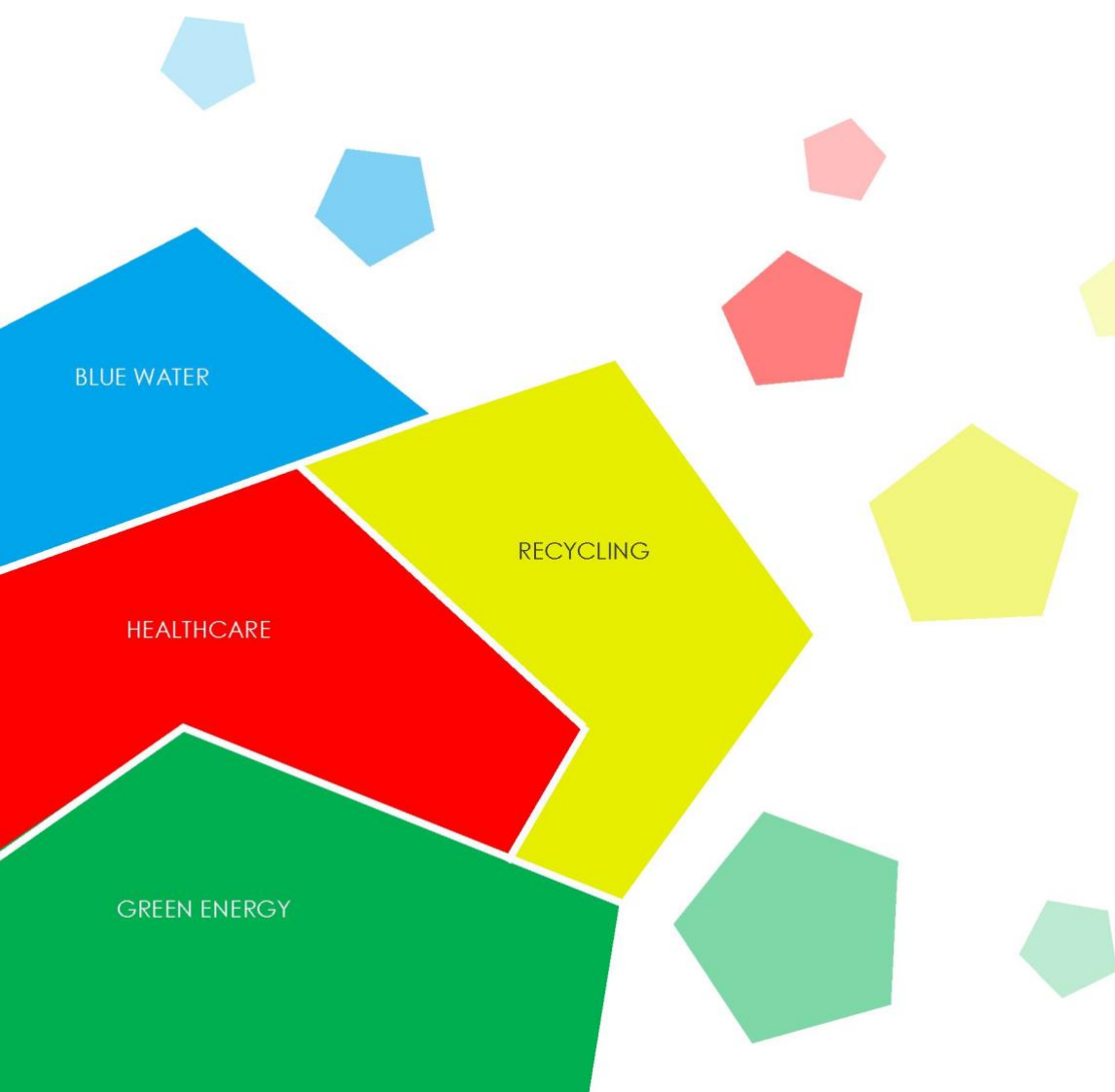


CATALOGUE OF HIGHLY EFFECTIVE  
AND INNOVATIVE  
TECHNOLOGIES



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<b>A2</b>	<b>MAGNETOTHERAPY DEVICE "TM"</b>	Equipment and technology that allow to receive a positive response from cells on treatment at different stages of disease development.	6
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**Name:** "HELIOS 711D".

**Description:** Complex is capable of implementation of various types of procedures simultaneously for 9 patients with various pathologies.

**Certification:** CIS Countries, European Union and Turkey (pending).

**Latest supplies:** United States (Rehabilitation Centre, Las Vegas), Moscow (Khrunichev Rehabilitation Centre of Cosmonauts).



#### > DESCRIPTION OF COMPLEX:

**Therapeutic complex "HELIOS 711D"** - integrated laser center, which includes 7 function-independent therapeutic laser systems for outside, internal, contact and non-contact action by Red, IR junction lasers, including combined action with permanent magnetic field and laser-activated water. All systems operate independently and separately according to the selected mode.

**High integration will allow an optimal way to organize:**

- Multifunctional cabinet of a laser therapy.
- Specialized cabinets for servicing 9 patients simultaneous.

LNET software of the "HELIOS 711D" laser center provides control of all system resources and informational support of decision-making when planning and conducting medical procedures.

#### > LASER THERAPY:

**Laser therapy** is a comprehensive and coordinated action at the level of cells, tissues and organs, control, and working systems of an organism.

At the level of the whole organism, laser therapy provides a multifaceted action: regenerative, immunostimulant, anti-inflammatory, anti-edemic, desensitizing, normalizing metabolism and gas exchange, improving microcirculation.

Through influence on organs, projections of organs, receptive fields, reflexogenic zones and corporal acupuncture points by constant, modulated and pulsed red and infrared laser irradiation occurs high clinical efficiency in the treatment of a wide range of diseases.

Laser therapy complements and goes well with medicamental methods, surgery, physiotherapy, chemotherapy, homeopathy, aromatherapy, balneology and other therapies and prevention treatments.



**Therapeutic complex "HELIOS 711D"** can function as a treatment for a narrow range of diseases (e.g., urology and cosmetology) and for general use in all areas, implementing procedures simultaneously to 9 patients with various pathologies.

**> THERAPEUTIC LASER SYSTEMS:**

> **SCANNING SYSTEM:** combined or selective multispectral scanning by red (R) and infrared (IR) lasers of a body surface. Combined irradiation of red and infrared spectrum with high scanning frequencies (100 - 150 Hz) and large positioning area (200 x 100 cm) are the main peculiarities of the scanning system.

**Used for** skin diseases, neurological pathologies, cardiovascular diseases, disorders of cerebral circulation, diseases of locomotorium and internal organs.

> **IR-MODULATED / IR FIXED PULSE SYSTEMS:** affecting by IR-modulated and IR fixed pulse lasers with magnetic nozzles in various ways: distant, contact, contact with a compression.

**Used for** injuries and diseases of deep-lying organs, blood vessels, ligaments, and joints.

> **INTRACAVITARY IRRADIATION SYSTEM:** affecting by R laser using photic ENT, endoscopic, vaginal, rectal, urethral, dental and other nozzles; external irradiation using acupuncture, cosmetic and other nozzles. More than 30 different optical nozzles.

**Used for** diseases of the mucous and abdominal organs in urology, gynecology, proctology, pulmonology, otolaryngology, dentistry, digestive organs. Alignment of energy imbalance, cosmetology.

> **PERCUTANEOUS OR INTRAVENOUS BLOOD IRRADIATION SYSTEM:** affecting noninvasively by R laser in a zone of projection of arterial trunk, organs, tissue and reflexogenic zones. Intravascular laser irradiation of blood.

**Used for** serious diseases associated with circulatory disorders (myocardial infarction, ischemic heart disease, obliterating diseases of limb vessels, diabetic angiopathy, etc.), inflammatory diseases of internal organs (pneumonia, abdominal organs), systemic diseases (diabetes, asthma, endocrine and others).

> **HYDROLASER SYSTEM:** combined influence of hydro-massage, R and / or IR-modulated lasers via the aquatic environment on the mucosal surface, tissues, reflexogenic zones and organs through special nozzles: (1) Hydro shower, (2) Dental and (3) Gynaecological.

**Used for** biomodification of the body state (removing depression, nervous and physical stress, pain, energy supply), treatment of functional disorders of the endocrine and autonomic nervous system, treatment of inflammations of the oral mucosa (periodontal disease, gingivitis), gynecological diseases.

**> LASER MODULES TECHNICAL DATA:**

PARAMETERS OF RADIATION		RED LASER	INFRARED MODULATED	INFRARED IMPULSIVE
Wavelength (Microns)		0.63 - 0.65	0.81 - 0.89	0.80 - 0.95
Modulating frequency (Hz)		continuous	0 - 10000	1 - 500
Discretization of frequency setting (Hz)		-	0.01 in range of 0 - 100 Hz, 1.0 above 100 Hz	0.01 in range of 1 - 100 Hz, 1.0 above 100 Hz
System's mean output power (MHW)	scanner	35 - 40	80	-
	IR - modulated	-	100	-
	IR - impulsive	-	-	5 - 8 W (impulsive)
	ICI	15	-	-
	LBI, ILBI	5 - 10	-	-
hydrolaser		15 - 20	100	-

## > EFFICIENCY OF LASER THERAPY:

Treatment of a wide range of diseases and syndromes of a various body systems.

> **CENTRAL AND PERIPHERIC NERVOUS SYSTEMS:** migraine, neuralgias, neurosis, osteochondrosis, vegetovessel dystonia and others.

**Sessions:** from 1 to 15

> **SYSTEM OF A BLOOD CIRCULATION:** vascular diseases of a brain, cerebral insults, idiopathic hypertension of the first and second degrees, reflectoric stenocardia, varicose phlebectasia of the lower extremities, ischemic illness of heart, myocardial infarction.

**Sessions:** from 10

> **SYSTEMS OF RESPIRATION:** chronic bronchitises, pneumonia, bronchial asthma, tracheitis etc.

**Sessions:** from 6 to 10

> **ORGANS OF DIGESTION:** an ulcer of a stomach and duodenum, chronic gastritis, functional violations of a stomach and intestine, chronic cholecystitis, pancreatic disease etc.

**Sessions:** from 8 to 10

> **GENITOURINARY SYSTEM:** a prostatitis, urethritis, sexual distresses, inflammatory diseases of female generative organs, barrenness, mastitis, hypo- and hyperlactation etc.

**Sessions:** from 2 to 10

> **LOCOMOTORIUM:** pseudo rheumatism, deforming arthritis etc.

**Sessions:** from 1 to 10

> **SURGICAL PATHOLOGY:** trophic ulcers and long not healing wounds, combustions, fractures of bones, obliterious endartereet and atherosclerosis, diabetic ungiopathies of arterias of the lower extremities, phlebitises, thrombophlebites; prophylaxis and treatment of postoperative complications.

**Sessions:** from 1 to 15

> **OTORHINOLARYNGOLOGICAL DISEASES:** tonsillitis, anginas, rhinitis, genyantritis, acute and chronic laryngitis, pharyngitis, acute and chronic otitis, otosclerosis etc.

**Sessions:** from 2 to 10

> **DENTISTRY:** paradontosis, relapsing gerpetising stomatitis, periodontitis, alveolitis, pulpitis, ulitis, abscess and phlegmon of a face etc.

**Sessions:** from 2 to 10

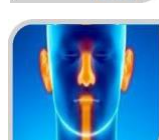
> **DEPENDENCE:** alcoholism, smoking of tobacco, narcomania.

**Sessions:** from 10

> **DERMATOLOGY:** an eczema, neurodermite, urticaria, customary acnes, psoriasis, alopecia, vitiligo, simple and relapsing herpes, furunculosis.

**Sessions:** from 1 to 10 > **COSMETOLOGY:** skin of a face, neck (laser face-lifting), pilar part of a head, cellulite, correction of a figure at local deposit fatty of tissues.

**Sessions:** from 1



**Name:** "TM".

**Description:** Equipment and technology, allowing to receive a positive response of cells on treatment at the different stages of disease development.

**Certification:** Ukraine.

**Latest supplies:** Kyiv City Oncology Center.



#### > DESCRIPTION OF THE DEVICE:

"TM" is a unique magnetotherapy device generating low intensity 3D magnetic field having different polarization, including vortex field around the whole body of a patient.

During the treatment, a patient is located inside a big size inductor, therefore magnetic field may exert action on the whole body simultaneously thus influencing all organs and systems of the organism. A session of magnetotherapy with "TM" device may have the following influence on health:

- Reduction of the amount of administered medicinal products and reduction of treatment duration.
- Improvement of wellbeing of patients with severe diseases:
- Long-term remission in patients with chronic diseases.
- Analgesic effects and improvement of psychophysical and emotional condition of a patient.
- Sleep normalization.
- Anti-inflammatory and anti-oedema action.
- Improvement of the microcirculation, peripheral circulation, and lymph drainage.
- Stimulation of hematopoiesis.
- Immune-modulating action.
- Activation of the regeneration of different tissues and vessels.
- Spasmolysis as a result of normalization of the characteristics of neurohumoral regulation (owing smooth muscle relaxation).

#### > ADVANTAGES OF TREATMENT WITH "TM" DEVICE:

- Device can be used for treatment of various diseases owing to its influence on all organs and systems of the organism.
- Treatment of patients with mastopathy, hysteromyoma, prostatic adenoma.
- Combination treatment of oncologic diseases.
- Reduction of the amount of administered medicinal products and reduction of treatment duration.
- Preventive treatment of different diseases owing to the action exerted on different regulatory systems of the whole body.

#### > SPORTS MEDICINE:

**State-of-the-art treatment promotes:**

- Quick recovery after injuries (hurts, tension of ligaments) or after surgery.
- Recovery after physical exercise.
- Increased tolerance to physical exercise.



## > EFFECTIVENESS OF THE DEVICE:

- > **IMPAIRED FUNCTION OF THE LOCOMOTORIUM SYSTEM:** spine osteochondrosis, rheumatoid arthritis, distortive osteoarthritis, arthritis, hurts, tension of ligaments.
- > **PSYCHOSOMATIC DISORDERS:** vegetovascular dystonia, depressive and asthenic feelings, neurosis.
- > **NERVOUS SYSTEM DISEASES:** consequences of injuries and brain and spinal cord circulation failure, initial presentation of cerebral blood supply insufficiency, dyscirculatory encephalopathy, neuropathy of cranial and peripheral nerves, consequences of neural infections, infantile cerebral paralysis.
- > **CARDIOVASCULAR DISEASES:** arterial hypertension, local congestive and oedematous circulatory disorders, associated changes in the hemodynamics in the great vessels and microcirculation: obliterating endarteritis and arteriosclerosis of limb vessels, chronic venous insufficiency, including with trophic disturbances, vasculitis with trophic ulcers, post-thrombotic venous syndrome, thrombophlebitis, primary and acquired lymphostasis.
- > **DIGESTIVE TRACT DISEASES:** uncomplicated gastroduodenal ulcerous disease, gastritis, cholecystitis, pancreatitis, hepatitis, enterocolitis, post-operative period - 3 to 4 weeks after surgery in the stomach, bowel or pancreas.
- > **RESPIRATORY DISEASES:** protracted pneumonia, bronchial asthma, acute and chronic bronchitis, sinusitis, pharyngitis, tonsillitis.
- > **ENDOCRINE GLAND DISEASES:** diabetes mellitus and its complications - angiopathy, polyneuropathy, enlargement of the thyroid gland.
- > **DISEASES OF THE UROGENITAL SYSTEM:** pyelonephritis, glomerulonephritis, prostatitis, prostatic adenoma, acute and chronic inflammations of internal female genital organs, hysteroepithelioma.
- > **SKIN DISEASES:** eczema, neurodermitis, psoriasis, psoriatic arthritis.
- > **ONCOLOGIC DISEASES OF THE FOLLOWING FORMS AND STAGES (IN A COMPLEX OR COMBINATION TREATMENT):** pain relief and correction of the immune status in patients with incurable forms of malignant tumours, inoperable post-surgery relapses and metastases of malignant tumours, prevention or inhibition of adverse effects of irradiation therapy (erythema, oedema, epitheliitis) and chemotherapy, lymphoma, Hodgkin lymphoma.
- > **MASTOPATHY IN PATIENTS WITH NO INDICATIONS FOR SURGERY.**
- > **REHABILITATION IN THE POSTOPERATIVE PERIOD.**



**Name:** "ASSISTANT".

**Description:** Prophylaxis, treatment and after treatment in fixed and mobile conditions, in private medical practice, in sporting medicine and in the medicine of debacles. Laser module Lm - 01 is applied.

**Latest supplies:** National Olympic Committee of Ukraine.



#### > DESCRIPTION OF THE COMPLEX:

"ASSISTANT" is the unique therapeutic complex, used in a private medical practice (family doctor), provides fast AID, used by athletes to achieve good results without the use of doping. Complex includes four (4) function-independent systems:

- **AWS (automated workstation)-diagnosis** - a system of noninvasive diagnostic of a functional condition of an organism.
- **Three (3) therapeutic laser systems.**

All systems work in parallel and separately way from each other, allowing to serve up to four (4) persons simultaneously. Built-in computer controls all functions of the complex in order to carry out the diagnostic, physiotherapeutic and preventive procedures. Also it contains techniques and patients database.

#### > AWS-DIAGNOSIS INCLUDES:

- Subsystem of the functional analysis of the heart rate.
- Subsystem of the electropuncture diagnostic of functional state.
- Subsystem of measuring and analysis of supersluggish activity of a brain (omegametry).
- Subsystem of the analysis of a frequency drifts of respiration (pulmotachometry).

**Advantages:** noninvasibility, simplicity of a diagnostic procedure, speed of obtaining of the results of examination, high selfdescriptiveness.

#### > SYSTEM OF A LASER THERAPY INCLUDES:

- Subsystem of IR modulated laser effect with magnetic nozzles.
- Subsystem of IR impulsive laser effect with magnetic nozzles.
- Subsystem of three (3) wave laser effects (combined system with red, IR-modulated, IR-impulsive lasers).

**Advantages:** Allows to execute vast complex of medical procedures with intracavitary, intravenous, cosmetology, acupuncturology, viaskin and other supplementary lenses, as well as with hydrolaser: shower, dentistry and gynaecology etc.

#### Diagnostic complex "ASSISTANT" in stationary and field conditions allows to:

- Get express information about the functional state of organs and body systems.
- Determine the need for additional in-depth medical examination.
- Determine the presence of irregularities in the cardiovascular system, circulatory system, gastrointestinal tract, urogenital system, respiratory and other systems.
- Assess the reserves and quality of health, the level of adaptation of the organism.
- Get a forecast on body's reaction to physical and nervous stress, and stress factors.
- Carry out professional selection based on medical, mental and physical performance.
- Obtain an objective and express assessment of the functional condition of the body in order to plan the training process, determine the optimal training loads and the level of readiness for competition.



**> GENERAL, RESTORATION AND  
REHABILITATION THERAPY:**

- Treatment of cardiovascular diseases, nervous breakdowns, functional violations of endocrine and vegetative nervous systems, traumas, catchcold-zymotic diseases and sexual distresses.
- Biomodification of a condition of an organism.
- Taking out of depressive condition, nervous and physical strains, pain sensations, power replenishment, treatment of different inflammations, gynecological diseases.
- Rising of immunodefence, prophylaxis of diseases, dump on the eve of starts, stimulation of an organism directly ahead of starts, relaxation and recovery after competitions.
- Prophylaxis of a professional stress - by rising adaptive capabilities of an organism to activity with effect of the extreme factors.
- Aftertreatment of fatigue and rising of functionability through optimization of internal natural physiological and biochemical mechanisms.

**> TECHNICAL DATA: LASER MODULE LM - 01:**

PARAMETERS OF IRRADIATION	RED LASER	INFRARED MODULATED LASER	INFRARED IMPULSIVE LASER
Wavelength, Micron	0.63 - 0.65	0.81 - 0.89	0.80 - 0.95
Maximum mean power output, MW	50	200	4
Maximum pulse power output, MW	50	200	8 000
Modulation frequency, Hz	Continuous	0 - 10 000	1 - 5 000
Discretization of frequency setting, Hz	-	0.01 in range of 0 - 100 Hz, 1.0 above 100 Hz	0.01 in range of 1 - 100 Hz, 1.0 above 100 Hz

**Name:** "ANDROMEDA-3M".

**Description:** Treatment and prophylaxis of diseases in: urologies, proctology, gynecology, sexual pathology, andrology. Laser module Lm - 01 is applied.

**Latest supplies:** Republican Centre of sexual pathology (Kiev, Ukraine).



#### > DESCRIPTION OF COMPLEX:

"ANDROMEDA-3M" complex is intended for realization of physiotherapeutic and preventive medical procedures by local transrectal, vaginal and transurethral effect on organs and locuses of pathology.

The high therapeutic efficiency is reached by integrated influencing on key physiological processes, tissues, reflexogenic zones and organs of following physical effects: massagelaser, vibrolaser, magnitolaser, thermolaser, hydrolaser.

ANDROMEDA-3M consists of a central unit and functional peripheral systems that are running under control of built-in microprocessor.

#### Microprocessor control allows to:

- Set and control all the parameters of peripheral systems.
- Choose from the standard (recommended) treatment regimens, or select individual one.
- Carry out the work in automatic mode, maintaining the given parameters of the treatment session.

#### > THERAPEUTIC INFLUENCE:

##### In urology:

- Improvement of drainage function and blood supplies of prostate gland.
- Taking out of stagnant phenomenon.
- Recovery of sensitivity of trophicity of the nervous terminations (endings).
- Achievement of training effect of contraction of muscles of prostate.
- Recovery of sexual and reproductive function.
- Intensifying of libido.

##### In gynecology:

- Improvement of functions of ovaries.
- Improvement of reducing capacity of parent tubes, hemo- and limfodynamics of organs of a small basin, antispasmodic and resorptional operating.
- Recovery of sensitivity and trophicity of the nervous terminations.
- Treatment of anabrosis of journal of uterus.
- Recovery of sex and genesial function.

> PERIPHERAL SYSTEMS:

> **LASER MASSAGE SYSTEM - MLS-01 / MLS-02:** allows to conduct transrectal massage of a prostate gland, and also vaginal massage in combination to laser effect.

**Features:** a smooth variation under the given program of amplitude and frequency of a massing within the limits of 1 - 90°C and 0.1 - 100 Hz accordingly.



> **VIBROLASER SYSTEM - VLS-01 / VLS-02:** allows to conduct transrectal or vaginal vibromassage in combination to laser effect.

**Features:** a smooth variation of frequency of chattering within the limits of 10 - 5000 Hz under the given program.



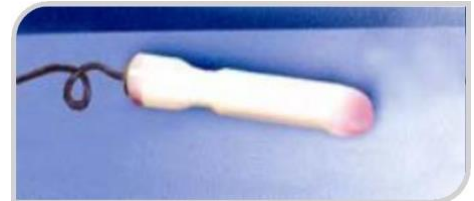
> **Magnitolaser system - MGL-01 / MGL-02:** allows to conduct transrectal / vaginal combined effect on slimy rectums or vaginas by a magnetic field with a laser radiation.

**Features:** programmatic change of parameters of a laser radiation.



> **THERMAL SYSTEM - GTS-01 / GTS-02:** allows to conduct effect, hypothermal, pyrexial and combined with a laser radiation, on slimy rectums or vaginas on a selected time chart.

**Features:** a smooth variation of temperature within the limits of 4 - 43°C under the given program.



Optical laser nozzles allow to conduct local transurethral, transrectal, vaginal, outside labile, acupuncture and hydrolaser effect.

**Name:** "TONUS".

**Description:** Prophylaxis, treatment and aftertreatment of diseases in: cardiology, neurology, dermatology, odontology, cosmetology, gynecology. Laser module Lm - 01 is applied.

Certification: Russia, Ukraine.

**Latest supplies:** USA (Rehabilitation Center, Las Vegas), Russia (Cosmonaut Khrunichev Rehabilitation Centre, Moscow).



#### > DESCRIPTION OF COMPLEX:

"TONUS" complex is intended for realization of physiotherapeutic and preventive medical procedures by hydrolaser effect - combined effect by the laser through a water environment on organs, locuses of pathology and all organism as a whole.

High therapeutic efficiency is reached by complex influence on key physiological processes, tissues, reflexogenic zones and organs of the following factors:

- Low intensive laser effect by 3 wave system.
- Hydromassage by water sprays of adjustable pressure and temperature.
- Effect by laser activated water.

#### General therapeutic effects (at a level of cell, organs, organism):

- An enhancement of activity antioxidant systems and protection of cells against operating free radicals.
- Stimulation of biosynthetic and biopower processes.
- Improvement of microcirculation and flow characteristics of a blood.
- Anesthetizing, vasohypotonic, unflamantary.
- Normalization of metabolic processes.
- Activation of a trophicity of tissues, normalization of a nervous excitability.
- Drop of an endogenic intoxication, recovery of functional violations of an endocrine and vegetative nervous system.

#### Biomodification of organism state:

- Improves a general condition of health.
- Has a tonic, harmonizing and sedative effect.
- Increases body resistance to different diseases.
- Renders antidepressive and antistressful effect.
- Takes out a nervous - emotional strain, irritability, sleeplessness.
- Takes out a set of symptoms of chronic overwork.
- Increases mental and physical activity.
- Reduces fatigability and increases functionability.

"TONUS" consists of a central unit and functional hydro nozzles.

#### Microprocessor control allows to::

- Define, monitor and store the set parameters of the treatment session.
- Choose from the standard (recommended) modes of treatment and prophylaxis or select individual one.
- Carry out the work in automatic mode

**Standard programs:** prophylactic, rehabilitation, healing, cosmetic, therapeutic and others.

## > SPECIALIZED NOZZLES:

> **Hydrolaser shower nozzle SN-01:** Allows conducting biostimulating hydromassage in combination to laser effect.

> **Gynecological nozzle GN-01:** Allows conducting vaginal hydromassage in combination to laser effect with the help of disseminating light nozzle.

> **Odontological nozzle ON-01:** Allows conducting hydromassage in combination to laser effect.



## > THERAPEUTIC INFLUENCE:

### Cardiology, neurology:

- Improves a cerebral circulation.
- Treatment of an osteochondrosis.
- Treatment of neuritises, neuralgia, neurosises.
- Normalizes a function of nervous, immune and endocrine systems.



### Urology, gynecology:

- Treatment of distresses of a man's and female sexual orb: prostatitis, inflammation of urinary bladder etc.
- Chronic inflammations of a uterus, ovaries etc.
- Recovery of sensitivity and trophicity of the nervous terminations (endings).
- Recovery of a sexual and genesial function, intensifying a libido.

### Cosmetology, odontology

- Improves a blood supply of a problematic skin, promotes its neogenesis: slows down an aging of cells and exocellular connecting tissue.
- Increases resiliency of a skin and normalizes water-in-oil balance: improves an elastance and reduces density of a false skin and derma.
- Increases efficiency of effect of nutrient materials of creams.
- Takes out an inflammation of a slimy oral cavity (paradantoses, ulites).



### Sports medicine:

- Stimulation before competitions.
- Relaxation after loads.
- Taking out of a fatigue and depressive condition after physical, psychological overloads.
- Promotes a muscle release phenomenon and recovery of forces.
- Takes out pain sets of symptoms at traumas, bruise.



**Name:** "SCREENER-5M".

**Description:** Express assessment of organism radionuclide pollution.

**Certification:** Russia.

**Latest supplies:** Japan (Tokyo, Fukushima). Total number delivered more than 250 pieces.

**Awards:** Gold Medal of International Forum in Brussels.



#### > DESCRIPTION OF COMPLEX:

"SCREENER-5M" is a unique medical complex of express assessment of radionuclide contamination of the organism, based on AWS-Nuclide. System runs under built-in computer.

**Advantages:** non-invasive, simple diagnostic procedure, speed of test results, high descriptiveness.

#### > AWS-NUCLIDE SYSTEM:

**AWS-Nuclide** is a system of operational definition of radioactive sources in the body and provides:

- Identification of very low activity of radionuclides of different origin in the human body (route of nuclides - air, water and food).
- Monitoring the effectiveness of removal of nuclides.
- Development of measures to reduce radiation exposure.

**AWS-Nuclide** is designed to measure incorporated radionuclides in the human body and allows quickly to:

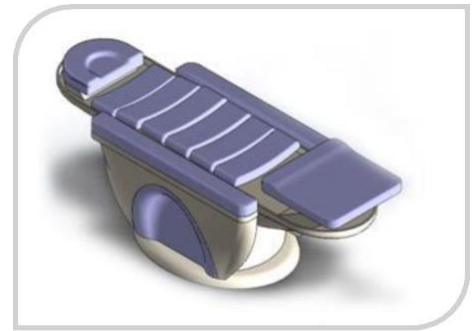
- Determine qualitative and quantitative composition of the radionuclides and their activity in the lungs, the gastrointestinal tract throughout the human body.
- Conduct express monitoring of the entire body to the presence of a very low activity radionuclides.
- Assess the individual radiation dose burden on the person.
- Identify the critical group (risk) with a high content of radionuclides.
- Choose the most effective sorption medications or other removal methods of nuclides from the body.

Types of radionuclides registered: **I, Am, Cs, Co, Ru, K** etc.

The minimum detectable activity: **5 - 10 nKu**.

**Name:** "BIOTRONIC".

**Description:** Prevention, treatment and rehabilitation in the field of physical therapy, pediatrics, balneology, sports medicine.



#### > DESCRIPTION OF COMPLEX:

"BIOTRONIC" is a unique medical complex that is used for prophylaxis, treatment and rehabilitation in physiotherapy, pediatrics, balneology, sports medicine. "BIOTRONIC" is:

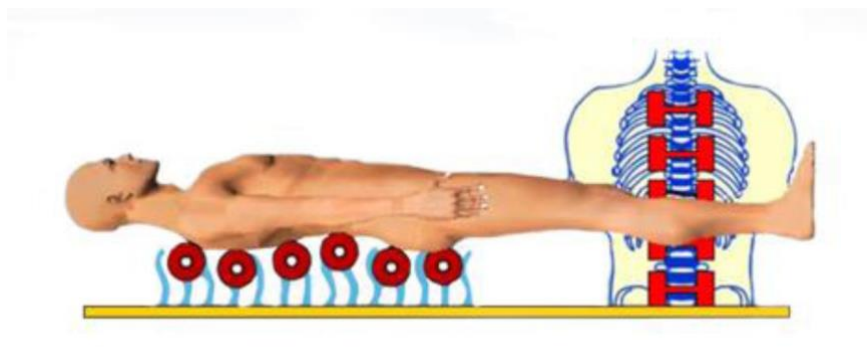
- A new solution in hardware wave vibrotherapy.
- An indispensable assistant to the family doctor.
- Modern approach to non-pharmacological treatment.

High therapeutic efficiency is achieved through comprehensive influence over key physiological processes, tissue, reflex zones and human organs by following factors:

- Low - High-frequency pulse and vibration impact.
- Radiant infrared impact.
- Sound relaxation.

#### > GENERAL, RESTORATION AND REHABILITATION THERAPY:

- Treatment of cardiovascular diseases, nervous disorders, functional disorders of the endocrine and autonomic nervous systems, trauma, catarrhal, infectious diseases and sexual disorders.
- Biomodification of state of the body - the removal of depression, nervous and physical stress, pain, energy supply, treatment of various inflammations, gynecological diseases.
- Enhance immunity, disease prevention, stress relief before the start, toning the body just before the start, relaxation and recovery after the competition.
- Prevention of professional stress by increasing the adaptive capacities of the organism to work with the influence of extreme factors.
- Rehabilitation of fatigue and increase efficiency through the optimization of internal natural physiological and biochemical mechanisms.



Rehabilitation and therapeutic effect is achieved with a native mechanical vibration wave of "smart" paravertebral massagers, which makes kneaded portion of the back along the spine to oscillate along a complex trajectory, and magnified while performing the procedure in combination with heat and other influences.

Lying back on the couch, the patient puts his feet on the recess of the simulator, which swings pelvic bones and transmits the undulatory motion to the spine and up to the cervical spine.

As a result of complex procedures the spine is massaged in two planes: longitudinal and transverse under the influence of which the spine is straightened and stretched, disappears infringement of nerve endings, relieves muscle spasms, restores normal mobility of the vertebrae, improves conduction of nerve impulses to the internal organs and tissues.

> **PROCEDURES PERFORMED:**

- Local micro-stretching.
- Dosed roller massage.
- Adjustable heating of paravertebral area.
- Dosed vibration massage of the spine.

> **DISEASE TREATMENT AND PREVENTION:**

- Osteochondrosis.
- Scoliosis.
- Curvature of the spine.
- Hernia and protrusion of the intervertebral discs.
- Other diseases of the spine.

> **THERAPEUTIC EFFECTS ACHIEVED DURING THE PROCEDURE:**

- Dilation of blood and lymph vessels.
- Increase in blood circulation.
- Stimulation of metabolism.
- Increased breakdown of lactic acid in the muscles that prevents a state of exhaustion.
- Relieving muscle stress.
- Muscle tissue becomes more elastic.
- Deepening breathing.
- Decrease in heart rate and blood pressure.
- A calming effect on the nervous system.



**Name:** "ONCO SCREENING".

**Description:** Method taken as a principle of technology is based on detection in surveyed whey fibers or polypeptides with changed chemical, and / or physical properties which are synthesized by tumoral cages from the beginning of their origination.

**Market potential:** We have good feedbacks on technology and development proposition from Boston Medical Group.

**Latest supplies:** 3 hardware complexes for three different clinics.



#### > DESCRIPTION OF TECHNOLOGY:

Within last 10 years group of the Ukrainian scientists develops the technology of early preliminary treatment of the oncological diseases which last version has gained name "ONCO SCREENING".

"ONCO SCREENING" is a new approach to screening of the malignant new growths, engaging use at the first stage of a diagnostic study of the universal method screening preliminary treatment.

Technology develops of 3 basic components: (a) laboratory, (b) hardware and software room and (c) organizational. As a substance for probe serves a whey of person blood.

**Laboratory** unit engages special machining of surveyed whey by chemical and physical affecting (light).

**Hardware and software** unit engages the specialized spectrophotometer and the software. It is intended for obtaining of response effect, machining and storage of information, database forming.



**Organizational** unit is an integral part of technology and engages rational takeoff of contingents for survey realization, patients allocation to additional methods of preliminary treatment depending on testing effects, dynamic observation for surveyed throughout the long-term period. Medial time from a blood taking before obtaining of response effect makes 2.5 hours.

#### > CLINICAL TRIAL OF THE METHOD:

On the given procedure at present time it is surveyed more than 2000 persons. Diagnostic sensitivity and specificity of a method have made 85 - 90 %.

Diagnostic efficiency of the test is studied in survey of 734 women from which at 318 occurred malignant new growths of mammary glands, uterus and ovaries. Diagnostic sensitivity of a method has made 97.5 % and specificity of 84.1 %.

High self-descriptiveness, simplicity of fulfillment, sweeping obtaining of effect, allow to recommend wide application of a method "ONCO SCREENING" in the capacity of the first stage of the most widespread oncological diseases at women screening. Health Ministry of Ukraine approves methodical recommendations about method use in medical institutions of Ukraine.



#### > ADVANTAGES:

- Efficiency of "ONCO SCREENING" is not lower than the results known markers of malignant growth.
- Method can be used to monitor oncological patients after treatment.
- Ability to monitor patients with any malignancy localization, including those without markers.

## > THEORETICAL SUBSTANTIATION OF

### A LABORATORY METHOD:

The method taken as a principle of technology is based on the detection in surveyed whey fibers or polypeptides with changed chemical, and-or physical properties which are synthesized by tumoral cages from the beginning of their origination.

Interacting with these fibers of special reagents and affecting on light response of certain power and spectrum leads to change of optical density of investigated whey in comparison with the control which is the whey of the same surveyed, but without reagents.

"Response reading" is carried out at the expense of whey scanning over the range a visible spectrum (360 - 600 nanometers). Thus, the effect of scanning of the control uses as a zero line. Spectrograms of oncological patients have the characteristic peaks of optical density corresponding to the anomalous fibers, reacted with reagents.

These pathological fibers can be different in different patients and at different swellings (this theme is the future design subject), however they, reacting with certain reagents come to light at scanning over the range a visible spectrum.

At healthy people these fibers miss, that allows to use the given method for early preliminary treatment of patients with oncological diseases, irrespective of origination place and a swelling morphological structure.

Figure1. Curves of optical density of cancer sick uterus body (at the left) and the healthy woman (on the right)

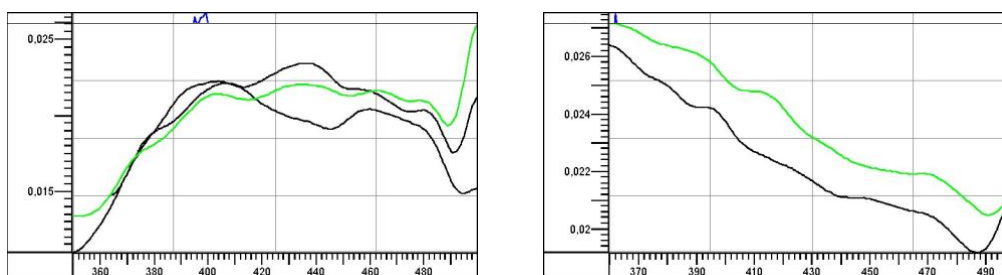


Figure 2 - 3. Characteristic spectrograms of blood whey optical density processed by test system "ONCO SCREENING", the oncological sick (at the left) and healthy

person (on the right)

### > ANALOGUES:

In Ukraine, similar methods are not present more. Foreign analogues are AMAS the test and DR-70 which are grounded on perfect another principle (the immunno-fermental analysis), is much more expensive at cost of reagents and equipment though do not yield an "ONCO SCREENING" according to their authors in accuracy of preliminary treatment.



**Name:** "CARDIOSCAN X9".

**Description:** Technology of noninvasive diagnosis of diseases, research of their development mechanisms, prediction of disease complications.



#### > DESCRIPTION OF COMPLEX:

"CARDIOSCAN X9" fills a gap in the diagnosis of heart between non-invasive, but low sensitivity usual methods of diagnosis (such as electrocardiography - ECG), and invasive (e.g. coronary angiography).

Patients suspected of having coronary artery disease, but with normal electrocardiogram, can be accurately classified through "CARDIOSCAN X9", taking into account the degree of myocardial ischemia.

#### > OPERATING PRINCIPLE:

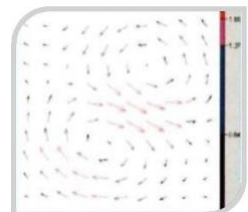
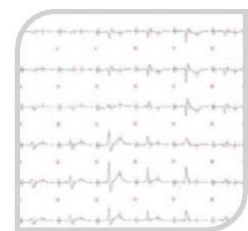
"CARDIOSCAN X9" operating principle is based on registration of changes in the magnetic field caused by the electrical activity of the heart during cardiocycle.

Maximum sensitivity sensors - Superconductive Quantum Interference Device (SQUID), cooled in cryostat by liquid helium to the temperature of - 269°C, are capable of detecting changes in a very weak magnetic signal.

Application of sophisticated active and passive protection of the detector allows to install equipment even in susceptible to communications disruption rooms.

Automatic sliding table for the patient, bundled with fixed detectors, allow to playback electromagnetic maps of electrical activity of the heart the size of 20 x 20 cm.

Developed method "CARDIOSCAN X9", using SQUID-technology, is highly promising for application in daily clinical practice.



#### > CLINICAL APPLICATIONS:

Due to its non-invasiveness, accuracy and informativeness, "CARDIOSCAN X9" method extends the region pathologies in which it can be applied with high efficiency. Some of the main indications:

1. Unclear chest pain.
2. Coronary vascular disease in patients with normal ECG.
3. Acute myocardial infarction.
4. Monitoring of patients after medical treatment.
5. Monitoring of patients after surgical treatment.
6. Monitoring of patients with heart diseases.
7. Monitoring of burn patients during treatment.



To detect early signs of myocardial ischemia, patients with unclear chest pain can be examined by "CARDIOSCAN X9".

"CARDIOSCAN X9" can not only confirm the diagnosis, but also to determine the extent and scope of ischemic changes.

"CARDIOSCAN X9" is ultra-sensitive tool for monitoring the results of medical treatment. Through the use of "CARDIOSCAN X9" medication and treatment method can be individually matched and confirmed, without any risk to patients. "CARDIOSCAN X9" is a class "A" unit.

Also "CARDIOSCAN X9" is able to detect early signs of heart disease and to assess the risk of future development of heart disease.

