Ilinskaya Olga Nikolaevna

CV

1958 – born in Menzelinsk, Tatarstan, Russian Federation;

1975 – graduated from mathematical school No 131 in Kazan;

1980 – graduated from Kazan State University, Biological Faculty (microbiology);

Since 1980 till today – working at Kazan Federal University;

1988 – PhD at Institute of Biochemistry and Physiology of Microorganisms, Puschino («Microbial destruction of cellulose nitroesters»);

1999 – Doctor of Science (Microbiology and Biochemistry) at Ist Medical Academy, Moscow («Biological effects of exogenous RNases»);

2001– Professor of Microbiology Department at Kazan Federal University;

2007 – corresponding member of Academy of Science of Tatarstan Republic;

2011 – member of Academy of Science of Tatarstan Republic;

2012 – Head of Branch for Medicine and Biology of Academy of Science of Tatarstan Republic.

Trainings

1979-1980 – «Polyphosphate accumulation in slime-variant *Neurospora crassa*», Institute of Biochemistry and Physiology of Microorganisms, Puschino (Student exchange grant, KSU)

1990-1991 – «DNA-damaging processes and genotoxicity testing», Institute of Toxicology of ETH and University Zurich, Switzerland (East Europe Foundation grant)

1991-1992 – «Professional and environmental carcinogens», Institute of Toxicology of University Wuerzburg, Germany (DAAD grant);

1993-1994 – «Function of Ca-dependent K^+-channels», Institute of Toxicology and Pharmacology of University Giessen, Germany (DAAD grant);

1996 – «Transgenic organisms and biosafety» school at International Centre of Genetic Engineering and Biotechnology, Trieste, Italy (UNIDO grant).

Honor and Awards

1975 – Gold Medal for the best school results;

1980 – «Red Diploma» for the best university results;

2002 – Award of Nauka/Interperiodika MAIK-Publishing group for the set of scientific publications;

2004 – Certificate of Honor from the Ministry of Education and Science of Russian federation for contribution to education and research;

2006 – Thankful Diplomas for management of International student activities: from Organizing Committee of 10th Symposium of Biology Students in Europe, Ancon, Italy; from Cappadocia Higher School, Turkey; from Ministry of Education and Science, Russian Federation.

2009 – State Award of Tatarstan Republic for scientific work «Microbial hydrolases as potential

therapeutic agents»;

2013 – Medal «Honored worker of Higher Education of Russian Federation».

Research and social activity

The main results were obtained by O.Ilinskaya (H-index 16) at the field of bacterial ribonucleases investigation, namely, regulation of their biosynthesis and molecular mechanisms of antiviral and antitumor activity. The number of results concern the xenobiotics destruction, genotoxicity testing, bacterial NO and biogas production. O.Ilinskaya published more than 200 papers, 14 methodological guides, 4 textbooks, 3 monographs, and 8 Patents of Russian Federation. 23 PhD students and 3 Doctors of Science obtained their degrees under scientific supervision of O.Ilinskaya. She is the Chairman of Tatarstan Biotechnologists Society, Curator of KFU-partnership with German Universities, the member of Scientific Council of KFU, the member of Scientific Committee by Governmental Council of Tatarstan.

Selected publications

1. Makarov A.A. Ilinskaya O.N. Cytotoxic ribonucleases: molecular weapons and their targets (review). FEBS Lett., 2003, 540, 15-20.
2. Ilinskaya O.N., Koschinski A., Mitkevich V.A., Repp H., Dreyer F., Pace N., Makarov A.A. Cytotoxicity of RNases is increased by cationization and counteracted by Kca channels. BBRC, 2004, 314, 550-554.
3. Olga N. Ilinskaya, Pavel V. Zelenikhin, Irina Yu. Petrushanko, Vladimir A. Mitkevich, Vladimir S. Prasolov Alexander A. Makarov. Binase induces apoptosis of transformed myeloid cells and does not induce T-cell immune response BBRC, 2007, 361, 1000-1005
4. A.A.Makarov, A.Kolchinsky, O.N.Ilinskaya. Binase and other microbial RNases as potential anticancer agents. BioEssays, 2008, 30, 781-790.
5. Ilinskaya O.N., A.Koschinski, H.Repp, V. Mitkevich, F.Dreyer, J. M. Scholtz, C. N.Pace, A. Makarov. RNase induced apoptosis: fate of calcium-activated potassium channels. Biochimie, 2008, 90, 717-725.
6. Vladislav M. Chernov, Olga A. Chernova, Anna B. Margulis, Alexey A. Mouzykantov, Nataliya B.Baranova, Elena S. Medvedeva, Alexey I. Kolpakov, Olga N. Ilinskaya. Genotoxic Effects of Mycoplasma cells (A. laidlawii PG8, M. gallisepticum S6, M. hominis PG37) formed in different growth conditions. American-Eurasian J. Agric. & Environ. Sci., 2009, 6, 104-107.
7. E.O. Mikhailova, N.P. Balaban, A.M. Mardanova, N.L. Rudakova, O.N. Ilyinskaya, G.N. Rudenskaya, A.A. Rizvanov, M.R. Sharipova. Purification of a subtilisin-like serine proteinase from recombinant Bacillus subtilis during different phases of growth. Annals of Microbiology. 2009, 59, 301-307.
8. Vladimir A. Mitkevich, Nickolai A. Tchurikov, Pavel V. Zelenikhin, Irina Yu. Petrushanko, Alexander A. Makarov and Olga N. Ilinskaya. Binase cleaves cellular noncoding RNAs and affects coding mRNAs. FEBS Journal, 2010, 277,186-196.
9. Mitkevich VA, Petrushanko IY, Spirin PV, Fedorova TV, Kretova OV, Tchurikov NA, Prassolov VS, Ilinskaya ON, Makarov AA. Sensitivity of acute myeloid leukemia Kasumi-1 cells to binase toxic action depends on the expression of KIT and AML1-ETO oncogenes. Cell Cycle. 2011 Dec 1;10(23):4090-4097.
10. Ayrat M. Ziganshin, Thomas Schmidt , Frank Scholwin, Olga N. Il'inskaya, Hauke Harms, Sabine Kleinsteuber Bacteria and archaea involved in anaerobic digestion of distillers grains with soluble. Appl. Microbiol. Biotechnol., 2011, 89, 2039-2052.

11. Ulyanova V, Vershinina V, Ilinskaya O. Barnase and binase: twins with distinct fates. Review. FEBS J. 2011 Oct;278(19):3633-43.

12. Dzamukova MR, Zamaleeva AI, Ishmuchametova DG, Osin YN, Kiyasov AP, Nurgaliev DK, Ilinskaya ON, Fakhrullin RF. A direct technique for magnetic functionalization of living human cells. Langmuir. 2011 Dec 6;27(23):14386-14393

13. Ksenia Fedorova, Airat Kayumov, Kathrin Woyda, Olga Ilinskaja, Karl Forchhammer. Transcription factor TnrA inhibits the biosynthetic activity of glutamine synthetase in Bacillus subtilis FEBS Letters 2013, 587, 1293–1298.

14. Hector Alejandro Cabrera-Fuentes, Muhammad Aslam, Mona Saffarzadeh, Alexei Kolpakov, Pavel Zelenikhina, Klaus T. Preissner, Olga N. Ilinskaya. Internalization of Bacillus intermedius Ribonuclease (BINASE) Induces Human Alveolar Adenocarcinoma Cell Death. Toxicon, 2013, 69, 219–226.

15. Mitkevich VA, Kretova OV, Petrushanko IY, Burnysheva KM, Sosin DV, Simonenko OV, Ilinskaya ON, Tchurikov NA, Makarov AA. Ribonuclease binase apoptotic signature in leukemic Kasumi-1 cells. Biochimie. 2013 95(6):1344-9.

16. Shirshikov F.V., Cherepnev G.V., Ilinskaya O.N., Kalacheva N.V. A hydrophobic segment of some cytotoxic ribonucleases. Med. Hypotheses. 2013 Aug;81(2):328-334.

17. P. V. Zelenikhin, A. V. Makeeva, A. P. Lozhkin, A. A. Rodionov, N. Nguen, and O. N. Ilinskaya Effect of *Bacillus pumilus* Ribonuclease on the Paramagnetic Centers of Microbial Cells Microbiology (Moscow), 2013, Vol. 82, No. 6, pp. 862–867.

18. O. N. Il'inskaya, Yu. V. Sokurenko, V. V. Ul'yanova, V. I. Vershinina, P. V. Zelenikhin, A. I. Kolpakov, E. S. Medvedeva, N. B. Baranova, M. N. Davydova, A. A. Muzykantov, O. A. Chernova, V. M. Chernov. Ribonucleolytic Activity of Mycoplasmas. Microbiology (Moscow), 2014. Vol. 83, No. 3, pp. 247–254.

19. Dao, Linh; Grigoryeva, Tatiana; Laikov, Alexander; Devjatijarov, Ruslan; Ilinskaya, Olga. Full-scale bioreactor pretreatment of highly toxic wastewater from styrene and propylene oxide production. Ecotoxicology and environmental safety, 2014, Volume:10 Pages:195-202

20. Essam Y. Abdul-Hafeez1, Nguyen Thi Nga, Nazira S. Karamova, Olga N. Ilinskaya. Antibacterial activity of certain medicinal plants on different bacterial strains associated with colorectral cancer. International Journal of Biosciences, 2014, Vol. 5, No. 7, p. 219-229.

21. Essam Y. Abdul-Hafeez, Nazira S. Karamova, Olga N. Ilinskaya Antioxidant activity and total phenolic compound content of certain medicinal plants International Journal of Biosciences, 2014. Vol. 5, No. 9, p. 213-222.

22. Chernov VM, Chernova OA, Sanchez-Vega JT, Kolpakov AI, Ilinskaya ON. Mycoplasma Contamination of Cell Cultures: Vesicular Traffic in Bacteria and Control over Infectious Agents. Acta Naturae. 2014 Jul;6(3):41-51.

23. Vera Ulyanova, Raihan Shah Mahmud, Elena Dudkina, Valentina Vershinina, Olga Ilinskaya Draft Whole Genome Sequence of *Bacillus pumilus* Strain 3-19, a Chemical Mutant Overproducing Extracellular Ribonuclease. Genome Announcements, July/August 2014 Volume 2 Issue 4, e00724-14.

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25. Garipov AR, Nesmelov AA, Cabrera-Fuentes HA, Ilinskaya ON. Bacillus intermedius ribonuclease (BINASE) induces apoptosis in human ovarian cancer cells. Toxicon. 2014 Dec 15;92:54-9.

26. O.N. Ilinskaya and R. Shah Mahmud. Ribonucleases as Antiviral Agents. Molecular Biology (Moskow), 2014, Vol. 48, No. 5, pp. 615–623.

27. Elena Dudkina, Airat Kayumov, Vera Ulyanova and Olga Ilinskaya. New insight into secreted ribonuclease structure: binase is a natural dimer. PLOS ONE 2014 Dec 31;9(12):e115818.

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