

Summary report on research accreditation

I. General information

Name of organization	State University of Medicine and Pharmacy <i>Nicolae Testemițanu</i> of the Republic of Moldova
Organization type (<i>to underline</i>)	Research institute <u>High education institution</u> Ministerial research institute
Research mission of organization	The research mission is to develop scientific research in line with national and international standards, including cooperation with similar institutions from abroad.
Strategic research direction (s)	Biomedicine, pharmacy, maintaining and strengthening of health
Evaluated period	2006-2010
Web of organization	http://www.usmf.md

II. Research capacity (annual average for evaluated period)

Total number of employees	1152,4					
Number of scientific researchers	117,7					
Number of researchers who possess honorific titles, scientific degrees, scientific and scientific-didactical titles	ASM full members	ASM corresp. Members	Professor	Associated professor	Dr.hab.	Dr. (PhD)
	8,2	5,8	128,8	312,6	148,2	499,2
Number of researchers involved in international projects	FP7	STCU	Bilateral	Others		
	0	7,2	18,4	0		
Number of young researchers (under 35 years old)	Dr. (PhD)	PhD students	Others			
	30	146,6	45,4			
Financial resources (thousand MDL)	Public budget	International projects/grants	Research contracts			
	10711,0	67,66	0			
Distribution of expenditures (thousand MDL)	Salary	Infrastructure development	Other			
	6864,0	1823,6	2883,4			
Expenditures for infrastructure development (thousand MDL)	Equipments	IT infrastructure	Endowment of experimental resorts			
	779,11	184,49	860,0			
List of 3 basic research methods, installations, technologies (per accredited field)	Medico-biological profile					
	Method of the determination of ischemic modified albumine capacity of cobalt binding.					
	Method of umbilical stem cell separation necessary for transplantation.					
	Method of obtaining cellular material with strong regenerative capacities and low antigenic effects.					
	Procedure of the laboratory determination of high genetic risk of acute leukemias on the basis of methylic profiles in DNA extracted from					

blood.

Procedure of determination of genetic risk factors in ischemic cardiopathy.

Public health and management profile

Technology of obtaining a new antibacterial substance Izohidrafural as solution and ointment (registered as "Izofural"), its production technology, physico-chemical methods of its analysis.

Method of the prognosis of occurrence risk of nosocomial septicopurulent infections.

Guide for monitoring and control of nosocomial infections.

Procedure for diagnostics, treatment and prophylaxis (nonspecific and specific) of acute viral B, C and D hepatitis.

Clinico-therapeutic profile

Methodology for investigation of haemomicrocirculation in chronic hepatitis depending on disease form and vegetative failures.

Method of hemodynamic evaluation in portal system by Doppler echography in patients with chronic viral C hepatitis with and without hepatic steatosis.

Temporary pharmacopeic monographies on active substances and pharmaceutic products: Profetur, Izoturon, Metiferon – parenteral solutions.

Technologic regulations for production of injectable solutions Profetur, Izoturon, Metiferon.

Technologic regulations for production of Raviten, an antihypotensive product for intramuscular and intravenous administration.

Technologic regulations for production of oil obtained from grape seeds, oil from grape seeds containing spirulina, oil from walnuts.

Temporary pharmacopeic monographs on walnuts, grape seed oil, grape seed oil with spirulina.

Clinico-surgical profile

Chronic decompensated amigdalitis treatment method.

Method of endoluminal haemostasis with esophagus stent mounting in uncontrolled haemorrhages in patients with esophagus ulcer.

Method for nonsurgical treatment of spleen and liver closed traumas.

Method for laparoscopic cholecystostomy in patients with hepatic cirrhosis.

Endoscopic multifunctional method of decompression and flushing of bile ducts.

Guidance for preparation of prostheses for temporary decompression of bile ducts.

Device for osteosynthesis in pelvic unstable fractures.

Device for intervertebral discs prosthesis.

Device for functional intervention in shoulders joints.

Mother and child's health profile

Method of diagnostics and assessment of the system proteolytic-antiproteolytic enzymes and assessment of inflammatory cytokines and tumoral immunity indicators.

Method of treatment of intervertebral discs displasias in children.

	<p>Method of treatment of cerebral paralysis in children. Method of treatment of perinatal encephalopathy in children of early age. Method of diagnostics of <i>coxa valga</i> in children. Device for treatment of spine scoliotic deformities in fetus.</p> <p style="text-align: center;">Pharmacy profile</p> <p>Procedure of dosage of metotrexate and 7-hidroximetotrexate in blood plasma. Method HPLC-UV for dosing of pharmacologic active compounds in leaves and flowers of <i>Crataegus monogyna Jacq.</i> și <i>Crataegus curvisepala Lindm.</i> Method of Benzituron and Metiferon dosage by physico-chemical methods. Procedure for <i>in vitro</i> obtaining of <i>Aronia melanocarpa</i> carpomass containing phenolic compounds with antioxidant and antimicrobial properties.</p> <p style="text-align: center;">Stomatology profile</p> <p>Method of frontal teeth restoration without pivot. Method of assessment of the possibility of implant inserting in the alveolar ridge segment. Method of assessment of the possibility of lamelar implants inserting in the maxilar segment with extensive edentia. Method of haemostasis after dental extraction. Device for dental prosthesis fixation. Device for restoration of gums. Device for radiograph analysis.</p>
List of provided scientific services	Biochemical, immunological, microbiological, toxicological, endocrinologic, genetical, morphological analyses.
List of editorial activities	<p>Founder of scientific journals: Scientific annals of SMPHU <i>Nicolae Testemițanu</i>.</p> <p>Co-founder of scientific journals: Bulletin of Academy of Sciences of Moldova, Medical courier, Arta Medica, Public Health, Economy and Management in Medicine.</p>

III. Distribution of number of research projects and themes during evaluated period

Institutional projects	2006	2007	2008	2009	2010
	18	18	18	19	20
Projects in the frame of State Programmes	2006	2007	2008	2009	2010
	0	5	5	13	12
Technological transfer projects	2006	2007	2008	2009	2010
	0	0	1	1	0
Projects for equipment procurement	2006	2007	2008	2009	2010
	0	1	0	0	0
Projects for young	2006	2007	2008	2009	2010

researchers	0	2	6	5	3
Projects in the frame of bilateral programmes	2006 2	2007 2	2008 2	2009 2	2010 4
International projects/grants	2006 0	2007 1	2008 1	2009 1	2010 1
List of 3 representative international projects/grants	<p style="text-align: center;">Scientifico-Technologic Center in the Ukraine (STCU)</p> <p>1) Elaboration of a multifunctional electrotherapy device. (Project director, PhD. N. Gurschi)</p> <p style="text-align: center;">Partnership projects ASM - Academy of Belarus</p> <p>2) Lipid and carbohydrate metabolism in patients with insuline-resistance. (Project director, State PhD V. Revenco)</p> <p style="text-align: center;">Partnership projects ASM – National Authority for Research of Romania</p> <p>3) Correlations between caudate lobe echorigidity and the other liver lobes in a child by real-time elastography, with implications in liver transplantation (Project director, PhD Ludmila Bologna)</p>				
Research contracts	2006 1	2007 1	2008 2	2009 1	2010 2
List of 3 representative research contracts	<p>1. Contract with the Institute of mother and child health research in the sum of 6.600 lei including biochemical investigations of new-borns - “Assessment of succinatdehydrogenase in new-borns neutrophyles.”</p> <p>2. Contract with “Fala-Dental SRL” in the sum of 33.500 lei for biochemical investigations in stomatology patients – “Assessment of bone remodeling processes in patients with parodontitis and dental implants.”</p> <p>3. Contract with the Institute of Vaccines and Serum “I. Mecinikov” of the Russian Federation, Laboratory for elaboration of new allergens, “Elaboration of new allergens of the regional flora and study of their immunobiological properties.”</p>				

IV. Scientific publications

Total number of publications abroad	Books 5	Chapters in books 5	Journal papers 340
Total number of publications in ISI journals and books	Books 5	Chapters in books 5	Journal papers 62
Total number of publications in the country	Books 115	Chapters in books 825	Journal papers 4.860
Total number of conference abstracts	International abroad 1.855	International in the country 85	National 735

List of 5 representative publications (per accredited field)

I. Medico-biological profile

1. Baciú Gh., Pădure A., Șarpe V. Mechanical traumas in medico-legal aspects. Ch. CEP Medicina, 2006. 256 p. (in Romanian).
2. Gudumac V., Corcimaru I. et al. Normative basis for clinical diagnostics laboratories. Ch., 2006, 352 p. (in Romanian).
3. Anestiadi V., Nagornev V., Zota E. Atherosclerosis pathomorphogenesis (immunological aspects). Chișinău-Sankt Petersburg, 2007, 318 p. (in Romanian).
4. Andrieș V., Iastrebova T., Neghină S., Batâr D. Vascularization and innervation of the human skeletal muscles. Ch.: CEP Medicina, 2008, 483 p. (in Romanian).
5. Wu, Y., Li, Y., Lange, E. M., Croteau-Chonka, D. C., Kuzawa, C. W., McDade, T. W., Qin, L., Curocichin, Gh., Borja, J. B., Lange, L. A., Adair, L. S., Mohlke, K. L. Genome-wide association study for adiponectin levels in Filipino women identifies CDH13 and a novel uncommon haplotype at KNG1-ADIPOQ. Hum Mol Genet. 2010;19(24):4955-4964. (IF 7,39).

II. Public health and management profile

1. Prisacari V. Guide for monitoring and control of nosocomial infections. Ch., Elena-VI SRL, 2008, 248 p.
2. Pântea V. Acute and chronic viral hepatitis. Actualities. Ch., 2009, 229 p.
3. Gulea A., Prisacari V., Țapcov V., Buraciova S., Spânu C., Bejenari N., Puarie V., Roy J. Synthesis and antimicrobial effect of copper and nickel carbazides containing sulphanilamides. Journal of pharmaceutical chemistry (in Russian), vol. 41, N 9, 2007, p. 114-117.
4. Țapcov V., Prisacari V., Buraciova S., Lazacovici D., Gulea A. Synthesis and antimicrobial effect of copper (II) complexons with benzoilhidrazone derivatives of salicylic aldehydes containing sulphanilamides. Journal of pharmaceutical chemistry (in Russian), T.42, N 9, 2008, ctp. 54-57.
5. Prisacari V., Zapuhlâh Gr., Leu E. Epidemiological peculiarities of neurosurgical nosocomial infections. Medical almanac (in Russian), 2009, №2, p.63-68.

III. Clinico-therapeutic profile

1. Groppa St. Cerebral progressive heredodegenerescences. Ch., 2007, 296 p.
2. Dumbrava V.-T. (red.) Basic hepatology (1, 2 vol.). Ch., Sirius SRL, 2010, vol. I – 400 p, vol. II – 416 p.
3. Braniște T., Naumov V. Dilatative cardiomiopathy: Analitical, clinico-instrumental, morphological and molecular-celular investigations. Differential diagnosis and prognosis. Iași, Vasiliana'98, 2010, 401 p.
4. Cepoida E., Bendelic E., Boișteanu V.// Imaging examination in the lacrymal system pathology Archives of the Balkan Medical Union, volume 43, Number 3- supplement, vol.- articles, September 2008, p. 78-80.
5. Musteață V., Corcimaru I. Targeted therapy of chronic myelogenous leukemia: experience of the Institute of Oncology of Moldova.

Archives of the Balkan Medical Union. 2008, 43(3), 154-155.

IV. Clinico-surgical profile

1. Ababii I., Maniuc M. Acute respiratory affections in child. Ch.: CEP Medicina, 2009, 172 p.
2. Ababii I, Sandul A. Mycoses in otorhynolaringology. Ch.: CEP medicina, 2009, 198 p.
3. Gudumac E. Surgery. Ch.: Central typography, 2009, 472 p.
4. Tănase A. Renal insufficiency. Ch.: Sirius, 2009, 380 p.
5. Mishin I, Ghidirim Gh, Dolghii A, Bunic G, Zastavitsky Gh. Implantation of self-expanding metal stent in the treatment of severe bleeding from esophageal ulcer after endoscopic band ligation. Diseases of the Esophagus. 2010, 23(7), 35-38. ISSN 1442-2050 (IF:1.493)

V. Mother and child's health profile

1. Paladi Gh., Cernețchi O. Practical obstetrics. Ch., 2007, 744 p.
2. Cernețchi O., Eșanu T., Sârbu Z. Obstetrics and gynecology. Ch.: CEP Medicina, 2008, 272 p.
3. Friptu V., Metaxa I., Moga M., Leahu V., Șaptefrați V. Inferior gyneco-urinary tract affections. Ch., 2009, 586 p.
4. Șciuca S., Iliciuc I. Essencial in child's neurology. Ch., 2010, 349 p.
5. Stamati A., Revenco N., Vatamanu M. L'estimation de la fonction du ventricule gauche chez les enfants. Archives de pediatrie, 2009, vol 16, issue 8, p. 834-835.

VI. Pharmacy profile

1. Gonciar V., Cazacu V., Cheptea Ed. Pharmacotoxicology. Ch.: Central typography, 2008, 464 p.
2. Safta V. Pharmacotherapeutic guide. Ch.: Vector, 2010, 1296 p.
3. Cardoso, C.C.; Alenina, N.; Ferreira, A.J.; Qadri, F.; Lima, M.P.; Gross, V.; Todiraș, M.; Pesquero, J.B.; Pesquero, J.L.; Bader, M. Increased blood pressure and water intake in transgenic mice expressing rat tonin in the brain. *Biol Chem.* 2010 Apr;391(4):435-41. (IF: 5.328)
4. Hilzendeger, A.M.; Morais, R.L.; Todiraș, M.; Plehm, R.; Da Costa Goncalves, A.; Qadri, F.; Carvalho Araujo, R.; Gross, V.; Nakaie, C.R.; Casarini, D.E.; Carmona, A.K.; Bader, M.; Pesquero, J.B. Leptin regulates ACE activity in mice. *J Mol Med.* 2010 Jul 8. (IF: 5.004)
5. Reiche, J.; Theilig, F.; Rafiqi, F.H.; Carlo, A.S.; Militz, D.; Mutig, D.; Todiraș, M.; Christensen, E.I.; Ellison, D.H.; Bader, M.; Nykjaer, A.; Bachmann, S.; Alessi, D.; Willnow, T.E. SORLA/SORL1 functionally interacts with SPAK to control renal activation of Na(+)-K(+)-Cl(-) cotransporter 2. *Mol Cell Biol.* 2010 Jun;30(12):3027-37. (IF: 6.057)

VII. Stomatology profile

1. Godoroja P. Orthodontics. Ch., 2007, 372 p.
2. Tintiuc E., Pancenco A., Burlacu V., Munreanu I. Stomatological services management in ambulatory. 2007, 180 p.
3. Railean S., Lupan I., Bușmachiu I. Practical course of pediatric

	<p>maxilo-facial and oral surgery. Ch.: CEP Medicina, 2009.</p> <p>4. Nicolau Gh., Nicolaiciuc V., Năstase C. Modern practical endodontics bases, Ch.: Nasticor, 2009, 191 p.</p> <p>5. Eni A., Burlacu V. Affections of hard dental tissues. Ch.: CEP Medicina, 2010, 197 p.</p>
List of 5 citations	<p>1. Wu, Y., Li, Y., Lange, E. M., Croteau-Chonka, D. C., Kuzawa, C. W., McDade, T. W., Qin, L., Curocichin, Gh., Borja, J. B., Lange, L. A., Adair, L. S., Mohlke, K. L. Genome-wide association study for adiponectin levels in Filipino women identifies CDH13 and a novel uncommon haplotype at KNG1-ADIPOQ. <i>Hum Mol Genet.</i> 2010;19(24):4955-4964. (IF 7,39).</p> <p>2. Reiche, J.; Theilig, F.; Rafiqi, F.H.; Carlo, A.S.; Miltz, D.; Mutig, D.; Todiraş, M.; Christensen, E.I.; Ellison, D.H.; Bader, M.; Nykjaer, A.; Bachmann, S.; Alessi, D.; Willnow, T.E. SORLA/SORL1 functionally interacts with SPAK to control renal activation of Na(+)-K(+)-Cl(-) cotransporter 2. <i>Mol Cell Biol.</i> 2010 Jun;30(12):3027-37. (IF: 6.057)</p> <p>3. Cardoso, C.C.; Alenina, N.; Ferreira, A.J.; Qadri, F.; Lima, M.P.; Gross, V.; Todiraş, M.; Pesquero, J.B.; Pesquero, J.L.; Bader, M. Increased blood pressure and water intake in transgenic mice expressing rat tonin in the brain. <i>Biol Chem.</i> 2010 Apr;391(4):435-41. (IF: 5.328)</p> <p>4. Mostovei A., Topalo V. One-step placement of two-stage dental implants without flap. <i>Clinical Oral Implants Research.</i> 2011, Vol 22, Issue No 9, p.958. ISSN 1600-0501. 2011 (I F. 2,812).</p> <p>5. Ghicavii V., Tanase A., Dumbravianu I., Ceban E. New direction in the Treatment of Benign Prostate Hiperplasia using Adenoprosin: Biologically active entomological medicine. 31 st Congress of the Societe Internationale D Urologie, Berlin, Germany, October 16-20, 2011 Urology, volum 78, supplement 3A, September 2011,p.S96 (IF-2,242).</p>

V. Innovation outputs

Total number of patents	Registered in the country 179	Registered abroad 4	Implemented 153
Total number of new developed methods and technologies	Registered 179	Non-registered 0	Implemented 153
Total number of new scientific products	Registered 68	Non-registered 0	Implemented 68
Total number of scientific outputs for central and local authorities (draft of law, strategies etc.)	71		
Total number of scientific outputs for educational institutions	Handbooks for high education 85	Handbooks for pre-university institutions 5	Delivered university courses 590

List of 5 representative innovation outputs (per accredited field)

Medico-biological profile

1. **Patent:** Antiinflammatory agent in the hemorrhagic shock.. Authors: Vişnevschii A., Ghicavii V., Lutan V., MD 4004, 2010.09.30.
2. **Patent:** Nutrient medium for the cultivation of cells of animal origin. Authors: Ababii I., Nacu V., Ciobanu P., Trifan V., Nacu V., MD 191, 2010.12.31.
3. **Patent:** Method of blood sampling from laboratory animals. Authors: Nastas I., Gudumac V., MD 3395, 2008.05.31.
4. **Patent:** Method of periodontitis induction. Authors: Granciu Gh., Gudumac V., Nastas I., MD 3527, 2008.11.30.
5. **Patent:** Method of determining the cobalt binding ability of the ischemic modified albumin. Authors: Gudumac V., Tagadiuc O., MD 4054, 2010.07.31.

Public health profile

1. **Patent:** Sulfanilamide-containing salicylidenethiosemicarbazidates of copper (II). Authors: Prisacari V., Gulea A., Tapcov V., Buraciova S., Spinu S., Bejenari N., MD 3124, 2007.04.30.
2. **Patent:** 12-Hydroperoxy-8a,12-epoxy-11-bishomodrimane for use in treating mycotic infections. Authors: Vlad P., Cucicova C., Arîcu A., Prisacari V., Dizdari A., Rudic V., Muşet Gh., Savin A., Proca L., Gonciar V., MD 3358, 2008.03.31.
3. **Patent:** Method of prognosticating the risk of development of nosocomial septico-purulent infections. Authors: Paraschiv A., Jucovschi C., Prisacari V., MD 3181, 2007.07.31.
4. **Patent:**Di(μ -O)-bis(3,5-dibromosalicylidene thiosemicarbazonatocopper). Authors: Prisacari V., Tapcov V., Buraciova S., Bârca M., Gulea A., MD 2942, 2006.07.31.
5. **Patent:** Potassium and sodium salts of N-4-((5-nitro-furan-2-yl-methylene)-amino)-benzene sulfonamides. Authors: Prisacari V., Tapcov V., Buraciova S., Samusi N. Gulea A., MD 2831, 2006.05.31.

Clinico-Therapeutic profile

1. **Patent:** Nasal remedy possessing vasoconstrictive and anti-edematous action. Authors: Ghicavii V., Barcan R., MD 3619, 2009.02.28.
2. **Patent:** Method of hepatic encephalopathy treatment. Authors: Dumbrava V.-T., Cobîltean L., Proca N., Rudic V., Ipatii C., MD 3555, 2008.12.31.
3. **Patent:** Use of 0.5% BioR solution as thrombocyte aggregation inducer. Authors: Dumbrava V.-T., Cobîltean L., Proca N., Rudic V., Ipatii C., MD 3670, 2009.04.30.
4. **Patent:** Method of determining the degree of activity of chronic viral hepatitis C. Authors: Maev S., Dumbrava V.-T., Lupaşco Iu., MD 302, 2010.06.30.
5. **Patent:** Method of treating resistant melancholic depressions. Authors: Cărăuşu Gh., MD 18, 2009.12.31.

Clinico-Surgical profile

1. **Patent:** Device for measuring the nasal cavity length to children. Authors: Ababii I., Maniuc M., Romanciuc D. MD 3002, 2006.11.30.
2. **Patent:** Method of omental bursa sanitation and drainage. Authors: Ciutac I., Ghidirim Gh. MD 3719, 2009.06.30.

3. **Patent:** Method of carrying out omentobursostomy in the treatment of acute necrotizing pancreatitis. Authors: Ciutac I., Ghidirim Gh. MD 3766, 2009.08.31.
4. **Patent:** Method of restoration of lymphocirculation through the thoracic duct in the hepatic cirrhosis with refractory ascites. Authors: Anghelici Gh., MD 116, 2010.08.31.
5. **Patent:** Device and method of treating the senile cataract. Authors: Jeru I., MD 3676, 2009.04.30.

Mother and child's health profile

1. **Patent:** Method of treating dysplastic processes of the lumbosacral region to children. Authors: Şavga N., MD 66, 2010.06.30.
2. **Patent:** Method of early metabolic syndrome detection to children. Authors: Cerempei L., Rîmarciuc G., Gudumac V., Cerempei E., Ababii M., MD 3468, 2008.09.30.
3. **Patent:** Device for paraurethral administration of gelatinous substances. Authors: Nacu V., Nacu L., Topor B., Friptu V. MD 3556, 2008.12.31
4. **Patent:** Method of secondary mitochondrial insufficiency diagnosis to children with chronic gastroduodenal diseases. Authors: Cerempei L., Rimarciuc G., MD 3026, 2006.12.31.
5. **Patent:** Method of coxa valga diagnosis to children. Authors: Moroz P., Rusanovschi G., Moroz-Sandrosean A., Stati L., Sandrosean Iu., MD 3116, 2007.04.30.

Pharmacy profile

1. **Patent:** Method of predicting the development of adverse effects in hearing aids. Authors: Ababii I., Parii S., Chiaburu A., Jucovschi C., MD 291, 2010.11.30.
2. **Patent:** Process for obtaining in vitro fruit biomass of Aronia melanocarpa (Michx.) Elliot. Authors: Calalb T., Jacota A., Bujoreanu N., Chirilov E., Bejan N., MD 46, 2010.03.31.
3. **Patent:** Antibacterial agent. Authors: Gonciar V., Zariciuc E., Bacinschi N., Lupaşcu T., Rudic V., Plugaru Ş., Cerlat S., MD 3228, 2007.09.30.
4. **Patent:** Medicinal remedy for vaginal biocenosis restoration in the form of suppositories. Authors: Rudic V., Diug E., Crudu D., Parii A., Erhan A., MD 3005, 2006.11.30.
5. **Patent:** Regenerating remedy for treating wounds and burns. Authors: Gonciar V., Cerlat S., Lupascu T., MD 3988, 2010.

Stomatology profile

1. **Patent:** Anti-inflammatory and antimicrobial ointment. Authors: Rudic V., Gudumac E., Melnic B., Godoroja P.
2. **Patent:** Removable dental implant. Authors: Nicolau Gh., Gorea O., Gorea-Nicolau Artemisia, Mariş M.
3. **Patent:** Method of treatment of dental ridges occlusion. Authors: Buşmachi I., Godoroja P.
4. **Patent:** Method of measurement of implant inserting in the alveolar ridge segment. Authors: Gumeniuc A., Topalo V.
5. **Patent:** Method of frontal teeth restoration without pivot. Authors: Grigoriev V., Postolachi A., Nicolau Gh., Burlacu V., Grigoriev M.

VI. Major scientific and innovation achievements

<p>Short description of main scientific results and its confirmation (by awards, citations, development of international projects etc.)</p>	<p>There were obtained 103 diplomas, cups and medals:</p> <ul style="list-style-type: none">• SUMPh „Nicolae Testemițanu” was awarded the international distinction „European Quality”, March 2007.• AGEPI cup for innovation and creativity 2007;• OMPI Gold medal, Brussels;• State premium of the Republic of Moldova, 2008;• Researcher of the year in the domain of medical sciences 2009;• The Government premium for „The most remarkable inventor 2009” (Infoinvent-2009, Chișinău);• Grand Premium of the International Exhibition „Proinvent” Cluj-Napoca, România;• Premium „The most remarkable Inventor 2009”;• „Leonardo da Vinci” medal for promoting of innovative activities. <p style="text-align: center;">Medico-biological profile</p> <p>There was elaborated a method to determine cobalt binding ischemic modified albumine for diagnostics of pathological processes caused by hypoxia in tissues and organs;</p> <p>Biochemical mechanisms in experimental osteopathy in various stages of postnatal ontogenesis were cleared up;</p> <p>For the first time, it was established that copper coordination compounds (CMT-28 and CMT-67) have a strong curative effect in hepatic cirrosis;</p> <p>The methodology of investigation of blood circulation in chronic hepatitis depending on the form of the disorders.</p> <p>Methylic profiles on the DNA level as molecular markers for some subtypes of acute leukemia were obtained.</p> <p style="text-align: center;">Public health and management profile</p> <p>There were determined the real morbidity, the epidemiological and ethiological peculiarities, risk factors in nosocomial septico-purulent infections; the Concept regarding monitoring and control of nosocomial infections in the medico-sanitary institutions of the Republic of Moldova; the Guide for monitoring and control of nosocomial infections was developed and implemented; 43 compounds with strong antibacterial and antifungal properties were identified; elaborated the composition and technology of the liquid form of Izofural and physico-chemical methods of the analysis and production of antibacterial remedy Izofural of 0.05% were elaborated; the bacteriological, toxicological and pharmacological studies <i>in vitro</i> and <i>in vivo</i> were carried out; established the storage conditions were established; the therapeutic activity of Izofural on the basis of the experiments with the example of inflammatory-purulent processes was assessed. The quality control was carried out and the the validity term of the remedy was determined. Technology regulations of its production were developed. The temporary pharmacopeia Monograph for the basic substance and medicine were elaborated; the analytical standardization documentation was registered and the licence for the production of the remedy was registered officially.</p>
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Clinico-therapeutic profile

There were revealed major risk factors and their heterogeneity in cerebrovascular stroke (CVS) and epilepsy in the population of the Republic of Moldova.

There were established clinical and evolutive peculiarities of chronic hepatitis and hepatic cirrhoses of alcoholic and viral etiology; differential diagnostic criterias of the pathologies were developed.

The epidemiology of endocrinologic pathologies in the Republic of Moldova in the period of 2006-2010, was studied the measures of an early diagnostics and secondary profylaxis of diabetes mellitus were proposed.

There were determined clinico-hemodynamic and biochemical parameters in patients with arterial hypertesion with obesity that lead to insulinoreistance; lipidic methabolism indexes were established and risk factors for the prognosis of coronary circulation disturbances in patients with metabolic syndrome were determined.

There were obtained new data as for morbidity structure in the elderly and the most important geriatric syndromes were established.

Clinico-surgical profile

The management of the treatment of nonacute otitis of the middle ear was optimized; laryngeal endoscopic microsurgery was implemented in cases of chronic amigdalitis in children.

The classification of esophageal varicose hemorrhages and the optimal diagnostico-curative algorithm for patients with intra- and retroperitoneal hemorrhages in cases of abdominal traumas were developed.

For the first time the method of endoscopic hemostasis of duodenal hemorrhagic varices by ligating with miniloop and the method of endoluminal hemostasis with mounting of esophageal stent in patients with uncontrollable hemorrhage in esophagus ulcer were developed.

The concept of obtaining celular grafts extracted from the bone marrow and of umbilico-placental cells with the possibility to use in many branches of modern medicine and implement in the Republic of Moldova.

There were developed methods of extracting and cultivating of *beta* pancreatic cells and experiments on their transplantation in diabetes mellitus.

Mother and child's health

There were determined anatomo-structural peculiarities of pathological processes in congenital malformations on the system level: feto-placental, organ, tissue, cells. Feto-placental system modifications with implication of the feto-placental vascular network were revealed. It was established that the presence of vascular thrombosis is determined by angyopathy diversity both displastic as a result of feto-placental malformations and toxic factors as a result of inflammatory-dystrophic modifications as a result of aggressive intrauterine infections; the algorithm of an early diagnostic and medico-surgical management in surgical septico-purulent pathology in children were developed.

There was developed a program for diminishing the incidence of perinatal encephalopaties by an ealy prophylaxis and preventive treatment of the nervous system in embryo of pregnant women of risk group. Some new markers of nervous system maturation in fetus such as biochemical, neurophysiologic, symptoms and clinico-paraclinical paralelism were studied.

	<p style="text-align: center;">Pharmacy profile</p> <p>A HPLC-UV method for dosing of pharmacological active compounds in flowers and leaves of <i>Crataegus monogyna Jacq.</i> and <i>Crataegus curvisepala Lindm.</i>) was devised; thirteen new pharmaceutical remedies were developed, 15 pharmaceutical monographs, 10 technological regulations were worked out, 6 production licences were registered officially; three new remedies: Coptizine and Neamon hepa with hepatoprotector effect, Propiconazol with antimicotic effect were developed and implemented. Imupurin as an immunomodulator, hepatoprotector, antioxidant remedy and as an aminoacids substitute and biostimulator in case of low immunity, complex treatment of infectious and inflammatory diseases was proposed was proposed. An experimental series of Neamon-Hepa was produced in „Eurofarmaco”,SA;</p> <p>New plant species were introduced in the collection of Medicinal Plant Cultivation Center; plant products from <i>Hypericum perforatum</i>, <i>Sativia officinalis</i>, <i>Cynara cardunculus</i> were obtained and they proved to have hepato-protector and antimicrobial properties.</p> <p style="text-align: center;">Stomatology profile</p> <p>A program of management and the amount of materials for recovery of patients with oral and maxillofacial pathologies was developed. It demonstrated the efficiency of titanium microplates in the treatment of posttraumatic osteomyelitis that allows an early recovery of patients with infected facial fractures as well as application of implants utility in facial fractures treatment.</p> <p>A study with implementing of technologies in developing of dental titanium implants was carried out and determined their effects on osteointegration was determined.</p>				
Number of organization' invited speakers at international conferences	2006 37	2007 41	2008 39	2009 51	2010 45
Short description of technological transfer and innovation results and its certification by implementation	<p>In medical practice 445 innovations, 63 politics documents, 299 methodological recommendations were implemented and 97 of them were implemented in activities of local and central authorities.</p> <p>183 inventions were patented, 4 of them – abroad. 153 inventions were implemented.</p> <p>Our concepts, methods and technologies were awarded with 192 medals at international and national exhibitions:</p> <p>Gold medals – 92; Silver medals – 64; Bronze medals – 36</p> <p>As a result of implementation into practice of the endoscopic surgical treatment of recurrent and chronic paranasal sinusitis in children, a faster recovery, significant reduction of incidence and recurrence duration (four times), diminishing of hospitalization time from 10 to 2 days were achieved and it contributes to a complete restoration of middle ear function.</p>				

	<p>Implementation of endoscopic laryngeal microsurgery diminished essentially the frequency of larynx papillomatosis recurrence in 60% of cases.</p> <p>Method of endoscopic hemostasis of ectopic duodenal varicose veins by mini-loops ligation was proposed.</p> <p>New methods of primary and secondary prophylaxis of esophageal varicose veins hemorrhage in patients with hepatic cirrhosis were proposed.</p> <p>The endoluminal hemostasis method with mounting of esophageal stent in patients with uncontrolled hemorrhage in cases of esophageal ulcers after endoscopic ligation was implemented.</p> <p>There were determined risk factors, etiopathogenetic mechanisms of duodenostasis caused by duodenal malrotation, secondary megacholodochitis, chronic pancreatitis and portal cirrhotogenic hypertension that result in some diagnostic and treatment complications with socio-economic impact.</p> <p>Clinico-evolutional peculiarities in septic-purulent infections in children were established and optimal medico-surgical management was developed which is individually adapted and pathogenically argued and contributes to the decrease of mortality rate.</p> <p>Risk factors were evaluated and pathophysiological mechanisms of cerebral ischemia in the acute form and strategies for thrombolytic treatment were determined.</p> <p>The complex study on electroencephalography video-telemetry improved knowledge of epileptogenesis, diagnostics and implementation of new therapeutic methods.</p> <p>Measures of primary, secondary and tertiary prevention of acute and chronic hepatitis, cirrhosis and primary hepatic cancer were developed. The concept and methodology to increase the level of knowledge of the population regarding epidemiology and prophylaxis of the pathologies were elaborated.</p> <p>Titanium microplates were developed and implemented in the treatment of post-traumatic osteomyelitis that led to an evident economic effect increasing treatment effect and shortening the hospitalization period.</p> <p>An elastic shutter for palatine defects and a method of determining cortical ridge density of the alveolar process were implemented.</p> <p>An antibacterial remedy "Izofural" (0.05% solution and 0.1% ointment) were developed and implemented with high efficiency in septic-purulent infections and burns.</p> <p>A series of pharmaceutical products (Imupurin, Imuheptin, Adenoprosin, vegetal oils (Regesan), Nucina, Raviten, Ravimig, Raviset) that are manufactured industrially and implemented in medical practice were studied, standardized and included in the National Standards documentation and clinical protocols.</p> <p>New plant species as <i>Hypericum perforatum</i>, <i>Salvia officinalis</i>, <i>Cynara cardunculus</i> were introduced in Medicinal Plant Cultivation Center (in Bardar); they represent a source of raw materials for vegetal antimicrobial and hepato-protector products.</p>				
Number of defended dr.hab./dr. theses per year	2006 5/42	2007 6/39	2008 8/37	2009 5/44	2010 6/27

VII. Present/further involvement in the Seventh Framework Programme (FP7): specific programmes (**Cooperation**, Ideas, People, Capacities) of interest and its subdivisions.

Domain – Health

Activity 1 – Biotechnology, generic tools and medical technologies for human health.

Topic for activity 1 – Regenerative medicine clinical trials

Project title – European clinical study for the application of regenerative heart valves.

Term of study – years 2012-2015.

VIII. Accredited research field and its evaluation by the National Council for Accreditation and Attestation of the Republic of Moldova (very good/good/satisfactory)

1. Medico-biologic profile (Evaluation mark – “Good”)
2. Public health and management profile (Evaluation mark – “Good”)
3. Clinico-therapeutic profile (Evaluation mark – “Good”)
4. Clinico-surgical profile (Evaluation mark – “Very good”)
5. Mother and child’s health profile (Evaluation mark – “Good”)
6. Pharmacy profile (Evaluation mark – “Good”)
7. Stomatology profile (Evaluation mark – “Good”)

IX. Category (A/B/C) attributed by the National Council for Accreditation and Attestation of the Republic of Moldova to the organization

The result of accreditation - Category A

X. Institutional development actions planned for the next 5 years (maximum ½ page).

1. The involvement of young researchers in the process of innovation and development activities has to be sustained.
2. The number of contracts signed with business partners has to be increased.
3. Technico-material capacities of laboratories have to be improved.
4. The number of project submissions, especially FP7 has to be increased.
5. The number of scientific publications in journals with impact factor, electronic editions and internationally quoted monographs has to be sustained.
6. The implementation of scientific patents has to be increased.
7. The number of trainings in high international centers has to be sustained.
8. The number of partnership projects has to be increased.
9. The number of international expertise and technological transfer events has to be increased.
10. Co-financing of research activities by National Health Assurance Company has to be documented.
11. Involvement of private sector for sustaining of stomatology and pharmacy research has to be encouraged.