ZRÍNYI MIKLÓS UNIVERSITY OF DEFENSE Thesis Council

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Presentation of by the author and official commentaries on the PhD thesis, reps. entitled

The role of medical fitness examinations and prevention in the light of changed life circumstances and emergencies at law enforcement agencies

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THESIS BOOKLET

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Title of the doctoral (PhD) dissertation:

The role of medical fitness examinations and prevention in the light of changed life circumstances and emergencies at law enforcement agencies

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Formulation of the scientific problem

In addition to health condition, damage or perfect condition of functions, several other factors – education, social and cultural behaviour forms, smaller and larger environment – effect or determine the individual's fitness for work (service) and its social participation.

Therefore the assessment of deficiency and ability to work requires the joint examination of factors related to health condition and other factors. The exact development of assessing suitability and its proper measurement within changed life circumstances, which plays a remarkably important role in the law enforcement service, are fundamental part of the subject matter.

Physical and mental stress remarkably increased on the basis of increased tasks and challenges occurred within the law enforcement staff.

The careful and safe selection of the staff and its more detailed medical fitness examination is essential to carry out these tasks. **Under changed life circumstances and emergencies**, such as in the course of insuring demonstrations, or at the time of extreme weather phenomenon, and in case of members of special police units, as a result of increased physical and mental stress, **the unforeseeable health damage and the risk of their occurrence is increased** in case of persons being inclined to it. Under service circumstances in case of special police units the occurrence of the abovementioned events and circumstances may determine not only the survivor capability but may also have serious consequences on carrying out police (deployment and operational) tasks.

The police staff, the new organizational principles formed after the **integration of Police** and Border Guards, the task-oriented and strategic challenges **make necessary the novel** formation of the set of conditions of fitness examinations. When dealing with this issue attention may and must be paid to those health damages the knowledge of which is of prognosticatory value and which can predict the occurrence of those diseases which could endanger the successful challenge undertaking, the fulfilment and execution of service tasks.

It is important and necessary to form common position concerning fitness examinations, the regular comparison of which with the similar methods of other EU member states is important.

The service demanding increased requirements necessitates the effective selection in the course of admissions. The admission screening carried out properly constitutes great help in not admitting persons being unfit from medical aspect. The proper admission, selection system helps to have less injuries and subsequent health damages at later trainings, preparations.

The physical and mental condition of young persons applying to admission is usually not satisfying. In my opinion, as far as this is concerned, the formation of health admission requirements is not consistent and usually not concrete enough, and the frequent changes of the relating legal regulations make the common justification more difficult.

Clear support helps the efficiency and effectiveness of prevention at directional, managerial levels. On the basis of management decisions the inner infrastructure appropriate for fitness examinations, prevention and patient care can be formed, the possibly greatest financial, material and technical support is available, however, its continuous monitoring is essential.

It is an important supporting factor that the internal clinic and supply structure is integrally connected with the task system of the Ministry of Defence National Health-care Centre. Impending factors also affect the efficiency of carrying out the task, thus the material, technical and financial opportunities are narrower and of limited size than what would be necessary. The time for performing screening tests is often insufficient; therefore the tests cannot be as thorough as really needed.

The division of damages important concerning individuals can be presented from two directions. As far as the individual is concerned damages can be divided into **physical and mental** damages. As a result of these damages the cooperation ability of the individual (including the ability to work as well) is decreasing in part or in whole.

In today's modern society the requirements made towards individuals are remarkably increased and in relation to this productivity became fundamental. **Performance at a proper level can be expected only from physically and mentally health persons.** Thus became the so called "cult of health" almost dominant in the life of society.

The selection on the basis of parameters determined properly and suitably, **the regular** care and prevention have significant role as far as the personal staff of the police force, fire service, disaster management and foreign missions to maintain order is concerned.

The choice of the subject matter is actual also because it is not an unusual incident in these spheres of activities and services that somebody – in some way and from some point of view – becomes unfit to carry out his or her previous work.

As far as the chosen subject matter is concerned the **handling of stress situations** occurring often in the course of performing law enforcement service and its health professional supervision is a really significant element. Functional and contextual factors play an important role in the course of planning and executing prevention activities concerning law enforcement staff.

One special field of task situations with increased burden are tasks such as the deployment of police personal staff in case of flood crisis situation, which does not fall within the professional sphere of competence, but falls within the sphere of protecting the personal and economical security of the population.

Several health and psychological difficulties can be detected in the course of **deploying** the police staff for emergency tasks. In unexpected situations occurring in connection with flood situation the personal staff receives such a lasting and extreme burden which the verification of effectiveness normally does not concern, therefore such examinations may have knew data as far as the personal staff is concerned. The preparation for performing extreme tasks occurring in the course of unexpected events gives several tasks to organisations performing health-care support. The research of this field is a novel task in international context as well.

To conclude, in my dissertation I carry out the analysis of the system of medical, physical and mental fitness examinations, in which I analyse this system's characteristics concerning special life and service circumstances with special regard.

The subject matter of the dissertation – in line with the above – is the analysis of the role of medical fitness examinations and prevention within changed life circumstances and emergencies at police bodies.

Determination of research aims

In developing the dissertation **I set the following main research aims** in the two main parts:

1. In the first chapter of my doctoral dissertation **I represent the system of the so called annual periodical fitness examinations** carried out within the law enforcement staff, their experiences and defects. In the subject matter I represent and analyse the known foreign and domestic experiences gained at the Police Force of the Austrian Republic and Military Health-Care Centre. In my dissertation I carry out a comparative analysis concerning the fitness examinations.

The aim of this part of my dissertation, on the one hand, as far as the law enforcement workers being already in service are concerned – professional, public servant and civil servant staff – is to use the results deriving from the analysis of effective legal regulations and protocols in increasing the efficiency of preventive screening activity. On the other hand, the aim is to call the attention to the importance of fitness examinations and prevention with presenting the literature and researches examined in this matter, and also to the earliest recognition and the necessary treatment of lesions affecting the body during the different endangered life situations.

In the first chapter of my dissertation I carry out the procedural and methodological analysis of the work fitness examination requirement system of the domestic law enforcement agencies and the causes of medical inadequateness. My research aim is to determine the strengths and weaknesses of the fitness examination system applied at law enforcement agencies, on the basis of which recommendations can be made to the optimization and development of the domestic legal, institutional and task system.

2. In the second chapter of my doctoral dissertation I wish to examine and analyse the health and psychological characteristics of extreme burden in the system of health protection and development within a single representative questionnaire survey (empirical research). I extend the survey over the examination of special burdens concerning the applicability of the police staff concerned in flood protection emergency as well.

On the basis of the evaluated survey results I draw up concrete recommendations to develop the focus system of health protection and development and to practical opportunities.

3. The third chapter of my dissertation examines the unified requirement system of the psychological fitness examination procedure of law enforcement agencies.

Research methods

My research aim is **to draw up recommendations** to prevent personal emergencies occurring after the integration of law enforcement agencies and to prevent the occurrence of psychiatric illnesses deriving from increased burden.

- 1. Elaboration, analysis and evaluation of relevant domestic and international literature relating to the subject matter:
 - part of the literature used in my dissertation since this part of the literature is published to a lesser extent – originates from internal police work materials, studies, professional articles and lectures;
 - in the course of research work I found it extremely important to adapt the knowledge gained from international literature and received during foreign study-tours in the domestic procedural and methodological system.
- 2. My primary researches are the comparative and evaluative analysis of the periodical fitness examinations of the personal staff of the Police.
 - In analysing the fitness examinations (procedures) I used one of the most up-to-date analysis (risk assessment) methods of strategic planning, organisation and decision preparation, the **SWOT analysis**. With the help of this method we can answer what could be proper and appropriate in the course of performing fitness examination as far as the solution is concerned.
- 3. I drew up individual questionnaires, which I analysed and evaluated, based on the rules of **empirical research method** in case of my researches concerning the police activity with increased (extreme) working place burden (employment) and flood crisis.

Short description of the performed analysis

In line with my aims I divided the dissertation into **three main parts**, in which I deal with the analysis of the work, medical and psychological fitness system of law enforcement agencies pursuant to my aims.

CHAPTER I

System of work medical fitness examinations at law enforcement agencies

To fulfil my research aim first I reviewed the procedures and set of requirements of the work medical fitness examinations of the law enforcement agencies with special regard to the Police, where I evaluated separately the system of health qualifications and unfitness examination methods.

CHAPTER II

Health-care and psychological questionnaire survey to estimate the police activity with increased working place burden and the deployment of police staff in emergency

In the second practical chapter of my dissertation I evaluated the health experiences of police activity with special burden and the deployment of police staff in emergency with the help of questionnaire survey formed pursuant to individual empirical research method.

CHAPTER III

Procedural and requirement system of psychological fitness examinations at law enforcement agencies

In this chapter of the dissertation after reviewing the organisational system of the police psychological examinations I analysed and evaluated the health psychological experiences of the integration of the police and border guard, and the consequences of work involving increased burden.

As far as the working place burden and employment is concerned in the police staff I carried out the identification of preventive measures and their adjustment to the psychological fitness examination system.

Summarized conclusions

I. Concerning the analysis of the system of work medical fitness examination

- 1. The **examination method** of the security bodies essentially equals to the one used by the Ministry of Internal Affairs Central Hospital and its Institutions Department for the Examination of Fitness for Work until 2007, however, on the basis of my relating researches and information acquisition it already mixes the military's system corresponding with the practice of the former years, which makes the solution of tasks concerned more uniform and effective.
- 2. In my opinion it should be made possible to the staff commander in charge **to carry out drug tests, drug preventive examinations** periodically, and immediately in case of involvement at the law enforcement staff working in the prevention of drug-related crimes.
- 3. On the basis of analysing the results of fitness examinations carried out at the Police College and Law Enforcement Training School the applicants were rejected to a great extent because of low mental performance, immature career motivation, emotional instability, and low disciplinary performance.
- 4. With making progress in service years of those performing actual service, **the occurrence of locomotor disasters** have a leading role. At selection, i.e. at the fitness examination of those applying to admission the precise survey of anamnesis is very important and also the fact indicated by the applicant on the application form, that in which section of service, in which field he or she would like to start his or her career.

5. The selection, the fitness examination greatly contributes to the human resource development and the reaching of strategic goals of security bodies. One of the most important characteristics of the effective organization is whether the organization can find those adequate people whose competences are appropriate for the requirements of the given position. If this task is conducted in a coordinated way keeping in mind the strategic aims of human strategy then we are speaking about an effective and well-working selection system.

II. In the field of police activity involving increased work stress and the application of police staff in emergency situations

- **6.** In connection with the field of expertise of health care I suggest providing shifts more often in the qualified periods; checking randomly, in their home- those on the sick list; a significant rise in the number of those working in the field of health care-psychology; tightening the relationship between work safety and health insurance and organizing frequent consultations to improve the stress-bearing ability of those working in extremely stressful situations.
- **7.** In connection with the field of expertise of psychology it is reasonable to utilise the results of the survey to decrease the work stress on organizational as well as on group level. In accordance with work safety regulations employers must pay increased attention to assessing psychosocial risks of work when assessing work risks, and to the prevention, reduction or elimination of those risks.

Since the staff needs human care of appropriate quality, it is essential that the psychological service contribute to this with its devices, within its limits of competence, as the part of integrated human resource management, from the selection through the preparation period through the performance assessment, support of career planning, in normal as well as in extraordinary periods.

During **leadership trainings** it is practical to pay special regard to the stress-reducing effects of the tasks being planned, organized; to the common characteristics of crisis situations, communication in times of crisis; to the possibilities of motivating personnel.

It is reasonable to further develop the methodology of psychological fitness examinations as well, a method of which is the elaboration of task-specific career profiles and system of fitness criteria, for which the psychological burdens specially characteristic of each task must of course be taken into consideration.

III. In the field of the requirement system and procedure of police psychological fitness examinations

- 8. Difficulties occurring in this field are expected to appear in an increased form in the work of leaders and the human fields of expertise. Their treatment on purely personal level will not be as effective, changes are needed on organizational level and solutions as well.
- 9. Professional experience definitely justify the **optimization of the work of the psychological organization** and thus the **suggestion related to the reduction of the work stress,** which can be executed with the help of a national level organization diagnosis survey.

- 10. It is necessary to identify job-specific psychosocial and other risk factors, their expectable effects and already present consequences more accurately. With the involvement of the fields of expertise of health care, psychology and work safety, and the police profession the revealing of risk factors characteristic of each job must be started through the establishment of the annual risk assessment's methodology.
- 11. It is reasonable to elaborate and introduce a comprehensive health development program concerning the full personal staff. In the interests of this program it is necessary to involve cooperating outside experts, and to cooperate with institutions for health preservation on national and regional level.
- 12. The health and psychic condition of the staff and its ability to work is stable. However, it is necessary to treat risks appearing as the result of the work stress even in the short term, since the staff receives a high level of stress at work, they are overburdened, and the high number of symptoms of illnesses makes it probable that the work stress level is high. International research also shows that of all the professions the police profession's stress level is one of the highest.
- 13. Data analysed in the research show in a realistic way that depending on **fields of expertise and position different causes of stress affect the personnel**, and the consequences appearing as medical symptoms are also different. It can also be pointed out that **health-preserving behaviour is not, or is only partly characteristic of police personnel.**
- 14. Part of the stress appearing in the physique can be reduced; the functioning of the physique can be optimized with the help of **physique diagnosis** examination that started not long ago. **Support of the environment** (e.g.: stable relationship with colleagues, family background) has a significant stress-reducing effect, and because of this it is extremely important to adequately treat and, if possible, prevent conflicts arising in work relationships.
- 15. Higher level decisions are necessary to create ergonomically appropriate work conditions, to reduce overburdening, to increase the feeling of security of the staff, to ensure its respect.
- 16. The system of selection, supply and care, and preparations must be further developed in the future. The psychological and work health supply system must be modernized according to present demands.
- 17. It is necessary to establish and maintain the so-called **network of health protection agencies**. The tasks of these experts would be to help the flow of information, the exchange of data between local and regional organizations, organizations of regional status, and regional public health and epidemics inspectors, coordinating special tasks, providing health care duties not requiring qualification, and helping the work of doctors providing basic health care, psychologists, and regional health care-epidemics and work safety inspectors.
- 18. It is necessary to continuously identify job-specific psychosocial and other risk factors and their expectable effects and their already present consequences.

- 19. It is reasonable that police organizations establish and introduce their own health preservation-health development programs with central control, with regard to local characteristics, within which greater stress must be put on establishing healthy attitude, health-preserving behaviour. Also, attention must be paid to getting personnel acquainted with and making them conscious of police health, psychological, work safety-cantered health preservation services.
- 20. From psychological, physical point of view, and to prevent health problems and to improve conditions it is necessary and reasonable to provide **constant recreational possibilities.** To do this it is necessary to further improve and enhance the infrastructural background (recreational centres), and to make them more available.

IV. My particular suggestions necessary to improve the fitness examination system are as follows:

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- a) I suggest re-establishing the **health care specialized agency of the Ministry of Internal Affairs** as an independent organizational unit, the main tasks of which are jobhealth and work hygiene, work-health and work safety, public health and epidemics. These tasks are based entirely on legal regulations and are independent of the financing of the National Health Insurance Fund.
- b) I suggest **treating the physical, psychological and professional fitness system** of civil servants, public servants, government workers and **professional staff as a unified structure** in the case of newly admitted personnel.
- c) The structural transformation of the present Ministry of Defence- Ministry of Internal Affairs unified system must be considered, which transformation needs further discussion. Improving work psychology for professional staff, especially in the case of disasters, should be considered in the first place.
- d) In cases of disaster in dangerous situations as a logistic task it is suggested to establish a so-called "M" reserve (Mobilization reserve) for at least 2000, the composition of which is necessary to be executed based on the suggestion of the Ministry of Internal Affairs' National Disaster Management Directorate.
- e) It is suggested to organize special training for the police forces primarily put into action with frequency to be determined later, but at least annually.
- In my opinion the **health regulations of the Ministry of Internal Affairs must be re-established** with special regard to the recently conducted reorganizations, according to which new service units got into the system and the regulation system of these must be reconsidered in health regulations as well, and it is necessary to establish this system in modifying legal regulations.

New Scientific Findings

- 1. Using in-depth analysis (focusing on procedure and methodology) of the requirement system of domestic security bodies' fitness examination system and the most common causes of medical inadequateness, systematizing, comparison on national and international level, contrasting with practical experience, and personal discussions on local and international professional forums <u>I found out</u> the strengths and deficiencies of the fitness examination system applied by law enforcement agencies, based on which <u>I elaborated particular suggestions</u> to optimize and develop the domestic legal, institution and task system
- 2. Put in the unified requirement system of the psychological fitness examination procedure of law enforcement agencies based on the critical analysis of international and domestic literature and on my practical experience home and abroad and my comparative evaluations I was the first to make particular suggestions to the organizational, procedural and methodological possibilities of the preventing (preventive treatment) of psychiatric illnesses occurring among the personal staff as the result of personal crises following the integration of security bodies and events of service that involve working under increased stress and overburdening in the course of fitness examination procedure.
- 3. Based on the results of a questionnaire survey I proved the medical and psychological characteristics of police activity involving increased (extreme) work stress (overburdening) and the applicability of police personnel in emergency situations based on which I elaborated a new protocol, I made suggestions to the practical possibilities of health protection and development.

Recommendations of the dissertation

- 1. The findings of my dissertation can serve as a basis especially for the improvement of the procedure and methodology of organizations dealing with the fitness examination of law enforcement agencies, with special regard to the psychological fitness examinations conducted under the challenging, changing life situations of today and under increased burden.
- 2. To elaborate professional conceptions, internal regulators helping judicature and methodological guides in connection with the realisation of those written under article1., and to elaborate execution plans and to define priorities.
- 3. My dissertation can be used as a reference in the educational system of the Police and the Zrínyi Miklós National Defence University, and in the education of institutions of higher education working on this field.
- **4.** The examinations conducted in the dissertation can serve as a basis when determining research directions on the field of work fitness examination.

List of publications

I. Lectures published in conference publications

Foreign language lecture published in international conference publications

1. Révai Róbert: A múlt és jövő, Közép-Európai országok belügyminisztériumai egészségügyi menedzsereinek találkozója, Pozsony, 2007. november

Lecture published in domestic conference publication

- 1. Kiss Róbert Gábor, Révai Róbert: Szív és érrendszeri kockázat, atherosclerosis, atherothrombosis, BRFK Hon- és Rendvédelmi Szervek I. Semmelweis-napi Szakmai Fóruma, Budapest, 2009, Duna Palota nonprofit Kft., Bp., pp.135-138
- 2. Leyrer Richard, Révai Róbert: Elemzés, prospektív összefoglalás az FBI Nemzeti Akadémián tapasztalt egészség megőrzési szemléletről, BRFK Hon- és Rendvédelmi Szervek I. Semmelweis-napi Szakmai Fóruma, Budapest, 2009, Duna Palota nonprofit Kft., Bp., pp.135-138
- 3. Révai Róbert: Az alkalmasságtól az idő előtti nyugállományig I. Előadás ORFK Bp., 2008. április
- 4. Révai Róbert, Sandra Sándor: Magnentoterápia hatásai, Renaisance Hungary, Bp., 2008.07.09.
- 5. Révai Róbert, Sandra Sándor: Magnetobiológia-megnetofiziológia, Orsz. Megnetoterápiás Konferencia, Visegrád, 2008.09.26.
- 6. Révai Róbert, Sandra Sándor: A mágneses térerőterápia javallata, ellenjavallata a kezelések folyamatai, Orsz. Magneto-terápiás Konferencia, Visegrád 2008.09.26.
- 7. Révai Róbert, Sandra Sándor: A magnetoterápia történelmi áttekintése, Orsz. Magnetoterápiás Konferencia, Visegrád, 2008.09.26.
- 8. Révai Róbert: A rendészeti vonatkozásai a humánigazgatási szolgálat új felvételesek iránymutatói alapján, ORFK Bp., 2010.01.15.
- 9. Révai Róbert: Az egészségügyi alkalmassági vizsgálatok és a prevenció szerepe a megváltozott életkörülmények és veszélyhelyzetek tükrében, ORFK Osztrák BM, Bp, Duna Palota 2010.04.06.

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- 1. Révai Róbert, Sandra Sándor: Magnentoterápia hatásai, Enaisance Hungary, Bp. 2008.07.09.
- 2. Révai Róbert, Sandra Sándor: Magnetobiológia-magnetofiziológia, Orsz. Megneto-terápiás Konferencia Visegrád, 2008.09.26.
- 3. Révai Róbert, Sandra Sándor: A mágneses térerőterápia javallata, ellenjavallata a kezelések folyamatai, Orsz. Maneto-terápiás Konferencia Visegrád, 2008.09.26.

- 4. Révai Róbert, Sandra Sándor: A magnetoterápia történelmi áttekintése, Orsz. Magnetoterápiás Konferencia, Visegrád, 2008.09.26.
- 5. Révai Róbert: A rendészet vonatkozásai a humánigazgatási szolgálat új felvételesek iránymutatói alapján, ORFK Bp. 2010.01.15.

II. Revised articles (on-line as well)

In foreign periodicals published in Hungary

- György Székely, Attila Jósvai András Erbszt Zoltán Szakács Róbert Révai János Gyarmati: The use of Vertebroplasty in Traumatic Fractures of the Thoracolumbal Spine, AARMS 8/1/2009. ZMNDU, Bp. pp.133-139, ISSN 1588-8789
- Róbert Révai, Tamás Révai: Military service in cold environments and prevention, risk management of coldstress, AARMS 4/8/2009, ZMNDU, Budapest, pp.569-573. ISSN 1588-8789

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- 1. Székely Gy, Jósvai A., Erbszt A, Szakács Z, Révai R, Gyamati J.: A vertebroplasztika alkalmazása a torakolumbális gerinc traumás töréseiben, HONVÉDORVOS, 2008/3-4
- Révai Róbert, Huszár András Lipka Zoltán: A nemzeti katasztrófavédelmi szervek és szervezetek szerepe és feladatai kiterjedt járványok esetén, Polgári Védelmi Szemle, 2009/2 Budapest, pp.14-24. ISSN 1788-2168
- 3. Révai Róbert, Görbe Attiláné Zán Krisztina: Egészség és migráció az Európai Unióban és Magyarországon, HADMÉRNÖK on-line pp.166-171. IV/2, Bp, ZMNE, 2009.
- 4. Révai Róbert, Istvanovszki László, Bedros J. Róbert, Huszár András, Székely György: Szervezett bűnözés egészségügyi aspektusai, Hadmérnök on-line pp.190-202. V/2, Bp, ZMNE, 2010.

Professional-scientific CV

Name: Róbert Révai MD,

Place and date of birth: Budapest, 17 October 1957

Education:

1976. Final Examination – Zrínyi Ilona Secondary School, Budapest

1979. Dental Technician qualification

1989. General Practitioner diploma – Semmelweis University

1994. Medical special examination1997. Cardiology special examination

2004. Employment medical science special examination

2006. Ph.D. doctoral training – Zrínyi Miklós National Defence University,

Military Technical Doctoral School

Workplaces:

1987. National Ambulance and Emergency Service, ambulance officer, ambulance

organisation

1987. Ministry of Internal Affairs Central Hospital and its Institutions

Medical, Cardiology Division, Leader Care Centre

2007. Police Headquarters of Budapest, chief medical officer

Professional experience:

1989-2000. Medical, Cardiology Division

1996. Grosshaden Clinic, Bavarian Heart-Centre Germany (3 months)

1996-tól Airport (Budapest Airport) Start-doctor service,

Flight Health-Care Centre

1997 MH Cardiology Rehabilitation Institute (2 months)

2000 – 2007 BM KKI Leader Health Protection Centre

Language skills:

- German medium state language exam
- Russian medium state language exam
- English language at conversational level

Scientific professional activities, recognitions:

- Member of the Society of Hungarian Cardiologists
- Member of the Society of Hungarian Angiologists
- Member of the management of IPA international police organisation
- Member of management of ORFK Scientific Board, Health Section manager
- Publication activity:
 - o lecture published in conference publication: 1 revised in foreign language, 9 revised in Hungarian, 5 unrevised in Hungarian.
 - o revised periodical articles: 2 in foreign languages, 4 in Hungarian.
- Recognitions: ministerial chief advisor minister of justice and law enforcement, recognition of professional course of life (2007)