

NATIONAL INSTITUT OF PUBLIC HEALTH



ANNUAL REPORT

2004

National Institut of Public Health, 2005

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1 Position and Tasks of the NIPH in the Protection and Promotion of Public Health

Under Act No. 258/2000 Dig. on the protection of public health in the valid wording of its article 86, the National Institute of Public Health has been founded as a healthcare facility, a contributory organization of the Ministry of Health of the Czech Republic. That legal decision came into force January 1, 2003, and thereby there has begun a new era of the Institute, continuing in its many year development and expansion, although from time to time interrupted by various organizational twists and turns that have never encroached on its professional quality. Its present director, Jaroslav Volf, M.D., Ph.D., assumed his duties on January 1, 2003.

Along with the new statute there have been newly defined the tasks of the NIPH and its position in the system of organizations concerned with the protection and promotion of public health. Following many year discussions there has been found a sound basis in the law even for the National Institute of Public Health. It seems that with the nearing of the anniversary of its 80-year duration the Institute is also formally returning into the firm structure of Czech healthcare, as it was in the 1920s on its establishment.

In its vast activities the Institute reflected the dynamics of the year 2004 that passed under fundamental changes in the structure of the former hygiene service. The Institute joined the ranks of healthcare facilities for which it has created a professional background. The tasks of the Institute are defined by law and in its statute. By law it has been established for the preparation of documentation for the national health policy, for the protection and promotion of health, for ensuring methodological and reference activities, for the monitoring and study of the relationship of the environment and health, for ensuring international cooperation in the protection and promotion of health, for quality control of services provided in public health protection, for postgraduate training and for health education of the public. The Institute also provides scientific and research activities as well as authorization and reporting activities.

The year 2004 was extraordinary for the Institute not only due to the gradual identification of its new role, but also in that with the entry of the Czech Republic into the European Union there have been, often at a hectic pace, finalized the legislative preparations of European integration. That required more than standard effort in the final touches on each document the preparation of which the Institute had participated in. Many new methodological and authorization activities followed from the needs of Regional Public Health Authorities and Regional Public Health Institutes in their fulfilling of requirements following from the Act on public health protection. The transition to being a contributory organization also meant substantial changes in its economics.

Notwithstanding a number of problems that have been a natural consequence and concomitant phenomenon of that period, the National Institute of Public Health is entering the year 2005 with good perspectives and self-conscience in becoming a modern and fully functional European healthcare facility.

2 Activities of the Centres and Expert Work Groups

2.1. Centre of Food Chain Hygiene

Profile of activities

The fundamental task of the Centre, defined at its instituting, are activities of healthcare experts in health protection and health promotion on the borderline between health care and the area belonging to agricultural experts, as had been recommended by the WHO.

Like in previous years, the CFCH has focused its activities on the problems of food safety and applied nutrition practically in all segments of risk analysis. The analysis of health risks proceeded within the framework of research. Health risk management was being materialized through participation in working out legislation and by technical support of decision making of the organs of state administration (foremost at the Ministry of Health of the Czech Republic, and in certain cases also at the Ministry of Agriculture of the Czech republic). Communication on health risks was materialized namely in the form of collaboration in education (teaching at universities and within the framework of training the staff of organs of public health protection), through collaboration with the media (e.g. news items for the Czech Press Agency ČTK through the Scientific Committee for Foodstuffs), and by creating its own web site (in 2004 namely for expert work groups). The number of graduated staff fluctuated between 27 and 30, including the technical support and administrative apparatus. To that relatively low number of workers there has also been adapted the scope of professional activities. Of the traditional activities on a long-term basis there predominated namely surveillance of the dietary exposure of humans within the framework of monitoring population health and consequent research and expertise activities. However, attention has also turned to other important research activities. In the microbiological diagnostics of pathogens in foodstuffs, research was focused on culturing and molecular biology methods and on the typing of epidemiologically important pathogens. In the novel subject of genetically modified organisms (GMOs) there continued work namely in theory focused on the study of novel cases notified within the Czech Republic and in the EU. There have also continued vast activities connected with the organizing of the agenda of the so-called Scientific Committee for Foodstuffs for which the Centre ensures a logistical hinterland and the heads in the Centre participate in the preparation of most of its documents destined for the public in the Czech Republic as well as abroad <http://www.chpr.szu.cz/vedvybor/vvp.htm>. Upon the entry of the Czech Republic in the EU there steeply increased the scope of activities ensuring the Rapid Alert System for Food and Feed (RASFF) for organs of public health protection. The Centre has formed an information system for organs of public health protection and on a regular basis evaluates reports from the RASFF, and in cases relevant for the organs of public health protection in the Czech Republic affords professional consultation (risk evaluation and primary drafts of health risk management). Important was also the work of leading workers of the Centre focused on the preparation of policy documents covering foodstuff safety. The workplace has to a substantial degree participated in the preparation of documentation for the Ministry of Health of the Czech Republic that has been applied in the Government order No. 1277/2004 Dig. concerning the strategy of food safety in the Czech republic upon entering the EU, as well as in the finalization of the document of the Ministry of Agriculture focused on “The concept of the

food industry in the Czech Republic”. Adequate effort has been devoted to the training of new experts.

Effect of quality control on the organization of work

In the year 2004 the Centre obtained a new accreditation certificate from the Czech Institute for Accreditation, ČIA, on the basis of a third successful passing of the accreditation procedure according to the Czech and European standard ČSN EN ISO/IEC 17025 and is valid till 2009. Maintaining the system of quality, the continuous requirements on quality at work and discipline along with average pay leads to a continuous turnover in the staff of the Centre. That has both a positive and negative impact. It facilitates a gradual reorganization of the team, however, the Centre is losing experienced workers who are then lacking in advanced research. That leads to increased labor costs in the framework of costly training programs. Newly coming graduates lacking practical working habits and frequently even with gaps in their professional knowledge, are not capable of independently working on tasks within time limits that the present situation calls for. That is manifested in lower competitiveness, namely as compared to developed EU institutions of like character. In that connection there can be expected growing demands in the fulfilling of the centre’s tasks, consequently leading to an increasing national and international division of labor. That shall undoubtedly increase pressure on greater specialization (technical and staffing) of the centre so as in future to be professionally successful in the EU.

The Centre’s most important fields of professional and research activities in 2004

The activities of the Centre are financed not only from the budget allotted to the NIPH, but also to a significant degree from purpose-bound sources such as national programs (1) and projects (1), as well as through national and international grants (3). Among the most important areas of professional and research activities in the year 2004 can be named the following:

In the field of monitoring the dietary exposure of humans there has begun the third research stage which differs from the preceding two five-year stages in a wider array of samples taken, that corresponding to changing dietary habits in the population of the Czech Republic. The task has been newly distributed over a two-year period after which there shall be made a final estimate of dietary exposures. Sampling was conducted in collaboration with public health institutes at 12 localities in the Czech Republic. Besides our own analytical activities, some samples have been analyzed in other national laboratories and abroad, and that proved to be economical and timesaving. In the monitoring program, besides exposure of the Czech population to chemical substances, also other parallel projects have been worked on, namely major pathogens in foodstuffs, presence of important toxigenic microscopic fungi, and detection of selected GM foodstuffs in the Czech Republic.

Concerning nutrition epidemiology, data collection has been finished within the framework of the First National Study on Individual Food Consumption based on a repeated 24-hour recall (the collection of data in the field was carried out by the firm GfK according to defined requirements). In the form of directed interviews there have been obtained responses to queries on repeated visits of more than 2500 subjects. A total of 5274 questionnaires have been filled in, representing a unique series of 2636 respondents.

Electronic data processing had begun in the course of the year already. Preliminary results of the study shall be applicable in healthcare practice in the year 2005 already.

As regards novel foodstuffs and genetically modified organisms (GMO), the year 2004 was significant in that activities have begun at the EU level. As of May 1, 2004, experts in the Czech Republic have their say in all cases notified in the EU countries. There has significantly increased the volume of theoretical technical activities. Due to that increase there shall have to be found a new mode of work, the present situation exceeding the capacity of the Centre. First of all, in question are the rationalizing of work with information and the introduction of an improved information system. In the course of the year, demands on laboratory activities have not increased. Practically all requirements come from other EU member countries. In the field of microbiology there have continued studies on problems of toxinogenic micromycetes. Data have been produced concerning the incidence of alternaria mycotoxins as well as of deoxynivalenol, that in 2005 should be assessed with the aid of a new probability evaluation of population exposure. In the area of detecting bacterial pathogens in foodstuffs there has been finalized the introduction and verification of certain molecular biology methods in diagnostics. In the year 2004, the demonstration of bacteria of the genus *Salmonella* and the species *Listeria monocytogenes* in foodstuffs has been performed by the PCR method. The epidemiological situation revealing a rapid increase in diseases caused by thermotolerant campylobacters has led to the introduction of a method for the species identification of isolates in humans, animals, as well as in foodstuffs. Hundreds of isolates have been analyzed in the course of the year 2004. Routine work included the typing of salmonellae, listeriae, and the follow-up of resistance to antibiotics in those pathogens. Activities in the field of microbiology have been specified more clearly in the annual reports of two reference laboratories (the NRC for Microscopic Fungi and their Toxins in the Food Chain, and the NRL for Listeriae in Food Chains) that are functioning at the Centre.

In the area of analytical chemistry there continued work on the optimization of the method for demonstrating acrylamide in various kinds of foodstuffs. This method is being applied on an on-going basis in the monitoring of dietary exposures. A certain part of the Centre's capacity has also been devoted to the study of the content of folic acid and tin in selected samples from the nationwide monitoring project. In collaboration with extramural companies there have been carried out determinations of arsenic species, tin compounds and TCDD-effect substances in selected samples of foodstuffs from the consumer food basket. There have also been conducted analyses of the glycoalkaloid content in potatoes (solanine, chalconine) so as to be able to carry out a probability assessment of risks in the year 2005 (international comparison).

Systemic and methodological support of organs of public health protection at the international level

On the basis of its scientific research activities the Centre is involved in the following systemic and methodological support of the activities of organs of public health protection.

The Centre is a contact point of the organs of public health protection for the rapid alert system for foods and feeds (RASFF). In the year 2004, out of an overall number of around 5000 RASFF reports from the EU, a total of 13 warnings, 8 pieces of information, and 20 novel items have been evaluated to be relevant for the Czech Republic.

Consequently, 33 draft reports have been sent from the Czech Republic. In collaboration with other members of the RASFF network in the Czech Republic there has been elaborated methodological material for the evaluation of health risks. Workers of the Centre have participated in the preparation of a Government Decree on the RASFF system that shall be published in 2005. An information system is in operation.

The Centre includes the Task Force for Novel Foodstuffs and Genetically Modified Organisms, which co-ordinates the activities also of other experts at the NIPH. Over the year 2004 there have been elaborated 85 expert opinions. In 2004, since the accession to the EU, the volume of work is markedly on the increase. Workers of the Centre participate in the activity of the EU Working Group for Novel Food (CAAAFAB), and newly also in that of the group for the EP and EC decree No. 1829/2004 (GMO). Besides that they also represent the Czech Ministry of Health in the so-called Czech Commission for GMO at the Czech Ministry of Agriculture, and participate in laboratory activities by contract. The workers of the centre have also been entrusted to represent the Czech Republic in the Task force for Safety of Novel Foods and Feeds at the OECD in Paris.

At the centre there has its seat the so-called Scientific Committee for Foodstuffs (SCF) established by Government Decree No. 1320/2001. The Centre has been entrusted with creating a background for it. In the course of the year 2004 the SCF put forth a number of vast public materials (cross-sectional documents in the field of food safety) and elaborated a number of standpoints to submitted queries. There have also been prepared drafts for the European Food Safety Administration (EFSA), e.g. on the problems of NDL-PCB and the descriptive document on the carp *Cyprinus carpio*. A persisting complication in the work of the SCF is a lack of top experts who are not only willing but also are competent to work effectively for the SCF. At present two posts for experts are vacant in the SCF.

In the area of collaboration in the harmonizing and implementation of European law, the Centre has participated on a routine basis, in the assessment of legal documents in the field of novel foodstuffs and GMOs, in the area of chemical and microbiological contaminants in foodstuffs, and generally also in other areas related to food safety and applied nutrition. Workers of the Centre are being summoned regularly to groups preparing government documents and policy strategies specialized in character (e.g. food safety, food production, obesity).

In the year 2004 the Centre continued at its job as WHO Contact Point for Food Safety. Besides supplying information from the WHO, through the RASFF information system for organs of public health protection, the Centre has taken over the dissemination of safety information from the WHO warning system Infosan. Thanks to the long-term program of monitoring dietary exposure, the Centre actively participates in the activities of the international group GEMS/FOOD WHO, e.g. as invited lecturers at workshops.

In the area of education, workers of the Centre are participating in the system of preparing so-called authorization sets following Act No. 258/2000 Dig. On Public Health Protection. Workers of the Centre are also heads and members of commissions for the assessment of health risks of chemical and biological agents in foods and feeds. At the Centre there has been defended one Ph.D. Thesis in 2004. In parallel several students from different universities are preparing their theses for a degree. Also study visits by secondary school students have taken place.

2.2 Centre of Health and Living Conditions

The activities of the Centre have been fundamentally influenced by the accession of the Czech republic to the EU. While in preceding years much activity had been devoted to preparations for harmonizing Czech legislation with that of the EU, the year 2004 meant its filling with concrete content, and that was reflected namely in the intensity of activities in the area of consumer health protection. Of course, there has simultaneously been focused attention on the preparation and amendments of decrees to Act No. 258/2000 Dig. *On public health protection*. Developed on was also the area of health promotion by working its own projects with nationwide impact on the one hand, and on the other by methodological assistance and creating of methods for project assessment. Besides that, the NIPH was entrusted also with controlling work on selected projects. The Centre organized and to a considerable degree supplied lecturers for several educational courses for the staffs of Regional Public Health Authorities and Public Health Institutes. Within the framework of research intentions and grant-supported projects, a number of tasks have been worked on. Just as in preceding years, the Centre has published an annual series of titles on health education, as well as the Child's Public Health and Vaccination Card.

Within the framework of increasing the quality of work and the ensuring of legislative obligations in public health protection in the area of products, there has been conducted a renewal of accreditation of the CHLC at the Czech Institute for Accreditation. The laboratories of the CHLC had been accredited as a whole under No. 1206.3 according to the standard CNS ISO EN 17 025, and in the year 2004 obtained re-accreditation for another 5 years, that being a fundamental step towards their centralization.

On the basis of Decree of the European Parliament and the European Council No. 88/2004/EC there has been established a new NRL for Food Contact Materials and Articles, and there has been prepared its inclusion in the network of national reference laboratories of EU member countries.

In the area of national legislation the staff of the Centre have participated systematically in the preparation of amendments to Act No. 258/2000 Dig. *On public health protection*., and of consequent decrees. Those were namely Decree No. 26/2001 Dig. *On cosmetics products*., Decree No. 84/2001 Dig. *On public health requirements on toys and other products for children under 3 years of age*. Regarding the Act on foodstuffs there has been elaborated documentation for decrees or their amendments. Those were, e.g. Decree No. 54/2002 Dig. in which there have been set the public health requirements on the identity and purity of additives, Decree No. 446/2004 Dig. in which there have been set requirements on food supplements and on enrichments of foods with dietary supplements, Decree No. 305/2004 Dig. in which are defined the kinds of contaminants and toxicologically significant substances and their permitted quantities, Decree No. 158/2004 Dig. in which there are set the maximum permitted amounts of residues of each kind of pesticide in foodstuffs and food raw materials. Active was also the participation in preparations of the Act on protection against damage caused by tobacco, alcohol, and other addictive substances. This area also includes the participation in the preparation of the National Strategy of Anti-narcotics Policy for 2005-2009.

The CHLC has been participating in the coordination of several goals of the European strategy Health 21. Marked were the activities in the creation and amending of European legislation and its implementation in the Czech Republic. Those were activities

namely in the area of protection against pesticide residues, in the implementation of technical amendments of the EU guideline for cosmetics, participation in the introduction of EU legislative requirements concerning food additives and the fortification of foods, participation in the preparation of the European decree on microbiological criteria for foodstuffs, participation in the standardization of methods for the microbiological testing of foodstuffs, participation in the preparation of EU guidelines and decrees on the safety of food contact materials, and participation in preparations of the European standard for the production of wrapping for foodstuffs.

Individual experts of the CHLC are members of expert commissions in the area of pesticide residues, etc. Important is namely the membership of Mrs Jírová, M.D., in the EC Permanent Committee for Cosmetics, the EC Working Group for Cosmetics, the Scientific Committee of the European Centre for Validation of Alternative Methods, the EC Scientific Committee for Cosmetics and Non-food Products, and the membership of Eng. Sosnovcová in the EC and Council of Europe Working Group of Experts for Food Contact Materials and Articles, and the EC Working Group for Safety of Toys. With the implementation of European law is connected her representing the Czech Ministry of health in the Coordinating Group for problems of Obstacles in the EU Internal Market in Non-harmonized Areas.

The Ministry of Health has entrusted the CHLC with the forming of a coordinating, monitoring and research workplace for the implementation of the European action plan *Tobacco-free Europe* and the European action plan on alcohol.

Collaboration with the Ministry of Health is extensive. Aside of much documentation created within the framework of legislative activities, documentation for the Chief Public Health officer and current requests for expert opinions, in question were newly introduced systems. The Centre has become the branch contact place for RAPEX – the early warning system for the occurrence of dangerous products on the EU market following EU Directive No. 2001/95/EC, the ensuring of risk assessment of products of common use. The Centre keeps the database ISIS – a register of the Chief Public Health officer's decisions on the approval of the introduction of selected products on the market, collaborates with the Ministry of Health on the formation of the database of decisions of the Chief Public Health Officer on dietary supplements, and following the requests of the Ministry of Health processes results of investigations by the public health service in the area of check-ups on meals.

Further, there have been developed activities in the area of health promotion at the national as well as international levels. The Centre for the Coordination of EU Community Projects ensured collaboration with the organization EuroHealthNet. There have been materialized namely the projects *Getting Evidence into Practice*, *Healthy Ageing*, *Health and Social Inclusion*, *The Alcohol Policy in a Larger Europe – Bridging the Gap*, and *Health Professionals and Smoking cessation in a Larger Europe*. For the Centre's activities important was foremost the European project *Getting Evidence into Practice*, the objective of which is the international standardization of health promotion projects. In the evaluation of projects worked on within the framework of the *National Program of Health in the Czech Republic* the Centre participated by the control of those projects and by the methodological support of them. The Centre worked on 8 health promotion projects directly, of which the most relevant were projects of nationwide scope: *Stop and Win*, *Health Promotion Pharmacies*, *Prevention on the Internet*, *A Tasty Life*, *Challenge Your Heart to Exercise*, and *Courses for Workers in Health Protection and Promotion*.

Participation in the campaign *Challenge Your Heart to Exercise* to increase physical exercise was a priority in the activities of all public health institutes in the Czech Republic. There has been broadened the scope of preventive activities on the Internet, namely by the inclusion of a test for assessing one's own health risks on the NIPH web site. The Centre has organized campaigns for the *World Tobacco-free Day* and the *International Non-Smoker Day*.

An important health promotion activity has been activities in connection with coordinating WHO projects *Health Promotion Schools and Kindergartens* and *CINDI*.

The basis of methodological; and reference activities were educational campaigns. There have been held several seminars and courses on the following subjects: *Overseeing Cosmetics Products*, *Safety Assessment of Food Contact Materials and Products*, *Safety Assessment of Toys*. The NIPH staff in the said areas has participated in the education of producers, importers and distributors. Among the traditionally successful seminars are *Smoking and Me*, seminars for workers in health promotion schools, *Metrology in the Microbiology of Foodstuffs*, and seminars of the Drugs Information Centre. Significant was the educational series *Methods in Health Promotion*, the six modules of which have been attended by health promotion workers from all the public health institutes. The series has become the basis of the system of life-long education of experts in health promotion.

Aside of seminars and courses there have been held individual and group consultations and methodological visits of workers from the Centre to Regional Public Health authorities and at laboratories of Public Health Institutes.

Paid expertise activities were namely in the area of assessing the safety of cosmetics and cleansing products, toys, articles for children under 3 years of age, food contact materials, building materials, dietary supplements, special nutrition foods, food additives, and plant protection products. There have been made 1753 assessments, each of which included negotiations with the submitter, study of submitted documentation, an analysis of a multiple of samples, and the elaboration of an expert opinion. Through those activities the Centre has markedly participated in the positive economic balance of the NIPH in the year 2004.

The year 2004 was also abundant with research activities. Finalized was work on research projects from the preceding period, and research plans were being elaborated for the one to follow. Within the framework of the last year in the working of research projects there have been carried out further studies. A further alternative method has been introduced – the determination of dermal tolerance in 3D models of human skin. Evaluated have been exposures to halogenated hydrocarbons from soft drinks. There have been finished and processed investigations of predictors of personal well-being. There have been finalized studies for the evaluation of health risks in behavior, for the determination of the prevalence of the smoking habit in the adult population and of the prevalence of smoking among the paramedical personnel.

The staff of the Centre has worked on or participated in several grant-supported research projects. In question were projects from GA Acad. Sci. CZ, *Hydrophilic Polymers with Bound Saccharides for Biological Applications* within the EU project *Whether the Prevalidated Human 3D Epidermis Model in vitro Phototoxicity Test Could Successfully be Used for Toxic Potency Testing*, from GA CZ, *Psychosocial Inequality in Health, Psychological Aspects of Behavior Relating to Health in Adulthood in Subjects Followed up from Birth on a Long-term Basis*, from IGA, *Study of Antimutagenic and*

Immunomodulatory Effects of Selected Substances of Natural Origin, Analysis of the Share of Smoking in Morbidity and Mortality in the Czech Republic and the Quantification of Economic Costs of Treating Diseases Caused by Smoking, Comparative Analysis of the Behavioral Components of Health in School Children.

The Centre, publisher and producer of health education aids, within the framework of the editorial plan for the year 2004 there has been published a total of 16 leaflets, 6 booklets, and 5 posters. Five publications were intended for the Internet. There has been produced a video-film, *It is Wonderful to Live*, about health promotion in the Czech Republic. Publications and video-films are distributed through the Public Health Institutes. Workers of the Centre have participated as authors in the majority of them.

As every year, in 2004 there took place extensive communication of the Centre with representatives of the public media.

2.3 Centre of Environmental Health

Expert Group on Water Hygiene + NRL for Drinking Water

The predominant activity of the NRL is the providing of expert opinions, statements and consultations on problems of hygiene and analytics of drinking water and recreational water. In 2004, the number of issued opinions exceeded 150; there were thousands of consultations and information given by phone to organizations as well as to individuals. Within the framework of expert assessments of the safety to health of articles and chemical substances intended for contact with drinking water there have been evaluated around 32 products and substances. The Expert Group conducted 9 inter-laboratory comparative tests for water analysis laboratories.

A large portion of effort has again been devoted to the preparation of new legislation (amendments of decrees concerning drinking water, bathing facilities, products intended for contact with drinking water, and bottled water) and new methodological instructions or recommendations of the NRC (methodologies for the monitoring of lead content in drinking water, in residential buildings, for the determination of enteroviruses in bathing water, for checking on heated water quality, for parasitic protozoa control in drinking water, etc.), including drafts of technical standards (TNV 757340 on water quality – methodologies of orientational sensory analyses). In the course of the year, trained workers of the Expert Group in the role of auditors and major auditors have participated in the authorization of several laboratories (sets A1-A4 and D1), participated in authorization courses for the assessment of health risks and in the testing of applicants for authorization in risk assessment.

An on-going component are methodological activities and postgraduate training regarding the whole public health service. There have been held 4 seminars, 2 tutorial days and 7 study visits for about 735 persons. Workers of the Expert Group held more than 35 lectures at various seminars and conferences in the Czech Republic and abroad, and published several dozens of articles in professional journals. The Expert Group has a web site updated on an on-going basis for the professional as well as the lay public.

From the research activities conducted within the framework of research intentions and an AVČR grant-supported project there can be named research in the prevalence of serum antibody response to cryptosporidia in relation to differing water quality, the detection of legionellae in the network of heated utility water under various regimes of sanitation and the determination of potential formation of by-products of disinfection. The Expert Group continued (by holding a workshop and by participation in the activities of expert groups for chemical and microbiological quality of drinking water and for sampling) in the fulfilling of the European project “Web-based European Knowledge Network on Water” initiated in 2002. The Expert Group has also initiated the founding of the national working group “Novel Contaminants in Drinking Water” (November 2004) which should be systematically involved with novel risks emerging from drinking water.

Expert Group for Ambient Air Hygiene

The content of professional activities was foremost the processing of expert opinions, health risk assessments, legislative activities, tuition, providing consultations, and inter-branch collaboration in expert groups. A significant component of activities was also the coordination of the subsystem of the MZSO project *Monitoring of the Indoor and Outdoor Ambient Air in Relation to Population Health* and the evaluation of results thus obtained. Expertise activities included expert assessments and a number of measurements of the outdoor and indoor air.

In the laboratory activities there can be included organizationally and professionally demanding activities such as:

- Organization of programs of qualification testing – 8 have been organized in 2004;
- systematic follow-up of Prague ambient air pollution by mobile units;
- development of QA/QC procedures by the gas calibration laboratory.

In 2004, aside of the annual audit of accreditation activities by the Czech Institute for Accreditation, there has been finalized the process of authorization in full range for the measuring of the quality of outdoor ambient air at the Ministry of Environment (automated and aspiration procedures, PAH determinations, and the taking of suspect particles of the PM₁₀ fraction following the CSN EN ISO 17025 standard).

Since January 2004, there have been broadened the activities of the expert group by the inclusion of problems concerning indoor ambient air. In that area, legislatively covered by Decree No. 6/2003 Dig., there have been materialized several expert opinion procedures and elaborated methodological requirements on the strategy of sampling indoor ambient air, and methods of measuring the quality of indoor ambient air (determinations of NO₂, CO, O₃, suspect PM₁₀ and PM_{2.5} particles, VOC, formaldehyde, ammonia).

An on-going component of the group's activities are methodological activities and postgraduate studies for the whole public health service. There have been held 3 seminars/tutorial days; workers of the expert group have held more than 30 lectures at various seminars and conferences in the Czech republic and abroad, and published 2 articles in professional journals. The expert group's web site for the professional and the lay public is updated on an on-going basis.

In the section on research there can be included the final stages of research intentions of the Ministry of Health of the Czech Republic (Health risks from pollution in the ambient air – preparation of documentation for the publication of results), continuation of the Ministry for Environment grant project (R&D – Characterization of the load in the population of small towns with noxae from the ambient air, and ambient air pollution with bio-aerosols), and continuation of collaboration in the grant-supported project of the Ministry for Environment (R&D - Determination of the effectiveness of measures for limiting ambient air pollution on the basis of lowering the negative effects of pollutants on components of the environment and on human health).

Expert Group for Hygiene of Soil and Waste

The predominant activity of the NRL is the providing of expert opinions, assessments and consultations on problems of waste, namely regarding the risks in waste

management, including the assessment of various waste management technologies and for the clean-up of old environmental burdens. Within the framework of expertise on assessments of the safety of products as regards health, there have been assessed 60 products. A component of its activities are clinical and microbiological analyses and ecotoxicological tests.

A portion of activities has been devoted to new legislation (Amendment of Act 185/2001 Dig. on waste, and Amendment of Ministry of Health Decree No.464/2000 Dig.; as well as preparation of documentation for the authorization of laboratories and of the new methodical instruction for the management of waste from healthcare facilities). The greatest part of those activities was the participation in materializing waste management plans in the area of minimizing health risks in waste management.

Within the framework of methodological activities there has been held a three-day course on the assessment of dangerous properties of waste, 2 tutorial days, and study visits for about 280 persons. Workers of the Expert Group held more than 30 lectures at various seminars and conferences in the Czech Republic and abroad, and published around 20 articles in professional journals. At the department there studied 3 pre-doctorate trainees, and 4 qualification theses have been elaborated.

Of the research activities carried out within the framework of research projects and R&D (Characterization of the load in the population of small towns with noxae from the ambient air, and ambient air pollution with bio-aerosols – Potentials and ways of utilizing sludge and waste from waste water treatment plants) foremost have been worked on Health Risks in the Management of Hazardous Waste and Risks of Microbiological Contamination of Environmental Factors.

Also in 2004 there has also been conducted, in collaboration with respective Public Health Authorities, the monitoring of soil in urban agglomerations in preschool facilities of selected cities.

The NRL has participated the eighth year in international ring rests conducted by the Department of Soil Science and Nutrition, Wageningen Agricultural University.

Expert Group - Indicators of Health

Within the framework of monitoring project No. VI – *Assessment of the State of Health* – there took place the final evaluation of the first stage of the HELEN Study determining the relations between health, lifestyle and the environment (overall, 27 cities and towns were evaluated); the final results of the study of 1998 through 2002 have been presented at the nationwide conference *Monitoring the State of Health* in Milovy and at a conference devoted to problems of AIDS in Poděbrady. In the year 2004 there has begun the IInd stage of the study and has been materialized in 9 cities of the Czech Republic.

The processing of routine statistical data in 2004 included the treatment of data from districts on infant, neonatal and perinatal mortality, on the numbers of spontaneous and artificial interruptions of pregnancy. Data on the proportion of low-birth-weight children have in addition been processed from former district cities, and that has shown that data characterizing the district as a whole, characterize insufficiently the situation in the city. Therefore, in future there shall be reduced the number of indicators, and district cities shall be chosen as geographical units. Preserved shall remain the comparison of selected indicators of health in the Czech Republic with those in other UE countries.

There has been finalized the processing of objective No. 6 *Studies in the Relations Between Parameters of Health and the Environment* of subproject No. III *Health Risks in the Environment*, there has been evaluated the share of the influence of lifestyle factors, socio-economic influences, effects of the environment, and the influence of heredity on health. In summary, it can be stated that there has been found a statistically significant relation between population health and all the factors assessed. Strongest is the effect of socio-economic factors, that of the environment being the weakest in comparison with all other factors.

Within the framework of materializing the project *Risk Factors in the Appearing of Bad Posture in School Children, Prevalence of diseases of the Locomotor Apparatus* supported by grant IGA MZ ČR NJ/7386-3, there has been finalized the investigation of a selected sample of the child population and carried out analyses of the data obtained. Selected results have been presented at the conference at Milovy, *Monitoring the State of Health*.

The Group participated in the materialization and processing of the results of a screening study on the exposure and burdening of the population of Lysá nad Labem to dioxin-effect polychlorinated biphenyls.

The Group participated in the task *Health Risks in the Environment* of the subproject *Analysis of the Health of the Population in the Environs of the NPP Temelín*. The major task at that stage in 2004 was the processing of data obtained through a questionnaire survey with the aim of describing the occurrence of selected determinants of health in the population living in the environs of the NPP.

The group has participated in the processing of the subproject *Population Health and the Level of Exposure* within the framework of R&D 740/01/02 *Determining the Effectiveness of Measures for Limiting Ambient Air pollution on the Basis of Minimizing the Negative Effects of Pollutants on the Environment and on Human Health*. For the assessment of population health there have been selected several indicators concerning mortality, hospitalized morbidity and the birth weight of newborns. There has been evaluated the development of district and urban indicators over the years 1995-2003, including international comparison with selected European countries. The evaluation has been supplemented with cartograms (GIS) that depict the distribution of the indicators in the course of 1995 through 2003.

Expert Group for Noise in the Environment

Among the activities of this Expert Group is the resolving of Project III – *Health Consequences and Disturbing Effects of Noise*. In 2004 the measuring of noise was conducted at selected basic localities of 19 cities in the Czech Republic. Further, there has been evaluated the estimate of the relative risk of health impairment by nighttime noise in adjacent localities. In the period 2002 through 2003, of a total number of around 42,000 inhabitants in adjacent localities of 16 cities there has been estimated the impairment of health by noise in 4.1% (approx. 1720 subjects) on condition of at least 10 years of residence at the site of approximatively determined noisiness, that being by 0.4% more than in the previous period 2000-2001. The results of monitoring have been presented at the nationwide conference *Monitoring of the state of health* in Milovy. Within the

framework of expertise activities there have been evaluated three studies on noise from the point of view of its health effects on the affected population.

Expert Group and National Reference Workplace for Genetic Toxicology

The predominant activities of the NRL were consultations, training of field workers, standardization of methods in the framework of public health institutes, and the organization and evaluation of interlaboratory comparative tests between public health laboratories in the Czech Republic and in Slovakia. Those activities have been presented in a separate report on the activities of the NRL. Within the framework of coordination of work on MZSO Project 5 (Biological Monitoring) there have been processed and published data obtained in the preceding stage and there has been prepared the fourth stage of biological monitoring in newly selected regions. Within the framework of research projects there has been finalized work on five research tasks focused foremost on the follow-up of the toxic element load in the population, the follow-up of the saturation of the population with beneficial elements, and the follow-up of exposure to genotoxic substances in the environment. Another significant activity of the EG was work on the EU grant-supported project in the Fifth Framework Program – *Cancer Risk Biomarkers*, as well as work on the Environment ministry grant-supported project *Ambient Air Pollution and Health Protection*.

The EG has participated in the evaluation and interpretation of results of the *Study of the Load on the Population Living in the Environs of Spolana Neratovice with Persisting Chlorinated Organic Substances*, in the elaboration of the report and in the communication with the public and the media. In the same manner it has participated in the evaluation and interpretation of results of analyses of dioxin-effect substances in the blood of subjects from Lysá nad Labem. There also can be mentioned participation in the preparation of the National Implementation Plan for POPs in connection with the Stockholm Agreement.

Of the other activities there has to be mentioned the assessment of reports on handling GMOs from the point of view of their health risks.

An important component of the work of this EG was the presentation of results at international conferences, publication and lecturing activities.

2.4 Centre of Epidemiology and Microbiology

Through the EpiDat, ARO and ISBT programs the Centre ensured the nationwide reporting of infectious diseases. The reports have been processed on a weekly basis and outputs were provided to the public health service. Monthly processing summaries including commentaries on the occurrence of each infection have been published in the bulletin “News from the CEM” (in Czech) and on the web site of the NIPH. Twenty-five reference laboratories of the centre have participated in the ensuring of nationwide surveillance programs over infectious diseases. There have been revised, reworked and amended the methodological instructions of the Chief Public health Officer for the safeguarding of surveillance over infections preventable by vaccination so as they meet the requirements of EC directives (2119/98/EC, 2000/96/EC, 2002/253/EC, 2003/542/EC). There has continued the fulfilling of WHO-EURO requirements following from the programs of polio and measles eradication. The microbiological laboratories of the centre have successfully passed the final audit of a three-year period according to standard ISO/IEC 17025 and have prepared themselves for accreditation following standard EN ISO 15189.

The centre provides External Quality Assessment (EQA) of diagnostics in microbiological laboratories. The spectrum of sent-out samples of microorganisms and sera is being ever broadened, reaching 31 in the year 2004. Sent off have been 3400 parcels containing almost 15,000 samples. Summarized results of diagnostics of each ring have been published on an on-going basis in the bulletin “News from the CEM” (in Czech). Health insurance companies pay the bills for the examination of biological material to microbiological laboratories only when they are participants in that EQA.

Workers on 19 subprojects of the NIPH Research Project have elaborated a final report for the whole period of its duration. Within the framework of the Centre, 6 IGA MZČR projects and 2 GAČR projects have been worked on. The staff of the centre participated in 25 EU projects and one prospective vaccination study.

At the Centre there have been operating three WHO Collaborating Centres (WHOC), namely the WHOC for Streptococci, the WHOC for TBC Bacteriology, and the WHOC for Reference and Research in Borreliosis.

There continued the surveillance program of invasive meningococcus affections, hemophilus affections, pneumococcus affections and affections caused by group A streptococci. Programs of active surveillance are being carried out in correlation with programs of the EU (MenNet, EU-IBIS, Strep-EURO). Strains isolated are characterized in detail with the aid of molecular biology methods. There has begun preparatory work on the introduction of genetic markers for the differentiation of capsule-less variants of *S.pneumoniae*. Both, the routine application of PCR for confirmation of the etiology of invasive affections and the multilocus sequence typing of PCR products have improved the quality of surveillance data. The complex of results obtained has been the basis for the vaccination strategy in the Czech Republic. Following the EU protocol, there are being followed up any possible failures of the newly introduced routine vaccination with the hemophilus vaccine. Anti-hemophilus antibodies have been determined by the ELISA method.

As regards viral respiratory infections, there has been secured the virological part of the surveillance of ARD in the Czech Republic through international collaboration with the

EU (active participation in the European system of EISS) and with WHO (active participation in the Global Program of Influenza Surveillance). The identification of isolated strains of flu and non-flu respiratory viruses, collaboration with the WHO NIMR influenza centre in London in the testing of antigenic alterations in circulating influenza strains, preparation of antigens and ELISA sets for rapid diagnostics of flu and non-flu respiratory viruses, the fulfilling of EU programs “Improving the Quality of Surveillance of Acute Respiratory Infections in the Czech Republic” (a pilot study is in course – 490 samples from all regions of the Czech Republic have been investigated up to now) and “Laboratory Diagnostics of High-Risk Respiratory Viral Agents” (the laboratory is ready for PCR and IF diagnostics of the SARS coronavirus, as well as for PCR and serological diagnostics of avian subtypes of the flu virus H5, H6, H9).

There have continued the diagnostics of infections caused by herpesviruses, chlamydiae, viruses of measles, rubella and mumps, and parvovirus B19; and the confirming and interpretation of obscure laboratory findings. There has been developed a method for the demonstration of the DNA of *C.pneumoniae* and *C.trachomatis* with the aid of real-time PCR (grant project IGA MZČR). Followed up were HHV8 infections in patients after allogenic transplantation and carried out the quantitative demonstration of CMV DNA in the blood of transplantation patients. Compared has been the diagnostic efficacy of various methods of CMV DNA quantification in clinical material.

The NRL for Enteroviruses collaborates with the WHO in the post-eradication period in Europe in the preparation of global poliomyelitis eradication. Investigated are cases of acute flaccid paresis in children under 15 years of age. Each case is reported to the WHO office in Copenhagen and to the RRL in Helsinki. Studied has been the occurrence of polio- and other entero-viruses in the environment, in the waste water of Regional Cities and refugee camps, and there was carried out the isolation, identification and quantification of antibodies against polio- and other entero-viruses in patients.

The major subject matter of the reference laboratory for the follow-up of resistance to antibiotics was the complex study of the epidemiology of the resistance of bacteria by phenotype and genotype methods, and the ensuring of EQA – Bacteriological Diagnostics, including the processing of the document in electronic form. These problems have been worked on through public health projects of the Ministry of Health of the Czech Republic, and their objective is the control of antibiotics resistance. The laboratory has also participated in the EC DG SANCO project *European Biological Resource Centres Network* (5th Framework Program), *European Surveillance Antimicrobial Resistance System* and *Pneumococcal Resistance, Epidemiology, Virulence – International Study* (6th Framework Program).

There have been conducted special immunochemical diagnostics of virus hepatitis A – E, and molecular biology diagnostics of hepatitis B, C, and D. There have been published results of a finalized GA ČR grant-supported project devoted to the TT virus. There continued the application of sequenation analysis for the determination of clinically important HBV mutants in the immunodominant antigenic determinant of the surface antigen of the virus and in the pre-C region of the HBV genome.

In the area of intestinal bacterial infection there have been diagnosed in detail several hundred strains of staphylococci and intestinal bacteria. There have been followed up the basic factors of virulence and so there have i.a. been elucidated several cases of toxic shock syndrome, staphylococcus enterotoxigenesis, and two epidemics of pemphigus in

newborns. With the PCR method there has been namely introduced the determination of PV leukocidine in strains from cases of severe dermal infections. Of the two grant-supported collaborations there has been finalized the GA ČR project, and there continues collaboration with the Centre of Food Chain Hygiene in the follow-up of multiresistant salmonella strains. The laboratory has successfully participated in two European control systems of comparing laboratory qualification. In collaboration with epidemiologists the expert group has participated in the EU project *EnterNet*.

In the year 2004 the greater part of the subject matter of the activities of the group working in disinfection and pest control has been the verification of the efficacy of agents for protective disinfection and insect and rodent control as a component of their approval procedure in the framework of Act No. 120/2001 Dig. on conditions of introducing biocides on the market; further, the verification of sterilizers and the characteristics of indicators of sterilization, and the verification of mould liquidation procedures. Workers of the group are participating in tests of a new product against lice that shall resolve the present acute lack of such a product on the market. Worked on have been three projects supported by grants from abroad focused on research and development of specific insecticidal products. There continued collaboration with the OECD on the harmonization of methods for the determination of the efficacy of antimicrobial biocides. There continued activities of the group's workers in the role of auditors or coordinators within the framework of authorization following Act No. 258/2000 Dig., on the protection of public health.

Within the framework of reference activities there has been carried out the confirmation of new cases of HIV/AIDS in the Czech Republic, and the determining of the viral load in HIV-infected subjects. Carried out is the epidemiological surveillance of HIV in selected population groups, applied are methods of molecular epidemiology and monitored is the occurrence of HIV/AIDS in the Czech republic. There have been held training courses, seminars, lectures, carried out external quality assessment, and assessed were commercial sets for HIV/AIDS diagnostics. Within the framework of research activities there has been performed HIV-1 sub-typing of strains isolated in the Czech republic, and the innovation of diagnostic procedures and the follow-up of resistance in HIV strains. International collaboration has been conducted in the framework of EU/WHO/UNAIDS – *EuroHIV*, and in the follow-up of HIV resistance – *SPREAD*.

In the area of tuberculosis, activities of the expert group were focused on collaboration in the framework of the network of supranational reference laboratories (SRL) of WHO/IUATLD, namely QC, DOTS Expansion Working Group, Subgroup on Laboratory Capacity Strengthening, and the international SRL survey “Frequency of *M. tuberculosis* Resistant to All Second-line Drugs”. Provided for was the operation of the bacteriological register “Information System of Bacillary Tuberculosis” (ISBT), the supplying of data in the framework of the program of Surveillance of Tuberculosis in Europe (EuroTB). Further, it was participation in working groups for NTM – non-tuberculosis mycobacteria, and for molecular epidemiology and control of tuberculosis. Participation in the CDC (Atlanta, GA) and DynCorp Health Research Services (Morrisville, NC, USA) project “Drug Susceptibility Testing of *M. tuberculosis* and Non-tuberculosis Mycobacteria”.

Routine laboratory diagnostics of toxoplasmosis and leptospirosis for selected preventive healthcare facilities has been run along with reference activities for toxoplasmosis and leptospirosis. At the NRL for Leptospirae there is kept a national

collection of leptospira cultures with the production of hyperimmune sera for application in the EQA of diagnostic laboratories in the Czech Republic under the patronage of AP CEM NIPH. The production of vaccines and their control is carried out on an on-going basis in collaboration with Sevapharma Praha and Bioveta Ivanovice. Within the framework of the follow-up of natural foci of infections the laboratory examines for leptospirosis small mammals, with the Regional Public Health Authority Brno, from endemic regions in the Czech Republic, and ensures regular field work (flagging of ticks) in foci of TBE for the EU grant-supported project in the framework of project cCASHh.

In the area of natural nidality infections, in the framework of an EU grant-supported project, there have been investigated with the Western blot technique, sera of 200 patients with symptoms of erythema migrans, neurological and musculo-skeletal symptoms, as well as sera of patients down with disseminated joint and myocardial bprreliosis and in the blood of donors from endemic regions. Sera, immunoblot results and tests of bactericidal effects, including clinical documentation have been transferred to the EU BOVAC project coordinator abroad. With the aid of sequenation of 14 human and 3 tick strains there have been demonstrated differences in the OspC genes. Sequences of 4 strains have been selected as new and suitable for a vaccine abroad. There continues work on sequenation analyses, in the preparation of cultures of suitable strains, DNA and antigens for that project. In ticks there has been demonstrated *B. burgdorferi* s. l. infection in 16 regions of the Czech republic. The mean infection rate in ticks in the Czech Republic was 11%.

The activities of the expert group of epidemiology lay in the providing of monitoring of the occurrence of infectious diseases in the Czech Republic, the coordination of their surveillance programs, the managing and control of immunization programs, the providing of methodological assistance in the identification of epidemics and in the materialization of anti-epidemic measures. It has participated in the preparation of legislation binding for the Czech republic upon entry into the EU. That legislation follows from directive No. 2119/98/EC or 2003/542/EC amending the directive 2000/96/EC, and requires an on-going elaboration of surveillance programs for set infectious diseases that in connection with the definition of cases of infectious diseases shall be gradually published in the Bulletin of the Ministry of Health of the Czech republic. There continued collaboration in the surveillance networks for infectious diseases within the EU framework (BSN =Basic Surveillance network; Enternet = reporting of salmonellosis, and EHEC; EU-IBIS = Invasive Bacterial Infectious Diseases) and the WHO (polio, measles and other infections in the framework of HFA 21) and the monitoring of zoonoses for needs of veterinary organs of the EU and WHO.

The laboratories of the tissue culture collection produced cells of 13 cell lines, on the average 2000 million cells per month, mostly for workplaces of the CEM. In parallel there has been kept a bank of more than 55 cell lines as well as a regular service of preparing culture media, solutions and T.C. grade water, the washing and preparation of glass for cell cultures. Research activities of the group comprised work on the WHO/EC project cCASHh, Contract No. EVK2/2000/0070, WP 5 – vector-borne Diseases. In collaboration with KRNAP (Krkonosé National Park) there has been determined the altitude limit of distribution of the vector *Ixodes ricinus* in the Krkonosé Mts. – 1260 m a.s.l. and at the same time the risk of infection with tick-borne encephalitis virus and *B. burgdorferi* s. l. in collaboration with the Institute of Parasitology, Academy of Sciences, through the investigation of more than 1260 *Ixodes ricinus* ticks.

With the aid of electron microscopy there have been demonstrated viruses and bacteria in body fluids and tissues, in swabs, tappings by puncture, stool and urine in patients by the method of negative staining or by immunosorption methods that rendered possible to differentiate the agent morphologically, or immunologically by the application of monoclonal antibodies. The methods have been checked in the External Quality Assessment Scheme (EQA-EM). Tested were flu vaccines, demonstrated were Calciviruses and Rotaviruses in babies, and Picornaviridae in the CSF as the cause of death. The study of tissues (biopsies of the heart, kidneys and sinovia) in selected patients has brought forth new pieces of knowledge on Lyme disease in carditis and arthritis.

The expert group for the epidemiology of chronic diseases was oriented on the securing of the interconnection of ISBT with the tuberculosis register. On the finalization of data for 2003 there has been elaborated an annual report of the ISBT. In collaboration also with the NRL for Mycobacteria there have been processed data on multiresistant tuberculosis. In the area of non-infectious epidemiology there has continued the processing of data from the study of chronic pain prevalence in the population of the Czech Republic. In the course of the year there has been prepared the inclusion of the workplace into the system of education of epidemiologists in intervention epidemiology within the framework of the European program EPIET – European Programme in Intervention Epidemiology Training. In the course of the year 2004, the activities of the manager of the National Program of Fighting AIDS and the UNAIDS Liaison Office in the Czech Republic have been concentrated on 3 thematic fields, namely 1) Coordination with the Ministry of Health of the Czech Republic in the management of the National Program of Fighting AIDS and coordination of each of its activities, namely in view of the preparation of national programs of HIV/AIDS prevention; 2) Publication of material distributed nationwide; and 30 Activities falling under the UNAIDS Liaison Office – communication between the centre in Geneva and the Czech Republic.

2.5 Centre of Occupational Medicine

The Centre has been renamed in 2004. The new name reflects better its tasks in the area of health protection and safety at work as set by valid legislation and by the Statute of the NIPH. Like in preceding years, the activities of the Centre were focused foremost on tasks in the areas of occupational hygiene, health risk assessment at the workplace, prevention of occupational diseases, health promotion at the workplace, and the development of occupational health care. The staff numbers have been kept at around 89 employees and accordingly there has been adjusted the scale of professional activities. Newly, there has been established a laboratory for the assessment and measuring of illumination. At the Centre there are active eight expert groups, one national reference centre, and six national reference laboratories and workplaces.

Professional and expertise activities

On an on-going basis the Centre has been carrying out consultation and expert activities over the whole branch of occupational medicine, including occupational hygiene, physiology and psychology, toxicology and occupational diseases. As in preceding years, there predominated namely consultation activities for the Ministry of health of the Czech Republic, for organs of public health protection, for employers, trade unions, as well as other organs of the administration. The overall number of expert's reports reached 185 at a volume of 1 600 ths CZK appropriated. In the year 2004 there have been concluded contracts with a number of health insurance companies (OZP, VOZP, Revírní bratrská pokladna ZP, ZP Metal Aliance, and ZP ŠKODA) for activity No. 205 – examination of pulmonary function.

In the year 2004, the Working Group for Exposure Limits and Categorization has investigated 24 new Permissible Exposure Limits (PEL). There has been amassed documentation for PEL values of aliphatic ethers and alcohols, and there has been assessed the risk of one newly registered substance (SML – KATCHEM)

An ever increasing and very complicated task represents the assessment of new technologies and processes in connection with GMOs and biocides. In the year 2004 there have been reviewed 67 applications for and reports on the handling of GMOs, that being twice as many as in the preceding year.

In collaboration with the occupational diseases section of the Society of Occupational Medicine of the JEP memorial Czech Medical Association and with the Occupational diseases Clinic at the University General Hospital and the Charles University First Faculty of Medicine in Prague, the Centre participated in the organization of the Tutorial Days of the Expert Commission for Assessing Occupational Diseases. Workers of the Centre are expert consultants of that Commission.

In the year 2004, there have been finalized the activities of the expert group “Health protection in Miners against the Appearance of Occupational Diseases”, and a final report has been submitted to the Ministry of Health of the Czech Republic for consideration by the Administration.

Legislation and health policy

Just as in preceding years, a significant part of the working capacity of the Centre's experts has been devoted to the preparation of documentation for administrative proceedings at the Ministry of Health of the Czech Republic. There have been elaborated remarks on and drafts of adjustments in the texts of a number of legislative amendments in bills to be forwarded.

The Centre's staff has also participated in the amendment of Govt. Decree No. 178/2001 Dig., in the wording of Govt. Decree No. 523/2002 Dig., in which there have been set the conditions of employee health protection at work, and that has then been issued as Govt. Decree No. 441/2004 Dig. Further, there has been elaborated expert documentation for the amendment of Govt. Decree No. 502/2000 Dig. *On the protection of health against the unfavorable effects of noise and vibrations*. Those have become the basis of gov't. Decree No. 88/2004 Dig. of January 21, 2004.

Further, there have been reviewed Acts No. 95/2004 Dig. *On the conditions for the attaining and recognition of professional qualification and specialized qualification for carrying out of the healthcare professions of physician, stomatologist, and pharmacist*, and No. 96/2004 Dig. *On the conditions for the attaining and recognition of qualification for carrying out non-medical healthcare professions and for performing activities connected with administering health care, and on amendments of certain related acts*.

Very exacting was work on amendments, commentaries and notes to other norms of law which are closely related to occupational medicine. There has been implemented a number of remarks to rules of law and their amendments through which there is being implemented Act No. 356/2003 Dig. *On chemical substances and products, and concerning amendments to certain other acts*.

There have been elaborated comments for an amendment of Act No. 258/2000 Dig. *On public health protection, and on amendments to certain related acts*, and an amendment of Act No. 120/2002 Dig. *On conditions for the introduction of biocidal products and active substances on the market, and on amendments to certain related acts*. There has been elaborated a methodological guideline for the procedure of determining PEL of substances not listed in Govt. Decree No. 178/2001 Dig. as amended in Govt. Decree No. 523/2002 Dig., and Govt. Decree No. 441/2004 Dig., in which are set conditions for the protection of health of employees at work and the procedure in categorization of jobs with the occurrence of chemical noxae or particulate matter for which there have not been legislatively fixed their PELs. The cited methodological guideline has been published with a number of misprints in section 12/2004 of *Věstník MZ ČR* (Bulletin of the Ministry of Health of the Czech Republic) as the Ministry of Health Methodological Instruction No. 17/2004 in *Věstník MZ ČR*, on the procedure for determining the PEL of substances not listed in Govt. Decree No. 178/2001 Dig., in which are set the conditions of health protection in employees at work as amended. Therefore, its corrected version has been published in section 1/2005 of *Věstník MZ ČR* under the same number.

Workers of the centre expressed officially their view concerning the bill on accident insurance, the bill on health care and drafts of related decrees. Within the framework of the debate concerning the bill on accident insurance there has been materialized the comment requesting the creation of legislative support for collaboration between the accident insurance information system and the National Register of Occupational Diseases. The

objective is to obtain from the accident insurance information system data on the severity of cases of occupational diseases expressed as the percentage loss of working ability. That information, which is required by EUROSTAT, is unavailable to us as yet.

Within the framework of the debate on bills of new legislation the Centre has participated in the preparation of documentation for the content and differentiation of preventive medical examinations in subjects exposed to selected factors in the working environment (asbestos, offensive allergens).

At the Centre of Industrial Hygiene and Occupational; Diseases there are being reviewed standards that have any relation to problems of health protection. At present, its electronic file includes 16 722 reviews of ČSN standards. They cover the whole area of problems worked on at the National Institute of public Health and a considerable part of the problems of safety at work and fire protection.

Prof. M. Cikrt, M.D., D.Sc. has been appointed a member of the Govt. Council for Safety and Health Protection at Work. Workers of the Centre have been appointed as members of certain Permanent Committees of the Council (Permanent Committee for Education and Research, Permanent Committee for Legislation, Permanent Committee for the Assessment and Evaluation of Occupational Risks, for Occupational Medical Care and Rehabilitation).

International collaboration

The Centre of Occupational Medicine is a WHO Collaborating Centre for Occupational Medicine. The Centre has been actively involved in the Program of Worldwide Research in Occupational Medicine “WHO Collaborating Centres Work Plan 2001 - 2005” through four projects. On an appeal from the WHO/HQ the Centre contributed to the GOHNET-Newsletter a study on occupational medicine problems of healthcare workers in the Czech Republic. A representative of the Centre has attended a conference of the European Network of WHO Collaborating Centres for Occupational Medicine at which there have also been newly defined the priorities for occupational medicine services in the European region.

In the year 2004 there continued the implementation of the EUROSTAT/EODS system in the Czech Republic. There has been introduced into practice an “Annex” to the notification of occupational diseases which is filled out by occupational hygienists within the framework of hygiene investigation at the workplace. Thereby is insured the obtaining of certain data requested by EUROSTAT, namely data on the etiological noxa in each individual case of occupational disease. There have been handed over to EUROSTAT data on all occupational diseases reported in the Czech Republic in the reference years 2002-2004. At the EUROSTAT meeting held in Bratislava the Czech Republic was appreciated for progress in implementing the EODS system, the Czech Republic having progressed the most among the new EU member states.

There has continued work on an amendment of the Methodology of Reporting Occupational Diseases, into which there have been incorporated certain measures on the harmonization of our occupational diseases data collection system with that valid in the EU. The objective is to improve international comparability of our statistical data on occupational diseases.

The Centre is also an international contact place for the International Program of Chemical Safety (IPCS). Within the framework of that accreditation it actively participates in the preparation and evaluation of documents of that program (EHC, CICAD). Moreover, it has applied to work on the IPCS project “Harmonization of Approaches to the Assessment of Risk from Exposure to Chemical Substances”.

Workers of the Centre have participated in OECD and JRC EC activities through the preparation of documentation for the validation of (Q)SAR methods (*in silico* methods, estimation through calculations) that shall contribute to the determination of toxicity of chemical substances and shall facilitate the fulfilling of the requirements of programs on the safety of chemical substances.

Job categorization and the system of monitoring health and the environment

Workers of the Centre, members of the Register council of the PHS Information System “Categorization of jobs and workplaces”, have collaborated in the further development of the system. On an on-going basis there have been updated data in the system according to amended legislative measures and inclusion of newly deliberated PELs into the categories. There have been provided extensive consultation activities for workplaces in the field, for the Ministry of Health of the Czech Republic, as well as for workplaces of the NIPH.

In the system of monitoring health and the environment the Centre coordinated all four tasks aimed at the relations of the working environment and health. The task of evaluating the excessive long-term unilateral load has ended in the year 2004.

Health 21

Within the framework of the program *Health 21* “Protection of the Health of the Working Population, and Maintaining and Improving Their Working Ability”, the activities of the Centre are focused foremost on motivating employers and the management of plants for the tasks of safety and health protection at work. There have been finalized criteria submitted for the assessment of health protection within the framework of the project “Health Promoting Enterprise” and in 2004 the project has been submitted for external examination. Following that procedure the project has been amended and finalized again.

Authorization

The year 2004 was filled with the professional preparation of authorizations. Workers of the Centre have actively participated in the preparation of authorization sets, instructions and other documents in a number of areas covering occupational medicine.

The NRL and Expert Workplaces have prepared professional documentation for the following sets:

B03 – B09 (Measuring of particulate matter levels in the indoor milieu of buildings; measuring of microclimatic parameters of the indoor environment of buildings; determination and measuring of daytime illumination parameters of the indoor environment of buildings, except for luminosity; determination and measuring of artificial illumination parameters of the indoor environment, except for luminosity; measuring of luminosity in the visual field and at places of visual work in the indoor environment of

buildings; determination of glare in the indoor environment of buildings; determination of sunlight in the indoor environment of buildings.)

G01 – G11 (Determination and measuring of vibrations and noise in the working environment.)

G12 – G15 (Determination and measuring of electromagnetic fields.)

H01 – H06 (Determination and measuring of daytime illumination in the working environment, except for luminosity; determination and measuring of artificial illumination in the working environment, except for luminosity; measuring of luminosity in the visual field and in places of visual work in the working environment; determination of glare in the working environment; determination and measuring of microclimatic parameters in the working environment; sampling a determination of particulate matter levels in the working environment.)

H11 – H12 (Taking of samples of gaseous noxae in the working environment and in samples from the working environment. Material on the fulfilling of criteria for the authorization of 4 laboratories for analyzing gaseous noxae in the working environment has already been over to the Centre for QC in Health Care.)

I01 – I03 (Determination of organic and inorganic indicators in the urine or in blood.)

I07 – I12 (Occupational physiology and psychology. There have been updated some authorization instructions, e.g. AI No. 7. There has also begun the carrying out of authorization audits in the area of occupational physiology and psychology. At present, there has been finalized the authorization of two workplaces. On an on-going basis there have been carried out consultation activities in the area of authorization – preparation of a handbook on quality, meeting specific conditions set by authorizing persons and there are being carried out comparative measurements in the area of occupational physiology.)

Research

In the year 2004 there continued work on subproject No. 4 “Health Risks of Exposure Factors in the Working Environment” in the following annotated objectives:

- Systematic updating of scientific documentation and methods of assessing the health risk of exposure to chemical noxae;
- Health risks of exposure to selected physical factors, health risks of the physical, psychic and sensory load in the working environment;
- Occupational diseases – frequency, diagnostics, medical assessment criteria.

Workers of the Centre worked on 8 projects supported by grants from IGA MZ ČR; 5 projects from GA ČR; 1 postgraduate project from GA ČR; 2 projects supported by grants from the Ministry of Education; 1 project supported by the League Against cancer; 1 project of health promotion, 1 international project within the framework of the 6th EC Framework Program (EC 2004 – 2009 “Novel Methods for Integrated Risk Assessment of Cumulative Stressors in Europe”, 2004 / 2009). Of these there has been finalized one IGA MZ ČR project and one GA ČR project. An evaluation of those projects shall take place in March, 2005. Within the framework of *Working Life and EU Enlargement* that was supported by the Swedish government last year, there has appeared a second issue of the

publication “Safety and Health Protection at Work in Small and Medium-size Enterprises” in 5000 copies.

Education and training

Workers of the centre participated in postgraduate training in occupational medicine as well as other areas (neurology, general medicine, toxicology, etc.), namely in the form of lectures and courses. The centre provides tuition and practicals for students of the 1st, 2nd and 3rd Faculties of Medicine - Charles University, Faculty of Natural Sciences – Charles University, Faculty of Humanities studies – Charles University, Faculty of Forestry and the Environment – Czech Agricultural University, and higher nursing schools. Expert of the centre participated as consultants for students’ theses in their state exams in preventive medicine at the 3rd Faculty of Medicine, and in master’s and bachelor’s exams in toxicological analysis at the Faculty of Natural Sciences.

Workers of the Centre held lectures at training and informative courses for worker in the production sphere (e.g. composite materials for textile fibers; paints and coating materials) and the educational system (courses in toxicology for secondary school teachers), etc.

Together with the Society of Occupational Medicine, JEP Memorial Czech medical Association, the Centre held regular seminars namely for field workers, organized and provided programs in traditional activities: Teisinger’s Day of Industrial Toxicology, Beno’s Day.

The workers of the Centre have been invited to organize a workshop on industrial toxicology within the framework of the Czech and Slovak Neurological Congress. In 2004 that workshop replaced the otherwise annually held Day of Industrial Neurology. The congress was held in Brno, December 1-4, 2004.

Separate seminars were devoted to newly prepared methodologies of measuring microclimatic parameters (Methodological Measure No. 12/2004 in *Věstník MZ ČR*) and to new legislation on health protection against the unfavorable effects of noise and vibrations (Govt. Decree No. 88/2004 Dig.); at the request of the Institute of public Health in Kolín there has been held a seminar for their employees.

In collaboration with the Department of Biostatistics and Informatics and the Centre of Epidemiology and Microbiology, the centre held a ten-day course in modern epidemiological methods “Course in Modern Epidemiology”. The course was drawn up so as to teach experts active in public health to orientate themselves in contemporary problems of the epidemiology of chronic diseases. The objective of the course was to prepare its participants for active work with scientific epidemiological literature and for a critical assessment of reports dealing with epidemiological data. Accented was the ability to evaluate epidemiological studies from the point of view of their validity and relevance for concrete situations, on basic knowledge about ways of organizing and presenting epidemiological data, on present-day options of their statistical analysis and the mode of analysis of causal relations. The instruction was provided by instructors having long-term experience abroad, scientifically active in the given problems.

Neither public education has been neglected in the year 2004. Workers of the centre appeared in nationwide TV broadcasts of ČT and TV Nova devoted to popularizing scientific pieces of knowledge.

Information sources

In the year 2004 there has been concluded an agreement with the Research Institute of Occupational Safety (VÚBP) on collaboration in the forming of the web site <http://www.bozpinfo.cz>. That site is focused on safety and health protection at work in the Czech Republic, on the one hand facilitating for its users direct contact with the NIPH web site, and namely it brings current information on safety and health at work for users from the business sphere, the state administration, the entrepreneur public namely from small and medium-size enterprises, students and the general public. Through that site there is presented by the National Information Centre BOZP (so-called Focal Point ČR).

At the Centre there are the editorial offices of two journals: *Czech Occupational Medicine* (In Czech) and *Homeostasis in Health and Disease*.

2.6 Center for Quality in Health Care

The major task of the Centre for Quality in Health Care (CQHC) is through methodology, coordination and information to ensure the materialization of programs of the follow-up of quality and effectiveness of health care in continuation of projects already materialized, namely in line with requirements voiced by international institutions. In view of the dynamic development of quality and efficiency programs, they are worked on through projects.

In the year 2004 the CQHC had coordinated the following 7 Czech Ministry of Health projects of quality promotion in health care:

1. Comprehensive project of radiation protection in health care;
2. Influencing the quality of antibiotics application aimed at controlling resistance to antibiotics;
3. Monitoring of nosocomial infections at locality of surgical interventions and the evaluation of their epidemiology as a quality indicator of health care;
4. Restrictive methods in psychiatry – standardization of attendant care;
5. Methodologies for controlling health care in the region;
6. Introduction of standard operation procedures for the implementation of state health supervision at the Regional Public Health Institutes following the requirements in Act No. 258/2000 Dig. *On Public Health Protection* as amended;
7. Comprehensive project including 4 sub-projects:
 - a) implementation of recommended procedures for GPs as an instrument of systematic improvement of quality in primary care;
 - b) informed care of self as an instrument of promoting the process of standardization in health care;
 - c) administration of recommended procedures;
 - d) quality control and standardization of healthcare information on the internet.

In December, 2004, the CQHC defended the final reports of the individual projects. Upon approval of the outputs of those projects and on their passing by the Deliberation Body at the Ministry of Health, more detailed information on the projects and outputs shall be accessible in static form at <http://www.szu.cz/CeKZ/> and upon putting into service the QMS server, also on-line for the medical public.

On the basis of entrustment by the Czech Ministry of Health the staff of the CQHC in 2004 participated in the activities of the Council for Quality in Health Care and that of the Managing Committee of the program Czech Quality.

In the year 2004 there continued successful collaboration with international institutions involved in quality (EFQM, ISQua, ESQH), recommended procedures (AGREE/G-I-N), as well as with institutions within the EU public health programs. There have been established new contacts with organizations and individuals abroad involved in similar problems as the CQHC is.

A significant activity in 2004 was the active participation of the CQHC in the role of one of 4 major organizers in the co-convening of the international conference *Health Technology Assessment International - 1st Annual Meeting* in the spring of 2004, in Poland. The CQHC has completely prepared a preparatory conference on the application of data sources in the area of oncology for HTA. Summary materials have been published in a

monograph (HTA in “Real Time” – Oncology as a Model for Data Management in Health Care Assessment) as an official publication of HTAI.

A very important agenda of the CQHC is participation in international projects concerning the problems of quality in health care within the framework of the 5th and 6th EU Framework Programs. In question are the following projects:

- An on-going research project that has been accepted in the 5th EU Framework Program with a focus on the description and classification of the system of quality control in national healthcare systems under the co-participation of European countries, coordinated by the NIVEL Foundation, the Netherlands. Under the auspices of that body, in 2004 there have been held the 2nd and 3rd ENQual workshops in which the head of the CQHC has participated in. Through questionnaires from each healthcare facility in the Czech Republic, ten hospitals are involved in the project.
- The on-going project IMPROHEALTH, coordinated by the Technical University Košice, within the framework of the EU Leonardo da Vinci program, which the CQHC co-participates in. The major task of the project – the creation of an e-learning course focused on the improvement of quality, effectiveness and efficiency of healthcare facilities – was the content of an international workshop held in Greece, June 2004. The project results shall be available to the CQHC and upon their possible accreditation the NIPH shall be able to provide training in the area of healthcare management.
- A new project, “Unified Central and Eastern European surveillance/monitoring system for healthcare quality and efficiency indicators CCEEQNET” that has been accepted (and is financed by DG SANCO), the main objective of which is to define the intersection of common quality indicators stemming from “administrative” data of 5 countries, and to put forth and materialize a system of validation and testing of those indicators.

The major tasks of CEEQNET:

1. To describe available administrative data sources in 5 countries;
 2. To carry out a search on methods of QA and indicators in 5 countries, and to perform a search on international Q indicators with a selection of suitable representatives of each category (structure, process, outputs, results, professional areas, etc.);
 3. To carry out a structured classification of indicators – a draft of the system, groups, etc. for the assessment proper;
 4. To define the key common indicators and make a selection of a limited number of indicators so as they cover all the suggested areas of the structured delimitation;
 5. To evaluate and delimit the applicability of data sources in each national system.
- A new project, TEMPUS/MEDA – Modern management training program for health care. The head of the CQHC is the operations manager of that project. In November, 2004, he attended an international workshop of the TEMPUS/MEDA project. The output of that project shall serve as further documentation material for healthcare management courses by the CQHC at the NIPH.

From all the international conferences and events held in 2004, material for professionals is being collected and prepared and shall be presented on the non-public site of the Quality Server in as it cannot be published in full for reasons of copyright.

Workers of the CQHC over the whole year 2004 prepared posters and lectures for domestic conferences and abroad (MEDTEL; INMED; Greek Society for Healthcare Quality; Institut des Sciences de la Santé – EC Bruxelles; Meeting of Leaders of Healthcare Quality Programmes – Egypt; a chapter on management of quality in health care for Georgetown University, US), articles for the daily *Zdravotnické Noviny* (system of accreditation of healthcare facilities in the Czech Republic).

The CQHC is a co-convenor of the 10th European Forum on Quality Improvement in Health Care which is to be held in London on April 13 – 15, 2005. It also the main convenor of the 11th European Forum on Quality Improvement in Health Care to be held in Prague at the close of April, 2006. Dr. Bourek is member of the international managing committee.

In the year 2004 there have commenced preparations for the operation of the Data Centre. That included the collection, classification and archiving of technical publications, materials and abstracts pertaining to healthcare quality and outputs of projects elaborated and coordinated by the CQHC. More than 2000 articles and abstracts are available now. There has been prepared and at the close of the year 2004 successfully materialized a tender for the putting of the Data Centre into operation, in which the above-mentioned data shall be made available. A further function of the Data Centre shall be the management of courses and training.

Workers of the CQHC have been summoned as experts to a number of activities connected with quality in health care, namely within the Czech Republic as well as within the EU.

To a significant degree the CQHC has participated in the creation of programs of quality and standards of therapeutic procedures for healthcare facilities as the editor of updated standards.

Activities of the “Centre for Quality in Laboratories”

1. Conceptual activities

The Centre has also collaborated with the Ministry of Health in the working out of the structure of the concept of quality and effectiveness of healthcare services in compliance with requirements of the EU, WHO and the principles of quality and safety of health care defined by the International Society for Quality in Health Care (ISQua). The head of the Centre has become a member of the sub-commission for accreditation at the Council for Quality at the Ministry of Health of the Czech Republic, which is involved in the fulfilling of ISQua requirements for the establishment of a National Accreditation System of Health Care Facilities.

Within the program of authorization according to Act No. 258/2000 Dig. *On public health protection*, there has been amended the structure of the Centre’s website pertaining to information from authorization applicants and workers carrying out health risk assessment (HRA), as well as for users of services rendered by authorized laboratories. Following instructions from the Ministry of Health there has been created a website for

publishing information on preparations for the National Accreditation System of Health Care Facilities which is directed by the Ministry of Health of the Czech Republic.

For the ensuring of the materialization of the register of participants in the Program of Improving Quality in Health Care, which is guaranteed by the Ministry of Health, within the project of the Ministry of Health the Centre has worked on a further stage of preparations of the register, namely a draft of the solving of IT processing of outputs from the Ministry of Health project “Modular System of Ensuring Quality in Health Care” with the application of data from the ÚZIS (Institute for Healthcare Information and Statistics).

Further, in the year 2004, in collaboration with reference laboratories at the NIPH and with the Chief Public Health Officer’s Advisory Board for Laboratories there have commenced preparations for amending the conditions for granting authorization according to Act No. 258/2000 Dig. *On public health protection*, as amended, and for amending consequent revisions of authorization instructions that govern the mode of the fulfilling of those conditions. The objective is to ensure updating, greater transparency and intelligibility of general as well as of technical requirements for the granting of authorization, and to further harmonize the concept of the authorization of laboratories with the concept of accreditation of clinical laboratories following ISQua accreditation principles.

In collaboration with the J.E.Purkyně memorial Czech Medical Association (JEP CzMA) there have begun preparations of clinical laboratories for the accreditation of their good-quality and safe laboratory services in line with the program of the register of participants in the Program of Improving Quality in Health Care, which is guaranteed by the Ministry of Health. The program of the register that has been initiated as a pilot one in collaboration with the Czech Society of Clinical Biochemistry, has been joined by other JEP CzMA professional societies that are members of the JEP CzMA Council for Accrediting Clinical Laboratories. The head of the Centre is member of that Council, and attends their regular meetings.

The Centre also collaborates with the Institute of Standardization in Metrology and Testing (ÚNMZ) and the Czech Metrological Institute (ČMI) in the preparation of handling metrology in the realm of chemical and biological measuring in harmony with the requirements of European metrological institutions. The head of the centre is member of the Technological Commission for Chemical and Biological Measuring of the ÚNMZ Council for Metrology.

The Centre is also engaged in work on the EU project “Unified Central and Eastern European Surveillance/Monitoring System for Healthcare Quality and Efficiency Indicators CEEQNET”. The head of the Centre acts as the county manager for the Czech Republic.

Within the program of the National Policy of Quality Promotion, the Centre participates in the preparation of the national register of councillors to systems of quality management and other managements. The head of the Centre is member of the National Registration Body of the Czech Council for Quality. The objective is to safeguard in that registration the interests of the healthcare branch in the handling of quality in healthcare services.

2. Materialization of the authorization program following Act No. 258/2000 Dig.

In the year 2004 there have been accepted 23 applications for the authorization of laboratories, of which 4 laboratories were granted a certificate of authorization.

In view of the complex nature of certain of those cases, in view of resolving variances in documentation or variances found in audits or the scrutiny by the Centre of the fulfilling of authorization requirements, the handling of 19 accepted applications is being passed into the year 2005.

Work has been finalized on 16 applications for the authorization of laboratories submitted in the year 2003. On the basis of the evaluation of the fulfilling of conditions for authorization by those laboratories, 16 certificates of authorization have been issued in 2004.

In the area of the authorization of workers assessing health risks, there have been held 2 courses for 36 participants. Successful participation in those courses is part and parcel of the authorization process proper. On the basis of the results in the final examinations taken, there have been issued 24 HRA certificates.

3. Educational and training activities

Worker of the Centre have actively participated in a number of conferences and seminars pertaining to programs on quality in health care, namely in the realm of public health protection as well as the medical service and clinical laboratories. Cooperation with the NCO NZO Brno (National Centre of Attendant and Non/medical Healthcare Professions) has been deepened, namely in the area of education and training of workers in healthcare institutes and regional public health institutes.

Within the framework of the program of the authorization of laboratories there have been organized training events for those interested in authorization as well as for auditors.

2.7 Department of Veterinary Services

The major task of the DVS – the ensuring of conditions for the work of experimenters working with laboratory animals, has been fulfilled. Purchase of laboratory animals in the whole range of required species, breeds and strains has been provided, although in certain deliveries there continue to be problems in the capacities of suppliers. The problems of housing laboratory animals, purchase of diet rations, pharmaceuticals, litter bedding, and the implementation of individual technological elements, were resolved to the satisfaction of experimenters. The spatial and staffing capacities of the DVS have been exploited.

In the year 2004 there have continued check-ups on the health of laboratory animals in the firms Velaz Ltd., Bio Test Konárovice Ltd., and Semed, which together with the check-ups on the health of laboratory animals at the breeding facility of the NIPH, have continuously ensured the good health of the laboratory animals in experiments conducted at the NIPH.

For reasons of lack of housing capacities for certain animal species at individual periods of time over the past year, there had to be adjusted with the experimenters the terms of some follow-ups to later dates.

The decisive step for the approval of further activity of the user and breeding facility of the NIPH was the passing of three accreditation procedures with a positive outcome.

Following preparatory activities, in April 2004 there took place a commissioner investigation in building No. 23A and the “Central Commission for Animal Protection of the Ministry of Agriculture” decided to grant a second accreditation for a period of five years.

In building No. 11 there took place in that same period a commissioner investigation and the “Central Commission for Animal Protection of the Ministry of Agriculture” decided to grant the first accreditation for a period of three years.

Upon the reconstruction of building No. 20 there took place a commissioner investigation in November 2004, and the “Central Commission for Animal Protection of the Ministry of Agriculture” decided to grant the first accreditation for a period of three years.

In view of the unstable capacity of suppliers of laboratory animals in filling consignments of laboratory animals, the changing requirements of experimenters, and the variable levels of health in the breeds of the supplying companies, the required laboratory animals, with singular exceptions, were purchased from Velaz Ltd., Charles River – ANLAB Ltd., and Bio Test Ltd.

The key task was to ensure the meeting of the Czech National Council Act No.246/92 Dig. on the protection of animals against cruelty, the materialization of Ministry of Health Decree No.311/97 Dig. on the breeding and exploitation of experimental animals, and the materialization of Act No.166/99 Dig. on veterinary care (the so-called Veterinary Act).

Thanks to an increased budget for the DVS in 2004, there have been resolved some long-term shortcomings in the supplementing of technological items (expendable material), and there has been made a further substantial step in the supplementing of building No. 31, as well as outfitting in part building No. 20 following accreditation.

In 2004, at the DVS there have been carried out 267 autopsies of laboratory animals, namely 61 diagnostic autopsies, 3 in the framework of check-ups in supplier farms, and 203 for a research project.

Of the 267 autopsied animals, 181 have been examined histologically. From those animals there have been processed 811 samples of organs. Researchers have not requested any histological examination of autopsied animals.

Sixty-three laboratory animals have been investigated bacteriologically. Besides that, 310 swabs from the breeding premises in building No. 31 have been cultured.

Parasitological investigations were performed in 54 cases, namely in live animals on check-ups of their state of health as well as from autopsied animals.

Serological investigations were carried out in 54 serum samples from mice. Samples taken from eleven sewer rats were examined under the electron microscope.

2.8 Scientific Information Centre

In 2004 most activities of the Scientific Information Centre (SIC) were based on Project LI 002026 of the Ministry of Education, Youth and Sports: „Information sources for care for healthy living conditions and health protection and promotion", conducted in the last four years. Tasks that emerged while the Project was in progress are being carried out either within the project period or afterwards. The SIC staff continued adjusting the operation of the existing library system Kpwin that needed to be upgraded to the client-server version to achieve higher stability and better data protection. A new modul WWW-OPAC, which is friendlier to the user of on-line library catalogues, was put into test operation.

The conditions for the entry of the NIPH library in consortia for the purchase of electronic resources and services in 2004-2008 were analyzed on an ongoing basis within the new project N1 Research Information Infrastructure. In cooperation with other libraries, journal collections were completed and duplicate accesses were resolved. Thanks to the participation in consortia, the NIPH library obtained online access to 10 fulltext databases of the following publishers: Elsevier Science, Springer, Wiley, Proquest, EBSCO and bibliographic databases CAB Abstracts, FSTA, OVID, ESPM and Knovel.

At the end of 2004, according to the conditions specified by Act No. 257/2001, on libraries and conditions for operating public library and information services (the Library Act), the regular stock revision was completed as indicated below, with a focus on the stock relevance and up-to-dateness.

To enlarge services of electronic delivery of documents and to promote digitalization of SIC documents for archiving purposes, a multifunction digital color copier was purchased from the funds of the Project Renewal and Development of the Material and Technical Basis of National Medical Libraries.

In 2004, the SIC staff provided library-information, editing, reprographic and photographic services to researchers of the NIPH, National Radiation Protection Institute, State Institute for Drug Control, students of the Third Medical Faculty of the Charles University, Regional and District Public Health Centres, users of the public network of health information services and other specialized users. The services provided to both the NIPH staff and extramural users are summarized on the SIC homepage at <http://www.szu.cz/svi/index.html>.

Library activities

The library stock was systematically supplemented with the entire domestic book and journal production in the relevant fields and selected titles from other countries. Throughout the year, 2,675 library items were newly added to the library book stock reaching a total of 89,714 library items by December 31, 2004. The library was subscribed to 348 journals of which 163 were domestic and 185 from other countries. The latter were entered on an on-going basis into the comprehensive catalogues of the National Medical Library and the National Library of the Czech Republic. The purchases for the library stock, including access to electronic journals and databases, amounting to 4,430 thousand CZK were covered from the SIC budget, NIPH grant projects, research plan and funds for the development of the Public Information Services in the Health Sector.

A total of 34,242 library items were borrowed. As many as 1,605 interlibrary loan requests and international interlibrary loan requests (including those to the SUBITO services) for journal article photocopies from the NIPH staff were met. The NIPH library answered 1,035 requests from co-operating libraries. Rapid information contents service was provided from 13 journal titles to 14 organisations. A total of 43,442 photocopies were made by the library.

Documentation, information, and translation services

In 2004, 815 retrievals were performed of which 159 were continuous. Nine retrievals were farmed out. Altogether 250 legislative documents of European legislation were retrieved.

Vol. 11 of the NIPH Bibliography 2002/2003 was issued, including 616 records not only listed alphabetically but newly also grouped by focus area. The Bibliography is available in electronic form at the SIC website. As many as 155 records were reported to the Information Registry of Results (acronymed RIV) that makes available publication data related to research and development projects and research plans supported by public funds. For the ILO-CIS Bulletin, 12 annotated references of articles with abstracts in English were submitted. A total of 1,731 articles from five dailies were processed for the database of daily newspaper monitoring. The outputs from the database were used not only at the NIPH but also within the Healthy Cities electronic conference and were displayed on a daily basis at the healthcare server <http://www.zdrav.cz>.

As many as 1,180 pages to be published or otherwise presented were translated, mostly into English, and 995 pages submitted in English were revised. Language consultations were provided to the NIPH staff on an ongoing basis.

Activities of the Section of Journal Editing and Photo Documentation

The journal *Acta hygienica, epidemiologica et microbiologica* (AHM) has been published for use of the Public Health Service. Four AHM issues appeared in 300 - 500 copies. AHM full texts have been available at the SIC website. Four regular issues and one supplement of the Central European Journal of Public Health (CEJPH) appeared in 400 copies. The SIC performed a part of the editing activities and provided the entire subscription service and promotion. The CEJPH website was redesigned along with the archives of past issues. An additional bibliography database was created for the generation of annual author indexes in both printed and electronic forms. In cooperation with the National Medical Library, a citation analysis was conducted for articles published in the CEJPH between 1993 and 2003. Other SIC activities included distribution of journals and legal deposits, order receipt, obligatory supply service and farming out such services as printing, binding of books and journals photo documentation and document digitalization.

The NIPH copy service made 204,641 copies.

2.9 Department of Biostatistics and Informatics

By January 1, 2004, the Department had 15 employees and 2 of these were part-time (retirees). One employee has joined the staff since July 2004.

The main activities of the informatics staff included the administration and protection of the computer network, server operation, providing service to users and advice in IT products. The staff collaborated with researchers and grant investigators in the field of application of statistical methods and data processing. They also provided consultations to researchers from the NIPH, Public Health Service and other health care settings. The statisticians participated in the organization of the „Course of Modern Epidemiology“. Furthermore, the staff were involved in the creation and operation of selected nation-wide registries.

Among the projects and tasks, in which the DBI statisticians were involved, the following ones can be mentioned: Selected demographic data processing; Statistical analysis of air pollution and related problems with 3D pollution modeling; Evaluation of skin irritability; 3D estimate of emission burden in smaller settlements based on modeling of time-space data from short-term measurements by mobile stations; Estimate of dynamics of local burden of moulds in a small settlement based on evaluation of data from repeated microbiological measurements; Evaluation of a comparative study of standard and alternative laboratory methods for detection of selected groups of microorganisms; Creation of a statistical model for evaluation of dimethylamine exposure; Evaluation of PCB in breast milk; Preparation and continuation of another year of the HELEN study; Study of indoor pollutant measurement; Study of poor posture in school children; Software and data adjustment for the noise monitoring subsystem; Toxoplasmosis incidence data processing; Anthropometric survey in children focused on growth curves for e.g. breast-fed children or children with growth disturbances; Creation of statistical models for monitoring growth in children; Statistical analysis in the study of immunotherapeutics; Method for assessment of general mortality associated with influenza epidemics; Assessment of food analysis carried out by the Public Health Service in the Czech Republic; Adjustment of software for recording physiological function within toxicological experiments and health promotion projects. The DBI organized regular intramural workshops in the field of mathematical statistics.

In 2004, the DBI staff were involved in publication and lecturing activities and designed software tools for various research projects. They provided graphic presentation of results for the NIPH researchers. They designed and manufactured electronic devices for the needs of the NIPH.

Furthermore, the DBI staff were involved in operation of EpiDat2004 software system and design of EpiDat2005, technical solution to the participation of the Czech Republic in the Basic Surveillance Network (EU project), design and operation of the NRL AIDS information system and the serum bank operation and control. They also participated in activities of the advisory board for informatics of the Chief Public Health Officer of the Czech Republic, including design and administration of the registries operated within the Coordination Centre for Sectoral Health Care Information Systems (Job categorization, Acute respiratory infections (ARI), Pandemics and EpiDat data transfer) and enlargement of the ARI registry to include influenza-like illness (ILI).

The DBI created an Internet application for a heart health competition organized within the National Health Programme 2004.

All NIPH computers were audited by the informatics staff for software license compliance according to Government Resolution No 624/2001. The staff also cooperated in central purchase of all hardware and software including installation and modification of the latter on an individual basis, provided basic maintenance of computers and consultation on their operation. The licence programme within the MICROSOFT SELECT agreement was used when purchasing software.

Administration of the NIPH computer network and servers, including the operation and development, was also part of the staff activities. The central server room was provided with air-condition and an adequate feed device and the servers were installed into the data rack. The intranet, antivirus protection administration and time and attendance systems were updated. The staff managed the access to the Internet, i.e. the operation of the mail, web and antivirus protection servers and stations. The NIPH intranet and central Internet websites were updated. The NIPH domain was newly registered in accordance with the new rules in force since 2004. In view of the threat posed by the global network, a new security system, consisting of the Symantec gateway security appliance and Brightmail AntiSpam, was proposed and tested for the local network. Within the Virtual Private Network, an Interactive Voice Response System was put into operation for Prague and Brno participants. Technical conditions were created for using the computer network for the purposes of the time and attendance system and security system. In 2004 the NIPH computer network was further enlarged to include building 20. The DBI staff also provided technical background for multimedia presentations at workshops and conferences organized by the NIPH.

In 2004, the DBI staff were involved in the following grant projects:

- „Child’s growth and its evaluation, social inequities and other factors that influence growth“ of the Internal Grant Agency of the Ministry of Health of the Czech Republic
- „Health and social inclusion 2004 - 2005“ of the EU
- „Analysis of the role of smoking in morbidity and mortality in the Czech Republic in 2002 and quantification of economic costs due to the treatment of diseases caused by smoking“ of the Internal Grant Agency of the Ministry of Health of the Czech Republic
- „Prediction model for acute toxicity estimate of mixtures of chemicals“ of the Grant Agency of the Czech Republic
- „Alternative method for acute toxicity determination of chemicals and acute toxicity estimate of their mixtures“ Of the Grant Agency of the Ministry of the Environment of the Czech Republic
- Research subproject IV. „Health risks from exposure to occupational factors“
- „Psychosocial health determinants“ of the Grant Agency of the Czech Republic
- „Biological monitoring and health risk from occupational exposure to MDI“ of the Internal Grant Agency of the Ministry of Health of the Czech Republic
- „Monitoring of the HIV/AIDS incidence and spread in the Czech Republic“ of the Internal Grant Agency of the Ministry of Health of the Czech Republic

- „Risk factors for poor posture in school children, prevalence of locomotor diseases“ of the Internal Grant Agency of the Ministry of Health of the Czech Republic
- „Psychological aspects of health behaviour in adulthood in subjects monitored from birth“ of the Grant Agency of the Czech Republic

2.10 Economics division

Costs and profits

Costs

The established annual cost budget 2004 of 342,338 thousand CZK was adjusted as follows: the established annual contribution was decreased by 7,000 thousand CZK (funds for the operation of the nationwide environmental health monitoring system to be forwarded to the public health institutes) and was added with other profits (funds for grant co-applicants), 2,192 thousand CZK for the operation of the NIPH, 500 thousand CZK for scientific and medical information, 150 thousand CZK for anti-drug policy, 8,397.80 thousand CZK for the National HIV/AIDS Program, 2,500 thousand CZK for the National Health Program, 600 thousand CZK for OZP health programs, 4,420 thousand CZK for the EU accession program, 9,928 thousand CZK for the Internal Grant Agency projects, 12,464 thousand CZK from the Internal Grant Agency for research plans, 3,210 thousand CZK for projects of the Grant Agency of the Czech Republic, 334 thousand CZK from the Grant Agency of the Czech Academy of Sciences, 751 thousand CZK from the Grant Agency of the Ministry of Education, Youth and Sports, 1,167 thousand CZK from the Grant Agency of the Ministry of Agriculture, 580 thousand CZK from the Grant Agency of the Ministry of the Environment and 1 457 thousand CZK from foreign grants and donations. The increased annual cost budget totalled 383 998.80 thousand CZK and was used 104.70 %, i.e. 402 033.24 thousand CZK (16 047.21 thousand CZK of this was an income tax advance payment).

Profits

In 2004, the total profit budget of 342,338 thousand CZK was decreased by 7,000 thousand CZK (funds for the nationwide environmental health monitoring to be forwarded to the public health institutes) and added with 48,650.80 thousand CZK to amount to 383,988.80 thousand CZK. It was fulfilled 107.78 % to total 413,858.37 thousand CZK.

Economic result

The economic result in 2004 was +11,825.13 thousand CZK.

Program funding – property renewal

Project title: ***Rehabilitation of building 20***

Registration number: 235 012 000

Rehabilitation phase 1 was started and completed in 2003. The systemic grant of 3,200 thousand CZK was used as follows: 200 thousand CZK for the design and 3,000 thousand CZK for rehabilitation operations. In 2004, after removal of defects and imperfections, the remaining amount of 2,591 thousand CZK was drawn from the NIPH own funds to complete phase 1. Phase 2 was focused on the completion of rehabilitation of building 20 for the needs of the department of veterinary services. As a result of the rehabilitation, the required parameters were met, the construction was approved and the department of veterinary services achieved accreditation. Rehabilitation phase 2 totalling

to 6 780 thousand CZK was covered from the NIPH own funds as well as the author's supervision at a cost of 29,750 CZK.

Project title: **Conversion of a part of building 4 ground floor to protected laboratory BL 3**
Registration number: 235 012 0002

Based on the decision of the Ministry of Health of the Czech Republic – investment development department – a tender for construction contracts was carried out in 2003; the conversion was started in October 2003 and a total of 1,298 thousand CZK was used up. In 2004, some financial and factual changes were made to the project. The Ministry of Health of the Czech Republic increased the subsidy from the state budget and the National Institute of Public Health also provided additional funds. The contract of 2003 was added with two amendments: amendment 1 dealt with the increased VAT and additional funds for three medical instruments and amendment 2 was related to the INWALL system intended for use in laboratories to improve their quality and useful life.

In 2004, a change was made to the sewerage system and the sewage decontamination process is being redesigned to comply with the BL3 criteria. For this reason the conversion was suspended and the Ministry of Health was asked to draw the amount of 3,043 thousand CZK to the spare funds.

In 2004, 3,081 thousand CZK were used for construction, 2,624 thousand CZK were needed for the technological part and 1,018 thousand CZK were spent to purchase instruments and other equipment. The total cost was 6,723 thousand CZK, with 6,357 thousand CZK being covered from the state budget and 366 thousand CZK being drawn from the NIPH own funds. Since the funds assigned from the state budget were exceeded by 427.20 CZK, the difference was remitted to account No 6015-2528001/0710 of the Ministry of Health.

Project title: **Laminar flow biohazard hood, safety centrifuge with cooling**
Registration number: 235 332 0107

A new class II laminar flow biohazard hood and a safety centrifuge were purchased to replace outdated and inadequate equipment that had not obtained validation certificates for further operation and consequently could not be used any longer by the accredited National Reference Laboratory for AIDS.

The grant of 315 thousand CZK was almost used up, the remaining 280 CZK were remitted to the state budget

Project title: **Printer, data/video projector, notebook**
Registration number: 235 011 0123

The assigned grant of 188 thousand CZK was used up, the remaining amount was 164 CZK.

Within this assigned systemic grant, the centre of the National HIV/AIDS programme manager was equipped with investment items that replaced the existing inadequate instruments. A color laser printer was purchased for printing limited amounts of prevention materials, a data/video projector and a notebook were bought for education and presentation activities.

Project title: **Digital copier**
Registration number: 235 022 0101

The grant allocated within the Project „Renewal and Development of the Material and Technical Basis of National Medical Libraries“ was used to purchase a multifunction digital copier for the Scientific Information Centre. The new copier will save the operator time and will be able to provide a wider range of services to the NIPH staff and users of public health information services.

The allocated amount of 150 thousand CZK was almost used up, the remaining sum of 843.70 CZK was remitted to the state budget.

Project title: **Energy audit**

Registration number: 235 019 0102

The allocated systemic grant of 190 thousand CZK was not used and was remitted to the state budget for the following reason: Since the decision of the Ministry of Health on the allocation of the grant from the state budget was issued on December 10, 2004 and the limit amount available for this purpose was announced on December 15, 2004, the energy audit was not feasible because of the closeness of the deadline and the large number of premises to be audited (31 buildings).

List of investment funds from grant agencies and funds from the state budget for the property renewal programmes

Internal grant agency of the Ministry of Health of the Czech Republic:

1A8248-3/04 Influence of biotransformation and transport on the incidence of breast cancer and chemotherapy effects

Instrument for isolation of nucleic acids and proteins

Total allocated: 134 000 CZK

Amount used up: 134 000 CZK

Balance: 0 CZK

Grant agency of the Ministry of Education, Youth and Sports – COST:

Study of the role of genetic factors in breast cancer OC B 20.001

Instrument for protein isoelectric focusing

Total allocated: 150 000 CZK

Amount used up: 150 000 CZK

Balance: 0 CZK

Funds from the state budget for property renewal programmes:

Programme 235 012 0002 – conversion of building B4 to protected laboratory BL 3

Total allocated: 6 357 000 CZK

Amount used up: 6 357 000 CZK

Balance: 0 CZK

Programme 235 0107 – Laminar flow biohazard hood, safety centrifuge with cooling

Total allocated: 315 000 Kč

Amount used up: 314 720 Kč

(class II laminar flow biohazard hood 283 220 CZK, safety centrifuge 31 500 CZK)

Balance: 280 CZK

Programme 235 011 0123 – printer, data/video projector, notebook

Total allocated: 188 000 CZK

Amount used up: 187 836 CZK

(data/video projector 77 350 CZK, notebook and printer 110 486 CZK)

Balance: 164 CZK

Programme 235 0220 0101 – digital copier

Minolta copier

Total allocated: 150 000,00 CZK

Amount used up: 149 156,30 CZK

Zůstatek: 843,70 CZK

Programme 235 019 0102 – energy audit

Total allocated: 190 000 CZK

Amount used up: 0 CZK

Balance: 190 000 CZK

Additional funds needed to purchase instruments for grant projects and to carry out programmes covered by the state budget were provided by the NIPH.

Technical Division

Design projects

The following designs were completed in 2004:

- rehabilitation of parts of the first and second floors in building 5
- rehabilitation of a part of the first floor of building 6
- rehabilitation and conversion of the former boiler house (building 8), building permit obtained in 2004.

The following designs were in progress in 2004:

- B 4 – PS 01 – decontamination of waste waters and changes made to the design of conversion of a part of the ground floor of building 4 to protected laboratory BL3.
- Rehabilitation of the third floor of building 31 (virological laboratory BL3).

Constructions in progress

Rehabilitation of building 20

In 2004, rehabilitation stages 1 and 2 were completed. Building 20 was rehabilitated and a new laboratory animal facility with laboratories and suites were built. The construction was approved and the centre was accredited. A part of the building (4 rooms and clothing change and shower rooms) was used as a SARS laboratory as authorized until May 19, 2005. A new aviary was also built next to the building. Stage 1 and 2 costs were 5,591 thousand CZK and 6,780 thousand CZK, respectively. The grant of the Ministry of Health was 3.2 million CZK, of this 0.2 million CZK were allocated for the design and 3.0 million CZK for stage 1 in 2003.

Conversion of a part of the ground floor of building 4 to protected laboratory BL 3

The project was started in the end of 2003 and 1,298 thousand CZK were used up. In 2004, construction and assembly activities were carried out and equipment for 5,361 thousand CZK was purchased. The construction did not progress continuously; a delay resulted from the need for redesigning waste water decontamination. The previous project of 2001 was not usable after the accession of the Czech Republic to the EU as it did not comply with the EU requirements for the operation of BL3 laboratories and wastewater release. The new design (to be completed) will meet the highest criteria for BL3 laboratories. In 2004, the initial project was reconsidered in view of additional technical requirements and the designer was asked to make respective changes to the initial design.

Further technological measures were taken: e.g. the time and attendance system was extended to include additional buildings, two cameras were installed for the vehicle entry monitoring system, the flammable store was equipped with a safety system, etc.

Farmed out construction repairs

In 2004, multiple minor repairs were completed as planned in various laboratories, offices and buildings, including technical maintenance activities to improve the technical condition of buildings and equipment.

Examples of such repair and maintenance activities:

- Repair of laboratory No. 433 in building 23
- Repair of laboratory No. 112 in building 11
- Repair of sanitary facilities in building 2
- Repair of UNIMO building 29
- Repair of the wall on the building 11 ground floor
- Lift repair in building 11 (central lift)
- Decorating and painting
- Floor repairs and renovation
- Renovation of the heating network in B5
- Water piping renovation
- Glazier works
- Roof repairs
- Repairs for the Centre in Brno
- Floor repair in building 23

List of investment items covered from the NIPH own funds in 2004

Investment item	Number	Total in thousands CZK
Grant contributions for apparatuses	2	384
Contributions to cover projects of the Ministry of Health of the Czech Republic		354
Aviary next to B20 (additional payment)		115
Time and attendance system in Bs 7, 11, 23 (additional payment)		491
Vehicle entry monitoring (additional payment)		500
Access system – lower porter’s lodge, B11 + B23		250
B 20 rehabilitation – part II		9 401
B 8 rehabilitation design		425
B 5 ground floor rehabilitation design		416
B 6 ground floor rehabilitation design		165
B 31 third floor rehabilitation design – virology laboratory (advance)		417
Electronic safety system for flammable store		87
Biosafety hoods for laboratory BL3		366
Electrodynamic vibrator (additional payment)	1	1 871
Payroll and personnel system SW upgrade (additional payment)		124
Laboratory benches	4	447
Laboratory hood	2	330
Water treatment plant	1	256
Laboratory air conditioner for the Brno Centre		60
Air conditioner and rack server		192
Servers for DBI and Intranet operation	2	315
Notebook	1	83
Color laser printer	1	118
ADS software for SIC	1	95
Passenger car	1	530
Instrument for SPF determination in cosmetics	1	1 200
Gas chromatograph with mass detector	1	2 340
Capillary gas chromatograph	1	1 261
Organic carbon analyzer	1	931
Laboratory glassware washer	1	239
Deep freezer	2	525
MiniVidas instrument	1	367
Apparatus equipment update		1 726
T o t a l		26 381

3 Education and Age Structure of Employees

Up to 31. 12. 2004, the Institute employed a total of 729 workers. Of these, 326 were graduates and 296 had secondary school education. Employees with other education numbered 107.

NIPH personnel structure

Graduates

Centre	MUDr.	RNDr.	Ing.	MVDr.	PhDr.	Mgr.	Bc.	Other	Total
EM	28	33	6	1	1	16	---	---	85
PL	26	12	15	---	2	10	2	---	67
HPŘ	---	3	6	5	---	5	1	---	20
HŽP	16	10	16	---	---	5	3	---	50
ZŽP	14	8	20	1	4	5	2	2	56
KZ	3	1	1	---	---	2	---	---	7
OBI	---	3	7	---	---	---	---	1	11
SVI	1	---	3	---	1	5	---	1	11
OVS	---	---	1	4	---	---	---	---	5
ETÚ	---	1	8	---	---	---	---	---	9
ŘÚ	2	---	1	---	1	---	---	1	5
TOTAL	90	71	84	11	9	48	8	5	326

Academic and university degrees

Centre	Prof.	Doc.	Dr.Sc.	CSc./Ph.D.
EM	---	2	2	28
PL	1	3	5	20
HPŘ	---	1	---	5
HŽP	1	1	1	11
ZŽP	---	1	---	12
KZ	---	---	---	3
OBI	---	---	---	7
SVI	---	---	---	1
OVS	---	1	1	---
ETÚ	---	---	---	---
ŘÚ	---	---	---	2
TOTAL	2	9	9	89

Secondary school – medical and non-medical personnel

Centre	Medical	Non-medical	Total
EM	67	12	79
PL	24	11	35
HPŘ	6	3	9
HŽP	23	5	28
ZŽP	26	10	36
KZ	---	4	4
OBI	---	5	5
SVI	---	11	11
OVS	---	10	10
ETÚ	8	65	73
ŘÚ	---	6	6
TOTAL	154	142	296

Age profile of NIPH staff: graduates and graduate managerial staff

All graduates	Age	Managerial
13	> 71	---
40	61 – 70	14
95	51 – 60	26
80	41 – 50	22
40	31 – 40	1
58	21 – 30	1
---	< 21	---

Employment of staff with altered work capability is presented as converted employment ratings:

The annual converted count of NIPH employees numbered 642 persons. The mandatory ratio of employees with altered work capability was 26 (4%). The state budget received 78 381 CZK in lieu of staff shortfall.

4 Science and Research

Despite the increased workload associated with the Institute's classification as a Public Health Protection Facility, and actual requirements stipulated by the Public Health Protection Act, research activities were both intensive and extensive.

All research activities, as well as their financing, were based on research objectives. (4 sectional research objectives and 35 tasks). The second focus of research comprised IGA projects (19) followed by GA ČR projects (10). A small amount of research was financed by grant agencies from various sectors and AV ČR (2).

A separate area to yield research results is part of the intervention projects for health promotion. These are financed by the Ministry of Health through the National Health Programme. NIPH completed 11 such projects.

In total, 54 projects were financed and conducted.

No. of grants and research objectives in 2000 – 2004

Agencies	2000	2001	2002	2003	2004
IGA	27	22	25	26	19
VZ MZ ČR	(35) 4	(35) 4	(35) 4	(35) 4	(35) 4
GA ČR	13	14	14	12	10
AV ČR	3	3	2	3	2
MŠMT	6	4	3	3	2
MZe	1	1	0	1	4
MŽP	2	4	5	4	2
International projects	20	10	19	16	27
Total	76	62	72	69	70

In all, 284 000 CZK of invested and 28 920 000 CZK of non-invested finances were provided by grant agencies and the National Health Programme. Of this amount, 4 302 000 CZK was reserved for wages.

Overview of finances (in thousands CZK) allocated to ČR grant projects and MZ ČR research objectives in 2004

Agencies	No. of grants	Finances:		
		investment	Non-investment	Salaries
IGA	19	134	9 126	2 065
VZ MZ ČR	(35) 4	0	11 402	1 192
GA ČR	10	0	3 060	490
AV ČR	2	0	334	43
MŠMT	2	150	751	120
MZe	4	0	1 167	315
MŽP	2	0	580	77
Total	43	284	26 420	4 302

Overview of finances (in thousands CZK) allocated to ČR grant projects and MZ ČR research objectives in 2000 - 2004

Year	Finances:		
	investment	non-investment	Salaries
2000	4 400	28 139	2 713
2001	8 527	34 900	3 321
2002	1 292	31 050	3 037
2003	1 465	38 766	4 410
2004	284	28 920	4 302

Projects conducted by NIPH in 2004 (ongoing and new)

Grant agency	Researcher	Project no.	Duration	Title of project
MZe	Dr. Karpíšková	QF 3085	2003 - 2005	Evaluation of antibiotic resistance of <i>Campylobacter jejuni</i> in foods and environment.
	Dr. Karpíšková	QF 4048	2004 - 2008	Biofilms in technical equipment as a source of meat contamination by hazardous microorganisms.
	Dr. Karpíšková	1B44019	2004 - 2006	Salmonella resistance to antimicrobial substances.
	Dr. Špelina	44040	2004 - 2006	Modelling and research of thermoinactivation, baroinactivation and growth of selected microorganisms.
GA AV ČR	Dr. Jírová	A4050301	2003 - 2005	Hydrophilic polymers with fixed saccharides for biological applications.
	Dr. Kožíšek	S6022006	2000 - 2004	Incidence of <i>Cryptosporidium spp.</i> Oocysts in drinking water.
MŽP	Dr. Kotlík	VaV/740/4/01	2001 - 2005	Characterisation of airborne pollution load on inhabitants of small domiciles and bioaerosol pollution.
	Dr. Rössner	VaV/740/5/03	2003 - 2007	Protective measures against airborne pollution.
MŠMT	Dr. Souček	OC B20.001	2002 - 2006	Study of the influence of genetic factors on breast cancer.
	Dr. Vojtíšek	OC 281.004	2003 - 2005	Changes in blood/brain barrier permeability caused by metals and influenced by radiation from mobile phones.
GA ČR	Mgr. Rucki	305/03/P018	2003 - 2005	Acute toxicity and the division coefficient of n-octanol/water in binary chem.. compounds.
	Dr. Gut	305/04/0403	2004 - 2006	Effects of new taxanes on breast cancer cells: transport, metabolism, microtubule interaction and induction of apoptosis.
	Dr. Havlíčková	310/02/0467	2002 - 2004	Systemic and mucous immune response following adjuvant immunization of mucous membranes with inactive influenza virus.
	Dr. Havlínová	406/04/0027	2004 - 2006	Psychological aspects of health-related behaviour in adults undergoing long-term monitoring since birth.
	Dr. Kebza	406/03/1168	2003 - 2005	Psychosocial inequalities in health.

Grant agency	Researcher	Project no.	Duration	Title of project
GA ČR	Dr. Křížová	310/02/1448	2002 - 2004	Biological activity of RTX proteins FrpC from <i>Neisseria meningitidis</i> and their role in meningococcal disease.
	Dr. Petráš	301/02/1505	2002 - 2004	Molecular diagnostic, epidemiology and classification of clinically significant gram-positive cocci.
	Dr. Souček	203/02/1152	2002 - 2004	Structure and function of P450 cytochromes of human and (mini) porcine origin.
	Doc. Tichý	305/03/1169	2003 - 2005	Models for estimating risk posed by chemical compounds using QSAR analysis.
	Dr. Vodičková	310/03/0437	2003 - 2005	Understanding styrene genotoxicity: the role of DNA repair, new reactive metabolites and secondary oxidation stress.
IGA MZ ČR	Dr. Kratěnová	NJ/7386-3	2003 - 2005	Risk factors for body posture in schoolchildren, prevalence of motor disease.
	Dr. Souček	NL/7295-3	2002 - 2004	Presence of P450 cytochrome in stem cells.
	Dr. Souček	NC/7527-3	2003 - 2005	Study of predisposing genetic factors for breast cancer.
	Dr. Gut	NL/7567-3	2003 - 2005	Influence of polyphenols and chelates on the toxicity and effects of anthracyclines and taxanes.
	Dr. Hulínská	NI/7528-3	2003 - 2005	Lymes carditis.
	Dr. Mráz	NJ/7387-3	2003 - 2005	Molecular dosimetry of exposure to alkylating reagents. Determination of ducts with globine by modified Edman degradation procedure.
	Ing. Stránský	NJ/7564-3	2003 - 2005	Biological monitoring and health risks of industrial exposure to methylen-4,4-diphenyldiisocyanate.
	Doc. Tichý	NJ/7435-3	2003 - 2005	Determination of the hazards of chemical compounds using statistical/ mathematical analysis.
	Dr. Nemeč	NR/7974-3	2004 - 2006	<i>Pseudomonas aeruginosa</i> In patients with cystic fibrosis: influence of timely PCR indicated therapy. Monitoring the routes of infection.

Grant agency	Researcher	Project no.	Duration	Title of project
IGA MZ ČR	Dr. Křížová	NI/7109-3	2002 - 2004	Prognostic factors of invasive meningococcal disease and their influence on therapeutic strategy.
	Dr. Motlová	NI/7382-3	2003 - 2005	Molecular genetic typing of <i>Streptococcus pyogenes</i> : emm typing.
	Dr. Musílek	NJ/7458-3	2003 - 2005	Properties and evolution of the hypervirulent clonal complex of <i>Neisseria meningitidis</i> newly spreading throughout central Europe.
	Dr. Brůčková	NR/7843-3	2004 - 2006	Monitoring the incidence and spread of HIV/AIDS in ČR
	Dr. Sovinová	NR/7866-3	2004 - 2006	Analysis of the role of smoking in ČR morbidity in 2002 and quantification of expenses for treatment of smoking-related diseases.
	Dr. Šperlingová	NR/7831-3	2004 - 2006	Research and development of a certified reference material: human urine-metabolites of toluene, cresol, hippuric acid.
	Dr. Turek	NJ/7462-3	2003 - 2005	Stud of the antimutagenic and immunomodulatory effects of selected natural substances.
	Ing. Vignerová	NR/7857-3	2004 - 2006	Child development and its evaluation. Social inequalities and other factors affecting development.
	Dr. Gut	1A8248-3/2004	2004 - 2006	Influence of biotransformation and transport on the incidence of breast cancer and the effects of chemotherapy.
	Dr. Roubalová	1A8259-3/2004	2004 - 2006	Development of methodology for detecting <i>C. pneumoniae</i> a <i>C. trachomatis</i> DNA using real-time PCR

EU Grants - NIPH

Centre/researcher	Project title	Programme title/EC - DG	Chief coordinator	Duration	Contract no.
CHŽP/Kožíšek	WEKNOW – Web-based European Knowledge Net. on Water	5. FP/RTD	Kiwa Water Research	01/10/02-30/09/05	EVK1-CT-2002-20004
CEM/Kříž B.	European Seroepidemiology Network2	5. FP/RTD	PHLS London, UK	01/01/01-31/12/04	QLK2-CT-2000-00542
CEM/Kříž B.	Climate Change and Adaptation Strategie for Human Health in Europe	5. FP/RTD	WHO, Kobenhagen, DK	01/05/01-30/04/04	EVK2-CT-2000-00070
CEM/Křížová	Strep - EURO	5. FP/RTD	Lund University, S	01/01/02-31/12/05	QLK2-CT-2002-01398
CEM/Křížová	EU MenNet	5. FP/RTD	IHM Univ., Wurtzbutg, D	01/01/01-31/12/04	QLRT-2000-01436
CEM/Žemličková	EBRCN	5. FP/RTD	DSHZ, Německo	30/04/01-31/10/04	QLRT-CTCT-2000-00221
CEM/Kříž B.	BOVAC Development of a Prophylactic vaccine and Diagnostic Markers to Present and Diagnose Lyme Borreliosis Specific to Europe and North America	6. FP/RTD	MWG Bitech A. G. (SME)	01/09/04-01/09/06	COOP-CT-2004-512598
CPŘ/Ruprich	Promoting Food Safety through a New Integrated Risk Analysis Approach for Foods	6. FP/RTD	RIKILT, Wagening. Univ., Holandsko	01/04/04-30/03/08	Foods-CT-2004-506446

CPL/Souček	Dietary Exposures to Polycyclic Aromatic Hydrocarbons and DNA Damage	6. FP/RTD	Nofer Institute of Occupational Medicine, Poland	01/01/04-01/01/07	FOOD-CT-2003-505609
CEM/Urbášková	PREVIS	6. FP	SMITTSKY DDS Institutet-Swedish Indy.for Infectious Disease Control	01/01/04-31/12/06	LSHM-CT 2003-503413
CPL/Tichý	Novel Methods for Integrated Risk Assessment of Cumulative Stressors in Europe	6. FP	National Environmental Research Institute, DK	1/11/2004-31/10/2009	GOCE 003956
CZŽP/Drahoňovská	Healthy Aging	PHP/SANCO	NIPH, Stockholm, S	07/07/04-07/07/07	2003107
CEM/Havličková	European Infl. Surveillance Scheme	PHP/SANCO	NIVEL-Utrecht, NL	01/09/03-2006	2003204
ČŘKZ/ Chaloupková	Unified Central and Eastern European Surveillance/ Monitoring System for Health Care Quality and Efficiency Indicators	PHP/SANCO	ÚZIS, Bratislava, SK	150504-150706	2003105
CHPŘ/Karpíšková	FOOD – PCR	PHP/SANCO	Danish Veterinary Lab, Kobenhavn, DK	01/03/00-01/06/03	QLK1-CT-1999-00226
CZŽP/Kebza	Cosing the Health Gap: Strategie for Action to Tavole Inequalities in Europe	PHP/SANCO	BzGA, D	15/03/03-15/03/06	2003318
CZŽP/Kebza, Drahoňovská	Implementation of Mental Health Promotion and Prevention Policie	SANCO	Fiosh, Dortmund, D	3.9.2004-07/2006	2003301

CZŽP/Komárek	Getting Evidence into Practice	PHP/SANCO	NIGZ, Woerden, N	01/04/03-30/06/05	2003105
CHŽP/Rössner	Cytogenetic Biomarkers and Human Cancer Risk	PHP/SANCO	Finish Institute of Occup. Health, FI	01/01/01-31/12/04	QLK4-CT-2000-00628
CZŽP/Sovinová	Alcohol Policy Network in the Context of a Larger Europe: Bridging the Gap	PHP/SANCO	EUROCARE, UK	01/11/03-31/10/06	2003102
CZŽP/Sovinová	Health Professionals and Smoking Cessation in a Larger Europe, Phase 1	PHP/SANCO	Universita del Terzo Settore, Pisa, Italy	11/2003-10/2004	2003307
ÚŘ/Volf /Mor.slez.kraj/KHS	Benchmarking Regional Health Management II	PHP/SANCO	NRW Bielefeld, D	010604-310507	2003106
ČŘK/Bourek	Improhealth	Leonardo da Vinci	Technická univ. Košice, SK	01/10/03-30/09/05	SK/03/B/F/PP-177014
CZŽP/Kebza	Tackling Health Inequalities and Social Exclusion in Europe, Phase II	EMPL	NHS Health Scotland, UK	31/12/03-03/10/05	VP/2003/023
CHŽP/Kubínová	Determinants of Cardiovascular Disease in Central Europe	HAPIEE	University College of London, UK	08/04/02-31/12/07	Bez č. smlouvy
CEM/Šmelhausová	European Sero-Epidemiology Network 2	ESEN 2	PHLS, CDSC, London, UK	2001-dosud	QLRT-1999-30542



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4 Science and Research

Vysvětlivky:	EC	European Commission
	DG	Directorate (grant benefactor)
	RTD	Research and Technical Development DG
	SANCO	Public Health and Consumer Protection DG
	PHP	Public Health Programme (formal title: Community Action in the Field of Public Health 2003 - 2008)
	5. FP	5 th framework programme
	6. FP	6 th framework programme

Evaluation of final reports on IGA grants by Ministry of Health authorities in 1991 - 2003

Category year	A	B	C	D	Total
1991			1	1	2
1992	4	8	2		14
1993	7	22	4		33
1994	8	9	1		18
1995	4	14	4		22
1996	6	7	5		18
1997	6	7	5		18
1998	x/ 7	8	2		17
1999	7	10	1		18
2000	3	4	3		10
2001	3	4	1		8
2002	2	4			6
2003	6	5	2		13
Celkem	63	102	31	1	197

x/ Minister of Health award

Overview of Ministry of Health IGA grants 1991 - 2004 by Centre and specialised work sites

Year	CEM	CHPNP	CHPŘ	CHŽP	CZŽP	CHZ x/	OBI since 2003 ŘÚ	NOČ since 2003 aborted	Total
1991	2								2
1992	6	6	1		1				14
1993	8	10	1	1	8	5			33
1994	6	7	1	1	2	1			18
1995	9	5		2	5			1	22
1996	5	8	1		3		1		18
1997	7	4	1	2	4				18
1998	10	5			2				17
1999	1	8	3	2	3		1		18
2000	2	3	1	4					10
2001	2	3		1	1		1		8
2002	3	2	1						6
2003	8	4					1		13
2004									0
Celkem	69	65	10	13	29	6	4	1	197

x/ delimited in 1995 to SÚJB

5 Postgraduate Education

Postgraduate training of Ph.D students in 2004

Centre	No. of students	No. of successfully completed courses	No. of students from medical faculties	No. of supervisors
CEM				
CZŽP				
CHŽP	3	1		
CPL	8	2	3	5
CHPŘ	5			2
Total	16	3	3	7

Educational activities in 2004

Centre/ type of activity	Consultation day	Workshop	Conference	Course	Discussion assembly	Total
CEM	8	2	1		1	12
CPL	1	7	3			11
CHŽP	3	4	1			8
CZZP	7					7
ŘÚ				1		1
CHPŘ	3					3
SPK				1		1
Total	22	13	5	2	1	43

A total of 43 educational activities were provided in 2004, 5 more than in the previous year.

Postgraduate activities at NIPH in 2001, 2002 a 2003 a 2004

No. of activities	2001	2002	2003	2004
Courses	4	4	1	2
Consultation days	19	19	15	22
Workshops	17	16	15	13
Conferences	6	5	5	5
Discussion assemblies	1	2	2	0
Study visits	1	1	0	1
Total	48	47	38	43

6 Activities of Reference Laboratories and Methodical Guidance

Specialisation of graduate NRL personnel in 2004

Branch: epidemiology and microbiology

Specialisation	Count
Doctors (MUDr., MVDr.)	15
Biologists (RNDr., Mgr.)	38
Engineers (Ing.)	5
Scientific or educational classification	24

Specialisation of graduate NRL personnel in 2004

Branch: public health

Specialisation	Počet
Doctors (MUDr., MVDr.)	34
Biologists (RNDr., Mgr.)	31
Engineers (Ing.)	40
Scientific or educational classification	37

NRL activities in 2004

No. and type of samples examined

Branch: epidemiology and microbiology

Type of material examined	No. of samples examined for:			No. of samples:	
	Public Health Service	Medical facilities	Others	Total	Reimbursement
Blood, blood derivates	444	8584	552	9580	7723
Sera	3258	17424	2516	23198	7472
Other biological material	204	5597	1676	7477	4256
Testing of strains	3896	11327	772	15995	677
Examination of physiological indicators in humans and animals	663	1225	307	2195	546
Groups of products	89	5	185	279	244
Environmental samples	15		5	20	10
Cosmetics				0	
Items of common usage				0	
Disinfectants			2	2	2
Insecticides and rodent control products		57	55	112	55
Chemicals		2	5	7	3
Total	8569	44221	6075	58865	20988
Percentage	14,56%	75,12%	10,32%	100,00%	35,65%

NRL activities in 2004

No. and type of samples examined

Branch: epidemiology and microbiology

Type of material examined	No. of samples examined for:			No. of samples	
	Public Health Service	Medical facilities	Others	Total	Reimbursement
Blood, blood derivates	408	27615	858	28881	26079
Serum	21996	62986	5643	90625	32102
Other biological material	626	10906	2670	14202	6952
Testing of strains	18644	27537	1064	47245	4111
Examination of physiological indicators in humans and animals	414	2512	556	3482	2178
Groups of products	63	2197	958	3218	1050
Environmental samples	5		9	14	9
Cosmetics				0	
Items of common usage				0	
Disinfectants		114	182	296	182
Insecticides and rodent control products			258	258	258
Chemicals			5	5	3
Total	42156	133867	12203	188226	72924
Percentage	22,40%	71,12%	6,48%	100,00%	38,74%

NRL activities in 2004

Number and type of samples examined

Branch: Public Health

Type of material examined	No. of samples examined for:			No. of samples:	
	Public Health Service	Medical facilities	Others	Total	Reimbursement
Blood, blood derivates	170	743	517	1430	42
Serum		34	167	201	
Other biological material	1464	194	110	1768	
Testing of strains	44		10	54	3
Examination of physiological indicators in humans and animals		34	691	725	
Groups of products	420		1368	1788	1364
Environmental samples	1477	655	2207	4339	2338
Cosmetics	24		1981	2005	1981
Items of common usage	10		549	559	547
Disinfectants			10	10	10
Insecticides and rodent control products				0	
Chemicals			8	8	
Total	3609	1660	7618	12887	6285
Percentage	28,00%	12,88%	59,11%	100,00%	48,77%

NRL activities in 2004

No. and type of samples examined

Branch: Public Health

Type of material examined	No. of samples examined for:			No. of samples	
	Public Health Service	Medical facilities	Others	Total	Reimbursement
Blood, blood derivates	1700	881	777	3358	160
Serum		34	167	201	
Other biological material	2176	423	80	2679	
Testing of strains	102		20	122	6
Examination of physiological indicators in humans and animals	500	122	5664	6286	
Groups of products	1198		4706	5904	4641
Environmental samples	13674	2005	21808	37487	5790
Cosmetics	136		4393	4529	4393
Items of common usage	80		894	974	894
Disinfectants			110	110	110
Insecticides and rodent control products				0	
Chemicals			48	48	
Total	19566	3465	38667	61698	15994
Percentage	31,71%	5,62%	62,67%	100,00%	25,92%

NRL paperwork in 2004

Branch: epidemiology and microbiology

Type of activity	Written assessments and validation:				Reimbursement
	MH ČR	Public Health Service	Other medical facilities	Others	
Specialised reports	16	57	60	126	101
Reviews and recommendations	128	87	49	78	14
Guidance and legislation	6	46	5	20	
Standard methodology	1	2	5	12	

NRL paperwork in 2004

Branch: Public Health

Type of activity	Written assessments and validation:				Reimbursement
	MH ČR	Public Health Service	Other medical facilities	Others	
Specialised reports	80	126	48	1902	1879
Reviews and recommendations	138	146	57	534	377
Guidance and legislation	80	35	3	80	3
Standard methodology	14	15	1	8	

Methodical NRL activity in 2004

Branch: epidemiology and microbiology

	Events				Total
	Consultation days	Seminars	Study visits	Pre- and postgraduate courses	
No. of events	13	44	110	167	334
No. of participants	832	5954	569	4476	11831
Total no. of days	15	42	185	145	387

Methodical NRL activity in 2004

Branch: Public Health

	Events				Total
	Consultation days	Seminars	Study visits	Pre- and postgraduate courses	
No. of events	53	50	66	258	427
No. of participants	1344	2046	238	7526	11154
Total no. of days	53	52	296	264	665

7 International Cooperation

WHO Collaborating Center for Reference and Research on Streptococci

Head: MUDr. Pavla Křížová, CSc.

Overseas partner: WHO HQ Geneva, founded in 1965, redesignated in 2004. The Centre has continued in providing all-inclusive microbiological and epidemiological coverage for diseases caused by group A and B streptococci, pneumococci and streptococci of other groups. This Centre is one of the few specialised laboratories in the world to own an extensive collection of sera for M and OF typing of group A streptococci. The Centre has introduced routine use of sequence typing of group A streptococci and *emm* typing. In 2004, the Centre continued in typing strains isolated abroad and sent for precise identification, sending reference strains on request. Likewise, work has continued on the collaborative prospective study aimed at monitoring the efficiency of a newly developed 11-valency conjugated pneumococcal vaccine for prevention of otitis in children. Cooperation as part of the 5th framework EU programme "Strep-EURO" has continued.

WHO Collaborating Centre for Bacteriology of Tuberculosis

Head: MUDr. Marta Havelková

Zahraniční partner: WHO HQ Ženeva, Švýcarsko, GTP – Global Tuberculosis Programme, ustanoveno 1964, obnovení členství 1994, o redesignaci požádáno v r. 2004. Pracovních skupina WG NTM (Working Group of Non-tuberculous Mycobacteria of the Bacteriology and Immunology Section of the WHO/IUATLD). Činnost WG zahájena v r. 1996, výsledky: Martin-Casabona N. et al. Non-tuberculous mycobacteria : patterns of isolation : a multi-country retrospective survey. *Int. J. Tuberc. Lung Dis.*, 2004, vol. 8, no. 10, p. 1186– 1193.

- Work group for expansion of DOTS (DEWG – DOTS Expansion Working Group) and the Subgroup on Laboratory Capacity Strengthening (SLCS). Since 2000 to date.
- Project: Drug susceptibility testing (DST) – Quality Control in DST, since 1998 to date.
- Global Project WHO on Antituberculosis Drug Resistance Surveillance in the World 1995 – to date, updated results published in WHO 1 – 3.
- Global Project WHO/IUATLD on Network of Supranational Reference Laboratories (IUATLD – International Union Against Tuberculosis and Lung Diseases) since 1996 to date
- International Collaborative Survey „Frequency of M. tuberculosis resistant to all second-line drugs, active since 2004.

WHO Collaborating Centre for Reference and Research on Borreliosis

Head: RNDr. Dagmar Hulínská, CSc.

Overseas partner: WHO HQ Geneva, founded in 1999

The major activities of the Centre are isolation, typing and storage of endemic *Borrelia* strains in central Europe. The aim is to procure detailed analysis of *Borrelia* antigen structure using biological-molecular methodology including sequential analysis. The results of these analyses are essential for development of specific vaccines useable in the target area. The Centre closely collaborates with CDCP Atlanta and other institutes in the USA (SUNY University, Stony Brook, New Jersey Medical University).

8 Publication Activities

The NIPH publication activities 2004 were regularly processed and entered in the bibliography database of the Scientific Information Centre. In 2005, the respective part of the records is going to be reported to the database of the VaV (Research and Development) Information System, more precisely to the Information Registry of Results (acronymed RIV) archiving and making available data on publication activities related to research and development projects and plans supported by public funds of the Czech Republic.

As many as 503 bibliographic records of works published in 2004 were processed (those from 2003 were progressively completed to total 584 records).

Table 1 shows numbers of publications by centres in 2004 (27 publications resulted from cooperation of authors from two or more centres). Final grant reports are not taken into account.

Twenty-nine out of 236 journal papers accepted for publication appeared in 20 high-impact journals. Thirty-eight abstracts from conferences and other meetings were published in 5 high-impact journals.

The bibliographic records of the NIPH publication activities of 2004 and those added for 2003 will be available in electronic form as the NIPH Bibliography 2002/2003 of the journal *Acta hygienica, epidemiologica et microbiologica* (AHM) at <http://www.szu.cz/svi/ahem.html>.

Numbers of publications by centres in 2004 (by February 28, 2005)

		CEM	CHŽP	CPŘ	CŘKZ	CZŽP	CPL	OBI	KŘ	Total
Journal paper	CR	112	18	10	0	17	36	11	0	204
	Other country	12	4	2	0	0	11	3	0	32
Abstract in a journal	CR	0	1	0	0	0	7	1	0	9
	Other country	38	1	0	0	0	2	3	0	44
Monography	CR	0	3	1	0	3	0	1	0	8
	Other country	0	0	0	0	0	0	0	0	0
Article for proceedings	CR	42	35	31	1	16	12	5	3	145
	Other country	14	6	14	3	10	16	1	0	64
Chapter in a monography	CR	0	0	1	0	0	1	0	0	2
	Other country	3	0	1	0	0	0	0	0	4
Electronic document	CR	1	2	2	0	1	0	0	0	6
	Other country	1	0	0	0	1	0	0	0	2
Poster	CR	0	0	1	0	0	0	0	0	1

	Other country	9	0	0	0	0	0	0	0	9
Total	CR	155	59	46	1	37	56	18	3	375
	Other country	77	11	17	3	11	29	7	0	155
Total		232	70	63	4	48	85	25	3	530

CEM Centre of Epidemiology and Microbiology
 CHŽP Centre of Environmental Health
 CPŘ Centre of the Hygiene of Food Chains
 ČRKZ Centre for Quality Control and Management in Healthcare
 CZŽP Centre of Health and Environment
 CPL Centre of Occupational Health
 OBI Department of Biostatistics and Informatics
 KŘ Office of the Director

9 PUBLISHING ACTIVITIES

A. Drawing of financial means for editorial and audiovisual activities

The editorial and dramaturgic board of the NIPH met on December 4, 2002, to discuss and approve the editorial plan for the year 2003. An expert team has fulfilled the editorial plan on the basis of allocated financial means.

Financial limit: 3 400 000,- CZK

Financial drawing: edition + video: 3 639 844,- CZK

Edition	CZK
Leaflets	1 743 450.-
Brochures	1 095 000.-
Posters	178 776.-
Other	254 214.-
Contribution for health and vaccination cards of children and adolescents	150 000.-
<i>Edition in total</i>	<i>3 167 226.- CZK</i>
Video	CZK
Video program	380 000.-
Contribution to videofilm "All We Know about AIDS"	14 280.-
Duplicate copies of video programs	18 838.-
Production of CD "So That a Dog Shall not Bite You"	59 500.-
<i>Video in total</i>	<i>472 618.- CZK</i>

Attendance fees at film festivals 0 CZK



B. Publishing activities

In the year 2004 there have been published:

- 16 leaflets
- 6 paperbacks
- 5 posters
- 1 other
- 5 articles on the internet

33 items altogether

For titles of particular nonperiodical publications edited in 2004 - see appendix.

The distribution of publications to healthcare and educational institutions has been coming off primarily through Public Health Institutes with residence in the regional capitals.

C. Audiovisual activities

1. Materialization

In the year 2004 one video program has been made; for its - see appendix.

2. Activities of video distributor

The offer of video programs for lending out and sale takes place through a video catalogue of the NIPH, which is distributed to healthcare and other institutions as well as to individual parties interested.

In all, lent out free of charge have been 331 video tapes

In all, handed out were 25 video catalogs

Parties interested: Public Health Institutes, Regional and District Public Health Authorities, educational and healthcare institutions, district and municipal organs, educational offices, pedagogical and psychological advisory centres, foundations, childrens homes, civil associations, military organizations, prison service, doctors, firms, private individuals, etc.

3. Activities of videofilm shop

Sold through GRANT-Videotranscription, Ltd., pursuant written contract with the NIPH and on non-commercial prices, approved by the Economical Department (EO) of the NIPH, have been 241 video tapes

4. Overview of presentation of video programs and eye catchers

a) Participation of video programs at exhibitions

Festival “Crystal Heart Poděbrady“, June June 1 - 4, 2004

Video programs chosen for projection: Pictures from Childhood VI

3rd nationwide conference, “Jihlava Health Promotion Days“

November 30 - December 1, 2004

Projection of video: Life is Wonderful

b) Workshop and video at the cinema MAT, December 7, 2004

For the staff of the Departments for Health Promotion at Public Health Institutes

Appendix

List of non-periodical publications and video programs published in 2004

Leaflets:

One's Own Well: Advantages and Risks
Pathways to Your Health (A Health Fan)
Successful Ageing and Active Old Age
Problems with Obesity in Children and Adolescents
Children and the TV Screen
Alcohol and Other Addictive Substances in Children – Prevention in the Family
The Head Louse, Scabies and Pinworm
What do You Know About Cancer of the breast
Cancer of the Colon and Rectum
Oral Hygiene in Adults
Mental Anorexia and Bulimia
A Diseased Thyroid Gland
Wholesome Residence for the Elderly
Are You Drinking Water from the Water Cooler ?
Thermal processing of meals in the Household
Exercises for Children with Bad Posture

Brochures:

Caring for the Mother at the Maternity Hospital in Puerperium
A Menu for Children under 2 Years of Age
Stress and Communication
The Nutritional Status of the Population and Nutrition Risks
Population Health in the Czech Republic
Lucy Wears Eye-Glasses



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9. Publishing Activities

Posters:

Ease Your Work at the computer

The World Day without Tobacco

What an Employee Should Know About Protection of One's Own Health at Work

The Right Way to Store Food and Meals in the Fridge - Prevention of Food-borne Diseases

For a Safe Road, an Accident is no Accident - WHO

Other Items:

Pictures for Children

Internet:

Consumer Behavior

Using Cleansing Products Reasonably

Using Cosmetics Reasonably

Problems of Tuberculosis

Waste Management in Healthcare Facilities

Video programs:

Life is Wonderful

10 Statutes of the National Institute of Public Health

Article 1

Preamble clauses

1. The National Institute of Public Health (hereinafter the Institute) was established by Article 86 of Act No 258/2000 as last amended as a healthcare facility.
2. The Institute is a contributory organization directly controlled by the Ministry of Health of the Czech Republic (hereinafter the Ministry). Based on the provision of the Minister of Health of December 17, 2002 under reference HEM – 300 – 18.12.02/35651 and the statement of the Minister of Health of December 17, 2002 under reference 31334/2002, the Institute is the successor of the state organizational component, the National Institute of Public Health, repealed by the date of the establishment of the Institute as a contributory organization.
3. Address of the Institute: Prague 10, Šrobárova 48/49, post code: 100 42
4. Identification number of the Institute: 75010330
5. The Institute is entitled to establish branches and outcentres.
6. The Institute is a functional and organizational economic unit that acts in all legal relations on its own behalf and responsibility.

Article 2

Mission, major tasks and other tasks of the Institute

1. The mission and major tasks of the Institute specified by Article 86, Paragraphs 2 and 3 of Act No 258/2000, on public health protection, as last amended, are as follows:
 - 1.1 To prepare background information for national public health policy making and health protection and promotion;
 - 1.2 To provide methodical and reference support in the field of public health protection;
 - 1.3 To monitor and to study relationships between environmental conditions and health;
 - 1.4 To participate in international cooperation;
 - 1.5 To assure quality control of services provided in public health protection;
 - 1.6 To provide postgraduate education in the medical disciplines of health protection and promotion and to promote community public health awareness;

- 1.7 To process data on population health relevant to prevention of the emergence and spread of infectious diseases, occupational health risks and other occupational health damage, human exposure to occupational and environmental pollutants and the epidemiology of drug addiction, with the aim of obtaining background information for national policy making and the monitoring of long-term trends in the incidence of infectious and other diseases of high prevalence;
2. Other tasks of the Institute specified by Article 86, Paragraph 4 of Act No258/2000 as last amended, are as follows:
 - 2.1 To promote preventive medicine disciplines and research in these disciplines, and to create conditions for these activities;
 - 2.2 To breed laboratory animals and to carry out experiments on animals;
 - 2.3 To provide healthcare and counselling including diagnostic activities in the following disciplines: occupational medicine, toxicology, psychology, physiology, clinical microbiology, parasitology, immunology and allergology;
 - 2.4 To take part in law making and harmonization with the EU legislation;
 - 2.5 To take part in the creation of standards and databases for Czech National Standards relevant to health protection;
 - 2.6 To develop standard methods and operating procedures in the field of public health protection;
 - 2.7 To provide paid services, i.e. counselling and expert opinion in healthcare to be either covered by health insurance or charged for, testing and procedures on request of health insurance companies, external quality assessment of laboratory procedures, supply of diagnostic agents and performance of occupational medicine procedures;
 - 2.8 To provide specialized and methodical support in the fields of public health protection and promotion as well as diagnosis, treatment and prevention of infectious diseases;
 - 2.9 To assess occupational and environmental health risk factors and to present the necessary suggestions for job categorization, limit values not established by regulations, etc.;

- 2.10 To assess risks in the field of food safety and to communicate with the public when authorized by the Ministry of Health;
- 2.11 To investigate and to measure occupational and environmental factors, products (including human and animal testing) and biological specimens, and to carry out biological exposure tests for the purposes of monitoring population health indicators, occupational and environmental factors and those related to working and living conditions, to provide background information in health risk assessment and management for activities of the public health authorities as part of the integrated rescue system, and to take part in health protection and health promotion programmes;
- 2.12 To take part in the accreditation system and quality control; to ensure methodical and organizational procedures for laboratory authorization; to confer authorization when authorized by the Ministry of Health;
- 2.13 To take part in the management of certification and accreditation programmes for health care facilities including special healthcare facilities;
- 2.14 To ensure programmes on healthcare provision quality and to take part in these programmes, including implementation of the projects for quality promotion in public health as presented and adopted by the Ministry of Health of the Czech Republic in agreement with the national policy for quality promotion in the Czech Republic, related to standardization in healthcare and methods for assessment of provided healthcare efficiency;
- 2.15 To technologically ensure the administration of records related to quality programmes and communication between providers and users of quality programmes;
- 2.16 To monitor selected occupational and environmental factors;
- 2.17 To measure and to test subjects for fulfilment of the tasks set;
- 2.18 To prepare background information for public administration activities in the fields of genetically modified organisms, chemicals and chemical agents including biocides, air protection and waste management;
- 2.19 To assess plant protective agents in terms of human health protection;

- 2.20 To fulfil tasks emerging from the Verification Protocol of the Convention on the prohibition of the development, production and stockpiling of bacteriological (biological) and toxin weapons and on their destruction (Convention on biological weapons) for the field of public health;
 - 2.21 To provide public library and information services in the field of public health and to take part in publishing activities;
 - 2.22 To provide pregraduate and postgraduate training in healthcare, preventive medicine and microbiology, with particular focus on evaluation of occupational and environmental health risks, health promotion, primary and secondary prevention of infectious, chronic and noncommunicable diseases and occupational healthcare;
 - 2.23 To organize conferences and other expert meetings;
 - 2.24 To cooperate in activities related to the operation and maintenance of public health information systems (e.g. Workplace Categorization, Acute Respiratory Diseases) and data evaluation;
 - 2.25 To rate healthcare technologies from the point of view of public health protection;
3. In a state of military preparedness and emergencies in the Czech Republic, the Institute is a specialized healthcare centre directly controlled by the Ministry of Health of the Czech Republic. The Institute takes part in execution of tasks in the fields of hygiene, epidemiology, toxicology and microbiology to the benefit of the population of the Czech Republic.

Article 3

Management and organization of the Institute

1. The head of the Institute is the director who is appointed and removed by the Minister of Health of the Czech Republic on suggestion of the Chief Public Health Officer of the Czech Republic. The director is the statutory representative of the Institute with general authority.
2. In the director's absence, an interim representative is appointed in writing by him/her to act on his/her behalf to the full extent of his/her rights and liabilities.



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10. Statutes of the National Institute of Public Health

3. The director of the Institute may establish a counselling board for consideration of issues of managing the Institute.
4. The organizational structure of the Institute and management relationships and bonds are specified in detail by the director in the Organizational Rules of the National Institute of Public Health (hereinafter Organizational Rules). In the Organizational Rules, the director also specifies the establishment, change or abolition of the branches or outcenters of the Institute according to Article I, Paragraph 5.

Article 4
Final clauses

1. Changes and amendments to the Statutes can only be made with the agreement of the Ministry.
2. These statutes shall come into force after being ratified by the Ministry.

Done at Prague

Date: November 11, 2003

Signature: Jaroslav Volf, MD, Ph.D.
Director of the Institute

Date: November 12, 2003

Signature: Marie Součková, MD
Minister of Health of the Czech Republic