MEDICINE: STRATEGIC PARTNERSHIP

Ophthalmology
Microsurgery
Radiation therapy
Biological and cell technologies
Pathomorphology

www.optecgroup.com
OUR MISSION

OPTEC is a supplier of high-technology solutions for various areas of science, medicine and industry.

Our objective is to establish and develop long-term partnership relations with our customers based on trust and cooperation.

Our strategy is to help our partners achieve excellence in their fields of activity.

For over 12 years OPTEC has been presenting various optical and electro-optical equipment in Russia and CIS countries. This equipment includes: light microscopes, atomic force microscopes, laser scanning microscopes and electron microscopes; nanotechnology systems and equipment for electron and ion-beam lithography; chemical spectral analysis systems; optical and mechanical profilometers, cryostatic equipment for physical research in the areas of low-temperature superconductivity, and equipment for testing the properties of nanoproducts.

WHAT MAKES US UNIQUE

Our success stems from the synergy of the talent and experience of our employees coupled with the high-tech equipment presented on the market.

OPTEC is a team that works like a single, well-coordinated mechanism.

All our solutions for our partners are unique and use state-of-the-art achievements of modern technology in all lines of our activity.

Creativity, mutual respect and partnership within the company is the basic principle of our work and a guarantee of success. What makes us still more unique is over 100 years of Carl Zeiss successful work in Russia and the CIS continued by OPTEC.
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Dear friends,

Today OPTEC represents the solutions of the world's best brands for science, education, medicine, and industry. All these sectors are exceedingly sensitive to the development of high technology. They directly affect the quality of life and, in recent years, we have seen a number of emerging scientific and educational centers, laboratories and medical institutions that are equipped at the state-of-the-art level. We are immensely proud to realize that our partnership makes the best technology available. This is what OPTEC perceives as success that we achieve together with you. And it is to you that we are obliged for our success.

OPTEC grows thanks to solid relationships and cooperation with our partners—scientific, educational and medical institutions. In the course of constant dialog with you, we make balanced decisions and choose the way to develop our company further.

I would like to thank you for your interest in and attention paid to OPTEC, and I hope that our partnership relationships will become even stronger.

Yours respectfully,
Maxim Igelnik,
OPTEC General Manager in Russia and the CIS
STRATEGIC PARTNERSHIP WITH MEDICINE

While equipping or upgrading a clinic, it is often difficult to choose the required systems of equipment and solutions that would best fit the task of the medical institution—beginning from diagnosis of diseases and up to surgical intervention.

OPTEC supplies a wide range of solutions for medical institutions of Russia and the CIS. Our specialists will help you select the equipment individually for your medical center, for successful achievement of the established objectives, while innovative technologies will be an important factor for the medical center to obtain the status of the best institution for its patients.

MEDICAL TECHNOLOGIES

Company’s competences in medicine
» Consulting, management
» Warranty and post-warranty service maintenance
» Mounting and installation
» Personnel training
» Parts and accessories supply
» Equipment upgrade
» Upgrade, enhancement and improvement of devices
OUR PARTNERS

Carl Zeiss Meditec
World leader in the production of diagnostic equipment for ophthalmology, ophthalmology lasers, and operating microscopes for various areas of microsurgery.
www.meditec.zeiss.com

Thermo Fischer Scientific
Full range of high-quality analytical equipment, including laboratory equipment, software, consumables and reagents for effective organization of operational and research processes. Devices and reagents for immunohistochemical research, histological and autopsy equipment.
www.thermofisher.com

CM Technologies
Provides an innovative system for cell material dynamic analysis for scientific research in genetics, immunology, proteomics, physiology, and embryology. Founded under the auspices of Tampere University of Technology, the company has developed a unique system for observing living cells in culture.
http://www.c-mtechnologies.com/
TAP Biosystems

The company was founded under the auspices of Cambridge University and for over 20 years has been developing automated systems to work with cell cultures. The company's product range includes CompacT SelecT, CellBase CT, and Cellmate automated machines for seeding, expanding and harvesting stem cells, and the Ambr bioreactor system.

http://www.tapbiosystems.com/

3DHistech

Manufacturer of digital scanners and software, founded under the auspices of Budapest University. The company created the world's first E-School e-learning program for future biologists, cytologists and geneticists.

www.3dhistech.com

Fрастema

The company has over 40 years of experience in installing ophthalmology equipment all over the world, including the ophthalmologist's workplace.

http://www.frastema.com/

UFSK

Development and production of tables and chairs for operating units.

www.ufsk.com
OPHTHALMOLOGY

Cataract and vitreoretinal surgery
Refractive surgery
Ophthalmology lasers and diagnosis

OPTEC develops complex solutions for ophthalmology and offers equipment for primary diagnosis of eye diseases, operating microscopes, surgery furniture for doctors and patients, equipment for treatment of postoperative complications and software that can consolidate all devices into a uniform information system, which will simplify the work of the clinic personnel and make it more effective.

Thanks to the individual approach, we will help you boost the performance of the clinic to create an effective workflow and solve issues in the treatment for diseases of the retina, cataracts, refractive surgery and other pathologies.

Our partners are pioneering German equipment manufacturers, such as ZEISS and UFSK, offering furniture for surgeons and patients in ophthalmology operating rooms, as well as Frastema, specializing in the organization of the ophthalmologist’s workplace.
Federal Government-Funded Institution
Academ. S.N. Fedorov Eye Microsurgery
Interdisciplinary Science and Technology Complex of the
Russian Ministry of Healthcare | Russia

The main goal of the Science and Technology Complex is to develop and introduce into medical practice methods for diagnosing and treating eye disorders, as well as to create the required technology and simultaneously solve an important social problem of making these achievements accessible to citizens living in all parts of Russia.

» Founded in 1986

» The ophthalmology complex combines a scientific institution, modern clinics, training centers and experimental production

» The results of scientific research and advanced ideas are implemented through a network of 11 branches in major Russian cities.

» In this interdisciplinary science and technology complex all types of eye diseases in adults and children are diagnosed and treated on a high technological level with the use of state-of-the-art equipment

» Over 5 million people have recovered their vision at the Eye Microsurgery Science and Technology Complex

ZEISS equipment:
» Surgical microscopes
» Diagnostic devices for retina and fundus examination
» Ophthalmological lasers
» IOLs
» VisuMax femtosecond system
» Mel 80 excimer laser
Today, the Ophthalmology Clinical Hospital is a large specialized center, consisting of a consultation and diagnosis clinic for up to 500 admissions per shift, a 240-bed in-patient department, and a contact lens correction laboratory.

The Ophthalmology Clinical Hospital has always been not only a patient care institution, but also a scientific, teaching and treatment base for the Russian Medical Academy of Postgraduate Education and the eye disease course at the Russian National Research Medical University.

**ZEISS equipment:**
- HFA 745 computer perimeter
- IOL Master coherent optical biometer
- Visulas Trion and Visulas YAG III ophthalmology lasers
- OPMI Lumera 700 surgical microscope
- Stratus OCT optical coherent tomograph
- FF 450 fundus camera
- Visucam 500 fundus camera

**Fрастема equipment:**
- Visus 2P ophthalmologist’s workplace
The history of the clinic dates back almost 180 years. On January 26, 1826, Knyaz Dmitriy Vladimirovich Golitsyn, the governor-general of Moscow, supported community leaders in the need to create a specialist eye hospital in Moscow. The hospital was designed to admit both inpatients and outpatients, and provide eye care particularly to the poor and needy, and was built on the donations of the townspeople.

The Ophthalmology Clinical Hospital is a teaching hospital that annually trains dozens of residents, and on-site and off-site postgraduate students.

The Ophthalmology Clinical Hospital has been equipped with ZEISS devices for the past few decades. The hospital also contains a museum collection of ZEISS devices that were manufactured in the 1970s.
Possesses modern diagnostic facilities, multidisciplinary clinical departments and utilizes modern treatment approaches

The clinical hospital undertakes its own medical research, thus improving the processes of diagnosis and treatment

Our partnership with the faculties of leading Russian universities ensures that the Clinical Hospital's methods of diagnosis and treatments continue to be the most effective and up-to-date

The Ophthalmology Department of the Hospital is unparalleled in its use of the most modern equipment, including highly reliable surgical and laser technologies, tools for comprehensive diagnosis of eye diseases, and equipment for inpatient and outpatient treatment, as well as laser vision correction. FemtoLasik is a method of laser vision correction, where a corneal flap is formed using a femtosecond laser, and not a mechanical microkeratome, which involves a steel blade
“In the first year of operating the laser we performed over 300 operations and implemented all types of keratorefraction operations—primarily penetrating and lamellar keratoplasty with various cornea diseases, as well as FLEX operations, a possible alternative to traditional excimer laser vision correction. The results of femtolaser operations have been presented at Russian and foreign conferences, including presentation at the first session of the Russian Society of Cataract & Refractive Surgeons.”

Igor Ioshin, Head of the Ophthalmology Department of Federal State Institution Clinical Hospital of the Presidential Administration of the Russian Federation

**ZEISS equipment:**
- VisuMax femtosecond system
- Mel 80 excimer laser
- Visante OCT optical coherent tomograph
- Atlas 900 keratotopographic system
- IOL Master optical coherent biometer
- Stratus OCT optical coherent tomograph
- SL 120 slit lamp
- HFA 745i visual field analyzer
- FORUM software
- IOLs

**Fрастema equipment:**
- Visus 2P ophthalmologist’s workplace
Federal Government-Funded Institution, Research Institute of Eye Diseases of the Russian Academy of Medical Sciences | Moscow

- Research of the retina and optic nerve structure
- Research of visual functions with the use of various programs in diagnosing and monitoring glaucoma patients
- Black-and-white photographic registration of fundus, including fluorescein angiography
- Calculation of the dioptric force of intraocular lenses
- The training center hosts professional development courses for doctors using diagnostic equipment

ZEISS equipment:
- Humphrey computer perimeter
- IOL Master optical coherent biometer
- Cirrus HD-OCT optical coherent tomograph
- Stratus OCT and Visante OCT optical coherent tomographs
- FF 450 fundus camera
- EVO LS 10 scanning electron microscope
The L.G. Sokolov Memorial Hospital №122 | Saint Petersburg

» The L.G. Sokolov Memorial Hospital №122 is a unique healthcare institution in Saint Petersburg that includes an in-patient department, an out-patient clinic and over 20 medical centers.

» Since 1983, the hospital has been providing expert patient care in various spheres, preserving the traditions of the old Russian school and developing new medical technology.

» The Ophthalmology Department of Clinical Hospital No. 122 comprises Transregional Ophthalmology Center that deals with various areas in cataract surgery: Cataract phacoemulsification with implantation of state-of-the-art flexible intraocular lenses.

ZEISS equipment:
» IOLs
» OPMI Lumera I and OPMI Lumera 700 surgical microscopes
» HFA II-I visual field analyzer
» IOL Master optical coherent biometer
» Cirrus OCT optical coherent tonometer

Frasstema equipment:
» Visus 2P ophthalmologist’s workplace
» Since 1994, the center has been providing expert treatment for patients with various eye diseases

» Diagnosis and laser treatment of patients with various retina pathologies, such as diabetic retinopathy, senile retinal dystrophy, and peripheral retinal dystrophy

» Diagnosis, conservative and laser treatment of patients with open- and closed-angle glaucoma

» Laser treatment for secondary cataract

ZEISS equipment:
» Humphrey HFA 750i visual field analyzer
» SL 115 Classic and SL 120 slit lamps
» FF450 and Visucam 500 fundus cameras
» Stratus OCT, Cirrus HD-OCT, Cirrus 4000, Cirrus 5000, and Visante OCT optical coherent tomographs
» Visulas 532s, Visulas YAG III Combi, and Visulas Trion Vite ophthalmology lasers
Republican Clinical Ophthalmology Hospital | Kazan, Republic of Tatarstan

» Diagnosis of early stages of glaucoma by means of laser scanning and computerized methods of determining fields of vision, life-time diagnosis of cornea and retina pathology on a microscopic level

» First implementation of the phacoemulsification method, which served as an example for other medical institutions of the republic, including private ones

» Laser surgery for glaucoma, diabetic retinopathy and other retina pathologies

» A concept of cataract treatment with a predictable outcome has been realized

ZEISS equipment:
» Cirrus OCT 4000 and Stratus OCT optical coherent tomographs
» HFA 750i visual field analyzer
» FF450 and VISUCAM lite fundus cameras
» Visulas trion, Visulas 532s, and Visulas YAG III ophthalmology lasers
» SL 120 slit lamp
» IOL Master optical coherent biometer
» OPMI Visu 210 surgical microscope

Fрастema equipment:
» Visus 2P ophthalmologist’s workplace
For patients with myopia, astigmatism and other refraction abnormalities, vision recovery is performed with the help of the ZEISS Mel 80 laser and particularly thanks to the unique LASIK technology (laser in-situ keratomileusis). According to the expert FDA assessment, this device has earned the confidence of 45 countries, as it ensures high treatment results.

The Microsurgery and Laser Vision Correction Center performs state-of-the-art operations for cataracts, glaucoma, and retinal detachment. A separate operating room of the special unit at the in-patient department is equipped with a latest-generation microscope and tools enabling most surgical interventions on the eyeball and its processes.

**ZEISS equipment:**
- IOLs
- Mel 80 excimer laser
- OPMI Lumera 700 surgical microscope
- Stratus HD OCT optical coherent tomograph
- IOL Master optical coherent biometer
The Microsurgery and Laser Vision Correction Center is definitely one of the most important departments of the North Caucasus Railway Hospital. Here, eye patients can also undergo additional examinations and receive treatment for any healthcare problems.

Operations for glaucoma in this department are performed using modern technologies that help reduce the probability of complications and increase the effectiveness of the operations. All known types of intraocular lenses can be implanted. The center has modern laser systems to perform timely operations for diabetic retinopathy and a number of other conditions.

The center performs diagnosis and treatment on the topmost level with the use of modern methods, materials and equipment that conform to world standards and have the required certificates and approvals for use in medical institutions of the Russian Federation.
Highly qualified specialists provide diagnosis and therapeutic care, deal with medical rehabilitation matters, organize preventive control and social health education among the population.

The laser diagnosis center was established in 1994 on the basis of the Regional Ophthalmology Clinic. Precise diagnosis is only half of the solution. The diagnosis department provides complete computer diagnosis of the eye. Including electrophysiological studies of the retina and optic nerve: registration of retina biopotentials, contrast and color sensitivity study of the central visual field.
2,000 laser operations and 36,600 diagnostic examinations per year. The results of such research are extremely important for the diagnosis of complex neuro-ophthalmological, congenital diseases, early stages of glaucoma, dystrophic diseases of the cornea, vitreous humor and retina, diabetes complications, microsurgery forecasts, etc.

The laser department of the center is equipped with modern ZEISS devices, which facilitates the performance of a wide range of laser microsurgery operations of all categories of complexity. Around 20 laser methods are used at the center’s laser department. Most often: argon laser retina coagulation—for diabetic retinopathy, peripheral retinal dystrophies (myopia), preventive laser coagulation, panretinal laser coagulation, discission, and iridectomy. YAG laser operations for secondary cataract and glaucoma.
Kazakh Eye Disease Research Institute | Almaty, Republic of Kazakhstan

» Leader of domestic ophthalmology with extensive material and technical capabilities and international state-of-the-art technology for diagnosis and treatment

» One of the advantages of the Kazakh Eye Disease Research Institute is the high qualification of its personnel

» Specialists of the clinic perform uniquely difficult and unparalleled operations

ZEISS equipment:
» Mel 80 excimer laser
» VisuMax femtosecond system
» CIRRUS 400, STRATUS OCT and VISANTE OCT optical coherent tomographs
» IOL Master optical coherent biometer
» Visulas YAG combi ophthalmology laser
» HFA 745i visual field analyzer
» ATLAS 900 keratotopographic system
» OPMI Lumera i and OPMI Pico i surgical microscopes
» SL 115 slit lamp
The combination of highly qualified personnel and the hardware of the world’s leading manufacturers of medical equipment makes it possible to perform full-scale super precise diagnosis and effective treatment for various eye pathologies of any difficulty.”

M.S. Suleymenov, Chief Physician, Doctor of Medicine, Senior Category Doctor

The institute develops and implements a large number of new surgery methods and its modifications. Surgery methods for complicated types of strabismus have been improved, and new methods for myopia and astigmatism correction have been developed.

All modern ophthalmological techniques are represented—crystalline lens ultrasonic cleavage and its removal through microincisions, non-invasive glaucoma surgery, corrective and vitreoretinal surgery, refractive operations using modern femtosecond laser, laser interventions for retina pathologies, including retinopathy of premature infants.

Along with the use of the modern international ophthalmology achievements, the Kazakh Eye Disease Research Institute develops its own diagnostic and therapeutic technologies.
Academ. Z. Aliyeva
Azerbaijan Eye Disease Research Institute | Baku, Republic of Azerbaijan

The institute was opened on May 22, 2009. Today, it is the only ophthalmology institution in the South Caucasus that has reached the standards accepted in developed European and world countries.

Considering the leading role of the institute in domestic ophthalmology, as well as increasing implementation of new methods and technology, modern approaches to diagnosis and treatment of eye diseases, a number of the departments of the institute have been given new names that correspond to their new tasks.

The institute has high-quality world-class operating microscopes equipped with video cameras and monitors, new various-type laser units, a computer perimetry, a coherent tomograph (the only one in the republic) that helps to increase precision in the diagnosis of retina and optic nerve diseases.

ZEISS equipment:
- Mel 80 excimer laser
- VisuMax femtosecond system
- Stratus OCT optical coherent tomodograph
- IOL Master optical coherent biometer
- OPMI Lumera I, OPMI Lumera T and OPMI Lumera 700 surgical microscopes
Republican Clinical Ophthalmology Hospital of the Healthcare Ministry of Uzbekistan | Tashkent, Republic of Uzbekistan

“A specialized scientific and medical center providing specialized ophthalmological care to citizens of the republic and performing scientific and educational activities. It is a reference center for teaching users to use therapeutic lasers and optical coherent tomography in Uzbekistan.”

K.S. Valieva, Chief Physician of the Republican Clinical Ophthalmology Hospital

» Implementation and improvement of existing and development of new methods for prevention, diagnosis and treatment of diseases
» Full range of diagnostic procedures and special medical care for eye patients
» Research of the retina and optic nerve structure
» Research of visual functions with the use of various programs in diagnosing and monitoring glaucoma patients
» Black-and-white photographic registration of fundus, including fluorescein angiography
» Diagnosis and treatment of retinal detachment using therapeutic lasers

ZEISS equipment:
» Humphrey computer perimetry
» Cirrus 4000 optical coherent tomography
» Visulas YAG III, Visulas 532s and Visulas Trion VITE ophthalmology lasers
» FF 450 fundus camera
» Visalis S500 phacosystem
» OPMI Visu 150 surgical microscope

Fрастема equipment:
» Visus 2P ophthalmologist’s workplace
In microsurgery, OPTEC offers ZEISS surgical microscopes that simplify complicated surgical tasks. Thanks to the implementation of innovative technology, participation of various-profile microsurgery specialists in the development of microscopes and unparalleled optics quality, ZEISS surgical microscopes may confidently be called unique.

In surgical microscopy, we collaborate with leading neurosurgeons, plastic and vascular surgeons, as well as with the leading specialists in dentistry, otolaryngology and gynecology. OPTEC also offers solutions for dentistry training centers: equipment of rooms for master classes with technoscopes (educational microscopes with video cameras) and binocular eye loupes to allow young specialists to become professionals at the very start of their career.
One of the oldest neurosurgery clinics in Russia, established in 1932. Today, the institute is one of the largest clinics in the world, providing patient care for diseases of the central and peripheral nervous systems.

Over the 76 years of its operation, the institute has developed sound clinical and scientific traditions, making it possible to provide a high level of diagnosis and treatment.

The surgery department is the 'heart' of the institute. Fourteen surgery suites, including three specialized X-ray surgeries and one emergency surgery, enable the performance of up to 30 operations per day.

During all operations on the nervous system, a microsurgery method is used. Therefore, the surgery suites are equipped with up-to-date and innovative operating microscopes of various complexity, which facilitates a decrease in the traumatism of the operations while improving their effectiveness.

**ZEISS surgical microscopes:**
- OPMI Vario on the NC 33 stand—6 pcs
- OPMI Neuro on the NC 4 stand—2 pcs
- OPMI Pentero—3 pcs
Top-level equipment of the center implies highly qualified personnel. That is the reason why the employees of the center regularly undergo training at leading Russian and world clinics to improve their skills in diagnosis and treatment of neurological diseases. The knowledge acquired is actively used in practice, which is confirmed by implementation of unique methods in operative treatment that have never been used in Russia before.

**ZEISS equipment:**
- OPMI Pentero 900 surgical microscope
- OPMI Vario surgical microscope
- A training surgery equipped with an OPMI 1 FC microscope has been created
The clinic uses modern diagnosis, treatment and postoperative care methods for neurosurgery patients, which makes it possible not only to provide patients with the maximum possible care, but also to decrease the time they spend in the clinic.

Five specialized neurosurgery departments are established under the auspices of the institution: the cerebral vessel surgery department, CNS tumor department, pediatric neurosurgery, functional neurosurgery department and vertebral column pathology department. In addition, the center comprises an emergency and intensive care department and five surgical departments fitted with state-of-the-art neurosurgery equipment that makes it possible to perform minimally invasive operations at a high level.

OPMI Pentero 900 operating microscopes actively use the method of intraoperative diagnosis of gliomas—brain tumors, a method for controlling the clipping of vascular aneurisms under a microscope using the Infrared 800 module and a method for evaluating blood velocity using the Flow 800 module.

The high qualification of the personnel of the center and the use of modern equipment lead to a low fatality rate (3.6%)

The center has been functioning since October 2009 and has been providing high-technology medical care to neurosurgery patients.

The surgical activity index of the center is high—92%, and matches that of the central Russian neurosurgery clinics.

The center is fitted with state-of-the-art equipment for microsurgery, endovascular and radiosurgical brain and spinal cord operations.

ZEISS equipment:
- OPMI Pentero 900 and OPMI Pentero surgical microscopes
- Eye Mag Pro S and Eye Mag Smart surgical binocular eye loupes
Innovative Surgery Technology Center | Tomsk

Since 2011, the center has been teaching plastic surgery to resident physicians. Since 2013, Experimental Microsurgery practical classes have been organized for students of Medical and Biological Departments.

The training and educational center was established under the auspices of the Government-Funded Higher Professional Educational Institution, Siberian State Medical University with the participation of Carl Zeiss and Autonomous Non-Commercial Organization Microsurgery Research Institute.

Since 2011, the center has been teaching medical students (therapy and pediatric departments) microsurgery technology.

As part of postgraduate education for practicing doctors, resident physicians, and internees, the center also admits military students for two short-term courses: Basic Microsurgery and Grafts in Plastic Surgery.

Methodological guidelines are implemented by the employees of the Plastic Surgery Department with a course on operative surgery and topographic anatomy of the Siberian State Medical University and Microsurgery Research Institute.

ZEISS equipment:

- OPMI 1FC operating microscope for a training surgery
- OPMI Pico desktop technoscope for a training surgery
Republican Neurosurgery Science Center, Ministry of Healthcare of Republic of Kazakhstan | Astana, Republic of Kazakhstan

» The center was opened on July 1, 2008

» It is the leading neurosurgery clinic in Central Asia with high-quality integration of science, practice and education as the basis for effective neurosurgery patient care in Republic of Kazakhstan

» The center is fitted with state-of-the-art diagnosis and therapeutic equipment that ensures high-quality specialized neurosurgery patient care

**ZEISS equipment:**
- OPMI Vario/S88 surgical microscope
- Axiostar plus and Axioskop 40/40 FL laboratory microscopes
- SL 115 slit lamp
- HFA 740i visual field analyzer

**Thermo Fischer Scientific equipment:**
- STP-120 carousel type automatic tissue processing machine
- HM 520 thermostatic cooler
- EG 350-1 tissue sample paraffin coating station
“The mission of the center is to provide high-quality neurosurgery patient care on the basis of modern medical technology, world healthcare quality standards and international medical management, to perform applied research in neurosurgery, to use their results in the development and implementation of effective treatment methods, and to implement up-to-date neurosurgery patient care standards.”

S. K. Akshulakov, Director General of the Republican Neurosurgery Science Center

The center performs unique operations, such as transnasal skull base tumor removal, deep cerebral tumor removal with the use of a neuronavigation system, microsurgical removal of cerebral vessel aneurisms, endovascular surgical treatment of cerebral vessel aneurisms, subcutaneous operations on the brain, spinal cord and various regions of vertebral column, microsurgical operations on peripheral nerves, modern vertebral column stabilizing systems are implanted
Otolaryngology Department of the Russian Medical Postgraduate Academy (RMPA) | Moscow

- Otolaryngology Department of the Russian Medical Postgraduate Academy (RMPA) has been cooperating with OPTEC for more than ten years

- The leader of Russian postgraduate education, this department demonstrates and promotes state-of-the-art technology in the corresponding sphere. Equipment issues play an exceedingly important role in this respect, providing for successful therapeutic, scientific and educational activities

ZEISS equipment:

- OPMI Pico diagnosis microscope
- OPMI Sensera surgical microscope
- OPMI Pico desktop training microscope for demonstrative temporal bone dissection; it also helps young specialists to perfect their skills
- AxioStar laboratory microscope
An AxioStar microscope is installed in the lab and is used for serious scientific research. Thus, this department was the first in Russia to start researching ciliary activity of the middle ear. The results of these studies were issued in a number of foreign publications and presented at the largest international specialized conferences.

All the microscopes are equipped with video cameras, which contributes to increased visualization of the educational process: operations are broadcast in the room in lecture-dialog mode, and a dissection image on a large screen illustrates the basic stages of the operation step by step. High-resolution images and recordings acquired during operations are used afterwards as illustrations for scientific reports, methodological literature and educational videos.

Over 400 doctors from Russia and the CIS undergo training at the department over the course of one year. The department also organizes traveling certification courses for remote regions, such as Kamchatka and Irkutsk. Creation and development of a distance education system is in the planning stage.

Russia's first and the world's sixth OPMI Sensera surgical microscope was installed at the Otolaryngology Department in 2002.
The concept of the center has been developed with active participation of the Government of Novosibirsk Region, leading federal specialized research institutes, private businesses, public and private medical institutions and investment companies. As a result of such work the model of Russia's first Medical Technopark—the Innovative Medical Technology Center was created in 2010. In the first quarter of 2012, the facility was commissioned.

The structure of the Medical Technopark (Innovative Medical Technology Center) represents the entire infrastructure for the development of innovative medical technology. The elements of the center will guide an innovative medical company through all stages to the transformation of its scientific idea to a competitive medical product or service.

**Equipment:**

- ZEISS LSM 710 confocal microscope
- Thermo Fisher Scientific HM550 thermostatic cooler
- ZEISS Axio Observer Z1 research microscope
- ZEISS OPMI Vario 700 surgical microscope
“More and more endodontal specialists realize and appreciate the possibilities offered by the microscope. The Russian Endodontology Congress attracts more and more participants every year and, of course, organizes practical courses using ZEISS microscopes.”

Natalia Sheina, Endoforum Director

- In recent years, endodontia has been rapidly developing thanks to the ability to 'look inside the tooth' and 'see the unseeable' with the help of Carl Zeiss microscopes.
- Our cooperation makes it possible to perform practical courses with complete imitation of the endodontist/dentist workplace both in Moscow and in various regions of Russia.
- Success of the secondary endodontist treatment directly depends on whether the doctor operates the zoom function or not. The filling and tool fragment removal stage (especially from the apical third of the root canal) becomes possible with minimal complication risk.
- At the dissection stage it becomes possible to create minimally invasive access to the root canals, thus retaining the tooth's immune areas. At the diagnosis stage, the microscope presents an opportunity to detect the peculiarities in the position of the root canal gates, determine the anatomical peculiarities of the root canal system, which ensures high-quality mechanical treatment thereafter.
The First Professorial Dental Clinic | Moscow

The use of state-of-the-art methods and proven technology contributes to high-quality patient care. Seven years ago the First Professorial Dental Clinic was one of the first in Russia to use a microscope in practice, using it for canal treatment, implantation and a number of other manipulations. The clinic also uses binocular loupes for professional oral hygiene.

For over 14 years, the employees of the clinic have been bringing a healthy and lovely smile to their patients. Originally the clinic bore the name Professorial Dental Clinic, in honor of its founders—leading Russian professors, doctors and candidates of science.

Every doctor has a focused specialization but, regardless of the field of concern, he/she thinks and acts one step ahead, working out a prediction that helps avoid various pathologies.

The result of the employees' everyday work is over 14,500 grateful patients, many of whom came here on recommendations.

ZEISS equipment:

» OPMI Vario and OPMI Pro ergo surgical microscopes
Dental College No. 1 | Moscow

» Founded in 1998 and specializes in postgraduate training of dental hygienists, dentists and their assistants

» The college utilizes an academic approach to education in Russian dentistry and implements training technologies that are used in Dental Hygiene Schools of Amsterdam and Jerusalem Universities, in the Antonella Botticelli Training Center in Italy and Professor Julian Webber Endodontist Practice in London

» Modular-competence training system with computer knowledge testing, use of homuncules for practice, video analysis of patient admissions and state-of-the-art equipment—this is what helps the students achieve high performance

» Within implementation of the Zdorovye [Health] national project of the Russian Federation, the college performs further professional training of specialists with higher medical education on Preventive Dentistry for work in dental disease prevention offices in health centers.
Another equally important line of our activity is intraoperative radiation therapy of malignant diseases. In recent years, a new approach to breast cancer treatment has emerged: major surgery was replaced by minimally invasive, organ sparing therapy. Today, this trend also concerns radiation therapy. Oncologists are shifting from existing highly standardized treatment plans to individual therapy with allowance for side effects.

With traditional radiation therapy it is often impossible to treat the tumor bed due to post-operative changes or oncoplastic reconstruction. The precise position of the tumor cavity is difficult to locate even with the use of modern visualization technology. With targeted intraoperative radiation with the ZEISS INTRABEAM system, this becomes no problem.
Today, it is one of the largest oncological centers in Russia (810 beds)

9 surgery suites are equipped with video surgical complexes

The center participates in the work of international expert groups for the development of modern cancer treatment methods on the basis of domestic observations

The following methods are used in practice: cryosurgery, ultrasonic tumor ablation, photodynamic diagnosis methods, intraoperative radiation therapy
Clinical Oncological Center No. 1 | Krasnodar

» Powerful clinical basis with 7 departments of Kuban State Medical University. Highly qualified doctors are trained at the Oncology Department with a course in thoracic surgery and the Radiology Department of the medical university. A number of employees of the regional oncological center join forces with employees from the Therapy Department in scientific and educational activities.

» In the Southern Federal District it is the first oncological center to start using INTRABEAM—ZEISS innovative solution for intraoperative radiation therapy.

» It is a complex specialized healthcare institution with all the conditions to provide medical care to oncological patients at a high professional level, complying with modern requirements of medical science and practice.

» Cooperation in the development of new methods in the use of intraoperative radiation.

» The use of the new device makes it possible to double the longevity of a patient without reacquisition of malignant tumors.
National Oncological Center | Tbilisi, Republic of Georgia

The center implements various innovative projects for prevention, diagnosis and treatment of oncological diseases with the use of new, high-tech methods

» The center was opened in 2005

» The center is the first healthcare institution that started implementing cancer prevention programs in Georgia

» Today, the center is the first healthcare institution in the Caucasus region that offers therapy with the use of INTRABEAM

» The device was installed at the end of 2012, and over 20 operations have already been performed with the use of INTRABEAM
Today, colposcopy is the primary method of screening diagnosis and advanced gynecological examination of the female genital area. The method makes it possible to detect evidence of cervical neoplasia (non-malignant pathology of the squamose cervix epithelium) and the evidence of a possible malignant process. The role of colposcopy is also important in detecting pre-malignant conditions of the vesical cervix, such as papilloma, polyp, and erosion. Colposcopy is actively used in operative gynecology for diagnosis and treatment, which helps optimize the scope of the operative intervention and avoid intraoperative complications.

Examination quality and diagnosis accuracy is critical for the diagnosis procedure. ZEISS colposcopes are the world’s bestsellers in the segment of high-tech gynecological clinical diagnosis and fully comply with the modern requirements for top-class diagnosis equipment.
"In recent years LiteDoc and MediDoc video documentation programs have been widely used to create databases for colposcopy on the basis of the original software developed by ZERTS MEDICAL specially for ZEISS coloscopes."

V.V. Shmatkova, Director of ZERTS MEDICAL

» Exclusive supplier of ZEISS coloscopes in Russia and the CIS

» Around 500 projects for the supply of coloscopes in Russia and the CIS are supervised by the company every year

» The range of Zerts Medical equipment consists of ZEISS-E and ZEISS 150 FC binocular coloscopes, as well as the OPMI Pico operating coloscope

» For over 5 years Zerts Medical has been successfully distributing ZEISS coloscopes through a wide dealer network, organizing training for dealers and doctors under specialized programs

» Organization of demonstration rooms and training courses for specialists working with ZEISS equipment

» ZEISS equipment testing in dealerships, gynecology medical centers and specialized clinics

» Activities under regional and federal programs aimed at fitting perinatal and gynecology centers with state-of-the-art equipment
Automated seeding, expansion and differentiation of cells
Cell biotechnology and biological engineering
Scientific research in genetics, immunology, proteomics, physiology and embryology

OPTEC is a supplier of top-class equipment by world leaders in the sphere of biological technologies. For over 12 years, the company has been offering state-of-the-art tools and methods for clinicians, researchers and scientists working with microscopes or in the sphere of cell technology.

Microscopy has always been the key technology in life sciences. With its solution portfolio in this area, innovative approach, and highly qualified employees, Carl Zeiss Microscopy occupies a unique position and plays an important role in the search for answers to the questions that our society faces: from the solution of ecological problems to improving the understanding of neural disorders, oncological processes and behavior of infectious agents. Carl Zeiss has a remarkable 170-year-long history and performs a responsible mission, globally supporting scientific research all over the world.
Biological technology is one of the most important and innovative fields of the company's activity in the area of medicine and healthcare. Due to continuous improvement of production, biotechnology allows doctors and scientists all over the world to make discoveries previously unavailable for humankind.

Development of new biological technologies causes revolutionary changes in practical medicine. They are normally based upon the culture, storage and use of various types of progenitor and stem cells.

Our microscopes are more than just equipment. Highly qualified personnel, wide service infrastructure and on-line user support—this is what lets our partners use their microscopes with the utmost efficiency.

There are numerous applications for such products, and on the whole their expansion on the market underlines the fact that a new therapy type—regeneration medicine—is starting to take shape in Russia. Stem cells are used in the treatment of socially significant diseases, such as diabetes, heart and vascular diseases, and locomotor system disorders. There are also cell products for urology, gynecology, plastic and reconstructive surgery, cosmetology, and trichology. There are cases where cell therapy was successful in regeneration of the atrophied optic nerve and restorative treatment for cataracts and glaucoma.

While equipping or renovating laboratories and facilities, it is often difficult to choose the required complex of equipment and solutions that would best suit the lab and specialists.

OPTEC represents complex equipment for laboratories and works dealing with acquisition, cultivation, storage and use of cell and tissue cultures. Based on world-wide experience in laboratory diagnosis, our specialists provide consulting support at every stage of the project. They will also acquaint you with the latest trends in the development of high technology, help you plan the equipment of your lab with the required devices, technology, software, and accompanying services.
Federal Government-Funded Institution N.N. Petrov Oncology Research Institute of the Russian Ministry of Healthcare | Saint Petersburg

Russia's first oncological institution, whose scientific and clinical school is one of the best in the country and is well-known far beyond its borders. The Oncology Research Institute provides medical services to citizens of all regions of the Russian Federation for quotas on high-technology medical care.

Development, justification and evaluation of unique technologies in modern biotherapy

- Development of an antitumor vaccine on the basis of the marrow precursors of dendritic cells
- Development of and control over vaccine therapy of malignant tumors on the basis of the patients' own (autologous) cells
- Evaluation of post-vaccination protein production by lymphocytes

Equipment:

- Cell-IQ v2 fully integrated system for observation of living cells in culture (CM Technologies)
- Thermo Fischer HM 340 E with STS microtome
- Thermo Fischer Excelsior tissue processing device
- Thermo Fischer HistoStar paraffin coating station
- Thermo Fischer Autostainer 720 stainer
- ZEISS Axio Imager M1 research laboratory microscope
Highly qualified pathologists perform histological and cytological studies of biopsy specimens. For a number of pathologies not only traditional methods are used, but also immunohistochemistry and molecular cytology methods, such as PCR in situ, FISH, CISH, PCR-real time.

The Pathology Department studies structural and molecular peculiarities of various-localization endometriosis, HPV-associated vesical cervix pathologies, including in pregnant women, mesenchymal corpus uteri tumors, ovary neoplasms, and various pathologies of girls' reproductive systems.

The general direction in the scientific research of the laboratory is studying the condition of stem cell niches during female reproductive system diseases.

Equipment:
- ZEISS Axio Imager A2, Axioscope A1, Axioplan 2, Axioskop 40 and Axioskop Plus laboratory microscopes
- Themo Fischer HM340E and HM355 S microtomes with a section transition system
- Themo Fischer EC350 paraffin coating station
- Themo Fischer HMS 760x stainer
- Themo Fischer CTM6 glass cover slipper

Clinical morphological and immunohistochemistry studies, disease diagnosis with the use of various therapeutic agents.
Anatomical pathology is a scientific and applied discipline that studies the morphological basics of pathological processes in the bodies of humans and animals, as well as morphological aspects of pathogenesis in cells, tissues, organs and organ systems.

Histological studies play an important role in high-quality diagnosis of pathological processes during diseases, which determines correct and timely treatment.

The company offers a wide range of histological equipment and consumables by Thermo Fisher for preparation of high-quality microslides for laboratories with various material flows.

Along with routine morphological studies, the value of the immunohistochemistry method is increased as one of the stages of the integrated diagnostic process in oncological morphology.
Organization of events for detecting and elimination of the influence of highly dangerous factors of physical, chemical and biological nature on the health of the employees of serviced organizations and the population of serviced territories

Organization of medical and sanitary activities for prevention, cause detection, localization, and elimination of the consequences of emergency situations, radiation, chemical and biological failures and accidents, expansion of infectious diseases, and mass non-infectious diseases (intoxications)

In 2012, under the federal program for equipping the institutions of the Federal Medical and Biological Agency, OPTEC fitted 35 establishments all over Russia with histological Thermo Fisher equipment in short timeframes
Tatarstan Regional Clinical Cancer Center | Kazan, Republic of Tatarstan

Tatarstan Regional Clinical Cancer Center is a leading specialized medical and preventive treatment institution that coordinates the oncological service operation in the Republic of Tatarstan, supervises methodological, organizational, diagnostic and therapeutic work of healthcare services in the Republic of Tatarstan with the purpose of improving oncological patient care.

The hospital has its own solutions for epidemiology, prevention, diagnosis and treatment of malignant neoplasias, rehabilitation and palliative therapy of oncological patients.

Equipment:
- Shandon Varistain Gemini stainer
- Themo Fischer CTM 6 histological section processor and glass cover slipper
- ZEISS Axio Scope A1 research laboratory microscope
- ZEISS Axio Imager research laboratory microscope with an M2 stand
- ZEISS MIRAX Midi (3D Histech Panoramic) research laboratory scanning microscope
“In 2010, under the federal oncological program, the Republican Clinical Oncology Hospital received new unique pathomorphology and other equipment for highly specialized advanced microscopic and cytogenetic tumor diagnosis. It allows us to provide accurate diagnoses on a qualitatively new level and thus helps prescribe targeted effective treatment.”

S. V. Petrov, Professor, Doctor of Medicine, Chief of the Immunohistochemistry Tumor Diagnosis Laboratory

Since 1996, the hospital has been performing full-scale diagnosis work with the use of modern immunohistochemistry and molecular-cytogenetic methods based on using cancer cells for the detection of genes and/or specific protein molecules, which has caused an increase in the quality of tumor diagnosis and treatment to a level corresponding to that of leading Russian and foreign oncological clinics.

Tatarstan Regional Clinical Cancer Center had a deserved priority in the implementation of these high-technology methods of human malignant neoplasia verification, which has led to assigning reference (controlling and consultative) status to the immunohistochemistry laboratory for the entire Volga Region.

Thermo Fischer equipment:
- Laboratory Information System (LIS)
- PrintMate 450 cassette printer
- SlideMate slide marker
- Shandon Excelsior histological processor
- EG 350 biological tissue paraffin coating station
- HM (HM 340E) anatomical pathology microtome
- Autostainer 480 2D immunohistochemistry stainer
North-western State Medical University named after I.I. Mechnikov | Saint Petersburg

» Established on October 12, 2011 as a result of a merger of the two oldest Russian medical educational institutions—Saint Petersburg Medical Postgraduate Academy and the I. I. Mechnikov Saint Petersburg State Medical Academy

» The university is engaged in active scientific and research work, which helps train highly qualified specialists with a high level of knowledge and who are capable of applying it in practice

» Scientific and research activities of the university are performed in accordance with currently promising tendencies in the development of medical and biological sciences. Significant attention is paid to studies in the sphere of healthcare, sanitary and epidemiological security of the population
“In the course of the reorganization of the Pathology Department, the laboratory was fitted with equipment corresponding to the modern diagnosis requirements and approaches. The immunohistochemistry method is actively used, as well as the molecular biological methods, such as FISH and CISH.”

Yu.A. Krivolapov, Professor, Doctor of Medicine, Chief of the Pathology Department of Clinical Molecular Morphology

Thermo Fischer equipment:
» Print Mate 450 cassette printer system
» SlideMate slide printer system
» STP420 high-capacity histological tissue processor with two working chambers
» STP 120 carousel type automatic tissue processing machines
» EC 350 paraffin coating station
» Slide Mate slide marker system
» HM 355 S automated microtome with a section transmission and specimen cooling systems
» HM 430 sliding microtome
» HM 560 MV automated cryostat with a ‘vacutom’ system
» Autostainer 720-2D immunohistochemistry stainer
» Pannoramic 250 FLASH digital scanning microscope by 3D HISTECH
HEALTHCARE MODERNIZATION PROGRAM

For many years, OPTEC has been participating in the equipping of Russian medical institutions under state programs. For example, active work was performed under implementation of the Healthcare Modernization Program for 2011–2012, supervised by the Moscow Healthcare Department.
Microsurgery

Under this program in 2012, OPTEC took part in the equipping of Moscow clinics with 47 operating microscopes for complicated surgical interventions in various areas of microsurgery.

Moscow clinics were equipped with innovative, high-tech operating microscopes, which helped surgeons reduce the mortality rate, improve the quality of patients' lives after complicated operations, especially in such areas of medicine as neuro-oncology, brain aneurysm surgery, hemorrhagic stroke surgery, spinal surgery, middle ear microsurgery, and ophthalmological surgery.

To help surgeons master the complicated technique of microsurgery operations with the use of the surgical microscope, OPTEC cooperates with the leading specialists of the country and annually equips over 40 master classes and practical courses with training microscopes.
In 2012, equipment was supplied to 205 ophthalmologist rooms in out-patient clinics and clinical hospitals of Moscow under implementation of the Healthcare Modernization Program for 2011–2012.

Out-patient ophthalmological rooms were fitted with innovative high-tech equipment for complete and complex examination of eye patients. It was the first time that the out-patient sector of the ophthalmological care system was so widely equipped with state-of-the-art computer perimetry.

Such devices make it possible to diagnose eye diseases at an early stage, which ensures their timely and effective treatment. In the first instance, this refers to such significant medical and social problems as glaucoma prevention and treatment.

In order to help clinical doctors master the new technology, OPTEC collaborated with the specialists of the Research Institute of Eye Diseases of the Russian Academy of Medical Sciences and organized a series of training seminars where doctors mastered the technological principles of equipment operation and excelled in mastering practical skills.
Increased attention to oncology in most countries of the world is determined by a strong tendency toward an increasing frequency of oncological diseases that has reached high rates and continues to grow. Today, most healthcare institutions require an upgrade, which especially concerns pathology departments.

In 2009, in Russia the implementation of the National Oncological Program started. OPTEC actively participates in the equipping of pathology departments in oncological institutions of the Russian Federation. Under the National Oncological Program, specialized organizations were supplied with state-of-the-art, high-tech histological and microscopy equipment and a robotized histology and immunohistochemistry diagnosis system with archiving capabilities. The equipment complex includes devices individually selected for each of the organizations for histological sample preparation and further microscopy sample analysis with regard to the total scope of studies and specific tasks of the laboratory.

OPTEC LLC is the exclusive Russian and CIS representative of the American company Thermo Fisher Scientific, with manufacturing facilities in the USA, Germany and Great Britain.

Under the oncology program in 2009–2012, OPTEC participated in the supply of equipment complexes to 26 oncological clinics out of 46 that participated in the program and to 2 federal healthcare institutions.
Information support: 8-800-2000-567.
Free calls in Russia.
Detailed information about OPTEC solutions can be found on website
www.optecgroup.com
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