

# Биография Тучина Валерия Викторовича



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<https://www.sgu.ru/person/tuchin-valeriy-viktorovich>

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ORCID 0000-0001-7479-2694 <https://orcid.org/0000-0001-7479-2694>

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<https://www.scopus.com/authid/detail.uri?authorId=36048347000>

Google Scholar <https://scholar.google.com/citations?user=wkUfJAYAAAAJ&hl=en>

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[https://www.elibrary.ru/author\\_profile.asp?id=20243](https://www.elibrary.ru/author_profile.asp?id=20243)

Research gate <https://www.researchgate.net/profile/Valery-Tuchin>

<https://exaly.com/author/1186974/valery-v-tuchin/rankings>

<https://www.allbookstores.com/V-V-Tuchin/author/1>

## Тучин Валерий Викторович

Родился 4 февраля 1944 года, г. Саратов

Член-корреспондент РАН

Доктор физико-математических наук

Заслуженный деятель науки РФ

Профессор

заведующий кафедрой оптики и биофотоники и руководитель научного медицинского центра Саратовского национального исследовательского государственного университета им. Н.Г. Чернышевского

заведующий лабораторией лазерной диагностики технических и живых систем Института проблем точной механики и управления, ФГБУН Федеральный исследовательский центр «Саратовский научный центр Российской академии наук»

научный руководитель междисциплинарной лаборатории биофотоники Национального исследовательского томского государственного университета, Томск

научный руководитель лаборатории фемтомедицины университета ИТМО, Санкт-Петербург

E-mail: [tuchinvv@mail.ru](mailto:tuchinvv@mail.ru)

## Образование

1966 – Саратовский государственный университет, физический факультет, радиофизика и электроника

1970 – 1974 – аспирантура, кафедра оптики СГУ

1974 – кандидат физико-математических наук по специальности 01.04.05 – оптика

1982 – доктор физико-математических наук по специальности 01.04.03 – радиофизика, включая квантовую радиофизику

## Карьера

1966 – 1970 – инженер Научно-исследовательского института механики и физики при СГУ (НИИМФ СГУ)

1971 – 1974 – ассистент и аспирант кафедры оптики СГУ

1974 – 1982 – старший преподаватель, доцент кафедры оптики СГУ

1982 – 1989 – профессор, заведующий кафедрой оптики, декан физического факультета СГУ

1989 – по настоящее время – профессор, заведующий кафедрой оптики и биофотоники, заведующий лабораторией лазерной диагностики технических и живых систем Института проблем точной механики и управления, ФГБУН Федеральный исследовательский центр «Саратовский научный центр Российской академии наук»

2014 – по настоящее время – научный руководитель междисциплинарной лаборатории биофотоники Национального исследовательского Томского университета

2017 – по настоящее время – научный руководитель лаборатории фемтомедицины Национального исследовательского университета ИТМО

2020 – по настоящее время - руководитель научного медицинского центра СГУ

### **Профессиональная деятельность**

**2000-2015** – директор по внешним связям научно-образовательного центра Министерства образования и науки РФ и Американского фонда гражданских исследований «Нелинейная динамика и биофизика»

**2003** – по настоящее время – директор Научно-образовательного института оптики и биофотоники при СГУ

**2005 - по настоящее время** – вице-президент Российского фотобиологического общества

**2007** – по настоящее время – директор Международного научно-образовательного центра оптических технологий в промышленности и медицине (МНОЦ) «Фотоника» при СГУ

**Председатель диссертационного совета** при СГУ по защите докторских диссертаций по специальностям оптика и биофизика (физико-математические науки)

**Член ученого совета** СГУ

**Член совета** Института физики СГУ

**Член ученого совета** Института точной механики и управления ФГБУН Федеральный исследовательский центр «Саратовский научный центр Российской академии наук»

**Член международного совета** научно-образовательной школы «Фотонные и квантовые технологии. Цифровая медицина» Московского государственного университета имени М.В. Ломоносова

**Член экспертного совета особой экономической зоны** технико-внедренческого типа, созданной на территориях Энгельского, Балаковского муниципальных районов и муниципального образования «Город Саратов» Саратовской области

**Главный редактор** журнала Journal of Biomedical Photonics & Engineering  
<http://jbpe.ssau.ru/index.php/JBPE>

**Главный редактор** журнала The Open Biomedical Engineering Journal  
<https://benthamopen.com/TOBEJ/editorial-board/>

**Главный редактор** журнала Materials по направлению Optics and Photonics  
[https://www.mdpi.com/journal/materials/sectioneditors/optics\\_photonics](https://www.mdpi.com/journal/materials/sectioneditors/optics_photonics)

**Заместитель главного редактора** журнала Известия Саратовского университета – Новая серия. Физика <https://fizika.sgu.ru/en/editorial-board>

**Тематический редактор/Редактор-консультант** журнала Journal of Biomedical Optics,  
<https://www.spiedigitallibrary.org/journals/journal-of-biomedical-optics/editorial-board?SSO=1#navBarAnchor>

**Член редакционного совета** журналов

Journal of Innovative Optical Health Sciences (JIOHS)

<https://www.worldscientific.com/page/jiohs/editorial-board>

Квантовая электроника <https://iopscience.iop.org/journal/1063-7818>

Лазерная медицина [http://www.goslasmed.ru/laser\\_medicine\\_periodical/](http://www.goslasmed.ru/laser_medicine_periodical/)

Current Pharmaceutical Biotechnology <http://www.eurekaselect.com/node/607/current-pharmaceutical-biotechnology/editorial-board>

**Член редколлегии журналов:**

Известия ВУЗов - Прикладная нелинейная динамика,

<https://andjournal.sgu.ru/ru/content/redakcionnaya-kollegiya>

Оптика и спектроскопия, <https://journals.ioffe.ru/journals/5>

Письма в журнал технической физики, <http://journals.ioffe.ru/journals/editors/4>

Журнал технической физики, [https://www.elibrary.ru/title\\_about\\_new.asp?id=7801](https://www.elibrary.ru/title_about_new.asp?id=7801)

Light: Advanced Manufacturing (LAM), <https://www.light-am.com/index.htm>

Journal of Biophotonics, <https://onlinelibrary.wiley.com/journal/18640648>

Translational Biophotonics, <https://www.onlinelibrary.wiley.com/journal/26271850>

Journal of X-Ray Science and Technology – Clinical Applications of Diagnosis and Therapeutics,

<https://www.iospress.nl/journal/journal-of-x-ray-science-and-technology/>

Applied Scientific Reports, <http://www.hoajonline.com/applsci/rep/editorialboard>

Frontiers of Optoelectronics <https://link.springer.com/journal/12200>

**Член международного совета журнала Physics in Medicine and Biology (2013-2016)**

**Приглашенный редактор журналов:**

Оптика и спектроскопия, Квантовая электроника, Известия ВУЗов - Прикладная нелинейная динамика, Phys. Med. Biol., Medical Physics, Cytometry A, Biomed. Opt. Express., JIOHS, J. of Biomedical Optics, J. of Biophotonics, J. of X-Ray Science and Technology – Clinical Applications of Diagnosis and Therapeutics, Adv. Opt. Technol., Medical Laser Application., Journal of Physics: Conference Series, Photon. Lasers Med., IEEE J. Selected Topics in Quantum Electronics, International Journal of Spectroscopy, Materials, Light: Science & Applications (LSA), Optical Engineering и др.

**Рецензент журналов:** Science Translational Medicine, Nature Protocols, Nature Scientific Reports, Light: Science & Applications (LSA), Opt. Communications, Optics Letters, Optics Express, Biomed. Opt. Express, Applied Optics, JOSOA, J. of Biomedical Optics, J. Biophotonics, Laser Surgery and Medicine, Applied Physics, IEEE J. of Selected Topics in Quantum Electronics, Phys. Med. Biol., Прикладная нелинейная динамика, Оптика и спектроскопия, Квантовая электроника, Optics & Laser in Engineering (Singapore), Cytometry A, PLoS ONE, Laser Photonics Rev. Light: Applications and Science и др.

Член международных научных обществ: SPIE, OSA, IEEE

Член комитета по биофотонике международного научного общества IEEE

Узловой лидер по РФ Всемирного консорциума по биофотонике BP4L (Node Leader of Biophotonics4Life Worldwide Consortium)

Член международного совета Центра биомедицинской фотоники им. Бриттона Чанса Хуажонг научно-технологического университета г. Ухани (2013 – 2015).

Член совета факультета инженерных наук Национальной лаборатории по оптоэлектронике г. Ухани Хуажонг научно-технологического университета г. Ухани (2014 –2019).

Член рабочих групп 3 и 7 Европейской технологической платформы Photonics21

Член рабочей группы по биофотонике технологической платформы РФ «Фотоника»

Член рабочей группы по международным связям технологической платформы РФ «Медицина будущего»

Член комитета EPIC Biophotonics, EPIC - Европейский консорциум фотонной промышленности

Член рабочей группы по биологическим и медицинским наукам по оценке исследовательской инфраструктуры для включения в национальную дорожную карту Германии (2016).

Член Совета Российского отделения SPIE, член комитетов SPIE по организации научных конференций, по публикациям и советников президента SPIE по Европе (1990-2005).

Член/Председатель комитета по премиям OSA Robert E. Hopkins Leadership Award (2017/2018)

Член/Председатель комитета по премиям OSA/ SPIE Joseph W. Goodman Book Writing Award (2018-2024)

Эксперт научного фонда Израиля

Эксперт проектов Европейского союза 7-й Рамочной программы и Horizon 2020

Эксперт исследовательской программы профессоров SFI научного фонда Ирландии

Член подкомитета “Thermal Medicine” of The American Society of Mechanical Engineers (с 2020).

С 1987 организовал более 50 международных конференций в России, США, Европе, Китае и сделал более 100 приглашенных и пленарных докладов.

#### **Основатель, председатель и сопредседатель международных конференций**

1. Saratov Fall Meeting (Chair: V.V. Tuchin) (1996-2024).
2. Optical Coherence Tomography and Coherence Domain Optical Methods in Biomedicine, SPIE, Photonics West, USA (Chairs: V.V. Tuchin, J.G. Fujimoto, J.A. Izatt) (1997-2019).
3. Dynamics and Fluctuations in Biomedical Photonics, SPIE, Photonics West, USA (Chairs: V.V. Tuchin, M.J. Leahy, R.K. Wang) (2005-2025).
4. International Conference on Photonics and Imaging in Biology and Medicine (PIBM), (Chairs: Q. Luo, L.V. Wang, V.V. Tuchin), China (2001-2024).
5. Biophotonics: Photonic Solutions for Better Health Care, SPIE Photonics Europe (Chairs: J.Popp, W. Drexler, V.V. Tuchin, D.L. Matthews, F. Pavone) (2008-2018).
6. Biophotonics, Programme track (Chairs: J.Popp, S. Gioux, V.V. Tuchin), SPIE Photonics Europe, Strasbourg, France, 2020, 2022.
7. Tissue Optics and Photonics (Chairs: V.V. Tuchin, W.C. P. M. Blondel, Z. Zalevsky, SPIE Photonics Europe, Strasbourg, France, 2020, 2022, 2024, 2026).
8. Honorary co-chair of OPORTO 22 – 1st Spring Biophotonics Conference in Porto (Chairs: Luis Oliveira and Igor Meglinski) <https://stemm.tech/oporto22/>
9. International Symposium FLAMN-22, Fundamentals of Laser Assisted Micro- & Nanotechnologies, June 27 - 30, 2022, St. Petersburg, Russia, The 3rd International Scientific School “Biomedical Laser Technologies” (S02) (Chairs: Andrey Belikov, Valery Tuchin, Vadim Veiko); <https://flamn.itmo.ru/>
10. Chinese-Russian Workshop on Biophotonics and Biomedical Optics (Chairs: Dam Zhu and Valery V. Tuchin) (2006-2024), Saratov, Wuhan, Samara, Hainan.
11. BRICS Workshop on Biophotonics (Chairs: Valery V. Tuchin, Qingming Luo, Vanderlei Salvador Bagnato, Santhosh Chidangil, Heidi Abrahamse) (2019-2024), Saratov, Manipal.

#### **Член консультативных комитетов международных конференций и проектов:**

1. BIOS Symposium of Photonics West Symposia, США (1997-2024)
2. International Conference Laser Applications in Life Sciences (2010-2024)
3. International Photonics and OptoElectronics Meetings (POEM), Wuhan, China

4. The Conference on Laser Surgery and Medicine 2012 (CLSM 2012), Yokohama, Japan, on April 25–27, 2012
5. 4th International Conference “Smart Materials, Structures and Systems” CIMTEC 2012, Montecatini Terme, Italy, June 10 to 15, 2012
6. The H2020 Project “(AMPLITUDE – Advanced Multimodal Photonics Laser Imaging Tool for Urothelial Diagnosis and Endoscopy [Grant Agreement: 871277] (2020-2023).
7. The 9<sup>th</sup> International Conference on Perspectives in Vibrational Spectroscopy (<https://icopvs2022.in/>), Indore, India, December 13-17, 2022.
8. The 2<sup>nd</sup> Edition of the International Conference on Nanoscience and Photonics for Medical Application (ICNPMA-2022, 28-30<sup>th</sup> Dec. 2022)

#### **Член программных комитетов научных школ и конференций**

1. International Conference on Advanced Laser Technologies (2005-2024), September. [ALT Conference | Home](#)
2. International Conference on Nanoscience and Photonics for Medical Applications – ICNPMA”, Manipal Academy of Higher Education, Manipal, India (28-30<sup>th</sup> December, 2019, 2022); <https://conference.manipal.edu/icnpma2019/Default> .
3. Biophotonics and Imaging Graduate Summer School (BIGSS 2020), *National University of Ireland, Galway*, 25-29 August 2020, Digital Forum. <https://optics.org/events/2020/895>
4. The 8th International Conference on Photonics, Optics and Laser Technology - PHOTOPTICS 2020, 27 - 29 February, 2020 - Valletta, Malta. <http://www.photoptics.org/Biophotonics.aspx?y=2020>
5. Moderator of Seeing Through Tissue, JBO Webinar Series, Hot Topics in Biomedical Optics.
6. Member of Organizing Committee of SPIE Poincaré Webinar Series on Optical Polarization and Related Phenomena. <https://groups.google.com/g/the-henri-poincare-webinar-series?pli=1>
7. The 3rd International Conference “Biophotonics Riga – 2020”, 24-25 August, 2020, Riga.
8. The 4-th International Conference Terahertz and Microwave Radiation: Generation, Detection and Applications (TERA), August 24-26, 2020, Tomsk. <http://tera2020.tsu.ru/>
9. VII Троицкая конференция с международным участием "Медицинская физика" (ТКМФ-7), 19–21 октября 2020 г. <http://www.medphys.troitsk.ru/>
10. ICLO, St. Petersburg, November 2-6, 2020, <https://laseroptics.ru/general-information.html>
11. XII Международная конференция “Фундаментальные проблемы оптики” ФПО-2020, Санкт-Петербург, 19- 23 октября 2020 года.
12. SPIE Photonics Asia Conferences, Optics in Health Care and Biomedical Optics X (PA110), 11 - 13 October 2020, Beijing International Convention Center, Beijing, China
13. The International Conference on Spectroscopic Ellipsometry (ICSE), May 22-28, 2022, South Tower of Junefield Plaza, Beijing, China; <http://www.icse-9.com/En/Menu/11a22a2d-bb5e-4e6a-a1db-ee1f6680e3fa>
14. International Symposium Fundamentals of Laser Assisted Micro– & Nanotechnologies (FLAMN-22), June 27 - 30, 2022, St. Petersburg, Russia <https://flamn.itmo.ru/>
15. 25<sup>th</sup> Congress of the International Commission for Optics (ICO) and 16<sup>th</sup> Conference of International Society on Optics Within Life Sciences (OWLS), 5 - 9 September 2022; Program Committee Subcommittee Chair on Biomedical Optics <https://ico25.org/?s=program-committee-subcommittees>



16. Asia Communications and Photonics Conference/2023 International Photonics and Optoelectronics Meetings (ACP/POEM), Wuhan, November 4-7, 2023.
17. Label-free Biomedical Imaging and Sensing (LBIS) 2025 (Chairs: Natan T. Shaked, Tel Aviv Univ. (Israel), Oliver Hayden Technische Univ. München (Germany)), Conference BO508, SPIE Photonics West, 25 - 30 January 2025, San Francisco, California, US.
18. Optical Coherence Tomography and Coherence Domain Optical Methods in Biomedicine, SPIE Photonics West, US (Chairs: J.G. Fujimoto, J.A. Izatt) (2020-2025), 25 - 30 January 2025, San Francisco, California, US.
19. Photonics Asia: Optics in Health Care and Biomedical Optics XIV, 12–14 October 2024, Nantong, Jiangsu, China (PA111) [www.spie.org/pa111call](http://www.spie.org/pa111call)

### **Индивидуальные гранты, почетные звания и награды**

Медаль «За Трудовое Отличие» (1976)

Орден «Трудового Красного Знамени» (1986)

Орден «Дружбы» (2005)

Звание «Заслуженный деятель науки России» (1999)

Звание «Почетный профессор Саратовского университета» (2014)

Медали оптического общества им. Д.С. Рождественского: имени Д.С. Рождественского (2018) и имени С.И. Вавилова (2022)

Избран членом-корреспондентом РАН по специальности «медицинская физика» по отделению физических наук (2019).

Медаль имени Александра Михайловича Прохорова за разработку спектральных методов исследования биологических тканей для решения задач медицинской диагностики и дозиметрии в лазерной терапии и хирургии, присужденная Академией инженерных наук им. А.М. Прохорова (2021).

Юбилейная медаль «300 лет Российской академии наук» (2024).

Лауреат Общенациональной премии «Профессор года 2023» в номинации «физико-математические науки» <https://profsobranie.ru/297>

Гранты ведущего научного работника РФ, 1994 - 1996; 1997-2000; 2001-2003

Академик Академии инженерных наук им. А.М. Прохорова (2021)

Соросовский профессор в 1997, 1998 и 1999.

FiDiPro профессор университета Оулу (Finland Distinguished Professor, TEKES, 2011-2014)

Chime Bell Prize of Hubei Province, China (2014) - Премия за вклад в развитие провинции Хубей, а именно научных исследований, создание платформы и обучение талантов Национальной лаборатории по оптоэлектронике (Wuhan National Laboratory for Optoelectronics (WNLO)), а также за развитие двухсторонних связей провинции Хубей с ее зарубежными партнерами.

Гранты Президента РФ поддержки научных школ №№ 96-15-96389, 00-15-96667, 25.2003.2, НШ-208.2008.2, НШ-1177.2012.2, НШ-703.2014.2 и НШ-7898.2016.2.

Грант Министерства образования и науки РФ 1.4.06, РНП.2.1.1.4473 «Ведущие научно-педагогические коллективы» 2003-2014.

Приглашенный профессор Хуажонг научно-технологического университета г. Ухани (Huazhong University of Science and Technology) (Китай).

Приглашенный профессор Тяньцзиньского университета (Tianjin University) (Китай).

Адъюнкт профессор университета Лимерика (University of Limerick) (Ирландия)

Адъюнкт профессор Национального университета Ирландии (Голуэй) (National University of Ireland Galway)

Почетный член международного общества по оптической технике (SPIE Fellow 2005)

Почетный член международного оптического общества (OSA Fellow 2016)

Премия международного общества по оптической технике (SPIE Educational Award, 2007) за выдающиеся достижения и в знак признания беспрецедентного вклада в мировое образование и распространение технической информации в области биомедицинской оптики и биофотоники, а также новаторскую работу в рамках SPIE образовательных программ по биомедицинской оптике. <http://spie.org/x15039.xml>

В 2016 году награжден OSA / SPIE премией Джозефа У. Гудмана за написание монографии V.V. Tuchin, *Tissue Optics: Light Scattering Methods and Instruments for Medical Diagnostics*, 3rd edition, **PM 254**, SPIE Press, Bellingham, WA, 2015, которая признана выдающейся монографией, внесшей значительный вклад в исследования, преподавание и развитие промышленности в области оптики и фотоники. [http://www.osa.org/en-us/awards\\_and\\_grants/awards/award\\_description/goodmanbookaward/](http://www.osa.org/en-us/awards_and_grants/awards/award_description/goodmanbookaward/) (**2889** цитирований в Google Scholar)

В 2019 году был награжден премией OSA Майкла С. Фельда по биофотонике за новаторские исследования в биофотонике, особенно в области оптики и оптического просветления биологических тканей, а также за развитие биофотоники путем издания основополагающих монографий и обзоров для обучения будущих исследователей. [https://www.osa.org/en-us/awards\\_and\\_grants/awards/award\\_description/michaelsfeld/](https://www.osa.org/en-us/awards_and_grants/awards/award_description/michaelsfeld/)

Лауреат конкурса на лучшую научную работу 2010 года, 12 мая 2010 года, Международная конференция CYTO 2010, Seattle, Washington (Galanzha EI, Shashkov EV, Tuchin VV, Zharov VP. In Vivo Multispectral Photoacoustic Lymph Flow Cytometry with Natural Cell Focusing and Multicolor Nanoparticle Probes. *Cytometry*, 2008; 73:884-894; **139** цитат в Google Scholar)

Премия «Международной академической издательской компании «Наука» за лучшую публикацию в издаваемых ею журналах» за цикл работ «Биомедицинская оптика и спектроскопия», опубликованных в журнале «Оптика и спектроскопия» коллективом авторов: Тучин В.В., Башкатов А.Н., Генина Э.А., Синичкин Ю.П., Кочубей В.И., Правдин А.Б., Симоненко Г.В., Трунина Н.А., Янина И.Ю., Лычагов В.В. (диплом № 142, решение комиссии о присуждении премии от 22 ноября 2011 г., протокол заседания № 2).

Премия издательства Tsinghua University Press “Nano Research Top Papers Award” (2016) за публикацию статьи Terentyuk, G; Panfilova, E; Khanadeev, V; Chumakov, D; Genina, E; Bashkatov, A; Tuchin, V; Bucharskaya, A; Maslyakova, G; Khlebtsov, N; Khlebtsov, B. Gold nanorods with a hematoporphyrin-loaded silica shell for dual-modality photodynamic and photothermal treatment of tumors in vivo, *Nano Research*, 7 (3), 325-337 (2014), DOI: [10.1007/S12274-013-0398-3](https://doi.org/10.1007/S12274-013-0398-3). Citations Google Scholar: **173**, IF 8.515.

Paper, O. Semyachkina-Glushkovskaya, A. Abdurashitov, A. Dubrovsky, M. Klimova, I. Agranovich, A. Terskov, A. Shirokov, V. Vinnik, A. Kuzmina, N. Lezhnev, I. Blokhina, A. Shnitenkova, V. Tuchin, E. Rafailov, and J. Kurths, Photobiomodulation of lymphatic drainage and clearance: perspective strategy for augmentation of meningeal lymphatic functions, *Biomedical Optics Express* **11** (2), 725-734 (2020). <https://doi.org/10.1364/BOE.383390>, **IF 3.482**, **Q1**, has been chosen for inclusion in *Spotlight on Optics* (<http://www.osapublishing.org/spotlight/>)

Диплом Лазерной Ассоциации РФ за лучшую отечественную разработку в области лазерной аппаратуры и лазерно-оптических технологий в номинации «Учебные пособия, справочные и научно-популярные издания лазерной тематики» за книгу В.В. Тучин, «Лазеры и волоконная оптика в биомедицинских исследованиях», М.: Физматлит, 2010 (2012).

Профессор Тучин является лауреатом премии Nanqiang Life Science серии лекций Сямынь университета, Китай (2016).

Благодарственные письма Министерства образования и науки РФ как эксперту и руководителю экспертной группы конкурса на получение гранта Правительства РФ для государственной поддержки научных исследований, проводимых под руководством ведущих ученых в российских образовательных учреждениях высшего профессионального образования, научных учреждениях государственных академий наук и государственных научных центрах Российской Федерации (2013).

Благодарственное письмо Президента Российской Федерации за вклад в развитие отечественной науки, многолетнюю плодотворную деятельность и в связи с 300-летием со дня основания Российской академии наук (2024).

Краткосрочные гранты приглашенного профессора (1990–2023 годы) в университетах и компаниях США (36), Европы (21), Японии (4), Китая (15), Южной Кореи (4), Сингапура и Бразилии, включая Wellman Laboratories в 2002 году (серия лекций по фотомедицине MGH), Технологический институт Роуз-Халмана в 2007 году (Индиана, США), Университет науки и технологии (HUST), Ухань, Китай, 2012, 2016, 2017; Университет Оулу, Финляндия, 2011–2014 годы, 2019 год; Индия (4 университета) 2020; Хайнань университет, Санья, Китай (2023), Академия наук Армении, Ереван, Армения (2023).

#### **Наиболее цитируемые статьи:**

A.N.Bashkatov, E.A.Genina, V.I.Kochubey, V.V.Tuchin. Optical properties of human skin, subcutaneous and mucous tissues in the wavelength range from 400 to 2000 nm. – J. Phys. D: Appl. Phys., vol. 38, 2005, pp. 2543-2555 (**2011** цитирований в Google Scholar, **17741** загрузок) вошла в список из 12 наиболее важных статей, опубликованных в журнале J. Physics D, и в 50 лучших публикаций серии журналов J.Phys (14 журналов) за 50 лет существования.

J.T. Alander, I. Kaartinen, A. Laakso, T. Pätilä, T. Spillmann, V.V. Tuchin, M. Venermo, P. Välisuo, A review of indocyanine green fluorescent imaging in surgery, International journal of biomedical imaging 2012 (**69749** views, **15955** downloads, **1384** citations in Google Scholar, 17.05.2024). <https://doi.org/10.1155/2012/940585>

A.N. Bashkatov, E.A. Genina, and V.V. Tuchin, Optical properties of skin, subcutaneous, and muscle tissues: a review, J. Innovative Optical Health Sciences, 4(1) pp. 9–38 (2011) (**929** цитирований в Google Scholar).

Пионерская работа по технологии оптического просветления V.V. Tuchin, I.L. Maksimova, D.A. Zimnyakov, I. L. Kon, A. H. Mavlutov, and A. A. Mishin, “Light propagation in tissues with controlled optical properties,” J. Biomed. Opt. 2(4), pp.304-321, 1997 (**612** цитирований в Google Scholar).

В. В. Тучин, Исследование биотканей методами светорассеяния УФН, 1997, 167:5, 517-539 (**517**) цитирований в Google Scholar)



B Khlebtsov, V Zharov, A Melnikov, V Tuchin, N Khlebtsov, Optical amplification of photothermal therapy with gold nanoparticles and nanoclusters, *Nanotechnology* 17 (20), 5167, 2006 (**514** цитирований в Google Scholar).

Dan Zhu, Kirill V. Larin, Qingming Luo, and Valery V. Tuchin, Recent progress in tissue optical clearing, *Laser Photonics Rev.* 7, No. 5, 732–757 (2013) (**515** цитирований в Google Scholar).

#### Наиболее загружаемые и цитируемые книги:

1. Tuchin, V.V. (ed.) *Coherent-Domain Optical Methods: Biomedical Diagnostics, Environmental Monitoring and Material Science*, vols. 1&2, Second edition. Berlin, Heidelberg, N.Y.: Springer-Verlag, 2013, более **71000** загрузок on SpringerLink to 17.05.2024.
2. V.V. Tuchin, *Optical Clearing of Tissues and Blood*, **PM 154**, SPIE Press, Bellingham, WA, 2005 – 254 p. <https://spie.org/Publications/Book/637760?SSO=1> (**504** цитирований в Google Scholar).
3. V.V. Tuchin, L. Wang, and D.A. Zimnyakov, *Optical Polarization in Biomedical Applications*, Springer-Verlag, Berlin, Heidelberg, N.Y., 2006 - 275 p. (**443** цитирований в Google Scholar).
4. V.V. Tuchin, *Tissue Optics: Light Scattering Methods and Instruments for Medical Diagnostics*, 3<sup>rd</sup> ed., **PM 254**, SPIE Press, Bellingham, WA, 2015– 988 p. ISBN: 9781628415162 <https://spie.org/Publications/Book/2175698> (**2889** цитирований в Google Scholar).
5. V.V. Tuchin (Ed.), *Handbook of Optical Biomedical Diagnostics. Light-Tissue Interaction*, vol.1, 2<sup>nd</sup> ed., SPIE Press **PM262**, Bellingham, WA, USA, 2016 – 864 p. *Methods*, vol.2, 2<sup>nd</sup> ed., SPIE Press **PM263**, Bellingham, WA, USA, 2016 – 688 p. (**877** цитирований в Google Scholar).

**По данным РИНЦ** на 04.09.2017 В.В. Тучин входит в Топ-100 самых цитируемых (1 место) и продуктивных (1 место) российских учёных по направлению «Биотехнология», по направлению «Биология» (соответственно 9 и 18 места) и по направлению «Медицина и здравоохранение» (соответственно 18 и 28 места).

Специальный выпуск журнала Professor Valery V Tuchin's contribution to the field of biomedical optics, Eds. R.K. Wang, A.V. Priezhev and S. Fantini, *J. Phys. D: Appl. Phys.*, vol. 38, 2005, pp. 2497-2747

Специальный выпуск журнала "Лазерная биофотоника", посвященный 70-летию В. В. Тучина, редакторы А. В. Приезжев, А. Н. Башкатов, Э. А. Генина, *Квантовая электроника*, том 44, 2014, вып. 7 и 8.

Специальный выпуск журнала: In Honor of Valery V. Tuchin's 70th Birthday, Ed. Kirill Larin, *J. Biophotonics*, **8** (4), 2015.

Специальный выпуск журнала: Celebrating Prof. Valery Tuchin's 70th Birthday, Kirill V. Larin and Dan Zhu, *J. Innovative Optical Health Sciences* **8** (4), 2015.

Спецвыпуск *Biomed. Opt. Express* (**10**(9), 2019) посвящен пионерским работам Тучина В.В.: "a comprehensive overview of current research in tissue optics, much of it inspired and informed by the pioneering work of Prof. Valery Tuchin."

A special issue on Biophotonics dedicated to Prof. Valery V. Tuchin, Ed. N. Ghosh, *Asian Journal of Physics* **29** (1 & 2), 2020, pp.1-128.

#### Учебная работа

В СГУ и ТГУ подготовил и читает для студентов биофизических специальностей курс введение в специальность, общий курс оптики и специальные курсы по оптике биотканей, медицинским лазерам и волоконным световодам, микроструктурным световодам для медицины, оптическим измерениям в биомедицине, оптической цитометрии и лазерному микроспектральному анализу.

Подготовил и прочитал более 50 кратких курсов по оптике и спектроскопии биотканей и биофотонике для российской и международной аудитории аспирантов, докторантов, инженеров, работников компаний и медицинских работников (1991-2024), в том числе в рамках образовательных программ международных оптических обществ SPIE и OSA и Оптического общества имени Д. С. Рождественского. В России: МИЭТ, ТГУ, МГТУ им. Н.Э. Баумана, МГУ, Приволжский исследовательский медицинский университет Н. Новгород, университет ИТМО, ФГБУ «НМИЦ им. В. А. Алмазова» Минздрава России и др. За рубежом: Украина, Латвия, Литва, Канада, Италия, Германия, США, Великобритания, Франция, Венгрия, Польша, Испания, Греция, Финляндия, Португалия, Республика Корея, Китай, Сингапур, Япония, включая последние: Греция (2015), Великобритания (2016), Литва (2017), Латвия (2017), Италия (2018), Германия (2015, 2018, 2019, 2021), США (2015, 2016, 2018, 2020), Израиль (2015, 2016, 2018), Франция (2017, 2018), Польша (2016), Испания (2017, 2018), Финляндия (2019), Республика Корея (2016, 2017), Макао (2016), Китай (2016, 2017, 2018, 2023), Япония (2016), Бразилия (2019), Индия (2020), Швейцария (2020), Пермь (2021), Иран (2021, 2022, 2023), Турция (2022), Мексика (2023), Армения (2023).

### Область научной деятельности

Биологическая и медицинская физика, биофотоника, биомедицинская оптика, лазерная спектроскопия и визуализация в биомедицине, нелинейная динамика лазерных и оптических систем, физика оптических и лазерных измерений, нанобиофотоника.

### Публикации

Автор или редактор более 37 книг, 91 главы в книгах, 64 специальных выпусков журналов, 100 трудов конференций, 35 учебных пособий, более 75 патентов РФ, Белоруссии, США и Португалии и более 1500 научных статей и аналитических обзоров.

### Цитируемость

#### Google Scholar (17.05.2024)

<https://scholar.google.com/citations?user=wkUfJAYAAAAJ&hl=en>

Число публикаций (с 2019)	Число цитир. (с 2019)	<a href="#">h-индекс</a> (с 2019)	Среднее число цитир. на публ. (с 2018)	Среднее число цитир. в год (с 2018)
<b>1804 (550)</b>	<b>40831 (17599)</b>	<b>88 (57)</b>	<b>18.8 (28.4)</b>	<b>1007.4 (2832.6)</b>

#### Scopus (17.05.2024) <https://www.scopus.com/authid/detail.uri?authorId=36048347000>

Число публикаций	Число цитир.	<a href="#">h-индекс</a>	Среднее число цитир. на публ.	Среднее число цитир. в год
<b>1374</b>	<b>22220</b>	<b>66</b>	<b>13.9</b>	<b>598.3</b>

#### Web of Science core collection (17.05.2024)

<https://publons.com/researcher/1353614/valery-v-tuchin/metrics/>

Число публикаций	Число цитирований	<a href="#">h-индекс</a>	Среднее число цитир. на публ.	Среднее число цитир. в год

1179	16394	57	12.5	289.3
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### РИНЦ (17.05.2024)

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Число публикаций (ядро РИНЦ)	Число цитирований (ядро РИНЦ)	<a href="#">h-индекс</a> РИНЦ (ядро РИНЦ)	Среднее число цитир. на публ. (ядро РИНЦ)	Среднее число цитир. в год (ядро РИНЦ)
<b>1858 (1425)</b>	<b>27486 (24340)</b>	<b>65 (62)</b>	<b>13.55(16.3)</b>	<b>781.6 (688.4)</b>

Число загрузок наиболее цитируемых книг и статей превышает 100000.

### Кол-во **ссылок** на публикации в **РИНЦ**

Число цитирований из публикаций, входящих в РИНЦ

<http://www.expertcorps.ru/science/whoiswho/ci86>

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[https://www.resurchify.com/all\\_ranking\\_2.php?query](https://www.resurchify.com/all_ranking_2.php?query)

Q-SJR журналов <https://www.scimagojr.com/journalrank.php>

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1. А.В. Приезжев, В.В. Тучин, Л.П. Шубочкин, Лазерная диагностика в биологии и медицине, Наука, Москва, 1989.
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3. V.V. Tuchin (Ed.), *Tissue Optics: Applications in Medical Diagnostics and Therapy*, Book of selected papers, SPIE Milestone Series **MS 102**, Bellingham, WA, USA, 1994.
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5. V.V. Tuchin, *Tissue Optics: Light Scattering Methods and Instruments for Medical Diagnosis*, SPIE Tutorial Texts in Optical Engineering **TT38**, Bellingham, WA, USA, 2000.
6. V.V. Tuchin (Ed.), *Handbook of Optical Biomedical Diagnostics*, SPIE Press **PM107**, Bellingham, WA, USA, 2002 – 1093 pp.
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8. B. Wilson, V. Tuchin, S. Tanev, Eds., *Advances in Biophotonics*, NATO Science Series I. Life and Behavioural Sciences – Vol. 369, IOS Press, Amsterdam, 2005, 283 p.
9. V.V. Tuchin, *Optical Clearing of Tissues and Blood*, **PM 154**, SPIE Press, Bellingham, WA, 2005 – 254 p. <https://spie.org/Publications/Book/637760?SSO=1>
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13. Тучин В.В. Лазеры и волоконная оптика в биомедицинских исследованиях/2-е издание. — Москва: Физматлит, 2010, 488 с.
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15. Г. Симоненко, В. Тучин, Д. Зимняков, Оптические характеристики жидкокристаллических и биологических систем, LAMBERT Academic Publishing GmbH & KG, Berlin, 2010.
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20. О.В. Мареев, А.А. Свистунов, И.В. Федосов, В.В. Тучин, Г.О. Мареев, С.И. Луцевич, И.С. Букреев, Р.С. Прохоров, Е.С Краснова, *Лазерная доплеровская флоуметрия и возможности ее применения в оториноларингологии*, Издательство Саратовского медицинского университета, Саратов, 2012, 83 с.
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#### **Избранные статьи в трудах конференций и сборниках трудов**

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79. Valery Tuchin, "Tissue Optical Clearing/Contrasting for Image Enhancement in the Ultra-Broad Wavelength Range," Asia Communications and Photonics Conference (ACP), November 10-13, 2017, Guangzhou, China (invited).
80. Valery Tuchin, "Enhanced OCT imaging and monitoring of drug delivery," EPIC Biophotonics Workshop Towards in vivo imaging, 30 Nov. – 1 Dec. 2017, Amsterdam, The Netherlands, p.5, 2017 (key-note presentation)
81. Marina Novoselova, Sergey V. German, Ekaterina I. Galanzha, **Valery V. Tuchin**, Vladimir P. Zharov, Dmitry Gorin, Elina A. Genina, Imaging and navigation of remote controlled nanostructured carriers for theranostics [10479-14], Photonic Diagnosis and Treatment of Infections and Inflammatory Diseases, Photonics West Symposium, BiOS, San Francisco, 27 January–1 February 2018. **Invited**
82. Ekaterina I. Galanzha, Marina V. Novoselova, Dmitry A. Gorin, Alexandru S. Biris, Robert J. Griffin, **Valery V. Tuchin**, Boris N. Khlebtsov, Therapeutic targeting of circulating tumor cells in vivo [10495-9], Biophotonics and Immune Responses XIII, Photonics West Symposium, BiOS, San Francisco, 27 January–1 February 2018. **Invited**
83. Oxana V. Semyachkina-Glushkovskaya, Arkady Abdurashitov, Anton Namykin, Ivan Fedosov, Alexander Shirokov, Maria Ulanova, Natalia Shushunova, Alexander Khorovodov, Anastasiya Bodrova, Madina Sagatova, Elena Saranceva, Maria Dvoryatkina, **Valery V. Tuchin**, Optical technologies for in vivo monitoring of lymphatic system in the brain [10495-18], Biophotonics and Immune Responses XIII, Photonics West Symposium, BiOS, San Francisco, 27 January–1 February 2018. **Invited**
84. V.V. Tuchin, E.I. Galanzha, V.P. Zharov, "Optical amplification of in vivo photoacoustic flow cytometry," TuSMB-01, 5th International A.M. Prokhorov Symposium on Lasers in Medicine and Biophotonics, the International Conference on Laser Optics ICLO 2018, <http://laseroptics.ru/>, St. Petersburg, June 4-8, 2018 (invited paper).
85. K.I. Zaytsev, N.V. Chernomyrdin, K.M. Malakhov, Sh.-I.T. Beshplav, S.A. Goryaynov, V.N. Kurlov, I.V. Reshetov, A.A. Potapov, V.V. Tuchin, "In vitro terahertz dielectric spectroscopy of human brain tumors," WeSMB-25, 5th International A.M. Prokhorov Symposium on Lasers in Medicine and Biophotonics, the International Conference on Laser Optics ICLO 2018, <http://laseroptics.ru/>, St. Petersburg, June 4-8, 2018 (invited paper).
86. O.V.Semyachkina-Glushkovskaya, E.U. Rafailov, S.G. Sokolovsky, E.G. Borisova, V. Mantareva, I. Angelov, A. Shirokov, N. Navolokin, N.A. Shushunova, A.P. Khorovodov, A.V. Terskov, A.A. Bodrova, M.V. Ulanova, E. Shrif, V.V. Tuchin, J. Kurths, "Laser technologies of targeted opening of blood-brain barrier for drug brain delivery," WeSMB-29, 5th International A.M. Prokhorov Symposium on Lasers in Medicine and Biophotonics, the International Conference on Laser Optics ICLO 2018, <http://laseroptics.ru/>, St. Petersburg, June 4-8, 2018 (invited paper).
87. V. N. Kurlov, I.A. Shikunova, G.M. Katyba, K.I. Zaytsev, N.V. Chernomyrdin, I.N. Dolganova, V.V. Tuchin, I.V. Reshetov, "Biomedical applications of sapphire shaped crystals," WeSMB-31, 5th International A.M. Prokhorov Symposium on Lasers in Medicine and Biophotonics, the International Conference on Laser Optics ICLO 2018, <http://laseroptics.ru/>, St. Petersburg, June 4-8, 2018 (invited paper).
88. L. Oliveira, I. Carneiro, S. Carvalho, R. Henrique, D. K. Tuchina, P. A. Timoshina, A. N. Bashkatov, E. A. Genina, V. V. Tuchin, "Tissue optical clearing as a diagnostic tool for tissue

- pathology differentiation,” WeSMB-37, 5th International A.M. Prokhorov Symposium on Lasers in Medicine and Biophotonics, the International Conference on Laser Optics ICLO 2018, <http://laseroptics.ru/>, St. Petersburg, June 4-8, 2018 (invited paper).
89. Valery Tuchin, "Optical clearing as a promising technique for *in vivo* optical imaging and treatment of hidden pathologies," 12th Workshop on Advanced Multiphoton and Fluorescence Lifetime Imaging Techniques FLIM2018" Conference in Berlin-Adlershof, Max-Born-Institute, June 15 - 16, 2018 (invited paper).
  90. Valery V. Tuchin, "Optical clearing as a promising technology for *in vivo* laser diagnostics and treatment of hidden pathologies," Advanced Laser Technologies (ALT'18), September 09-14, 2018, Tarragona, Spain (plenary paper).
  91. O.Semyachkina-Glushkovskaya, E. Vodovosova, E. Borisova, A. Khorovodov, A. Terskov, I. Agranovich, A. Mamedova, M. Klimova, C. Zhang, W. Feng, Yu. Li, T. Yu, D. Zhu, V. Tuchin, "Photodynamic opening of blood-brain barrier: non-invasive approaches and age differences," Advanced Laser Technologies (ALT'18), September 09-14, 2018, Tarragona, Spain (invited paper).
  92. Kirill I. Zaytsev, I.N. Dolganova, N.V. Chernomyrdin, G.A. Komandin, M.A. Schcedrina<sup>3</sup>, S.-I.T. Beshplav, S.A. Goryaynov, I.V. Reshetov, A.A. Potapov, and V.V. Tuchin, "A potential of optical coherence tomography and terahertz pulsed spectroscopy for intraoperative diagnosis of brain tumors," Advanced Laser Technologies (ALT'18), September 09-14, 2018, Tarragona, Spain (invited paper).
  93. I. Carneiro, S. Carvalho<sup>1</sup>, V. Silva, R. Henrique, L. Oliveira, **V. V. Tuchin**, "Kinetics of optical properties of human colorectal tissues during optical clearing – a comparative study between normal and pathological tissues," Advanced Laser Technologies (ALT'18), September 09-14, 2018, Tarragona, Spain (**invited**).
  94. Elina A. Genina, Alexey N. Bashkatov, Daria K. Tuchina, Polina A. Timoshina, Oxana V. Semyachkina-Glushkovskaya, **Valery V. Tuchin**, "Optical properties of rat brain tissue in the normal state and at the different stages of glioma development," Advanced Laser Technologies (ALT'18), September 09-14, 2018, Tarragona, Spain (**invited**).
  95. Valery Tuchin, Biological tissue optics and optical clearing, 22<sup>nd</sup> International School for Junior Scientists and Students on Optics, Laser Physics & Biophotonics/3<sup>rd</sup> AD FLIM School, Saratov, 24-28 September, 2018 (**plenary**).
  96. Kirill I. Zaytsev, Valery E. Karasik, Vladimir N. Kurlov, **Valery V. Tuchin**, Igor V. Reshetov, Prospects for Malignancy Diagnosis by Using Terahertz Spectroscopy and Imaging, 6<sup>th</sup> International Symposium Optics and Biophotonics, Saratov, 24-28 September, 2018 (**plenary**).
  97. Irina Dolganova, P. Aleksandrova, K. Zaytsev, A. Kosyrkova, S.-I. Beshplav, I. Reshetov, A. Potapov, **V. Tuchin**, Optical coherence tomography of malignant brain tumors *ex vivo*, 6<sup>th</sup> International Symposium Optics and Biophotonics, Saratov, 24-28 September, 2018 (**invited**).
  98. Isa Carneiro, Sonia Carvalho, Rui Henrique, Luís Oliveira, **Valery V. Tuchin**, Optical properties of human liver from 400 to 1000 nm, 6<sup>th</sup> International Symposium Optics and Biophotonics, Saratov, 24-28 September, 2018 (**invited**).
  99. Irina Yanina, Nikita A. Navolokin, Viktor V. Nikolaev, Daria K. Tuchina, Anastasia I. Knyazkova, Yuri V. Kistenev, **Valery V. Tuchin**, Spatial distribution of optical characteristics of paraffin block embedded malignant tumor tissues, 6<sup>th</sup> International Symposium Optics and Biophotonics, Saratov, 24-28 September, 2018 (**invited**).
  100. Anton Yu. Sdobnov, Maxim E. Darwin, Johannes Schleusener, Jürgen Lademann, **Valery V. Tuchin**, Investigation of changes in hydrogen bound water profiles of porcine skin under optical clearing, 6<sup>th</sup> International Symposium Optics and Biophotonics, Saratov, 24-28 September, 2018 (**invited**).
  101. Anton Sdobnov, Ekaterina Lazareva, Alexey N. Bashkatov, Elina A. Genina, Vyacheslav I. Kochubey, Irina Yu. Yanina, Santhosh Chidangil, Srinivas Mutalik, Sathish Pai Ballambat, V.K Unnikrishnan, Aseefhali Bankapur, Jijo Lukose, **Valery V. Tuchin**, Maxim E. Darwin,



- Optical studies of topically delivered optical clearing agents and cosmetic preparations through the skin components: from ex vivo to in vivo, 6<sup>th</sup> International Symposium Optics and Biophotonics, Saratov, 24-28 September, 2018 (**invited**).
102. Elina Genina, Alexander Pravdin, Daria Tuchina, Viktor Nikolaev, Ekaterina Lazareva, Dmitry Yakovlev, Irina Yanina, Marine Amouroux, Alexey Bashkatov, Vyacheslav Kochubey, Walter Blondel, **Valery Tuchin**, Research and development of effective optical technologies for diagnostics in dermatology, 6<sup>th</sup> International Symposium Optics and Biophotonics, Saratov, 24-28 September, 2018 (**invited**).
  103. Valery V. Tuchin "Biophotonics in Russia: main directions and development prospects" X International Conference "Basic Problems of Optics (BPO'18)", St. Petersburg October 15-19, 2018 (plenary paper).
  104. Valery Tuchin, "Tissue optical clearing as a platform for *in vivo* optical imaging and treatment of hidden pathologies: from UV to terahertz," International Conference on Laser Applications in Life Sciences (LALS) in Israel, November 18-20, 2018, Bar-Ilan University, Israel (plenary paper).
  105. Valery Tuchin, "Tissue optics and optical clearing for functional imaging," 30<sup>th</sup> International SAOT Workshop, Functional Optical Imaging in Medical Engineering, November 29 – 30, 2018, Friedrich-Alexander Universität Erlangen-Nürnberg, Germany (plenary paper).
  106. Valery Tuchin, "Optical clearing of tissues in a broad spectral range from UV to THz," International Conference on Bio Sensing and Imaging (ICOBSI), December 17-19, 2018, Palazzo Affari Firenze Fiera (plenary paper).
  107. Yury V. Kistenev, Valery V. Tuchin, Alexey V. Borisov, Ekaterina N. Lazareva, Viktor V. Nikolaev, Daria K. Tuchina, Denis A. Vrazhnov, Irina Yu K. Yanina, Medical diagnosis using IR and THz tissue imaging and machine learning methods (*Invited Paper*), paper # 10877-18, Dynamics and Fluctuations in Biomedical Photonics XVI, BiOS, Photonics West, San Francisco, 2–7 February 2019.
  108. V. V. Tuchin, Benefits of tissue optical clearing for intensive laser actions (invited) International Symposium, FLAMN-19 - Fundamentals of Laser Assisted Micro- & Nanotechnologies, June 30 - July 4, 2019, St. Petersburg, Russia.
  109. O.A. Smolyanskaya, Q. Cassar, M.S. Kulya, N.V. Petrov, K.I. Zaytsev, V.N. Trukhin, A. Gorodetsky, J.-P. Guillet, P. Mounaix, V.V. Tuchin, Interaction of terahertz radiation with bio-like objects: theoretical and numerical modelling, real objects and phantom experiments (invited), International Symposium, FLAMN-19 - Fundamentals of Laser Assisted Micro- & Nanotechnologies, June 30 - July 4, 2019, St. Petersburg, Russia.
  110. E.A. Genina, A.B. Bucharskaya, G.N. Maslyakova, M.L. Chekhonatskaya, G.S. Terentyuk, V.D. Genin, N.G. Khlebtsov, V.V. Tuchin, A.N. Bashkatov Advanced Strategy for Plasmonic Photothermal Therapy of Tumors (INVITED), International Symposium, FLAMN-19 - Fundamentals of Laser Assisted Micro- & Nanotechnologies, June 30 - July 4, 2019, St. Petersburg, Russia.
  111. Valery Tuchin, Research and development of effective optical technologies for diagnostics in dermatology, International Research Network "Bright Far-Infrared Optoelectronic Sources to Field-Matter Interaction Studies, Life Sciences and Environmental Monitoring" 2nd Workshop, July 6, 2019, Nizhny Novgorod.
  112. Valery Tuchin, Advances in tissue optical clearing: towards broadband multimodal imaging techniques and *in vivo* applications (invited), The VII International Symposium "Topical Problems of Biophotonics – 2019" (TPB-2019), July, 27 through July, 31 2019, Nizhny Novgorod.
  113. E. Genina, A. Bashkatov, V. Tuchin, V. Zharov, Integrated effects on skin immersion optical clearing in vivo, International Conference, Advanced Laser Technologies, Prague, Czech Republic, 15-20 September 2019 (invited).

114. D.K. Tuchina, P.A. Timoshina, V.V. Tuchin, OCT and laser speckle imaging for quantification of diffusivity and impact on blood flow of diabetic tissues and organs, International Conference, Advanced Laser Technologies, Prague, Czech Republic, 15-20 September 2019 (invited).
115. I. Carneiro, S. Carvalho, R. Henrique, L. Oliveira, V. Tuchin, Optical properties of human normal and pathological colorectal tissues from 200 to 1000 nm, International Conference, Advanced Laser Technologies, Prague, Czech Republic, 15-20 September 2019 (invited).
116. В.В. Тучин, И.Г. Меерович, Д.К. Тучина, О.А. Синдеева, Н.И. Казачкина, В.В. Жердева, А.П. Савицкий, А.А. Богданов мл. Скрытая диффузия молекул оптических просветляющих агентов: достоинства и недостатки при оптической визуализации патологий, VI Съезд биохимиков России, Секция «Молекулярный имиджинг», 1 по 6 октября 2019, Сочи (приглашенный).
117. К.И. Зайцев, В.Е. Карасик, В.Н. Курлов, В.В. Тучин, И.В. Решетов, “Применение терагерцовых технологий в биофотонике,” Фотоника. Мир лазеров и оптики 2019, 4–7 марта 2019, Москва, Россия, [https://www.photonics-expo.ru/ru/list\\_of\\_exhibitors/](https://www.photonics-expo.ru/ru/list_of_exhibitors/) (пленарный).
118. K.I. Zaytsev, I.N. Dolganova, N.V. Chernomyrdin, Sh.–I.T. Beshplav, V.E. Karasik, V.N. Kurlov, D.S. Ponomarev, I.V. Reshetov, A.A. Potapov, V.V. Tuchin, “Prospect of THz technology in intraoperative diagnosis of human brain tumors,” 2<sup>nd</sup> Photonic and OptoElectronic Materials Conference 2019 (ПОЕМ’19), April 9–12, 2019, University College London, London, UK, <https://www.poem2019.com/> (приглашенный).
119. К.И. Зайцев, Н.В. Черномырдин, А.А. Гавдуш, Г.М. Катыба, И.Н. Долганова, В.Е. Карасик, Г.А. Командин, И.Е. Спектор, В.Н. Курлов, И.В. Решетов, А.А. Потапов, В.В. Тучин, “Терагерцовые технологии в биофотонике,” 10-я Международная Научно-практическая конференция по физике и технологии наногетероструктурной СВЧ электроники «Мокеровские чтения», 15–16 мая 2019, Москва, Россия, <https://mokerov.mephi.ru/> (пленарный).
120. К.И. Зайцев, Н.В. Черномырдин, А.А. Гавдуш, Г.М. Катыба, И.Н. Долганова, В.Е. Карасик, Г.А. Командин, И.Е. Спектор, В.Н. Курлов, И.В. Решетов, А.А. Потапов, В.В. Тучин, “Проблемы применения терагерцовых технологий в диагностике злокачественных новообразований,” Восьмая Всероссийская научно-техническая конференция «Электроника и микроэлектроника СВЧ», 3–6 июня 2019, Санкт-Петербург, Россия, <http://www.mwelectronics.ru/> (пленарный).
121. K.I. Zaytsev, I.N. Dolganova, V.E. Karasik, V.N. Kurlov, A.A. Potapov, I.V. Reshetov, V.V. Tuchin, “Prospects for human brain glioma diagnosis using terahertz spectroscopy and imaging,” 8th Russia-Japan-USA-Europe Symposium on Fundamental & Applied Problems of Terahertz Devices & Technologies (RJUSE TeraTech 2019), July 6–7, 2019, Nizhniy-Novgorod, Russia, <http://www.rjuse-2019.org/> (приглашенный).
122. K.I. Zaytsev, N.V. Chernomyrdin, A.S. Kucheryavenko, I.N. Dolganova, G.M. Katyba, V.N. Kurlov, V.E. Karasik, I.V. Reshetov, V.V. Tuchin, “Sub-wavelength-resolution terahertz imaging of soft biological tissues,” Advanced Laser Technologies 2019 (ALT’19),

September 15–20, 2019, Prague, Czech Republic, <http://altconference.org/alt19> (приглашенный).

123. I.N. Dolganova, G.M. Katyba, I.N. Shikunova, I.V. Reshetov, M.A. Schcedrina, K.I. Zaytsev, V.V. Tuchin, V.N. Kurlov, “Sapphire shaped crystals as a prospective material platform for novel modalities of medical diagnosis and therapy,” *Advanced Laser Technologies 2019 (ALT’19)*, September 15–20, 2019, Prague, Czech Republic, <http://altconference.org/alt19> (приглашенный).
124. O.P. Cherkasova, A.A. Gavidush, N.V. Chernomyrdin, K.M. Malakhov, S.-I.T. Beshplav, I.N. Dolganova, G.R. Musina, I.V. Reshetov, G.A. Komandin, V.E. Karasik, A.A. Potapov, V.V. Tuchin, K.I. Zaytsev, “Intraoperative diagnosis of human brain gliomas using THz spectroscopy and imaging: a pilot study,” *Advanced Laser Technologies 2019 (ALT’19)*, September 15–20, 2019, Prague, Czech Republic, <http://altconference.org/alt19> (приглашенный).
125. P. Rakotomanga, S. Zaytsev, M. Amouroux, C. Soussen, G. Khairallah, E. Genina, V. Tuchin and W. Blondel, Analysis of skin intrinsic fluorophore contributions during optical clearing: source separation technique applied to spatially resolved multiply excited autofluorescence spectra, Saratov Fall Meeting SFM’19 – Symposium, September 23 - 27, 2019 (приглашенный интернет-доклад).
126. VV Tuchin, New optical transparency windows of biological tissues: from UV to THz, International Conference PhysicsA.SPb, Phys-Technical Institute named after A.F. Ioffe, St. Petersburg, October 22-24, 2019 (plenary).
127. Valery Tuchin, Tissue optical clearing for diagnostics and therapy: from deep-UV to THz, The 4th International Symposium and School for Young Scientists "Physics, Engineering and Technologies for Biomedicine," MEPhI, Moscow, October 28-30, 2019 (invited).
128. [Valery V. Tuchin](#), [Elina A. Genina](#), [Alexey N. Bashkatov](#), [Ekaterina N. Lazareva](#), and [Vladimir P. Zharov](#) "In vivo optical clearing of human light and dark skin, Dynamics and Fluctuations in Biomedical Photonics XVII, 1123902 (San-Francisco, 1-6 Feb. 2020); <https://doi.org/10.1117/12.2566932> (приглашенный).
129. [Alexei A. Bogdanov Jr.](#), [Valery V. Tuchin](#), [Irina G. Meerovich](#), [Natalia I. Kazachkina](#), [Viktoria V. Zherdeva](#), [Ilya D. Solovyev](#), [Daria K. Tuchina](#), and [Alexander P. Savitsky](#) "Towards registration of optical and MR signal changes in subcutaneous tumor volume in vivo after optical skin clearing", Proc. SPIE 11239, Dynamics and Fluctuations in Biomedical Photonics XVII, 112390N (San-Francisco, 1-6 Feb. 2020); <https://doi.org/10.1117/12.2545312> (приглашенный).
130. [Oxana V. Semyachkina-Glushkovskaya](#), [Ekaterina Zinchenko](#), [Maria Klimova](#), [Andrey Terskov](#), [Arkady Abdurashitov](#), [Alexander Dubrovsky](#), [Inna Blokhina](#), [Alexander Khorovodov](#), [Ilana Agranovich](#), [Nikita Navolokin](#), [Alexander Shirokov](#), [Elena Saranceva](#), [Aysel Mamedova](#), [Valery Tuchin](#), and [Juergen Kurths](#) "Pilot study of transcranial photobiomodulation of lymphatic clearance of beta-amyloid from the mouse brain: breakthrough strategies for non-pharmacologic therapy of Alzheimer’s disease (San-Francisco, 1-6 Feb. 2020)", *Biophotonics and Immune Responses XV*, 1124103; <https://doi.org/10.1117/12.2541561> (приглашенный).
131. [Valery V. Tuchin](#), “Tissue optical clearing aiming multimodal imaging: moving from *in vitro* to *in vivo*”, The VIII International Conference on Perspectives in Vibrational

- Spectroscopy (ICOPVS-2020) <https://www.icopvs2020.org/>), Bangalore, India, Feb.24-28, 2020 (plenary lecture).
132. Elina A. Genina, Alexey N. Bashkatov, Sergey M. Zaytsev, Marine Amouroux, Walter C. P. M. Blondel, Valery V. Tuchin, Physical impacts on epidermal permeability in vivo for optical clearing agents, Tissue Optics and Photonics, Conference 11363, SPIE Photonics Europe, Strasburg, 30 March–2 April 2020 (Invited Paper).
  133. Yury V. Kistenev, Alexey V. Borisov, Polina A. Dyachenko, Ekaterina N. Lazareva, Viktor V. Nikolaev, Daria K. Tuchina, Denis A. Vrazhnov, Irina Yu K. Yanina, Valery V. Tuchin, Differential diagnostics of paraffin-embedded tissues by IR-THz spectroscopy and machine learning, Tissue Optics and Photonics, Conference 11363, SPIE Photonics Europe, Strasburg, 30 March–2 April 2020 (Invited Paper). <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11363/113630P/Physical-impacts-on-epidermal-permeability-in-vivo-for-optical-clearing/10.1117/12.2555734.short?webSyncID=b6a0cbad-0593-29ad-883c-9d902bc9993c&sessionGUID=ed268bea-d49a-2853-1ab0-d3a6b03c97c0>
  134. Luis Oliveira, Isa Carneiro, Sonia Carvalho, Rui Henrique, Valery V. Tuchin, Measurement of optical properties of normal and pathological human liver from deep-UV to NIR, Tissue Optics and Photonics, Conference 11363, SPIE Photonics Europe, Strasburg, 30 March–2 April 2020 (Invited Paper). <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11363/113630G/Measurement-of-optical-properties-of-normal-and-pathological-human-liver/10.1117/12.2554877.short>
  135. Alexei A. Bogdanov, Irina Meerovich, Natalia I. Kazachkina, Victoria Zherdeva, Ilya Solovyev, Alexander P. Savitsky, Valeriy V. Tuchin, Optical clearing effects in subcutaneous red-fluorescent tumors monitored by fluorescence and magnetic resonance imaging in vivo, Tissue Optics and Photonics, Conference 11363, SPIE Photonics Europe, Strasburg, 30 March–2 April 2020 (Invited paper). <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11363/113630S/Optical-clearing-effects-in-subcutaneous-red-fluorescent-tumors-monitored-by/10.1117/12.2560186.short>
  136. V. V. Tuchin, Improved biomedical imaging over a wide spectral range from UV to THz towards multimodality, The 3rd International Conference “Biophotonics Riga – 2020”, 24-25 August, 2020, Riga, on-line meeting (Invited paper).
  137. Yu. V. Kistenev and V. V. Tuchin, Optical clearing and machine learning concepts for THz spectroscopy of tissues, The 4-th International Conference Terahertz and Microwave Radiation: Generation, Detection and Applications (TERA), August 24-26, 2020, Tomsk. (Invited paper); on-line presentation. <http://tera2020.tsu.ru/>
  138. V. V. Tuchin, Presentation of Russian projects on Biophotonics, 2<sup>nd</sup> Meeting of the BRICS Working Group on Photonics, October 13 – 15, 2020; Section “Photonics applications in biomedicine. Photonics for agriculture and food industry”, Skolkovo Institute of Science and Technology (Skoltech), RF Ministry of Science and Higher Education, on-line meeting (Invited paper). <https://eng.brics-russia2020.ru/calendar/20201013/654480/2nd-Meeting-of-BRICS-Working-Group-on-Photonics.html>
  139. В.В. Тучин, Новая концепция мультимодальной медицинской визуализации на основе оптического просветления тканей в широком диапазоне длин волн, VII Троицкая конференция с международным участием "Медицинская физика" (ТКМФ-7), 19–21 октября 2020 г., Институт фотонных технологий, ФНИЦ «Кристаллография и фотоника» РАН (ИФТ РАН), Троицк (плeнарная лекция). <http://www.medphys.troitsk.ru/>
  140. I.V. Reshetov, K.I. Zaytsev, I.N. Dolganova, E.N. Rimsкая, K.G. Kudrin, M.A. Schedrina, D.S. Ponomarev, V.N. Kurllov, A.A. Potapov, and V.V. Tuchin, Label-free optical diagnosis of malignant and benign neoplasms with different nosologies and localizations, ICLO, St. Petersburg, November 2-6, 2020, MoSYP-03 Monday, November 02, 2020 (Plenary). <https://laseroptics.ru/general-information.html>
  141. I.N. Dolganova, P.V. Aleksandrova, N.A. Naumova, P.V. Nikitin, K.I. Zaytsev, S.T. Beshplav, V.V. Tuchin, Optical coherence tomography of brains: ex vivo study of healthy and malignant tissues, ICLO, St. Petersburg, November 2-6, 2020, TuSYA-06, Tuesday,

- November 03, 2020; 11:30-12:00 (Invited paper). <https://laseroptics.ru/general-information.html>
142. W. Blondel, S. Zaytsev, V. Colas, G. Khairallah, P. Rakotomanga, C. Soussen, E. Genina, C. Daul, V. Tuchin, M. Amouroux, Study of the impact of optical clearing on skin absorption, scattering and autofluorescence properties, ICLO, St. Petersburg, November 2-6, 2020, TuSYB-01, Tuesday, November 03, 2020; 14:30-15:00 (Invited paper). <https://laseroptics.ru/general-information.html>
143. V. Tuchin, Advances in tissue optical clearing: new steps to clinics, ICLO, St. Petersburg, November 2-6, 2020, ThSYB-17, Thursday, November 05, 2020; 11:30-12:00 (Invited paper). <https://laseroptics.ru/general-information.html>
144. Valery Tuchin, Optical clearing of biological tissues in multimodal imaging: from in vitro to in vivo, 4th Sechenov International Biomedical SUMMIT (SIBS 2020), November 17-18, 2020, Sechenov University, Moscow, Russia, on-line meeting (Invited). <https://sechenov-sibs.confreg.org/>
145. В.В. Тучин, Научный медицинский центр СГУ им. Н.Г. Чернышевского, Круглый стол Комитета Государственной Думы по охране здоровья на тему «Развитие медицинской науки в Российской Федерации. Законодательное регулирование», 23 апреля 2021 года.
146. V. Tuchin, Towards multimodal tissue imaging with optical clearing, Frontiers in Photonics Science & Technology 2021, A Virtual Symposium hosted by the Fitzpatrick Institute for Photonics, May 16-18, 2021 (plenary) <https://sites.duke.edu/2021fipsymposium/>
147. V.V. Tuchin, S.V. Zar'kov, Yu.A. Avetisyan, A.N. Yakunin, I.G. Meerovich, D.Fixler, A.P. Savitsky, The fluorescent protein/plasmon nanoparticle complexes as multimodal optical sensors (invited), 7-9 June 2021, Photonics Days Israel, online event <https://photonics.aeai.org.il/wp-content/uploads/sites/21/2021/06/final-of-day-2.pdf>
148. V.V. Tuchin, Advances in tissue optical clearing for laser diagnostics and treatment, B-I-32 The 28th International Conference on Advanced Laser Technologies, September 06-10, 2021, Moscow, Russia (invited).
149. Valery V. Tuchin, Optical Clearing as a Tool for Multimodal Tissue Imaging, BRICS Workshop on Biophotonics -2021, September 27–29, 2021, Saratov, Russia (invited).
150. V.V. Tuchin, Optical Clearing of Tissues: Benefits and challenges, International School of Lasers and Biomedical Photonics, LBMP2021 Online, October 9-11, Tehran 2021(invited).
151. V.V. Tuchin, Multimodal tissue imaging supported by optical clearing, Asia Communications and Photonics Conference (ACP) 2021, 24-27 October 2021, Pudong Shangri-La Hotel, Shanghai, China (invited).
152. V.V. Tuchin, New perspectives in laser medicine Russian Science and Technology Innovation Matchmaking Meeting, Thursday, November 4, 2021, Dingxiang Hall, East Lake International Conference Center, Department of Science and Technology of Hubei Province (invited).
153. В. В. Тучин, Оптическое просветление тканей как новый подход в антимикробной и противогрибковой фототерапии, VIII Международный симпозиум по когерентному оптическому излучению полупроводниковых соединений и структур, ФИ РАН, Москва 23-25 ноября 2021 г. Приглашенный доклад
154. V.V. Tuchin, Analytical biophotonics based on optical clearing of tissues and instrumental multimodality, 15th International Conference on Photonics and Imaging in Biology and Medicine (PIBM 2021), December 2-4, 2021, Hainan University, Haikou, China (plenary) [http://pibm.hust.edu.cn/English/Invited\\_Talks.htm](http://pibm.hust.edu.cn/English/Invited_Talks.htm)
155. V.V. Tuchin, Advances and prospects of multimodal biomedical imaging and treatment based on tissue optical clearing, 6th West-Lake Photonics Symposium (WPS), Dec. 10, 2021, Zhejiang University, Hangzhou, P.R.China (keynote).



156. В.В. Тучин, «Окна прозрачности и оптическое просветление биологических тканей: вопросы медицинской диагностики и фототерапии», Научная сессия Общего собрания ОФН РАН, Москва, 13 декабря 2021года (приглашенный).
157. I. Carneiro, S. Carvalho, R. Enrique, A.R. Botelho, H. Silva, I. Martins, L. Oliveira, and V. Tuchin, Measurement of optical properties of human kidney from the deep-UV to NIR, 16th International conference on Laser Applications in Life Sciences, 1<sup>st</sup> -2<sup>nd</sup> April 2022, Nancy (France), Abstracts Book, p. 81 (2022). <https://lals.sciencesconf.org/> (invited).
158. E.A. Genina, V.D. Genin, E.A. Kolesnikova, S.M. Zaytsev, Y.I. Surkov, I.A. Serebryakova, V.V. Tuchin, Advanced approaches to skin *in vivo* optical clearing, 16th International conference on Laser Applications in Life Sciences, 1<sup>st</sup> -2<sup>nd</sup> April 2022, Nancy (France), Scientific Program, p. 14 (2022). [https://lals.sciencesconf.org/\(invited\)](https://lals.sciencesconf.org/(invited)).
159. Isa Carneiro, Sónia Carvalho, Rui Enrique, Ana Rita Botelho, Hugo Silva, Inês Martins, Luís Oliveira and Valery Tuchin, Measurement of optical properties of human kidney from the deep-UV to NIR, 16th International conference on Laser Applications in Life Sciences, 1<sup>st</sup> - 2<sup>nd</sup> April 2022, Nancy (France), Scientific Program, p. 9 (2022). [https://lals.sciencesconf.org/\(invited\)](https://lals.sciencesconf.org/(invited))
160. Valery V. Tuchin, Optical clearing of tissues: Issues of diagnostics, phototherapy, and monitoring of implants, OPORTO 22 – 1st Spring Biophotonics Conference in Porto, April, 20-23, 2022 (keynote - online) <https://stemm.tech/oporto22/>
161. Valery V. Tuchin, Optical Clearing of Tissues for the Improvement of Laser Medical Technologies, 3<sup>rd</sup> International Conference on Light and Light-based Technologies (ICLLT-22), Ankara, Turkey, 25-27 May, 2022.
162. L.M. Oliveira, T.M. Gonçalves, A.R. Botelho, I.S. Martins, H.F. Silva, I. Carneiro, S. Carvalho, R. Henrique, V.V. Tuchin, Spectroscopic detection of pigments in tissues: correlation with tissue aging and cancer development (Invited paper), # TuSYB-12, 7<sup>th</sup> International A. M. Prokhorov Symposium on Biophotonics, 20<sup>th</sup> International Conference Laser Optics ICLO 2022, St. Petersburg, Russia, 20—24 June, 2022.
163. I.S. Martins, M.R. Pinheiro, H.F. Silva, V.V. Tuchin, L.M. Oliveira, Evaluation of OCA diffusivity in tissues through diffuse reflection spectroscopy (Invited paper), # WeSYB-22, 7<sup>th</sup> 7<sup>th</sup> International A. M. Prokhorov Symposium on Biophotonics, 20<sup>th</sup> International Conference Laser Optics ICLO 2022, St. Petersburg, Russia, 20—24 June, 2022.
164. H.F. Silva, D.S. Teixeira, I.S. Martins, V.V. Tuchin, L.M. Oliveira, Evaluation of optical clearing potential of natural oils and gels (Invited paper), #WeSYB-26, International A. M. Prokhorov Symposium on Biophotonics, 20<sup>th</sup> International Conference Laser Optics ICLO 2022, St. Petersburg, Russia, 20—24 June, 2022.
165. I.D. Solovyev, N.I. Kazachkina, V.V. Zherdeva, I.G. Meerovich, D.K. Tuchina, A.A. Bogdanov Jr., V.V. Tuchin, A.P. Savitsky, Simultaneous measurement of fluorescent and magnetic resonance 3D images (Invited paper), # WeSYB-21, International A. M. Prokhorov Symposium on Biophotonics, 20<sup>th</sup> International Conference Laser Optics ICLO 2022, St. Petersburg, Russia, 20—24 June, 2022.
166. V.V. Tuchin, Tissue optical clearing opens new avenues for laser technologies in medicine, PL-3, International Symposium Fundamentals of Laser Assisted Micro- & Nanotechnologies (FLAMN-22), June 27 - 30, 2022, St. Petersburg, Russia (пленарная лекция); <https://flamn.itmo.ru/> .
167. N.V. Chernomyrdin, M. Skorobogatiy, V.V. Tuchin, K.I. Zaytsev, Terahertz solid immersion microscopy: Recent achievements and challenges (Invited), # S02-13, International Symposium Fundamentals of Laser Assisted Micro- & Nanotechnologies (FLAMN-22), June 27 - 30, 2022, St. Petersburg, Russia; <https://flamn.itmo.ru/>
168. V.V. Tuchin, In vivo tissue optical clearing as a tool for laser diagnostics and therapeutics, The 29th International Conference on Advanced Laser Technologies, September 11-16, 2022, Moscow, Russia [Invited] <https://altconference.org/program-22> .

169. E.A. Genina, V.D. Genin, A.B. Bucharskaya, N.A. Navolokin, G.S. Terentyuk, N.G. Khlebtsov, V.V. Tuchin, The study of laser-assisted skin optical clearing in vivo, The 29th International Conference on Advanced Laser Technologies, September 11-16, 2022, Moscow, Russia [Invited] <https://altconference.org/program-22> .
170. M.A. Ansari, M. Samani, S. Ziaee, E.A. Lazareva, Yu.I. Surkov, I.A. Serebryakova, E.A. Genina, V.V. Tuchin, Refractive index measurement of the mouse skin in the visible wavelength range, The 29th International Conference on Advanced Laser Technologies, September 11-16, 2022, Moscow, Russia [Invited] <https://altconference.org/program-22> .
171. В.В. Тучин, Новые оптические биомедицинские технологии на основе оптического просветления тканей (New optical biomedical technologies based on optical clearing of tissues), XIX Международной конференции по голографии и прикладным оптическим технологиям HOLOEXPO 2022, Санкт-Петербург, 20-23 сентября, 2022 (пленарный доклад).
172. Valery Tuchin, Tissue photonics: towards multimodal tissue imaging and therapy through optical clearing, 7th International Symposium «Physics Engineering and Technologies for Biomedicine» and School for Young Scientists, November 19-24 of 2022, Moscow, Russia (пленарный доклад).
173. В.В. Тучин, Визуализация и спектроскопия биологических тканей в широком диапазоне длин волн: от глубокого УФ до ТГц, Всероссийская конференция молодых ученых с международным участием «Фундаментальная и прикладная медицина “Biomeeting”», 29-30 ноября 2022г (пленарный доклад).
174. A.P. Savitsky, I.D. Soloviev, I.G. Meerovich, I.E. Granovsky, N.K. Marynich, D.K. Tuchina, A.B. Konovalov, V.V. Vlasov, V.V. Tuchin, Multimodal MRI and life-time fluorescence sensors for theranostic applications, OASIS8 - International conference & Exhibition on Optics & Electro-Optics, 12-13 December 2022, David InterContinental Hotel, Tel Aviv, Israel [Invited]. <https://www.oasis8.org.il/dab>
175. Valery Tuchin, Optical clearing of tissues: multimodality and in vivo applications, International Conference on Nanoscience and Photonics for Medical Applications (ICNPMA-2022), Manipal Academy of Higher Education, Manipal, Karnataka, India, December 28-30, 2022. Plenary lecture. <https://conference.manipal.edu/ICNPMA2022/>
176. Alexei A. Bogdanov, Valery V. Tuchin, Natalia I. Kazachkina, Victoria V. Zherdeva, Lilya G. Maloshenok, Daria K. Tuchina, Irina G. Meerovich, Ilya D. Solovyev, Alexander P. Savitsky, [Clinical MRI contrast agent improves fluorescent imaging of red fluorescent protein expression in-vivo due to the effect of tissue optical clearing](#) (Invited Paper), Conference 12378, Dynamics and Fluctuations in Biomedical Photonics XX, 29 - 30 January 2023, 29 January 2023 • 3:50 PM - 4:20 PM PST, BiOS, SPIE Photonics West Symposia, 28 January - 2 February 2023, San Francisco, California, United States
177. Valery V. Tuchin, Modern trends in biomedical optoelectronics: to see deeper and treat more precisely, New Year Workshop, Frontiers of Optoelectronics, 9-10 January, 2023, Wuhan, China (invited).
178. Valery V. Tuchin, K.I. Zaitsev, I.V. Reshetov, Terahertz biophotonics, The 5th International Conference Terahertz and Microwave Radiation: Generation, Detection and Applications" (TERA-2023), 27 February – March 2, 2023, Moscow, MPhI (Plenary lecture).
179. Valery Tuchin, Welcome speech, 16th International Conference on Photonics and Imaging in Biology and Medicine — PIBM-2023, Chairs: Q. Luo, V. Tuchin and L. Wang, March 29 - April 1, 2023, Haikou, Hainan, China (invited).

180. Valery Tuchin, Recent advances in optical clearing of tissues: Towards in vivo applications, Chinese-Russian Workshop on Biophotonics and Biomedical Optics, Chairs: V. Tuchin and D. Zhu, March 29 - 31, 2023, Haikou, Hainan, China (invited).
181. Valery V. Tuchin, New Achievements in Tissue Optics and Optical Clearing in a Wide Spectral Range from Deep UV to Terahertz, BRICS Workshop on Biophotonics II, May 16-18, 2023, Saratov, Russia, Hainan, China, San Paulo, Brazil, Manipal, India, Johannesburg, RSA (Plenary- Online).
182. Valery Tuchin, Advances in tissue optics and optical clearing in ultra-wide spectral range from deep UV to terahertz, SBC 2023 - The 2nd Spring Biophotonics Conference, June 15-17 2023, Espinho, Portugal (Keynote - Online).
183. Valery V. Tuchin, Spectroscopy of tissues in a wide spectral range from deep UV to THz, The XX Symposium on High Resolution Molecular Spectroscopy, July 03-07, 2023, Озеро Байкал, Иркутск, Россия (приглашенный).  
<https://symp.iao.ru/en/hrms/20/progpdf>
184. Valery Tuchin, Tissue optics and optical clearing modalities, Light Conference Week 2023, Track 3 Optical Imaging and Metrology, August 11-16, 2023, Changchun, China, p. 58.  
<http://lightconference.cn/> (invited).
185. Valery V. Tuchin, Tissue photonics: on the way to multimodal imaging and therapy using optical clearing, The 11th School of BioPhotonics, Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE), San Andrés Cholula, Pue., Mexico, August 9-11, 2023 (plenary lecture).  
<https://www-optica.inaoep.mx/~EscuelaBiofotonica/index.php>
186. V. Tuchin, P. Dyachenko, A. Bucharskaya, D. Tuchina, Optical technologies for monitoring vital complications in diabetes mellitus, The 30th International Conference on Advanced Laser Technologies September 18-21, 2023 Samara, Russia [Invited] [PROGRAM of ALT`18 the 26th International Conference on Advanced Laser Technologies \(altconference.org\)](https://altconference.org/)
187. A. Yakunin, S. Zarkov, Y. Avetisyan, G. Akchurin, I. Meerovich, A. Savitsky, V. Tuchin, Enhancement of Near Field and Local Absorption in Plasmonic Nanoparticle-Protein Fluorescent Complexes, The 30th International Conference on Advanced Laser Technologies September 18-21, 2023 Samara, Russia [Invited] [PROGRAM of ALT`18 the 26th International Conference on Advanced Laser Technologies \(altconference.org\)](https://altconference.org/).
188. E. Genina, I. Serebryakova, Y. Surkov, Y. Kuzinova, O. Konopatskova, V. Tuchin, Multimodal approach to the diagnosis of human skin cancer in vivo, The 30th International Conference on Advanced Laser Technologies September 18-21, 2023 Samara, Russia [Invited] [PROGRAM of ALT`18 the 26th International Conference on Advanced Laser Technologies \(altconference.org\)](https://altconference.org/).
189. Valery Tuchin, Advances in Tissue Optics and Photonics: Forward to New Medical Technologies Through Optical Clearing, European Summit on Laser Optics & Photonics Technology, Xperts Meetings (ELOPS-2023 – Hybrid Edition), both on-site and virtually, September 25-27, 2023, Barcelona, Spain <https://elops.org/> (plenary lecture). [Final Program-ELOPS2023.pdf](https://elops.org/program/ELOPS2023.pdf)
190. Тучин В. В., Фундаментальные основы метода оптического просветления биологических тканей: задачи диагностики и терапии патологических процессов, Всероссийская научная конференция с международным участием «Невская фотоника – 2023», 9-13 октября 2023 г. Санкт-Петербург, Университет ИТМО (приглашенный)  
chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://nevphoton.ru/docs/programNF2023.pdf
191. В.В. Тучин, Управление оптическими свойствами биологических тканей: новые приложения в мультимодальной визуализации и фототерапии, Пятая международная конференция «Физика — наукам о жизни» со школой молодых ученых, 16-19 октября,

- Санкт-Петербург, Физико-технический институт им. А.Ф. Иоффе (приглашенный).  
<https://phls2023.ioffe.ru/ru/program/vtornik-17102023/>
192. E. Genina, V. Genin, A. Bucharskaya, N. Navolokin, G. Terentyuk, N. Khlebtsov, V. Tuchin, New approaches to the laser plasmon resonance phototherapy of cancer, 17th International conference on Laser Applications in Life Sciences, 15-17 October 2023, Muğla, Turkey (invited).
  193. Тучин В. В. Управление оптическими свойствами биологических тканей: новые приложения в мультимодальной визуализации и фототерапии, International conference [PhysicA.SPb/2023](#) 23-27 October, 2023 (Приглашённый)
  194. Valery Tuchin, Optical Clearing in PDT and PTT, International Seminar of Lasers and Biomedical Photonics, LBMP 2023, 18-20 October 2023, Tehran, Iran (invited)
  195. Valery Tuchin, Tissue optics and optical clearing in a wide spectral range: from deep UV to THz, Asia Communications and Photonics Conference /The International Photonics and OptoElectronics Meetings (ACP/POEM 2023), Nov.4-7, 2023, Wuhan, China (tutorial)  
<chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/http://acpconf.com/public/upload/ueditor/file/20231030/1698642331289875597.pdf>
  196. Walter Blondel, Sergey Zaytsev, Valery Tuchin, Elina Genina, Dan Zhu, Marine Amouroux, Experimental evaluation of human skin optical clearing in vivo efficiency using biocompatible agents and optical coherence tomography, Asia Communications and Photonics Conference /The International Photonics and OptoElectronics Meetings (ACP/POEM 2023), Nov.4-7, 2023, Wuhan, China (invited)  
<chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/http://acpconf.com/public/upload/ueditor/file/20231030/1698642331289875597.pdf>
  197. Valery Tuchin, Advanced Biomedical Imaging and Tomography at Tissue Optical Clearing, The 16th International Conference on Machine Vision (ICMV2023), Yerevan, Armenia, November 15-18, 2023, Russian-Armenian University (keynote lecture).  
<https://icmv.org/>
  198. Valery V. Tuchin, Tissue optical clearing technologies: perspectives for *in vivo* biomedical applications, Light Conference on Advanced Optical Manufacturing, Rugao, Jiangsu Province, China, 16<sup>th</sup>-17<sup>th</sup> April, 2024 (invited).

### **Избранные образовательные лекции и краткие курсы лекций**

1. V.V. Tuchin, "Optical Clearing of Tissue and Blood," Half-day short course, Photonics West Symposia, BiOS-2006, San Jose, California, USA, 21-26 January, 2006.
2. V.V. Tuchin, "Tissue Optics and Immersion Optical Clearing in Imaging, Spectroscopy, and Therapy," One-day short course, World Congress on Medical Physics, 27 August – 1 September, 2006, Seoul, South Korea.
3. В.В. Тучин, Оптическое просветление биологических тканей и крови, однодневный курс лекций для студентов, аспирантов и научных сотрудников, Львовский Национальный университет, Львов, Украина, 5 декабря 2006.
4. V.V. Tuchin, *Fundamentals of Laser-Tissue Interaction*, Lecture for Medical Personal, Symposium on Laser Medical Applications, Moscow, July 5 - July 6, 2010.
5. V.V. Tuchin, *Coherence-Domain and Polarization Methods in Biophotonics*," Huazhong University of Science and Technology, Wuhan, China, November 6, 2010.
6. V.V. Tuchin, *In vivo optical flow cytometry*, Beijing Institute of Technology, Beijing, November 8, 2010.
7. V.V. Tuchin, *In vivo image flow cytometry*, tutorial, Scientific Meeting of Photonics4Life, Institut d'Optique Graduate School, Campus Polytechnique, Palaiseau, France, 29 November - 1 December, 2010.

8. V.V. Tuchin, *In vivo* optical flow cytometry and cell imaging, 1- Image cytometry, 2 - Photothermal cytometry, 3 - Integrated photoacoustic cytometry, International School of Physics “Enrico Fermi” “Microscopy Applied to Biophotonics,” Varenna (Lake Como) - July 12-22, 2011.
9. Valery V. Tuchin, A clear vision through tissues: enhanced optical imaging and therapy (invited), ST-DOT Summer School "Photonics Meets Biology", Hersonissos, Crete, Greece, 15th - 18th September, 2011.
10. Valery V. Tuchin, Optical Clearing of Tissues and Blood, SPIE Short Course, HUST SPIE Student Chapter, PIBM-11, Short Courses Session, 4 November 2011, Wuhan, China.
11. Valery V. Tuchin, Tissue Photonics, HUST University Short Course, 6 November 2011, Wuhan, China.
12. V.V. Tuchin, Tissue Optics, Huazhong University of Science and Technology, 3 November, 2012.
13. V.V. Tuchin, Tissue Optics and Measurements in Biophotonics, University of Eastern Finland - Joensuu Summer School on Optics, June 10-14, 2013.
14. V.V. Tuchin, Tissue Optics and Optical Clearing, Research Training Course “Biophotonics – Riga 2013,” 26-28 August, Riga, Latvia, 2013.
15. V. Tuchin, Tissue Optics and Tissue Optical Clearing, 1st OILTEBIA European School organized by Universidad Carlos III de Madrid (UC3M), Leganés, Madrid (Spain), 15-19 September 2014.
16. V. V. Tuchin, Tissue Optical Clearing, Tzinghua University in Shenzhen, China, November 12, 2014, for PhD and MS students of Biomedical Engineering
17. V.V. Tuchin, Advanced tissue optical clearing, Huazhong University of Science and Technology, Wuhan, November 16, 2014. The inauguration lecture as a receiver of the Chimes Prize of Hubei Province, China
18. V.V. Tuchin, Tissue Optics and Photonics, 3rd FAST-DOT Summer School «Photonics meets Biology», 28 September - 2 October 2015, Royal Mare Thalasso & Spa Hotel, Anissaras, Crete, Greece – two lectures.
19. V. V. Tuchin, “Tissue optics and nanomedicine,” SPIE Short Course, SPIE Student Chapter of University of Houston, February 11-12, 2016, Houston, USA.
20. V. V. Tuchin, “Tissue optical clearing: new prospects in optical imaging and therapy,” Visiting Professor Lecture, Baylor College of Medicine, Texas Children’s Hospital, February 12, 2016, Houston, USA.
21. V. V. Tuchin, “Nanoparticle enhanced optical biomedical imaging, sensing and therapy,” 2<sup>nd</sup> International Young Scientists School “Nanostructured materials,” 10-11 May 2016, Tomsk, Russia.
22. V.V. Tuchin, “Enhanced optical imaging: from UV to terahertz and from *in vitro* to *in vivo*,” SPIE Short Course, OPTO2016 and COST, Gdansk, July 6-9, 2016.
23. V. V. Tuchin, “Tissue optical clearing: new prospects in optical imaging,” SPIE Short Course, Hamlyn Centre for Robotic Surgery, Imperial College London, Imperial Optical Society, 9 September, 2016, London, UK.
24. V.V. Tuchin, “Tissue optical clearing and delivery of agents and nanoparticles,” Shenzhen University, October 19, 2016, Shenzhen, China.
25. V.V. Tuchin, “Fundamentals and advances of tissue and blood optical clearing,” University of Macau, October 21, 2016, Macau, China
26. V. V. Tuchin, “Tissue optics and optical clearing technologies” NANQIANG life science series lectures of Xiamen University, October 24, 2016, Xiamen, China.
27. V.V. Tuchin, “Tissue optical clearing method,” Chinese-Russian Workshop on Biophotonics, Nanjing University of Aeronautics & Astronautics, October 26, 2016, Nanjing, China.
28. V.V. Tuchin, “Tissue optics and mechanisms of tissue optical clearing,” China Pharmaceutical University, October 27, 2016, Nanjing, China.



29. В.В. Тучин, Оптика биологических тканей и оптическое просветление, 1st School on Advanced Fluorescence Imaging Methods (ADFLIM), Москва, 12-14 декабря 2016.
30. V.V. Tuchin, "UV to THz enhanced tissue imaging at immersion clearing: from *in vitro* to *in vivo*," SPIE Short Course, SPIE Student Chapter of MIET, Moscow, December 12, 2016.
31. V.V. Tuchin, "Enhanced spectroscopy and imaging of tissues by immersion clearing: from UV to terahertz," SPIE Short Course, SPIE Student Chapter of Moscow Bauman University, Moscow, January 25, 2017.
32. V.V. Tuchin, Biological tissue optics and optical clearing, 2<sup>nd</sup> School on ADFLIM, St. Petersburg, 26-28 July 2017.
33. V.V. Tuchin, Tissue immersion optical clearing: from *in vitro* to *in vivo*, OSA Short Course, OSA Student Chapter of University of Houston, Houston, January 25, 2018.
34. V.V. Tuchin, "Tissue optics and tissue optical clearing," Research Center in Automatic Control in Nancy (CRAN) UMR 7039 CNRS, Université de Lorraine, Vandoeuvre-lès-Nancy, France, April 27, 2018 (invited lecture).
35. Valery Tuchin, "Tissue optical clearing as a platform for *in vivo* optical imaging and treatment of hidden pathologies: from UV to terahertz," Lecture for SPIE Student Chapter of Bar-Ilan University, Israel, November 18, 2018.
36. Valery Tuchin, "Tissue optics and optical clearing for functional imaging," Lecture on 30<sup>th</sup> International SAOT Workshop, Functional Optical Imaging in Medical Engineering, November 29 – 30, 2018, Friedrich-Alexander Universität Erlangen-Nürnberg, Germany.
37. Valery Tuchin, "Tissue optical clearing for multimodal imaging: from *in vitro* to *in vivo* Lecture for Students of University of Florence, Florence, Italy, December 20, 2018.
38. V.V. Tuchin, "Tissue optics and optical clearing of tissues and cells," São Paulo School of Advanced Science on Modern Topics in Biophotonics, São Carlos/SP, Brazil, 20-29 March, 2019 (Short Course - three lectures).
39. Valery Tuchin, Tissue optical clearing aiming multimodal imaging: from *in vitro* to *in vivo*, SPIE Lecture, Technical University of Munich, Munich, June 27, 2019.
40. В.В. Тучин, Оптическое просветление биологических тканей в задачах мультимодальной визуализации: от *in vitro* к *in vivo*, Публичная лекция в Первом МГМУ им. И.М. Сеченова, Москва, 4 декабря 2019.
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60. Лекция в базовой школе РАН Государственное автономное общеобразовательное учреждение Саратовской области "Гимназия № 1" лекцию на тему: «Биофотоника – новая наука на службе человека» 01.12.2023г. согласно утвержденному базовой школой РАН графику.
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## **Подготовка кадров**

### **Доктора наук**

1. Ульянов Сергей Сергеевич
2. Зимняков Дмитрий Александрович
3. Утц Сергей Рудольфович
4. Денисова Татьяна Петровна
5. Максимова Ирина Леонидовна
6. Аветисян Юрий Арташесович
7. Галанжа Екатерина Ивановна
8. Кочубей Вячеслав Иванович
9. Симоненко Георгий Валентинович 2010
10. Березин Кирилл Валентинович 2011
11. Генина Элина Алексеевна – 2018
12. Зайцев Кирилл Игоревич – 2023

### **Кандидаты наук**

1. Мельников Леонид Аркадьевич

2. Акчурин Гариф Газизович
3. Рабинович Эммануил Моисеевич
4. Четвериков Виталий Иванович
5. Шубочкин Лев Петрович
6. Синичкин Юрий Петрович
7. Гусев Валерий Викторович
8. Максимова Ирина Леонидовна
9. Торонов Владислав Юрьевич
10. Татаркова Светлана Алексеевна
11. Ярославский Илья Владимирович
12. Изотова Вера Филипповна
13. Татаринцев Сергей Николаевич
14. Кон Ирина Львовна
15. Соколов Александр Александрович
16. Меглинский Игорь Владиславович
17. Смоляков Геннадий Александрович
18. Ярославская Анна Никитична
19. Радченко Елена Юрьевна
20. Пешкова Анна Юрьевна
21. Генина Элина Алексеевна
22. Башкатов Алексей Николаевич
23. Федосов Иван Владленович
24. Сурменко Елена Львовна – 2004
25. Черкасова Ольга Алексеевна – 2007
26. Акчурин Георгий Гарифович – 2009
27. Малинин Антон Владимирович – 2013
28. Янина Ирина Юрьевна – 2013
29. Ерохин Павел Сергеевич – 2015
30. Жерновая Ольга Сергеевна – 2015 (Ирландия)
31. Постнов Дмитрий Дмитриевич – 2015
32. Трунина Наталья Андреевна – 2016
33. Тимошина Полина Александровна – 2017
34. Селифонов Алексей Андреевич – 2021
35. Сдобнов Антон Юрьевич – 2021
36. Абдурашитов Аркадий Сергеевич – 2022
37. Салем Самия Фарук Ибрахим – 2022
38. Яковлев Дмитрий Дмитриевич – 2022
39. Генин Вадим Дмитриевич – 2022
40. Зайцев Сергей Михайлович – 2022 (Франция)
41. Лазарева Екатерина Николаевна - 2023

#### **Научно-исследовательские проекты**

1. «Оптические методы диагностики нано- и мезоскопических сред», Аналитическая ведомственная целевая программа «Развитие научного потенциала высшей школы (2009 – 2011 гг.)»; № 2.1.1/4989. Руководитель
2. «Развитие научно-образовательной структуры по когерентной оптике и биофотонике», Аналитическая ведомственная целевая программа «Развитие научного потенциала высшей школы (2009 – 2011 гг.)»; № 2.2.1.1/2950. Руководитель
3. «Исследование взаимодействия оптического излучения с биологическими тканями и разработка когерентно-оптических и спектральных методов медицинской

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4. 7-ая Рамочная Программа Евросоюза в области технических и естественных наук, грант № 224014 Network of Excellence for Biophotonics (Photonics4Life), 2008-2012. Руководитель
  5. “Noninvasive assessment of topical drug delivery in ocular tissues” Grant RUB1-2932-SR-08 of U.S. Civilian Research and Development Foundation for the Independent States of the Former Soviet Union (CRDF) with University of Houston; Cooperative Grants Program-Biomedical Competition, 2009-2011. Руководитель
  6. «Физические и физиологические механизмы оптического просветления», РФФИ, №08-02-92224-ГФЕН\_а; российско-китайский проект, 2008 – 2010. Руководитель
  7. «Организация и проведение XIII Ежегодной Международной Междисциплинарной Школы для молодых ученых и студентов по оптике, лазерной физике и биофотонике», РФФИ, №10-02-06824-моб\_г, 2010. Руководитель
  8. «Влияние структурно-морфологических особенностей биотканей на их оптические характеристики и световые поля в ближнем УФ - ближнем ИК спектральном диапазоне», РФФИ, №10-02-90039-Бел\_а; российско-белорусский проект, 2010 – 2011. Руководитель
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  10. «Исследование терапевтических, токсических и термических воздействий комплексов наночастица-фотосенсибилизатор при лазерном воздействии», госконтракт № 02.740.11.0484; ФЦП «Научные и научно-педагогические кадры инновационной России» на 2009-2013 гг. Руководитель
  11. «Разработка оптических методов исследования и мониторинга изменений параметров биологических тканей и цельной крови при изменении содержания глюкозы в тканях организма человека и животных», госконтракт № 02.740.11.0770; ФЦП «Научные и научно-педагогические кадры инновационной России» на 2009-2013 гг., Руководитель
  12. «Разработка новых фотонных технологий анализа биофизических процессов в живых организмах на субклеточном, клеточном и тканевом уровнях для задач неинвазивной и минимально-инвазивной диагностики и терапии», госконтракт № 02.740.11.0879; ФЦП «Научные и научно-педагогические кадры инновационной России» на 2009-2013 гг. Руководитель
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  14. “The developing of research infrastructure and approaches to optical point-of-care medical diagnostics,” Uzbek AS, Univ. Hospital Zurich, Switzerland, SCOPES EC, Swiss NSF, 2011/14. Design of POC medical instruments. Руководитель
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19. Разработка компьютерного диагностического комплекса для выявления ранних патологических изменений в кровотоке мозга, 2012 – 2013, ФЦП «Исследования и разработки по приоритетным направлениям развития научно-технического комплекса России на 2007-2013 годы», гос. контракт 11.519.11.2035. В рамках международного договора с Австралией. Руководитель
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22. Лазерная трансфекция клеток и тканей, меченных золотыми наночастицами, 2012 – 2013, РФФИ, грант 12-02-92610-КО\_a. Руководитель
23. Biophotonic technologies for novel diagnostic and therapeutic applications, FiDiPro (Finland Distinguished Professor) Program, awarded by TEKES, №40111/1 (2011-2014), V.V. Tuchin – FiDiPro. Руководитель
24. Грант РФФИ: 13-02-91176-ГФЕН\_a, Механизмы оптического просветления кожи в норме и патологии, количественная оценка, 2013-2014. Руководитель
25. Научный проект по организации Международного симпозиума по оптике и биофотонике "Saratov Fall Meeting 2013". Грант РФФИ, 13-02-06107Г\_2013. 2013. Руководитель
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27. "Exploring for the technology in the field of in-vivo optical clearing for fat tissue" OLYMPUS CORPORATION (43-2, Hatagaya 2-Chome, Shibuya-ku, Tokyo, Japan) (2013-2015), 84,000 USD. Руководитель
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30. «Дистанционно управляемые наноструктурированные системы для адресной доставки и диагностики», грант Правительства Российской Федерации 14. Z50.31.0004 для государственной поддержки научных исследований, проводимых под руководством ведущих ученых (Г.Б. Сухоруков) в российских образовательных учреждениях высшего профессионального образования, научных учреждениях государственных академий наук и государственных научных центрах Российской Федерации, (2014- 2018), руководитель научной группы.
31. Грант РФФИ: 14-15-00186, Прецизионная метрология пространственно-временных оптических и тепловых процессов, индуцированных импульсным лазерным

- облучением биологических тканей и клеток, допированных наночастицами (2014-2016). Руководитель
32. Грант РФФИ: 14-15-00128, Ворота гематоэнцефалического барьера: механизмы регуляции, их зависимость от состояния организма и возраста, способы коррекции с помощью супрамолекулярных транспортных систем (2014-2016) – исполнитель.
  33. Научный проект по организации Международного симпозиума по оптике и биофотонике "Saratov Fall Meeting 2014". Грант РФФИ, 14-02-20101г\_2014. 2014. Руководитель
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Валерий Тучин,  
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