.

**6.** **Selected for press-release of the FASEB Journal**

Randhawa M, Huff T, Valencia JC, Younossi Z, Chandhoke V, Hearing VJ, Baranova A. Evidence for the ectopic synthesis of melanin in human adipose tissue. ***FASEB J****.* 2009 Mar;23(3):835-43.

**7.** **Selected for the Editorial Review in *Pigment Cell Melanoma Res***. Ito S. Melanins seem to be everywhere in the body, but for what? Pigment Cell Melanoma Res. 2009 Feb;22(1):12-3.

Randhawa M, Huff T, Valencia JC, Younossi Z, Chandhoke V, Hearing VJ, Baranova A. Evidence for the ectopic synthesis of melanin in human adipose tissue. ***FASEB J.*** 2009 Mar;23(3):835-43.

**8.** **Selected for GMU press-release. Reviewed by multiple web sources** (www.physorg.com, www.bio-medicine.com, www.esciencenews.com, www.sciencedaily.com, http://pcos.insulitelabs.com, www.thaindian.com, www.news-medical.net, www.gate2biotech.com and others). Randhawa M, Huff T, Valencia JC, Younossi Z, Chandhoke V, Hearing VJ, Baranova A. Evidence for the ectopic synthesis of melanin in human adipose tissue. ***FASEB J.*** 2009 Mar;23(3):835-43.

**9.** **Top 10 Most Cited Articles in Genomics for the 2006 impact factor window (2004-05 Publications)**

Baranova A, Ivanov D, Petrash N, Pestova A, Skoblov M, Kelmanson I, Shagin D, Nazarenko S, Geraymovych E, Litvin O, Tiunova A, Born TL, Usman N, Staroverov D, Lukyanov S, Panchin Y. The mammalian pannexin family is homologous to the invertebrate innexin gap junction proteins. ***Genomics.*** 2004 Apr;83(4):706-16.

**CONFERENCES AND PANELS ORGANIZED / CHAIRED**

**October 2017:** Member of the Program Committee**, ClinProt 2017 (Moscow, Russia)**

**August 2016:** Member of the Program Committee**, 8th International Young Scientists School "Systems Biology and Bioinformatics" (SBB’2016),** Novosibirsk, Russia, August 22nd-25th, 2016 (<http://conf.bionet.nsc.ru/sbb2016/en/pc/>).

**April 2016:** Organizer and Chair of **NEWTRITION**, the first international summit in personalized healthcare and nutrition that gathered dietology, nutritiology, gastroenterology, personalized medicine and life science experts involved in technological healthcare development from all over the world. ([**http://newtrition.ru/en/**](http://newtrition.ru/en/)). Invited Speakers: Rick Kivel (past Chairmain of Global MIT Enterprise forum), Prof. James Kaput (Nestle Institute of Health Science), Dr. Terry Grossman (author of TRANSCEND, jointly with Ray Kurzweill, DR. Fetissov (Rouen University, France), Dr. Daiva Nielsen (Harvard Medical School), Dr. Pavel Shkludov (IBM Watson), Dr. Brian Piening (Standford University School of Medicine), Dr. Sang Woon Choi (CHA University), Dr. Milka Sokolovich (Head of Nutrition and Health at the European Food Information Council, Belgium), Jotham Suez (Weizmann Institute of Science, Israel) and others. **Final panel discussion:** [**https://www.youtube.com/watch?v=sm9NPNZWXg0**](https://www.youtube.com/watch?v=sm9NPNZWXg0)

**2015:** the Member of the Program Committee, **7th International Young Scientists School "Systems Biology and Bioinformatics" (SBB’2015)**, Novosibirsk, Russia, June 22nd-25th, 2015 ([**http://conf.nsc.ru/SBB2015/en/info\_letter**](http://conf.nsc.ru/SBB2015/en/info_letter)).

**2013:** Organizer and Chair, Collaborative Workshop on Biomarkers (Russian Biomarker Consortium), Moscow, Russia, February 18, 2013

**2012:** Co-Chair of afternoon session at Third International Scientific-Practical Conference “**Post-Genome Methods of Analysis in Biology and Laboratory and Clinical Medicine**”, November 22-24, 2012, Kazan, Russia. Jointly with Dr. Lyudmila Ogorodova (Currently: Deputy Minister of Education and Science of the Russian Federation)

**2012:** Organizer and Chair, Collaborative Workshop on Biomarkers, Moscow, Russia, January 16, 2012. Invited speakers: 15 Professors from various Russian Research Organizations

**2009:** Organizer and Chair, two Systems Biology Research Panels, CoS, February 12th, 2009 and May 5th 2009.

Invited speakers: **Dr. Eytan Domany**, The Henry J. Leir Professorial Chair, Department of Physics of Complex Systems, The Weizmann Institute of Science, Rehovot, Israel; **Dr. Yuri Nikolski**, GeneGo, Inc, CEO and Founder, **Dr. Vladimir Kuznetsov**, Head of the Division of Genome and Gene Expression Analysis Bioinformatics Institute, Biopolis, Singapore. Other presenters: G.Manyam (graduate student, PhD in Biosciences program), J.Bode (graduate student, PhD in Mathematics), E.Nohelty (graduate student, MS in Biology).

**2008:** Co-Chair of the Afternoon Session at the Invitation-only **Workshop on Computational Systems Biology Approaches to Analysis of Genome Complexity and Regulatory Gene Networks**, Institute for Mathematical Sciences, Singapore, (November 20-25, 2008). Jointly with Dr. Eytan Domany, The Henry J. Leir Professorial Chair, Department of Physics of Complex Systems, The Weizmann Institute of Science, Rehovot, Israel

**2006:** Co-Chair of the Questions and Answers session “**High-throughput methods of modern transcriptomics**”, GMU-INOVA Translational Research Institute Symposium, April 7, 2006. Jointly with Dr. J. Quakenbush, Professor of Computational Biology & Bioinformatics, Department of Biostatistics, Dana-Farber Cancer Institute

**2006-2008:** Member of the International Program Committee for conference on Computational and Systems Biology (CASB 2006, CASB 2008)

**2004:** Co-Chair of the section “Theoretical and experimental biology” at the 12thh International Conference in AIDS, Cancer and Related Problems, St. Petersburg, Russia, May 24-28, 2004

**AWARDED GRANTS AND CONTRACTS:**

**2005-Current:** Experimental research program in liver diseases, obesity, metabolic syndrome and related conditions is directly supported by Inova Healthcare Systems

**2019-Current: Egg Nutrition Center** “Influence of Dietary Choline Intake on Sensory Processing Symptoms and Neurotransmitter Levels in Children with Autism Spectrum Disorder (ASD)” PI: Dr. Slavin – CHHS, Role: Co-PI

**2019-Current: NSF I-CORP** “JeevaDx: Virtual Clinical Trials Platform” Role: PI

**2016-2017:** **GMU Provost' Multidisciplinary competition TIER 1** "Genetic Differences in Chronic Soft Tissue Pain Syndromes**"** PI: Dr. Sikdar – BENG, Role: Co-PI

**2014-2015: PNC Foundation** “Effect of prescribed aerobic exercise vs self-selected activity in treatment of breast cancer related fatigue”.PI: Gerber, **Role: Co-PI**

**2013-2014: PNC Foundation** “A metric to distinguish central from peripheral fatigue in breast carcinoma”. PI: Gerber, **Role: Co-PI.**

**2013: JHU/APL, REDD Internal Research and Development Project** “Support for Influenza and broad spectrum susceptibility mitigation”. **PI: Baranova.**

**2011-2014:**  **The Thomas F. Jeffress and Kate Miller Jeffress Memorial Trust** “Physiological Meaning of RNA Editing in Plasma Dendritic Cells”. **PI: Baranova**.

**2012:** **Mary Louise Andrews Award for Cancer Research program, Virginia Academy of Science** “Generation of novel Red Fluorescent Protein-labeled protein for the determination of intracellular localization and prenylation status”. PI: Dr.Van Hoek***.* Role: Co-PI**

**2011: Mary Louise Andrews Award for Cancer Research program, Virginia Academy of Science**“Modeling bacterial protein prenylation in eukaryotic cels using bioinformatics and molecular approaches”. **PI: Baranova**

**2009:****ATCC Contract** “Batch BLAST Software” **PI: Baranova**

**2007-2009: Susan G. Komen Foundation** "Molecular Network Profiling of DCIS for Patient Stratification and Individualized Therapy" PI: Dr.Edmiston, INOVA. **Role: Co-PI**

**2005-2008: The Thomas F. and Kate Miller Jeffress Memorial Trust** “Melanin biosynthesis in adipocytes: cross-talk between energy balance and pigmentation control" **PI: Baranova**

**2005-2009: NCI NIH 1R15CA113331-01** “KCNRG gene as candidate tumor suppressor for CLL and MM” **PI: Baranova**

**MEDIA APPEARANCES (selected):**

**2017: Video on importance of viral prenylation (recorded for Bioessays channel)**

[**https://www.youtube.com/watch?v=A\_bGR-f9C3w&t=52s**](https://www.youtube.com/watch?v=A_bGR-f9C3w&t=52s)

**2017:**

**Three-part video on using longitudinal monitoring of biomarkers for improving human health and longevity**

[**https://www.youtube.com/channel/UCXJYy66gIOEsT04ndBUBFPw**](https://www.youtube.com/channel/UCXJYy66gIOEsT04ndBUBFPw)

**The channel has 2984 subscribers**

**2017: Radio Show “Silver Rain” : “Something Good”**

**http://www.silver.ru/programms/chto\_to\_khoroshee/editions-of-the-program/materials-CHtotakoestressikaksnimborotsya/**

**2016-current: “Healthy Living” (22 episodes) at** Russian National TV Show

Invited expert on Russian National TV Show “Healthy Living” (Host: Elena Malysheva). Explained results of genetic analysis of ancestry, carriership for monogenic diseases, predispositions to multifactorial diseases and other genetic influences on health and lifestyle for 12 Russian celebrities, including TV anchors, movie actors and politicians.

Examples:

<https://www.youtube.com/watch?v=mYMtuJako0c>

<https://www.youtube.com/watch?v=MjHY356b_kw>

<https://www.youtube.com/watch?v=kd0a9QflHKw>

**2015: UMASS-Amherst TV:** Summary of talk given at the 14th Annual International Conference on Dose-Response on "Preconditioning in Biology and Medicine" 2015 hosted by the International Dose-Response Society**.** [**https://www.youtube.com/watch?v=qHvemhseULg**](https://www.youtube.com/watch?v=qHvemhseULg)

**2014: Hosted a series of mini-TV-interviews with leading world scientists in the area of human longevity** recorded in Sochi, Russia (April 2014). List of persons interviewed: Prof. Brian Kennedy (Buck Institute for Research on Aging in Novato, California, CEO and Professor), Prof. Claudio Franceschi (Università degli Studi di Bologna Bologna, Italy), Prof. Robert J. Shmookler Reis (Professor, University of Arkansas Medical Center), Prof. Vera Gorbunova (University of Rochester)

**EXPERT COMMENTS IN NEWSPAPERS AND POPULAR PRESS:**

**Interviewed by Anna Dobryuha, “Komsomolskaya Pravda”**

[**https://www.kp.ru/daily/26764.4/3795948/**](https://www.kp.ru/daily/26764.4/3795948/)(November 30th, 2017)

**Interviewed by Anna Dobryuha, “Komsomolskaya Pravda”**

<https://www.kp.ru/daily/26729.7/3755337/> (September 8th, 2017)

**Interviewed by Anna Dobryuha, “Komsomolskaya Pravda”**

<https://www.kp.ru/daily/26564.4/3579667/>

(August 3rd, 2017)

**Expert Comment on the paper of Mitalipov’s team, published in Nature** <https://www.svoboda.org/a/28661567.html> (August 6th, 2017)

**“Science in Siberia”** <http://www.sbras.info/articles/opinion/gurmany-i-genomy> (July 31st, 2017)

**Interviewed by Ekaterina Pichugina “Moscowsky Komsomolets”** <http://www.mk.ru/science/2016/06/20/vrachey-razgruzyat-integratory-zdorovya.html>  (June 20th, 2016). READS: 12066

**Interviewed by Dmitry Mungalov, Sk.news:** <http://sk.ru/news/b/articles/archive/2016/05/04/integratory.aspx> (May 4th, 2016) READS: 2967

**Interviewed by Anna Dobryuha, “Komsomolskaya Pravda”** (August 4th, 2016) <http://www.kp.ru/daily/26564.4/3579667/> Shared: 167 times

**Interviewed by Anna Dobryuha, “Komsomolskaya Pravda”** (March 12h, 2016) https://www.kp.ru/daily/26500/3368840/

**Interview by Yulia Korneva “Live Up project” (October 6th, 2015)** <https://live-up.co/geneticheskij-test-fundament-dlya-issledovaniya-sobstvennogo-zdorovya-intervyu-s-generalnym-direktorom-kliniki-atlas/>

**Interviewed by Elena Kudrayvtseva for “Ogonyok” (April 27th, 2015)** <https://www.kommersant.ru/doc/2713110>

<http://intalent.pro/interview/ancha-baranova-o-personalizirovannoy-medicine-i-professiyah-budushchego.html>

**Interviewed by Anna Govorova (infox.ru) December 19th, 2014** <https://www.infox.ru/news/84/lifestyle/health/141064-budusee-mediciny-personalizirovannyj-podhod-k-kazdomu-celoveku>

**Interviewed by Nadezhda Markina (gazeta.ru) October 2nd, 2014** <https://www.gazeta.ru/science/2014/10/02_a_6232725.shtml>

**Interviewed by Ekaterina Pichugina “Moscowsky Komsomolets”** (September 24th, 2014) READS: 9256 <http://www.mk.ru/social/2014/09/24/geneticheskie-testy-polza-ili-vred.html>

**Interviewed by Anton Soldatov for “Psychologies” (Russian Edition)** <http://www.psychologies.ru/wellbeing/immunity/kak-nash-stress-otrajaetsya-na-zdorove-nashih-detey/>

<http://krasotka.postimees.ee/3607091/top-5-otkrytiy-v-dietologii-genetik-rasskazala-o-nauchnyh-podhodah-k-pitaniyu>

https://geektimes.ru/company/atlasbiomed/blog/281154/ [anyavezh](https://geektimes.ru/users/anyavezh/) 4 октября 2016 в 14:02

<http://biomolecula.ru/content/1845> (1325 reads)

**PUBLIC LECTURES (selected):**

**2018:** “The Health of the healthy people: get away from the escalator”, **Public Lecture at Gorky Park, “Garage” Museum, Moscow, Russia**, August 9th, 2018

**2018:** “STRESS POSITIVE”, **Public Lecture at “Zaryadye Park”, Moscow, Russia**, July 2018

**2018:** “Biotechnology: what we can and cannot (yet) do” **Guest Lecture for 4-6 grades at Mantua Elementary School, Fairfax VA** -6 grades May 2018,

**2018: "**Why being lazy is a virtue (this is about bioinformatics)” **Guest Speaker at Bioinformatics Hackathon "Biocode", Thomas Jefferson High School, VA** April 14th, 2018

**2018:** "Why being lazy is a virtue (this is about bioinformatics)” **Guest Lecture in BIOL 378 “Evolution and Biosystematics” University of LaVerne, California**, Apr 13th, 2018

**2018:** “Peculiar Biology of Human Reproduction”, **Senior Seminar at University of La Verne, California. Apr13th, 2018.** The seminar is biweekly event for biology undergraduate students

**2017: “The Health of the healthy people: get away from the escalator”,** Public lecture at Exhibition of Achievements of National Economy, Green Theater, Moscow, Russia, August 23nd, 2017

<https://www.youtube.com/watch?v=WD2ZlooxPYY&t=7s>

**2017: “The Health of the healthy people: get away from the escalator”,** Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia, August 2017

**2017: “On importance of being lazy: insights into ageing and longevity”,** Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia, February 2017

**2016: “Biomarkers of Ageing”.** Public lecture and press-conference associated with the release of the book “Biomarkers of Ageing”, IVAO. Grand hotel Europa, St. Petersburg, Russia, August 2016

**2016: “Stress in the City”.** Public lecture at Exhibition of Achievements of National Economy, Green Theater, Moscow, Russia, July 2016

**2016: “Liquid biopsy”**, Public lecture in Pharma’s Cool program, April 2016

**2015: “Personalized medicine“.** The talk on Pharma’s Cool program:[**https://www.youtube.com/watch?v=ecr-g74KSQA**](https://www.youtube.com/watch?v=ecr-g74KSQA)**,** also presented at MONIKI Institute, Moscow, Russia

**2014: “Nutrigenomics”** (in Russian). Recorded in Spring 2014 in Moscow, Russia with profession TV crew. Released (<http://newtrition.ru/en/> )

**2014: “Molecular and Cellular Gastroenterology”** (in Russian). Public lecture was recorded in Spring, 2014, Moscow, Russia with profession TV crew. Not yet released.

**2012-2014: ”How to make Obese People Healthier Without Making Them Sweat or Starve”,** multiple of locations, including: Thomas Jefferson High School for Science and Technology tjSTAR Symposium, (50 min, 200 attendees, May 30, 2012)

**2012:** Expert Talk: “Women in Science” Panel at Thomas Jefferson High School for Science and Technology tjSTAR Symphosium, 10 min, 50 attendees, May 30th, 2012

**2011:** **“Innovation in translational research”**, the Second Congress of the Alumni of Russian Universities working abroad”, June 29 – July 1st, 2011, Kazan, Russia. By invitation of the Ministry of Science and Education of Russia

**2010:** **“Modern agricultural biotechnology”**, Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia December 6, 2010

**INVITED LECTURES AT SCIENTIFIC CONFERENCES (Selected):**

**2018:** V Научно-практическая конференция «Мочекаменная болезнь: междисциплинарный подход» 7 декабря 2018 года, г. Москва.

**2018: “**[Reperfusion Activates AP-1 and Heat Shock Response in Donor Kidney Parenchyma after Warm Ischemia](https://www.hindawi.com/journals/bmri/2018/5717913/)” **oral presentation at XI International Conference on Bioinformatics of Genome Regulation and Structure/Systems Biology (BGRS\SB'18).** Novosibirsk, Russia. August 21 – 25th, 2018.

**2017: “**Genetics perspective on kidney stones in general population”, **Round Table at Urology Research Institute, Russian Academy of Medical Sciences, Moscow, Russia,** December 7th, 2017

**2017:** “Cardiovascular health biomarkers: a longevity perspective”, **Plenary at “Current problems in dyslipidemia and atherosclerosis”, Kemorovo, Russia** December 8th, 2017

**2017:** “[Reperfusion Activates AP-1 and Heat Shock Response in Donor Kidney Parenchyma after Warm Ischemia](https://www.hindawi.com/journals/bmri/2018/5717913/)”, **Pathway Studio Drop-in Day, Elsevier, Rockville MD** December 1st, 2017 **(Plenary)**

**2017:** “The Health of the healthy people: get away from the escalator”, **Summit on Controversies in Precision Medicine, Berlin, Germany November 13th – November 16th, 2018.** Invited by Dan Peer. [https://precisionmedicine.kenes.com/2017/programme-(2)/programme#.W5U6us5Kj3g](https://precisionmedicine.kenes.com/2017/programme-%282%29/programme#.W5U6us5Kj3g)

**2017:** “The Health of the healthy people: get away from the escalator”, **Clinical Protomics (ClinProt), Moscow, Russia Oct 30th-Nov 1st, 2018 (Plenary)** http://www.clinprot2017.org/

**2017:** “**Patterns of cfDNA fragmentation as a mine for biomarkers reflecting tumor epigenetics”**, at Commonwealth of Virginia Cancer Research Conference, Charlottesville, VA - September 22-23, 2017

**2017: “Precision medicine in Oncology: so little money, so many choices”.** Pan-Russian Conference”Biotechnology to the Medicine of the Future” Novosibirsk, July 24-26, 2017

**2016: “Dissection of programmed and externally instigated ageing in a fibroblast model”,** OMICs 2016, Varadero, Cuba, October 20-23, 2016

**2016: “A bit less traditional aspects of circulating DNA”** X International Conference on Bioinformatics of Genome Regulation and Structure/Systems Biology (BGRS\SB'16). Novosibirsk, Russia. August 29 – September 2nd, 2016.

**2016: “Dissection of programmed and externally instigated ageing in a fibroblast model”** X International Conference on Bioinformatics of Genome Regulation and Structure/Systems Biology (BGRS\SB'16). Novosibirsk, Russia. August 29 – September 2nd, 2016.

**2016: “Systemic Inflammation and Insulin Resistance: Measuring in Still Healthy Patients with further Correction by Means of Nutrition”,** Newtrition, April 15-16, Moscow, Russia. [**https://www.youtube.com/watch?v=JqJHl8Il31w**](https://www.youtube.com/watch?v=JqJHl8Il31w).

**2016:** **“Circulating DNA as a source of novel types of cancer biomarkers”,** International Cancer Study & Therapy Conference April 4-6, 2016, Baltimore, USA.

**2015: “The Challenges of Personalized Medicine”.** OPEN INNOVATION Forum & Technology show, October 28, 2015, Moscow Russia

**2015: “Personalized Medicine and Medicine of Stratified Groups”.** The Plenary lecture at the 7th International Young Scientists School **“Systems Biology and Bioinformatics”** SBB-2015, Novosibirsk, Russia, June 22-25, 2015

**2015: “Cloud Biomarkers for Aging”** Moscow Conference on Computational Molecular Biology (MCCMB'15) Moscow, Russia, July 16–19, 2015

**2015: “8-oxo-dG as an integrative stress response biomarker”,** invited talk at the **“Preconditioning in Biology and Medicine Mechanisms and Translational Research”**, UMass Amherst, MA, April 21 – 22, 2015

**2014: “Cloud Biomarkers for various pathogenic processes**” Big Data: Biology and medicine, Moscow, Russia, June 30, 2014 PLENARY

**2014:** “**The drifting distance of tissue profiles as personal holistic measure for aging and progression of chronic diseases”** Genetics of Aging and Longevity Conference, Sochi, Russia, April 6-10, 2014

**2013: “Composite Biomarkers for human pathogenesis”** in “Convergent technologies: Big Data in Medicine and Biology”, Moscow State University named after M. Lomonosov, Moscow, Russia, July 4, 2013 (Invited Oral)

**2013:** **“All of it is already there: protein-centric analysis of publicly available PPI data for functionally diverse KCTD family as an example”**, at The Chromosome-centric Human Proteome Project Mini-Symphosium, FEBS Congress, St. Petersburg, Russia, July 6-11, 2013

**2013: We know it all: what is next? Protein-centric analysis of publicly available PPI data for functionally diverse KCTD family as an example”** The Systems Biology and Bioinformatics, June, 2013 Novosibirsk, Russia,

**2012:** **“Biomarker Challenge: A Cloud instead of a Set of Vantage Points”** VIII International Conference on Bioinformatics of Genome Regulation and Structure/Systems Biology (BGRS\SB'12) Novosibirsk, Russia. June 25–29, 2012.

**2012: “Melanogenesis helps human adipose tissue withstand low-grade systemic inflammation”** VIII International Conference on Bioinformatics of Genome Regulation and Structure/Systems Biology (BGRS\SB'12). Novosibirsk, Russia. June 25–29, 2012. (INVITED ORAL)

**2012: “Melanogenesis helps human adipose tissue withstand low-grade systemic inflammation”;** 11th International Conference “Functional Foods and Chronic Inflammation: Science and Practical Application”, August 21-23, 2012, University of San Diego, San Diego, California, USA.

**2012:** “**Biomarker Challenge: A Cloud instead of a Set of Vantage Points**” III International Conference "Post-genome Analysis Methods in Biology, Laboratory and Clinical Medicine" Kazan, Russia, November, 22-24, 2012

**2012**: “**Predictive Biomarkers: where we are now and where we are heading**” Conference with international participation by the Russian Society of Oncology – “Tumors of the Reproductive System” N.N. Blokhin Oncocenter, October 29-30, 2012, Moscow, Russia,

**2012:** “**Multi-tiered strategy for an optimization of therapeutic siRNA compositions and their delivery**”. International Conference on Genetic Syndromes and Gene Therapy, November 19-21, 2012 San Antonio, Texas, USA

**2012: “Genome and transcriptome features of the malignant cell: Bird’s view”.** Collaborative research on Biomarkers: 10 years. Moscow, Russia, January 16, 2012

**2011: “Genome, transcriptome and proteome features of malignant cells as a source of combinatorial biomarkers for clinical translation”**. First US-Russia Scientific Forum in Biomedical and Behavioral Research meeting, Moscow, Russia, November 16-17, 2011. Sponsored by NIH

**2011: “Genome and transcriptome features of the malignant cells: Bird’s view.** VI Meeting of Nobel Prize Laureates: Physiology and Medicine in 21st Century, September 19-23, 2011, St. Petersburg, Russia PLENARY at  **“Genes and Health”** division

**2010: "Functional Relevance of Biomarkers: Do We Need to Consider it?"** International Pediatric Biomarker Symposium, Plenary: Current methods and perspectives in biomarker discovery. Innsbruk, Austria (February 4-6, 2010) PLENARY

**2010: “Functional relevance of Biomarkers: do we need to consider it?”** 19th International Conference “AIDS, cancer and public health” StPeterburg, Russia, May 24-25, 2010.

**2009: “A role of 13q14 deletions in the chronic lymphocytic leukemia and multiple myeloma. Genetics for Medicine**” (40 years of Russian Center for Medical Genetics, RAMS), December 16-18, 2009) Moscow, Russia

**2008: “Tumor marker-encoding genes: a bunch of mysterious diamonds in the pile of evolutionary compost”.** Invitation-only Workshop on Computational Systems Biology Approaches to Analysis of Genome Complexity and Regulatory Gene Networks, Institute for Mathematical Sciences, Singapore, November 20-25, 2008

**2008: “Hypothesis: an ectopic synthesis of the melanin in adipose may help to counteract metabolic syndrome”.** Invitation-only Workshop on Computational Systems Biology Approaches to Analysis of Genome Complexity and Regulatory Gene Networks, Institute for Mathematical Sciences, Singapore, November 20-25, 2008

**2008: “Hypothesis: an ectopic synthesis of the melanin in adipose may help to counteract metabolic syndrome”.** Annual Mid-Atlantic Diabetes Research Symposium, Lister Hill Auditorium, NIH, October 3, 2008

**2007:** “**Antisense RNA in the therapy of malignant tumors**”, Invitation-only Symposium «Molecular medicine for diagnostics and therapy of the socially important diseases», Russian Clinical Forum, Oct 17-19, 2007

**2007: “Inova-GMU Joint Project: Application of Gene Expression Technology to Liver Disease”** GMU-Inova Research Symposium, March 25th, Manassas, VA

**2005:** **“New Markers for Human Tumors: A High-throughput Computational Approach**”. Society for In Vitro Biology (SIVB) Meeting. Plenary: Functional Genomics and Proteomics. Baltimore, MD, June 5-7, 2005.

**2005: “Melanin biosynthesis pathway is functional in fat tissue collected from morbidly obese patients”.** 19th INTERNATIONAL PIGMENT CELL CONFERENCE (IPCC): A Focus on Human Pigmentary Diseases, Reston, Virginia, USA, September 18–22, 2005

**2005: “Comparative genomics of tumor specific sequences”.** 12th International Conference in AIDS, Cancer and Related Problems, St Petersburg, Russia, May 28-31, 2005

**INVITED SEMINARS (selected):**

**2018:** “MS- and Certificate level Graduate Program in Biology: Experience at Mason” **Department of Biology, University of LaVerne, CA.** Invited by: Dr. Tatiana Tatarinova

**2018:** “Targeting single-nucleotide alterations of living organisms for industrial purpose”, **seminar at Northorp Grumann headquarter, Tysons Corner, VA** March 7th, 2018 Invited by: Dr. Morgan Crafts

**2018: “**Targeting single-**nucleotide** alterations of living organisms for industrial purpose”  **CHMPR/CARTA Industrial Board Meeting, Computer Science and Electrical Engineering Department, University of Maryland, Baltimore County.** November 17th, 2017 Invited by: Dr. Yelena Yesha

**2018:** Seminar and collaborative discussion at **“The Dead Sea Research Institute First global scientific summit Life in Extreme Conditions – A Lesson from Nature”, Masada, Israel,** January 8-10, 2018 Invited by: Dr. Mira Marcus-Kalish

**2017:** “Homeostasis, hormesis and human longevity through the prism of extracellular DNA", **Chemistry and Biology Departments, Florida State University, Tallahassee, Florida,** October 6th, 2017, Invited by: Dr. Lenhert (BIOL) and Dr. Ramakrishnan (Chem).

**2017: Chemistry and Biology Departments, Florida State University**, “"Homeostasis, hormesis and human longevity through the prism of extracellular DNA", October 6th, 2017, Tallahassee, Florida. Invited by: Dr. Lenhert (BIOL) and Dr. Ramakrishnan (Chem).

**2017: Computer Science and Electrical Engineering Department, University of Maryland, Baltimore County.** April 6h, 2017 Invited by: Dr. Yelena Yesha

**2017:** **Biology Department, George Mason University**, “Dissection of programmed and externally instigated ageing in a fibroblast model”, February 14th, 2017. Invited by: Dr. Claudette Davis

**2016: DTRA** “Wearing to know: viral infection monitoring patches”, June 22nd, 2016. Invited by: Dr. Khan, Akbar S CIV DTRA J9 (US).

**2016: NIH, NHLBI, Lipoprotein Metabolism Section** “Distance analysis for NMR and protein profiles of patients with lipid metabolism disorders”, May 13th, 2016. Invited by: Dr. Alan Remaley.

**2015: NIH, NHLBI, Lipoprotein Metabolism Section** “Distance analysis for complex profiles of biomolecules”, November 16th, 2015. Invited by: Dr. Alan Remaley.

**2015: Department of Medicine Division of Genetics Brigham & Women's Hospital, Harvard Medical School** "Pitfalls of Biomarker Panels" Nov 18th, 2015. Invited by: Prof. Vadim Gladyshev

**2015**: **Department of Neuroscience, National Research Center "Kurchatov Institute”**, Moscow, Russia “Successful writing in science” July 18th, 2015. Invited by: Prof. K. Anokhin

**2015: Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia** “Personalized Medicine and Medicine of Stratified Groups July 22th, 2015. Invited by: Prof. E.K. Ginter

**2014: Institute of Chemical Biology and Fundamental Medicine, SB RAS, Novosibirsk, Russia** “Cloud Biomarkers for human pathologies”, seminar for Young Scientists, July 2014. Invited by: Prof. Vlassov

**2013: Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia** “Systems Biology perspective on Human genetics” July 18th, 2013. Invited by: Prof. E.K. Ginter

**2013: Biology and Biotechnology Academy, Southern Federal University**, Rostov, Russia. “Tumor Biomarkers: Quo Vadis?” July 2013, Rostov, Russia Invited by: Prof. Tatiana Shkurat

**2013: Bashkir State University** “On major differences between American, Russian and European Systems of High Education”, July 2013, Ufa, Russia. Invited by: Ministry of Innovation, Bashkortostan Government.

**2013: Bashkir State University “**Tumor Biomarkers: Quo Vadis?” July, 2013, Ufa, Russia Invited by: Prof. Valentin Pavlov

**2012: Institute of Biomedical Chemistry of the Russian Academy of Medical Sciences**, Moscow, Russia «Predictive Biomarkers: where we are now and where we are heading” Nov 1st 2012. Invited by: Prof. A.I. Archakov

**2012: Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia** “Recent advances in the NextGen sequences yield a breakthrough in human genetics” July 3rd 2012. Invited by: Prof. E.K. Ginter

**2011: Biomedical center, StPetersburg, Russia** “Genome and transcriptome features of the malignant cells: Bird’s view”. September 23, 2011 Invited by: Prof. A. P. Kozlov

**2011: Institute of Chemical Biology and Fundamental Medicine, SB RAS, Novosibirsk, Russia** “Biomarkers in Oncology: Quo Vadis?” November 2nd ,2011 Invited by: Prof. V.V. Vlassov

**2011: Center for New Medical Technologies, Novosibirsk, Russia** “Biomarkers in Oncology: Quo Vadis?” November 3rd, 2011 Invited by: Prof. A.I. Shevela

**2011: Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia** “Modern Medical Biotechnology” Oct 24th 2011. Invited by: Prof. E.K. Ginter

**2010: Vavilov Institute of General Genetics, Russian Academy of Medical Sciences, Moscow, Russia** “Entire transcriptome profile as composite biomarker” Dec 9th, 2010. Invited by: Prof. NK Yankovsky

**2010: Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia** “Modern agricultural biotechnology” Dec 6th 2010. Invited by: Prof. E.K. Ginter

**2010: Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia** “DNA baskets as novel vector for siRNA delivery” Dec 10th 2010. Invited by: Prof. E.K. Ginter

**2010: Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia**. “Functional irrelevance of biomarkers signatures: entire profile as composite biomarker” July 5th, 2010, Invited by: Prof. E.K. Ginter

**2010: Vavilov Institute of General Genetics, Russian Academy of Sciences, Moscow, Russia.** “Functional irrelevance of biomarkers signatures: entire profile as composite biomarker”. July8th, 2010. Invited by: Prof. S.L. Kisselev

**2010: National Security Technology Department, Applied Physics Laboratory**, **The Johns Hopkins University, Laurel, MD**. “Functional irrelevance of biomarkers signatures: entire profile as composite biomarker”. June 24, 2010. Invited by: Dr. Chris Bradburne

**2010: Computer & Information Sciences, University of Delaware, Newark, DE.** “Functional irrelevance of biomarkers signatures: entire profile as composite biomarker”. April 28th, 2010. Invited by: Dr. Li Liao

**2009: Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia.** “Recent advances in the understanding of the metabolic syndrome and insulin resistance”. June 17th 2009. Invited by: Prof. E.K. Ginter

**2009 GNII Genetika Research Institute for Genetics and Industrial Microorganism, Moscow, Russia**. “Recent advances in the understanding of the metabolic syndrome and insulin resistance”, June 19th 2009. Invited by: Prof. I.Manukhov

**2008 American Type Cell Culture, Manassas, VA** “Recent advances in the study of metabolic syndrome”. March 13, 2008. Invited by: Dr. P. Ikonomi

**2007 Functional Genomics lab, Russian Center of Medical Genetics Russian Academy of Medical Sciences,** “A functional study of novel tumor suppressor gene: KCNRG as an example”. Invited by: Dr. M. Skoblov

**2007: Laboratory of Molecular Pathology, NCI, NIH, Bethesda, MD**. “New Markers for Human Tumors” March 18th, 2007. Invited by: Dr. Vladimir Larionov

**2007: Department of Human Nutrition, Foods & Exercise, Virginia Polytechnic Institute and State University, Blacksburg, VA**. “Hypothesis: an ectopic synthesis of the melanin in adipose may help to counteract metabolic syndrome” May 15th, 2007. Invited by: Dr. Y. Ju

**2006: GMU-IHS Translational Research Center, Falls Church, VA**. “Melanin biosynthesis in human and murine adipocytes” May, 31st, 2006, Invited by: Dr. Z. Younossi.

**2006: Medical Genetics Research Center, Russian Academy of Medical Sciences, Moscow, Russia** “High-throughput methods in the human genetics” January 16th 2006. Invited by: Prof. E.K. Ginter

**2006: Epigenetics Lab, MGRC, Russian Academy of Medical Sciences, Moscow, Russia** “Bioinformatics approach to human genetics” January 17th 2006. Invited by: Prof.D.Zaletayev.

**2005: Pathology & Molecular Cell Biology Department at F. Edward Hebert Medical School, Uniformed Services University of the Health Sciences**. ”Comparative genomics of tumor markers: analysis of known, discovery of new” January 28, 2005. Invited by: Prof. P. Grimley

**2005: The Imaging Science and Information Systems (ISIS) Center, Department of Radiology, Georgetown University Medical Center** “Bioinformatics: talking simple” September 15, 2005. Invited by: Dr. Seong K. Mun.

**2005: Pigment Cell Biology Section of Laboratory of Cell Biology, Division of Basic Science, NCI, NIH** “Melanin biosynthesis in human adipocytes” March 2005. Invited by: Prof. Vince Hearing

**GRANTED PATENTS:**

1. A. Baranova, M.Skoblov, K.Shakhbazov “RET Finger Protein 2 Promoter” **US 7,989,201 B2.**

Issued August 2, 2011

1. ZM. Younossi, M.Jarrar, V. Chandhoke, A.Baranova “Methods of Diagnosing Non-Alcoholic Steatohepatitis” (NASH) **US 7,824,871** (US20110009279, US20080311593, WO/2007/130636, WO/2008/021192).

Issued November 2, 2010

1. A. Baranova. “Preventing obesity-related metabolic syndrome with melanogenesis”

United States Patent Application No. **US20110206642**.

1. T. Alsheddi, A.Baranova “Method of Identifying Unique Target Sequence”.

United States Patent Application No. 20070161012, **US 8014955**. Issued on Sep 6, 2011.

1. A. Baranova, A.Lobashev, L.Krukovskaya, N.Yankovsky, A. Kozlov “In silico screening for phenotype-

 associated expressed sequences” United States Patent Application No. **20030108890**

1. A. Baranova, A. Zirzow “Nanogenomics for medicine: siRNA engineering”

 United States Patent Application 20090306185; US 8,222,220. Issued August 7, 2012.

1. A. Baranova, G. Manyam, Alessandro Giuliani,“Tumor Discriminator” US Patent Application 20110301853
2. G. Glazko, A. Rahmatallah, A. Baranova “Gene Set Net Correlations Analysis (GSNCA): A multivariate

 differential coexpression test for gene sets and its use for stand-alone network derivation”

 United States Patent Application **filed at the end of 2014**.

1. Svetlana Kostyuk, Natalya Veiko, Ancha Baranova, “Oxidized Fraction of Extracellular DNA as a

 biomarker of stress and methods for using the same”

 **WO2015069883** (A2) 2015-05-14 WO2015069883 (A3) 2015-11-12; priority date 2013-11-06

A number of other patent disclosures filed through Office of Technology Transfer, GMU

**ACADEMIC ENTREPRENEURSHIP:**

***Long-standing advising and networking collaborations with following companies:***

***Zansors LLC*** (http://www.zansors.com), Tysons Corner, VA (Scientific Advisory Board member);

***Jeeva Informatics Solutions*** (<http://www.jeevadx.com/>), Herndon, VA (Adviser)

***Localized Therapeutics LLC***, Rochester, NY (<http://localizedtherapeutics.com/>) (Adviser)

***Atlas Biomed Group***, Moscow, Russia <https://atlas.ru/en/clinic> (Research Adviser)

***Collaborative program between CoS, GMU and Russian Research Organizations:***

This program is run in frame of U.S.-Russia Collaboration in the Biomedical Sciences, a public-private partnership of the Foundation for the NIH (FNIH) and aims at increasing U.S.-Russia collaborations in health research and to serve as an important bridge between U.S. and Russian research organizations. Currently, program involves 12 research organizations in four different regions of Russia (Moscow, Novosibirsk, St. Petersburg and Rostov). All these studies are funded by internal Russian grants that cover the labor of Russian researchers and laboratory supplies, while I provide my research expertise for both study design and data analysis. In many cases, the analysis of the data is performed by GMU students in frame of their per-credit research projects and result in inclusion of these students into the list of authors for published studies. In past 10 years, this Program resulted in 37 published manuscripts with joint authorship, including these in Clinical Cancer Research, Gene, BMC Genomics, FASEB Journal, Journal of Bacteriology and others.

**Key role in drafting a number of Sponsored Research Roadmaps** that were subsequently funded by Russian Ministry of Education and Science.

**Established collaborative connection with Trade Representation of the Russian Federation in the USA** (jointly with Dr. Svetlana Fileatreau, Eurasia Programs Coordinator at George Mason University). This resulted in selection of GMU as a major visitation site by various Russian Business and governmental missions to US, including Prof. Eugeny Shlyakhto, the Chief Cardiologist of the North-West Federal District of Russia, and the head of Almazov Federal Centre, one of the leading medical institutions in Russia that is comparable in its importance to Cleveland Clinic and Mayo Clinic of U.S. The Russian Business Mission was led by Elena Maksimkina, Chief of Office for Drug Supply and Regulation of the Circulation of Medical Supplies of the Ministry of Health of the Russian Federation, representatives of the Ministry of Health, Leningradskiy Region officials and business community representatives. In addition to GMU, the program also included meetings in HHS, National Children’s Medical Center, NIH, NY Presbyterian Hospital, and Weill Cornell Medical College.

**Established working relationship with two largest Russian government-supported Bioindustrial clusters** associated with Leading Universities, Northern Biocluster (Moscow) and Siberian biocluster, Novosibirsk (jointly with Dr. Svetlana Fileatreau, Eurasia Programs Coordinator at George Mason University).

**Developed Research Visibility Training Program** that provide its participants with necessary skills to increase efficiency of their publishing in peer-reviewed journals, conference presentations, and integration into non-profit international research networks, i.e. Human Genome Organization, International Biomarkers Consortium and others (see Teaching Activities).

**OTHER SERVICE:**

**School of Systems Biology, CoS, GMU:**

**2013-Current**

**MS in Biology Program**, Director

**2005-Current**

**Graduate Admission Committee**, Member

**2015**

**Shared Equipment Committee**, Member

**College of Science, GMU:**

**2011-Current**

**Nominations Committee**, in rotating qualities of either Chair or Member

**2006-Current**

**Director**, Center for the Study of the Chronic Metabolic and Rare Diseases

**2008-2016**

**Co-Director,** GMU – Inova Biomarker Validation Lab

**2011-2016**

Developed and administered GMU-Inova Internship program in Chronic Diseases

**Virginia:**

**2016**

**James Madison University**, External Reviewer for MS in Biology Program

**2013-Current**

**Virginia Academy of Sciences**, Awards committee, member

**2013-Current**

**Virginia Academy of Sciences**, Research committee, member

**2009-2013**

**Virginia Academy of Sciences**, Biology with Microbiology section;

 served in rotating qualities of either Chair or Vice-Chair, or Secretary.

**PUBLISHED BOOK CHAPTERS and MANUSCRIPTS**

**H-index = 37, Citations = 7299**

**(Google Scholar)**

**BOOKS**

1. Jarrar M, Younossi ZM, **Baranova A**. “Adipokines and Pathogenesis of Non Alcoholic Fatty Liver Disease” VDM Verlag Dr. Muller, 2008 ISBN-10: 3639091655
2. Manyam G, **Baranova A**. “Gene expression during carcinogenesis: A bioinformatics perspective” LAP Lambert Academic Publishing (2010) ISBN-10: 3838350898

**BOOK CHAPTERS**

1. Mayburd A, **Baranova A.** Knowledge-Based Compact Disease Models: A Rapid Path from High-Throughput Data to Understanding Causative Mechanisms for a Complex Disease. In: Biological Networks and Pathway Analysis (Methods in Molecular Biology),  2017;1613:425-461. Humana Press, New York, NY. doi: 10.1007/978-1-4939-7027-8\_17. PubMed PMID: 28849571.
2. Zolotarenko A, Chekalin E, Mehta R, **Baranova A,** Tatarinova TV, Bruskin S. Identification of Transcriptional Regulators of Psoriasis from RNA-Seq Experiments. In: Biological Networks and Pathway Analysis (Methods in Molecular Biology), 2017; 1613:355-370. Humana Press, New York, NY. doi:10.1007/978-1-4939-7027-8\_14. PubMed PMID: 28849568.
3. Boris Veytsman, **Ancha Baranova** “High throughput approaches to biomarker discovery and the challenges of subsequent validation” In: **Biomarkers in Disease: Methods, Discoveries and Applications.** Eds: Victor Preedy, Springer (2015) ISBN-10: 9400776950. **Opening chapter in a book**
4. Sergei Moshkovskii, Mikhail Pyatnitsky, Petr Lokhov, **Ancha Baranova**. “OMICS for tumor biomarker research” In: **Biomarkers in Disease: Methods, Discoveries and Applications**. Eds: Victor Preedy, Springer (2015) ISBN-10: 9400776950
5. **Baranova A**, Younossi ZM. “Adipokines in Non-alcoholic Fatty Liver Diseases” In: **Adipose tissue and adipokines in health and disease (Nutrition and Health)**. Editors: Giamila Fantuzzi and Carol Braunschweig, Humana Press (2014). 2nd edition, ISBN-10: 1627037691
6. Wojtusiak J, **Baranova A**. “[Model Learning from Published Aggregated Data](http://link.springer.com/chapter/10.1007/978-3-642-22913-8_17)” In: **Learning Structure and Schemas from Documents.** Editors: Marenglen Biba and Fatos Xhafa, Springer (2011) ISBN-10: 3642229123
7. **Baranova A**, Birerdinc A, Estep M, Younossi ZM. “Pathogenesis of obesity-related chronic liver diseases as the study case for the systems biology” In: **Systems Biology for Signaling Networks**. Editor: Sangdun Choi, Springer, (August 18, 2010) ISBN-13: 978-1441957962
8. **Baranova A,** Petricoin E, Liotta L, Jarrar MH, Younossi ZM. ”Novel Technologies in Studying Chronic Liver Diseases” In: **Practical Management of Liver Diseases**, Cambridge University Press (2008) ISBN-10: 0521684897
9. **Baranova A**, Younossi ZM. “Adipokines in Non-alcoholic Fatty Liver Diseases” In: **Adipose tissue and adipokines in health and disease**. Editors: Giamila Fantuzzi and Theodore Mazzone. Humana Press (2007) 1st edition ISBN-10: 1588297217
10. **Baranova A**, Scobeyeva V, Skoblov M. “Human Genome” In: **Hereditary Diseases: National Guidelines**. Editors: Bochkov NP, Ginter EK, Puzyrev VP. GEOTAR-Media, Moscow (2012) ISBN-10: 5970422311. In Russian. **Opening chapter in a National Guidelines**
11. **Baranova A**. Polymerase Chain Reaction (Lab Task 5). In: General Virology: **The Laboratory Manual**. Editor: Atabakov IG. (2002). In Russian. **The manual is nationally adopted for teaching virology labs in Russian Universities.**
12. Skoblov M**, Baranova A**. Sanger sequencing (Lab Task 6). In: General Virology: **The Laboratory Manual**. Editor: Atabakov IG. (2002). In Russian. **The manual is nationally adopted for teaching virology labs in Russian Universities.**
13. Ivanov D**, Baranova A**. Nucleic Acid Hybridization (Lab Task 7). In: General Virology: **The Laboratory Manual**. Editor: Atabakov IG. (2002). In Russian. **The manual is nationally adopted for teaching virology labs in Russian Universities.**

**RESEARCH PAPERS, PEER-REVIEWED**

**Organized by Topics:**

1. Obesity, Insulin Resistance, Metabolic Syndrome, Non-Alcoholic Fatty Liver Disease (42 papers)
2. Ageing and Longevity (7 papers)
3. Stress (9 papers)
4. Hepatitis C and other infections (10 papers)
5. Cancer (34 papers)
6. Other Chronic Diseases (7 papers)
7. Novel Functions for Human Genes (9 papers)
8. Bioinformatics and Computational Biology (16 papers)
9. Development of novel biotechnologies (10 papers)
10. Lux-biosensors (5 papers)
11. Miscellaneous (6 papers)

**1Obesity, Insulin Resistance, Metabolic Syndrome, Non-Alcoholic Fatty Liver Disease**

**(42 papers)**

**Baranova A,** Maltseva D, Tonevitsky A. Adipose may actively delay progression of NAFLD by releasing tumor-suppressing, anti-fibrotic miR-122 into circulation. ***Obes Rev.*** 2019 Jan;20(1):108-118. PMID: 30248223.

Turchinovich A, **Baranova A,** Drapkina O, Tonevitsky A. Cell-Free Circulating Nucleic Acids as Early Biomarkers for NAFLD and NAFLD-Associated Disorders. ***Front Physiol.*** 2018 Sep 20;9:1256. doi: 10.3389/fphys.2018.01256. PMID: 30294278

Mehta R, Shaw G, Masschelin P, Felix S, Otgonsuren M, **Baranova A**, Goodman Z, Younossi Z. Polymorphisms in the receptor for advanced glycation end-products (RAGE) gene and circulating RAGE levels as a susceptibility factor for non-alcoholic steatohepatitis (NASH). **PLoS One.** 2018 Jun 21;13(6):e0199294. PMID: 29928018 **Total Article Views: 673**

Mehta R, Jeiran K, Koenig AB, Otgonsuren M, Goodman Z, **Baranova A**, Younossi Z. The role of mitochondrial genomics in patients with non-alcoholic steatohepatitis (NASH). ***BMC Med Genet.*** 2016 Sep 5;17(1):63. PMID: 27596100. **Total Article Views: 1457**

de Oliveira MR, Elangovan N, Ljubkovic M, **Baranova A.** The roads to mitochondrial dysfunction. ***Biomed Res Int***. 2015;2015:235370. PMID: 25654089 (Editorial Note to Special Issue)

Estep JM, Goodman Z, Sharma H, Younossi E, Elarainy H, **Baranova A,** Younossi Z. Adipocytokine expression associated with miRNA regulation and diagnosis of NASH in obese patients with NAFLD. ***Liver Int.*** 2015 Apr;35(4):1367-72. PMID: 24684403

Mehta R, Neupane A, Wang L, Goodman Z, **Baranova A,** Younossi ZM. Expression of NALPs in adipose and the fibrotic progression of non-alcoholic fatty liver disease in obese subjects. ***BMC Gastroenterol.*** 2014 Dec 16;14:208. PMID: 25512222. **Total Article Views: *1431***

Mehta R, Birerdinc A, Wang L, Younoszai Z, Moazzez A, Elariny H, Goodman Z, Chandhoke V, **Baranova A**, Younossi ZM. Expression of energy metabolism related genes in the gastric tissue of obese individuals with non-alcoholic fatty liver disease. ***BMC Gastroenterol.*** 2014 Apr 9;14:72. PMID: 24716593. **Total Article Views: *1834***

Loria A, Doyle K, Weinstein AA, Winter P, Escheik C, Price J, Wang L, Birerdinc A, **Baranova A**, Gerber L, Younossi ZM. Multiple factors predict physical performance in people with chronic liver disease. ***Am J Phys Med Rehabil.*** 2014 Jun;93(6):470-6. PMID: 24398583

Page S, Birerdinc A, Estep M, Stepanova M, Afendy A, Petricoin E, Younossi Z, Chandhoke V, **Baranova A.** Knowledge-based identification of soluble biomarkers: hepatic fibrosis in NAFLD as an example. ***PLoS One.*** 2013;8(2):e56009. PMC3566090. **Total Article Views: 6,015**

Birerdinc A, Jarrar M, Stotish T, Randhawa M, **Baranova A.** Manipulating molecular switches in brown adipocytes and their precursors: a therapeutic potential. ***Prog Lipid Res***. 2013 Jan;52(1):51-61. PMID: 22960032.

**Baranova A**, Tran TP, Afendy A, Wang L, Shamsaddini A, Mehta R, Chandhoke V, Birerdinc A, Younossi ZM. Molecular signature of adipose tissue in patients with both non-alcoholic fatty liver disease (NAFLD) and polycystic ovarian syndrome (PCOS). ***J Transl Med***. 2013 May 31;11:133. PMID: 23721173. **Total Article Views: *3,853. Top 15% of access dynamics for this journal.***

Sharma H, Estep M, Birerdinc A, Afendy A, Moazzez A, Elariny H, Goodman Z, Chandhoke V, **Baranova A**, Younossi ZM. Expression of genes for microRNA-processing enzymes is altered in advanced non-alcoholic fatty liver disease. ***J Gastroenterol Hepatol.*** 2013 Aug;28(8):1410-5. PMID: 23663110.

Mehta R, Birerdinc A, Neupane A, Shamsaddini A, Afendy A, Elariny H, Chandhoke V, **Baranova A**, Younossi ZM. Expression of inflammation-related genes is altered in gastric tissue of patients with advanced stages of NAFLD. ***Mediators Inflamm.*** 2013;2013:684237 PMID: 23661906

Elariny HA, **Baranova A.** Comment on: Diet-induced obesity associated with steatosis, oxidative stress and inflammation in liver. ***Surg Obes Relat Dis***. 2012 Jan-Feb;8(1):81-3. PMID: 22118841 ***(Editorial comment)***

Stephen S, **Baranova A**, Younossi ZM. Nonalcoholic fatty liver disease and bariatric surgery. ***Expert Rev Gastroenterol Hepatol.*** 2012 Apr;6(2):163-71. PMID: 22375522.

Page S, Chandhoke V, **Baranova A.** Melanin and melanogenesis in adipose tissue: possible mechanisms for abating oxidative stress and inflammation? ***Obes Rev.*** 2011 May;12(5):e21-31. PMID: 20576005.

Younossi ZM, Page S, Rafiq N, Birerdinc A, Stepanova M, Hossain N, Afendy A, Younoszai Z, Goodman Z, **Baranova A.** A biomarker panel for non-alcoholic steatohepatitis (NASH) and NASH-related fibrosis. ***Obes Surg.*** 2011 Apr;21(4):431-9. PMID: 20532833.

**Baranova A**, Tran TP, Birerdinc A, Younossi ZM. Systematic review: association of polycystic ovary syndrome with metabolic syndrome and non-alcoholic fatty liver disease. ***Aliment Pharmacol Ther***. 2011 Apr;33(7):801-14. PMID: 21251033.

**Baranova A**, Jarrar MH, Stepanova M, Johnson A, Rafiq N, Gramlich T, Chandhoke V, Younossi ZM. Association of serum adipocytokines with hepatic steatosis and fibrosis in patients with chronic hepatitis C. ***Digestion.*** 2011;83(1-2):32-40. PMID: 20847561

Vernon G, **Baranova A**, Younossi ZM. Systematic review: the epidemiology and natural history of non-alcoholic fatty liver disease and non-alcoholic steatohepatitis in adults. ***Aliment Pharmacol Ther. 2011*** Aug;34(3):274-85. PMID: 21623852. ***TOP 10 Downloaded Papers in Alimentary Pharmacology and Therapy***

**Baranova A**, Lal P, Birerdinc A, Younossi ZM. Non-invasive markers for hepatic fibrosis. ***BMC Gastroenterol.*** 2011 Aug 17;11:91. PMID: 21849046. ***Accessed 34644 times. TOP 1% of access dynamics for this journal. Received HIGHLY ACCESSED award.***

Estep M, Abawi M, Jarrar M, Wang L, Stepanova M, Elariny H, Moazez A, Goodman Z, Chandhoke V, **Baranova A**, Younossi ZM. Association of obestatin, ghrelin, and inflammatory cytokines in obese patients with non-alcoholic fatty liver disease. ***Obes Surg.*** 2011 Nov;21(11):1750-7. PMID: 21744131.

Estep M, Armistead D, Hossain N, Elarainy H, Goodman Z, **Baranova A**, Chandhoke V, Younossi ZM. Differential expression of miRNAs in the visceral adipose tissue of patients with non-alcoholic fatty liver disease. ***Aliment Pharmacol Ther.*** 2010 Aug;32(3):487-97. PMID: 20497147.

Stepanova M, Hossain N, Afendy A, Perry K, Goodman ZD, **Baranova A**, Younossi Z. Hepatic gene expression of Caucasian and African-American patients with obesity-related non-alcoholic fatty liver disease. ***Obes Surg.*** 2010 May;20(5):640-50. PMID: 20119733

Randhawa M, Huff T, Valencia JC, Younossi Z, Chandhoke V, Hearing VJ, **Baranova A**. Evidence for the ectopic synthesis of melanin in human adipose tissue. ***FASEB J.*** 2009 Mar;23(3):835-43. PMID: 18971261. ***Selected for press-release of the FASEB Journal. Selected for the Editorial Review in Pigment Cell Melanoma Res. Ito S. Melanins seem to be everywhere in the body, but for what? Pigment Cell Melanoma Res. 2009 Feb;22(1):12-3. Selected for GMU press-release. Reprinted and discussed by multiple web sources.***

Younossi ZM, **Baranova A**, Stepanova M, Page S, Calvert VS, Afendy A, Goodman Z, Chandhoke V, Liotta L, Petricoin E. Phosphoproteomic biomarkers predicting histologic nonalcoholic steatohepatitis and fibrosis. ***J Proteome Res.*** 2010 Jun 4;9(6):3218-24. PMID: 20441224.

Estep JM, **Baranova A**, Hossain N, Elariny H, Ankrah K, Afendy A, Chandhoke V, Younossi ZM. Expression of cytokine signaling genes in morbidly obese patients with non-alcoholic steatohepatitis and hepatic fibrosis. ***Obes Surg.*** 2009 May;19(5):617-24. PMID: 19280268.

**Baranova AV**. Adipokine genetics: unbalanced protein secretion by human adipose tissue as a cause of the metabolic syndrome. ***Genetika.*** 2008 Oct;44(10):1338-55. PMID: 19062531.

Younossi ZM, Jarrar M, Nugent C, Randhawa M, Afendy M, Stepanova M, Rafiq N, Goodman Z, Chandhoke V, **Baranova A**. A novel diagnostic biomarker panel for obesity-related nonalcoholic steatohepatitis (NASH). ***Obes Surg.*** 2008 Nov;18(11):1430-7. PMID: 18500507.

**Baranova AV.** Adipokine genetics: unbalanced protein secretion by human adipose tissue as a cause of the metabolic syndrome. ***Genetika.*** 2008 Oct;44(10):1338-55. PubMed PMID: 19062531

**Baranova A**, Younossi ZM. The future is around the corner: Noninvasive diagnosis of progressive nonalcoholic steatohepatitis. ***Hepatology.*** 2008 Feb;47(2):373-5. PMID: 18220279. (Editorial)

Jarrar MH, **Baranova A**, Collantes R, Ranard B, Stepanova M, Bennett C, Fang Y, Elariny H, Goodman Z, Chandhoke V, Younossi ZM. Adipokines and cytokines in non-alcoholic fatty liver disease. ***Aliment Pharmacol Ther.*** 2008 Mar 1;27(5):412-21. PMID: 18081738.

**Baranova A,** Schlauch K, Elariny H, Jarrar M, Bennett C, Nugent C, Gowder SJ, Younoszai Z, Collantes R, Chandhoke V, Younossi ZM. Gene expression patterns in hepatic tissue and visceral adipose tissue of patients with non-alcoholic fatty liver disease. ***Obes Surg.*** 2007 Aug;17(8):1111-8. PMID: 17953248

**Baranova A,** Liotta L, Petricoin E, Younossi ZM. The role of genomics and proteomics: technologies in studying non-alcoholic fatty liver disease. ***Clin Liver Dis.*** 2007 Feb;11(1):209-20, PMID: 17544980.

**Baranova A**, Randhawa M, Jarrar M, Younossi ZM. Adipokines and melanocortins in the hepatic manifestation of metabolic syndrome: nonalcoholic fatty liver disease. ***Expert Rev Mol Diagn.*** 2007 Mar;7(2):195-205. PMID: 17331066

Calvert VS, Collantes R, Elariny H, Afendy A, **Baranova A**, Mendoza M, Goodman Z, Liotta LA, Petricoin EF, Younossi ZM. A systems biology approach to the pathogenesis of obesity-related nonalcoholic fatty liver disease using reverse phase protein microarrays for multiplexed cell signaling analysis. ***Hepatology.*** 2007 Jul;46(1):166-72. PMID: 17596878.

**Baranova A**, Gowder SJ, Schlauch K, Elariny H, Collantes R, Afendy A, Ong JP, Goodman Z, Chandhoke V, Younossi ZM. Gene expression of leptin, resistin, and adiponectin in the white adipose tissue of obese patients with non-alcoholic fatty liver disease and insulin resistance. ***Obes Surg.*** 2006 Sep;16(9):1118-25. PMID: 16989692.

**Baranova A,** Schlauch K, Gowder S, Collantes R, Chandhoke V, Younossi ZM. Microarray technology in the study of obesity and non-alcoholic fatty liver disease. ***Liver Int.*** 2005 Dec;25(6):1091-6. PMID: 16343057.

**Baranova A**, Collantes R, Gowder SJ, Elariny H, Schlauch K, Younoszai A, King S, Randhawa M, Pusulury S, Alsheddi T, Ong JP, Martin LM, Chandhoke V, Younossi ZM. Obesity-related differential gene expression in the visceral adipose tissue. ***Obes Surg.*** 2005 Jun-Jul;15(6):758-65. PMID: 15978142.

Younossi ZM, **Baranova A**, Ziegler K, Del Giacco L, Schlauch K, Born TL, Elariny H, Gorreta F, VanMeter A, Younoszai A, Ong JP, Goodman Z, Chandhoke V. A genomic and proteomic study of the spectrum of nonalcoholic fatty liver disease. ***Hepatology.*** 2005 Sep;42(3):665-74. PMID: 16116632.

Younossi ZM, Gorreta F, Ong JP, Schlauch K, Del Giacco L, Elariny H, Van Meter A, Younoszai A, Goodman Z, **Baranova A**, Christensen A, Grant G, Chandhoke V. Hepatic gene expression in patients with obesity-related non-alcoholic steatohepatitis. ***Liver Int.*** 2005 Aug;25(4):760-71. PMID: 15998427.

 **Ageing and Longevity (7 papers)**

Polesskaya O, Kananykhina E, Roy-Engel AM, Nazarenko O, Kulemzina I, **Baranova A,** Vassetsky Y, Myakishev-Rempel M. The role of Alu-derived RNAs in Alzheimer's and other neurodegenerative conditions**. Med Hypotheses.** 2018 Jun;115:29-34. PMID: 29685192

Fedintsev A, Kashtanova D, Tkacheva O, Strazhesko I, Kudryavtseva A, **Baranova A**, Moskalev A. Markers of arterial health could serve as accurate non-invasive predictors of human biological and chronological age. ***Aging (Albany NY).*** 2017 Apr;9(4):1280-1292. doi: 10.18632/aging.101227. PMID: 28455973

Moskalev A, Anisimov V, Aliper A, Artemov A, Asadullah K, Belsky D, **Baranova A**, de Grey A, Dixit VD, Debonneuil E, Dobrovolskaya E, Fedichev P, Fedintsev A, Fraifeld V, Franceschi C, Freer R, Fülöp T, Feige J, Gems D, Gladyshev V, Gorbunova V, Irincheeva I, Jager S, Jazwinski SM, Kaeberlein M, Kennedy B, Khaltourina D, Kovalchuk I, Kovalchuk O, Kozin S, Kulminski A, Lashmanova E, Lezhnina K, Liu GH, Longo V, Mamoshina P, Maslov A, Pedro de Magalhaes J, Mitchell J, Mitnitski A, Nikolsky Y, Ozerov I, Pasyukova E, Peregudova D, Popov V, Proshkina E, Putin E, Rogaev E, Rogina B, Schastnaya J, Seluanov A, Shaposhnikov M, Simm A, Skulachev V, Skulachev M, Solovev I, Spindler S, Stefanova N, Suh Y, Swick A, Tower J, Gudkov AV, Vijg J, Voronkov A, West M, Wagner W, Yashin A, Zemskaya N, Zhumadilov Z, Zhavoronkov A. A review of the biomedical innovations for healthy longevity. ***Aging (Albany NY).*** 2017 Jan 29;9(1):7-25. PMID: 28132958; PMCID: PMC5310653.

Kural KC, Tandon N, Skoblov M, Kel-Margoulis OV, **Baranova AV**. Pathways of aging: comparative analysis of gene signatures in replicative senescence and stress induced premature senescence. ***BMC Genomics.*** 2016 Dec 28;17(Suppl 14):1030. PMID: 28105936; PMC5249001

Stepanova M, Rodriguez E, Birerdinc A, **Baranova A**. Age-independent rise of inflammatory scores may contribute to accelerated aging in multi-morbidity. ***Oncotarget.*** 2015 Jan 30;6(3):1414-21. PMID: 25638154

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Velegzhaninov I, Mezenceva V, Shostal O, **Baranova A**, Moskalev A. Age dynamics of DNA damage and CpG methylation in the peripheral blood leukocytes of mice. ***Mutat Res. - Fundamental and Molecular Mechanisms of Mutagenesis.*** 2015 May;775:38-42. PMID: 25867117.

**Stress**

Vasilyeva I, Bespalov V, **Baranova A.** Radioprotective combination of α-tocopherol and ascorbic acid promotes apoptosis that is evident by release of low-molecular weight DNA fragments into circulation. ***Int J Radiat Biol.*** 2015 Nov;91(11):872-7. PMID: 26473391

Glebova K, Veiko N, Kostyuk S, Izhevskaya V, **Baranova A.** Oxidized extracellular DNA as a stress signal that may modify response to anticancer therapy**.** ***Cancer Lett.*** 2015 Jan 1;356(1):22-33.

Myakishev-Rempel M, Stadler I, Polesskaya O, ***Motiwala AS***, Nardia FB, Mintz B, **Baranova A,** Zavislan J, Lanzafame RJ. Red Light Modulates Ultraviolet-Induced Gene Expression in the Epidermis of Hairless Mice. ***Photomed Laser Surg***. 2015 Oct;33(10):498-503. PMID: 26398729

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Kostyuk SV, Tabakov VJ, Chestkov VV, Konkova MS, Glebova KV, Baydakova GV, Ershova ES, Izhevskaya VL, **Baranova A**, Veiko NN. Oxidized DNA induces an adaptive response in human fibroblasts. ***Mutat Res - Fundamental and Molecular Mechanisms of Mutagenesis.*** 2013 Jul-Aug;747-748:6-18. PMID: 23644378.

Ermakov AV, Konkova MS, Kostyuk SV, Izevskaya VL, **Baranova A**, Veiko NN. Oxidized extracellular DNA as a stress signal in human cells. ***Oxid Med Cell Longev.*** 2013;2013:649747. PMID: 23533696

Kostyuk SV, Ermakov AV, Alekseeva AY, Smirnova TD, Glebova KV, Efremova LV, **Baranova A**, Veiko NN. Role of extracellular DNA oxidative modification in radiation induced bystander effects in human endotheliocytes. ***Mutat Res - Fundamental and Molecular Mechanisms of Mutagenesis****.* 2012 Jan 3;729(1-2):52-60. PMID: 22001237.

Loseva P, Kostyuk S, Malinovskaya E, Clement N, Dechesne CA, Dani C, Smirnova T, Glebova K, Baidakova G, **Baranova A**, Izhevskaia V, Ginter E, Veiko N. Extracellular DNA oxidation stimulates activation of NRF2 and reduces the production of ROS in human mesenchymal stem cells. ***Expert Opin Biol Ther.*** 2012 Jun;12 Suppl 1:S85-97. PMID: 22594577.

Kostjuk S, Loseva P, Chvartatskaya O, Ershova E, Smirnova T, Malinovskaya E, Roginko O, Kuzmin V, Izhevskaia V, **Baranova A**, Ginter E, Veiko N. Extracellular GC-rich DNA activates TLR9- and NF-kB-dependent signaling pathways in human adipose-derived mesenchymal stem cells (haMSCs). ***Expert Opin Biol Ther.*** 2012 Jun;12 Suppl 1:S99-111. PMID: 22594608.

**Hepatitis C and other infections**

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