

QUESTIONNAIRE

Please, fill in the Questionnaire and return it to contact person in Moldova:

depintrel@asm.md. Phone: 272254

(* – mandatory fields)

	Details about organization
* Organization name	Research Institute for Mother and Child Health Care
Organisation acronym	
* Organization Activity Type (RES - Research, HE - University, SME - Small and Medium Enterprise, IND - Industry, OTH - Other)	RES - Research
* Keywords of main research areas	pediatrics, neonatology, pediatric surgery, obstetrics and gynecology, immunology
* Head of organization (first name, family name)	Ludmila Etco, Professor, PhD, Habilitation Doctor of Medicine
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*** Description of organization and its research achievements for the last five years (~ 5000 signs)**

Research Institute for Mother and Child Health Care is a leading institution of the Republic of Moldova in obstetric, gynecology, neonatology and pediatrics (somatic and surgical) domains. The Institution has a scientific-curative profile, executes the base state projects and implements modern technologies in medicine, thus performing a noble objective of mother's and child's health care; it is a centre that cumulates and puts in practice the inventions of national and foreign researches, initiates and coordinates the daily activity of regional centers.

Research Institute for Mother and Child Health Care has the following directions of activity:

- * Scientific;
- * Organizational-methodic;
- * Diagnostic;
- * Curative-prophylactics;
- * Prequalification of superior and medium medical cadres;
- * Teaching by faculty, residency, and post-university studies;
- * Promotion of healthy mode of life.

At the moment, Research Institute for Mother and Child Health Care has a stationary of 1005 beds (450 – pediatrics, 275 – obstetric and gynecology, 280 surgical pediatrics) and 2 republican consultative policlinics: for women and children. The clinic of the Research Institute for Mother and Child Health Care disposes of a modern equipment and laboratories, auxiliary services of diagnostic, being a medical institution of a highest level. By the National Program, it covers the whole territory of the Republic of Moldova.

Grace to the sacrifice of chairs collaborators of the State Medical and Pharmaceutical University „Nicolae Testemitanu”, to collaborative relations with clinical doctors and scientific researchers, there is organized the accordance of hospital and ambulatory medical assistance of high quality, in curative departments of the Research Institute for Mother and Child Health Care with the participation of savants in curative process, performing of surgical interventions and clinical investigations, organization of morning and morphological conferences, medical consultations and visits, elaboration and implementation of new methods of diagnostic and treatment, medical

rehabilitation, prophylaxis, performing the process of university, post-university and continuum training of specialist doctors, implementation of evidence based medicine.

The Institution has a potential of 1678 workers, inclusive 52 scientific researchers, 311 doctors, 672 medical assistances. 6 researchers have a title of Hability Doctor of Medicine, 40 – Doctors in medicine (PhD), 475 are of superior professional category. Regular scientific studies in obstetric and gynecology, perinatology, somatic and surgical pediatrics domains, by thematic plains of scientific sections are performed in the Institution.

Research Institute for Mother and Child Health Care has 7 scientific departments:

- Obstetric and gynecology;
- Perinatology;
- Pediatrics;
- Pediatric Neurology;
- Surgical correction of congenital malformations at children;
- Immunology and Microbiology;
- Pathology.

They execute a chain of programs:

I. Evaluation of major risk of maternal prenatal, infant and children morbidity and mortality, and disablement of children in the Republic of Moldova.

II. Implementation of maternal deaths and prenatal audit at the national level.

Institutional projects in the process of development:

- ✓ Etiological, genetic, epidemiological, clinical and immunological aspects in allergic maladies at children.
- ✓ Determination of major risk factors in prenatal morbidity and mortality.
- ✓ Problems in diagnostic and treatment in process of rehabilitation of neurological handicapped children, and those born prematurely.
- ✓ The role of infection in genesis of post-operator morbidity and mortality of newborns with congenital malformations.

The Institution works in a close collaboration with Scientifically-practical Centre of Management and Public Health, National Centre of Preventive Medicine, with important international organizations – WHO, UNICEF, UNFPA, SOROS Foundation, university centers and governmental structures from Japan, France, Sweden, USA, Canada, Romania, Greece, Italy, Norway, Poland and others countries.

	Contact Information
* Contact person (first name, family name)	Olga Cirstea
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* Position	Junior Researcher
* Qualification and research experience	Pediatrician; working in research field since 2005, December
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International co-operation / Participation in EU RTD programs or other bilateral / multilateral actions
INTAS, TACIS, TEMPUS, COST, EUREKA, other RTD programs (please specify program/s, project title/s and year/s)
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	* Please, use "X" to indicate the scientific area/s of your potential project
CHEMISTRY	
SOCIAL AND HUMAN SCIENCES	
ECONOMIC SCIENCES	
ENGINEERING SCIENCE	
ENVIRONMENT	
AGRICULTURE AND FOOD	
HEALTH	X
MATHEMATICS	
INFORMATION SCIENCE	
PHYSICS	
NANOTECHNOLOGIES	
ENERGY	
TRANSPORT	
SPACE	

* Summary of potential research project envisaged hosting of European researcher for the period of between 1 and 2 years
<p align="center">Gene-Environment Interaction in the Development and Spread of Atopic Disease in Children (2009-2010)</p> <p>Research planned within the scope of this project will complete our previous scientific investigations in understanding environmental factors that are responsible for the development of allergic diseases in children (2006-2008) through the study of fundamental hereditary principles of atopy, i.e. a study of the asthma candidate genes in native children living in unfavorable environmental conditions.</p> <p>The analytical epidemiology methods will be applied to select children with hereditary susceptibility to atopy living in the regions with various physical and social conditions.</p> <p>The impact of each (genetic or environmental) factor on the onset of atopic disease in children will be measured through a systematic approach towards children's clinical condition, the morphological and functional condition of different organs and homeostatic systems of the body (respiratory, immune, and hereditary).</p> <p>The study will be carried out using a wide range of up-to-date genetic and immunological methods (e.g. candidate gene typing, analysis of the genetic expression profile, study of immune mediators and genes of interleukins).</p> <p>Through molecular research, genes will be defined for the final encoded protein products which are the most important for onset of atopic disease in children.</p> <p>The study of candidate genes in atopy and of genes responsible for synthesis of certain cytokines in the humoral immune response will allow us to define the molecular hereditary peculiarities, which predispose to the disease development.</p> <p>Based on genetic analysis, the selection criteria for high-risk family groups with atopic disease will be elaborated with a view to programming and improvement of prevention measures as soon as possible.</p> <p>The project foresees the elaboration of modern etiopathogenic programs of primary prevention and treatment, and their implementation in medical practice which will increase children's body tolerance to allergens, will decrease morbidity and disability in children population of the Republic of Moldova, and will improve the quality of life for children and their families with asthma and other atopic disease.</p> <p>The research results will be reported to the Academy of Sciences of the Republic of Moldova, the Ministry of Health of the Republic of Moldova, and the Council of Ministers with a view to elaborating measures and implementing them in future programs for prevention of hereditary diseases since the prenatal period, which requires a new approach to changing environmental and working conditions.</p> <p><u>Project purpose:</u> To assess the role of genetic and environmental factors in the development and prevalence of atopy in children and to elaborate adequate preventive and therapeutic measures.</p> <p><u>Objectives:</u></p> <ol style="list-style-type: none"> To study polymorphic variants of xenobiotics metabolizing genes GSTM1, CYP1A1, NAT2, GSTP, GSTT1, and IL4, IL4RA, and IL5 genes in healthy children and those with atopy.

2. To assess a correlation between external (environmental) factors and atopy in children with various genotypes.
3. To evaluate interrelation between candidate-gene polymorphism, clinical variants and severity of the atopic disease in children.
4. To develop adequate criteria for identification of groups of children with high risk to atopy.
5. To improve measures of prevention and treatment of children with atopic disease.

The *scientific novelty* of this research will include the evaluation of the role that genetic and environmental factors play in pathogenesis of atopic disease in children. The pathogenic importance of genetic polymorphism in the modification of respiratory function, peculiarities of the immune response, and the IgE dependent inflammation of bronchi will be determined.

Polymorphic variants of the GSTM1, CYP1A1, NAT2, GSTP, GSTT1, IL4, IL4RA, and IL5 genes will be investigated in healthy children and in children with atopy in Moldavian population for the first time.

The role of genetic polymorphisms of biotransformation enzymes and cytokines as well as their receptors in development and progression of atopic diseases in Moldavian population will be assessed.

The role of environmental factors on the development of atopic phenotypes in children with various genotypes will be estimated.

The theoretical background of atopic disease mechanisms will be developed to provide support for improved prevention and therapy schemes of these diseases.

Data concerning the actual spread of atopic disease in children and the evolution of epidemiology indices in dynamics will be developed and the most important risk factors of genetic and environmental cause will be delimited. Based on data obtained, measures to decrease atopic disease will be elaborated.

Description of estimated results:

Completion of the project will have **significant applications:**

- A database on genetic polymorphism in atopic disease in children will be formed.
- Prognostic algorithms will be elaborated, which will allow for the development of a new strategy for defining which groups of children are at high risk for the onset of atopy.
- The results obtained will allow the elaboration of prevention measures to reduce the frequency, severity and progression of atopy in children.
- New methods for pharmacological prophylaxis and immunomodulatory action will be implemented to further reduce atopy in children.

The geno-phenotypic analysis method, which will be elaborated, could be extended as a research model for other multifactorial diseases.

Socio-economic impact of the project:

- The quality of life of patients with atopic disease, especially of asthmatics and their families will be improved.
- Morbidity indices and the number of disabled children, and infant mortality will decrease due to methods of prevention, management and therapy of atopic disease.

Ways of implementation.

The scientific results will be reported and implemented at institutional and republican levels (including data on relevant indices of infant morbidity) and at all levels of health facilities through elaboration of management protocols for atopic disease in children and adolescents. If promising results are obtained, standard treatment and investigation protocols of children with asthma will be modified. The results of the research will be disseminated in scientific articles, algorithms on risk group selection, policies for prevention and treatment of atopic disease at all levels of medical care for children.

	Please, confirm your agreement on data publication and dissemination
I agree with the publication of the data on the web-site http://www.inco-eeca.net , and dissemination among Mobility National Contact Points of the EU MS and AC (YES / NO)	YES
Date	11.06.2008