

Alexander Zaboronok



Personal Information

Place of Birth: Minsk, Belarus,
Born: 23 October 1979, Age 35
Marital status: married (Nadzeya Kavaliova)
Children: Alisa (8 y.o.) and Andrey (5 y.o.)

Languages

Native Russian, fluent English, conversational
Japanese (N3 passed in 2012), basic German.

Education

[1985-1992] School N54, specialized in foreign languages learning (English)
[1992-1998] Linguistic College N24, specialized in foreign languages learning and teaching (English, German)
[1998-2004] Belarusian State Medical University (BSMU), Faculty of General Medicine, Minsk (<http://www.bsmu.by/>)
[2004-2005] Internship in General surgery, Surgical Department, Minsk City Hospital N5
[2005] Postgraduate course in Neurosurgery (3 months), Belarusian Medical Academy for Post-graduate Training
[2007-2008] Clinical residency at the Department of Nervous and Neurosurgical Diseases, BSMU, full-time studies.
[2009-2013] Postgraduate PhD course in Neurosurgery, University of Tsukuba, graduated in October 2013 (<http://www.tsukuba.ac.jp/>).

Professional experience

[2004-2005] Minsk City Hospital N5, Surgical Department, post of General surgeon (Internship, full-time).
[2005-2007] Minsk City Hospital N9, Department of Neurosurgery, post of Neurosurgeon (full-time, part-time during clinical residency)
[1998-2008] Private company "IRA SoftAnt", post of manager, part-time (in Belarus).
[2008-2013] Fundamental research experience (in vitro and in vivo), including cells cultivating (U87, U251 human gliomas, 9L, C6 rat gliomas), laboratory animals care (Nod/SCID, Nude, Balb/C mice, and Fisher rats), laboratory methods (in Japan, further see "Skills").
[2013.09.01 ~ present time] Office for the Promotion of International Medical Affairs, University of Tsukuba Hospital, Clinical Assistant Professor: promotion and maintenance of international, medical English communication course.
[2014.04.14 ~ present time] Private company "Tsukuba R&D" co-founder and promoter, international cooperation in research, new medical technologies development, Japanese culture and traditions, etc. (in Japan, further see "Skills").

Skills

Medical university:

- medical practice;
- part-time and full-time work at the medical institutions, acquired the qualification of nurse and medical doctor, specialized in Neurosurgery for more than 3 years, general surgical and neurosurgical procedures, including research work (photodynamic therapy).

Fundamental research (laboratory methods):

- colony forming assay, MTS cytotoxicity assay; Inductively-Coupled Plasma Atomic Emission Spectrometry (ICP-AES) operation, X-ray and gamma biological irradiators operation, work with optical analyzers, optical and electronic microscopy, experiments at proton irradiator;
- gold nanoparticles and boron compounds development (in cooperation

with International Research Center “Martinex” and Enikolopov Institute of Synthetic Polymeric Materials, Russian Academy of Sciences, Moscow, Russian Federation).

Private company:

- knowledge in business communication, advertisement strategies;
- medical field-oriented software development;
- English language for medical communication teaching;
- use of modern graphics software;
- professional photography equipment use;
- development of design-oriented computer systems.

Advanced computer knowledge (PC and Mac).

Research topics

Medical university:

- development of choroid plexus in rat brain (Department of Histology);
- photodynamic therapy and diagnosis of brain tumors (Department of Neurosurgery).

Neurosurgical practice:

- photodynamic therapy and diagnosis of malignant brain tumors with Fotolon (Minsk City Hospital N9, Department of Neurosurgery).

University of Tsukuba:

- glioma cells migration and invasion after gamma and proton irradiation in small doses;
- glioma radiosensitization with gold nanoparticles;
- development of hyaluronic acid-melanin-based gold nanoparticles (in cooperation with the International Research Center “Martinex” and Enikolopov Institute of Synthetic Polymeric Materials, Russian Academy of Sciences, Moscow, Russian Federation, Moscow, Russia);
- navigation-guided endoscopic biopsy for intraparenchymal brain tumors with photodynamic diagnosis.

Awards and grants

Belarusian State Medical University:

- student presentation and research awards at International student scientific conferences at BSMU, Minsk, Belarus (2000-2003).

Ministry of Education, Culture, Sports, Science and Technology of Japan:

- scholarship for young specialists (researchers) from abroad to study in Japan (2008-2013).

Japan Neurosurgical English Forum:

- 2nd award for best neurosurgical presentation in English (2013);

Ministry of Education, Culture, Sports, Science and Technology of Japan:

- personal grant-in-aid for young researchers (Kakenhi, Wakate B) No. 26860393 (2014-2016).

Publications

Most publications are listed in the PubMed database of US National Library of Medicine, National Institutes of Health: <http://www.ncbi.nlm.nih.gov/pubmed/?term=Zaboronok+A>

1. Proton beam irradiation stimulates migration and invasion of human U87 malignant glioma cells. Zaboronok A, Isobe T, Yamamoto T, Sato E, Takada K, Sakae T, Tsurushima H, Matsumura A. J Radiat Res. 2014 Mar 1;55(2):283-7. doi: 10.1093/jrr/rrt119. Epub 2013 Nov 1.
2. Size-dependent radiosensitization effects of gold nanoparticles on human U251 malignant glioma cells. Zaboronok A, Tsurushima H, Yamamoto T, Isobe T, Takada K, Sakae T, Yoshida F, and Matsumura A. Nanosci. Nanotechnol. Lett. 5, 990-994 (2013)
3. The optimization of fluorescence imaging of brain tumor tissue differentiated from brain edema-in vivo kinetic study of 5-aminolevulinic acid and talaporfin sodium.

- Tsurubuchi T, Zaboronok A, Yamamoto T, Nakai K, Yoshida F, Shirakawa M, Matsuda M, Matsumura A. Photodiagnosis Photodyn Ther. 2009 Mar;6(1):19-27.
4. Boron neutron capture therapy for newly diagnosed glioblastoma: a pilot study in Tsukuba. Yamamoto T, Nakai K, Tsurubuchi T, Matsuda M, Shirakawa M, Zaboronok A, Endo K, Matsumura A. Appl Radiat Isot.2009 Jul;67(7-8 Suppl):S25-6.
 5. Feasibility of boron neutron capture therapy for malignant spinal tumors. Nakai K, Kumada H, Yamamoto T, Tsurubuchi T, Zaboronok A, Matsumura A. Appl Radiat Isot. 2009 Jul;67(7-8 Suppl):S43-6
 6. Intracellular uptake of a new boronated porphyrin EC032. Tsurubuchi T, Yamamoto T, Nakai K, Zaboronok A, Yoshida F, Miyakawa M, Shirakawa M, Yamamoto Y, Matsuda M, Matsumura A. Appl Radiat Isot. 2009 Jul;67(7-8 Suppl):S94-6.
 7. Proton magnetic resonance spectroscopy findings of hemangioblastoma. Isobe T, Yamamoto T, Akutsu H, Anno I, Shiigai M, Zaboronok A, Masumoto T, Takano S, Matsumura A. Jpn J Radiol. 2010 May;28(4):318-21
 8. The status of Tsukuba BNCT trial: BPA-based boron neutron capture therapy combined with X-ray irradiation. Yamamoto T, Nakai K, Nariai T, Kumada H, Okumura T, Mizumoto M, Tsuboi K, Zaboronok A, Ishikawa E, Aiyama H, Endo K, Takada T, Yoshida F, Shibata Y, Matsumura A. Appl Radiat Isot. 2011 Dec;69(12):1817-8.
 9. Prognostic factors in glioblastoma multiforme patients receiving high-dose particle radiotherapy or conventional radiotherapy. Matsuda M, Yamamoto T, Ishikawa E, Nakai K, Zaboronok A, Takano S, Matsumura A. Br J Radiol. 2011 Dec;84 Spec No 1:S54-60.
 10. Navigation-guided endoscopic biopsy for intraparenchymal brain tumor. Tsuda K, Ishikawa E, Zaboronok A, Nakai K, Yamamoto T, Sakamoto N, Uemae Y, Tsurubuchi T, Akutsu H, Ihara S, Ayuzawa S, Takano S, Matsumura A. Neurol Med Chir (Tokyo). 2011;51(10):694-700.
 11. Navigation-guided endoscopic biopsy for pathological diagnosis for intraparenchymal pure germinoma near the ventricular trigone. Onuma K, Ishikawa E, Matsuda M, Shibata Y, Satomi K, Yamamoto T, Zaboronok A, Takano S, Matsumura A. Surg Neurol Int. 2012;3:9.
 12. Glioma immunotherapy with combined autologous tumor cell and endothelial cell vaccine in vivo. Sakamoto N, Uemae Y, Ishikawa E, Takano S, Nakai K, Yamamoto T, Zaboronok A, Matsumura A. Neurol Med Chir (Tokyo). 2012;52(4):194-201.
 13. Dual-port technique in navigation-guided endoscopic resection for intraparenchymal brain tumor. Masuda Y, Ishikawa E, Takahashi T, Ihara S, Yamamoto T, Zaboronok A, Matsumura A. Surg Neurol Int. 2012;3:35.
 14. Elevated diffusion anisotropy in gray matter and the degree of brain compression. Osuka S, Matsushita A, Ishikawa E, Saotome K, Yamamoto T, Marushima A, Satou N, Zaboronok A, Masumoto T, Matsumura A. J Neurosurg. 2012 Aug;117(2):363-71.
 15. Acute subdural hematoma without subarachnoid hemorrhage caused by ruptured A1-A2 junction aneurysm. Case report. Takada T, Yamamoto T, Ishikawa E, Zaboronok A, Kujiraoka Y, Akutsu H, Ihara S, Nakai K, Matsumura A. Neurol Med Chir (Tokyo). 2012;52(6):430-4.
 16. Spinal dural arteriovenous fistula with lipomyelodysplasia. Sato M, Takigawa T, Shiigai M, Tamura G, Masumoto T, Nakai Y, Zaboronok A, Tsurushima H, Matsumura A. Neurol Med Chir (Tokyo). 2013;53(2):107-9.
 17. A new mechanism of cerebrospinal fluid leakage after lumboperitoneal shunt: a theory of shunt side hole--case report. Matsubara T, Ishikawa E, Hirata K, Matsuda M, Akutsu H, Masumoto T, Zaboronok A, Matsumura A. Neurol Med Chir (Tokyo). 2014;54(7):572-7. Epub 2013 Dec 5.
 18. Pretreatment with buthionine sulfoximine enhanced uptake and retention of BSH in brain tumor. Yoshida F, Yamamoto T, Nakai K, Zaboronok A, Matsuda M, Akutsu H, Ishikawa E, Shirakawa M, Matsumura A. Appl Radiat Isot. 2014 Jun;88:86-8. doi: 10.1016/j.apradiso.2014.02.025. Epub 2014 Mar 28.