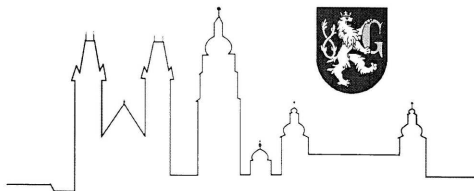


Czech Anatomical Society  
Czech Society of Histo- and Cytochemistry  
Faculty of Medicine in Hradec Králové, Charles University in Prague  
Faculty of Pharmacy in Hradec Králové, Charles University in Prague



## **MORPHOLOGY 2003**

41st Symposium of the Czech Anatomical Society  
with International Participation

## **PROGRESS IN BASIC, APPLIED AND DIAGNOSTIC HISTOCHEMISTRY**

40th Symposium of the Czech Society of Histo-  
and Cytochemistry with International Participation

## **PROGRAMME**

Hradec Králové, September 15–19, 2003

## Organizing Committee

**Honorary President:** Prof. MUDr. Stanislav Němeček, DrSc.

**President:** Doc. MUDr. Jaroslav Mokrý, Ph.D.

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| MUDr. Jana Karbanová       | Petra Podhrázká              |
| MUDr. Josef Mráz, CSc.     | MUDr. Olga Procházková, CSc. |
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| Milada Hetešová            | Jana Bezoušková              |
| Mgr. Petr Nachtigal, Ph.D. | Lenka Matyášková             |
| Mgr. Martin Kopecký        | ing. Zuzana Müllerová        |

**Symposium Website:** <http://www.lfhk.cuni.cz/symphist/>

Dear Colleagues,

It is my great pleasure to welcome you on behalf of the Organizing Committee to the 41st Symposium of the Czech Anatomical Society (CAS) with International Participation „Morphology and Cell Biology” and to the 40th Symposium of the Czech Society of Histo- and Cytochemistry (CSHC) with International Participation "Progress in Basic, Applied and Diagnostic Histochemistry" held in Hradec Králové, Czech Republic.

For the first time both symposia are organized at the same time to attract attention of more experts from morphological and related scientific disciplines and provide the participants the opportunity to visit both symposia. The most attractive topics consisting of Workshops "Programmed Cell Death" and "Stem Cells and Cellular Differentiation" are situated in overlapping programme of both symposia. Other innovations in scientific programme include organisation of other workshops where the participants may gain a practical experience: "Digital Image Processing" and "Chemicon IHC Workshop".

In addition I cordially invite you to social events organised in Botanic Gardens and Nové Adalbertinum. These sites provide a wonderful area for fruitful discussions and exchange of scientific knowledge. I believe you spend and enjoy a wonderful time in Hradec Králové.

Jaroslav Mokrý

## Programme

### Progress in Basic, Applied and Diagnostic Histochemistry

**Tuesday, September 16**

**(Faculty of Medicine)**

- 08:00 – 20:00 Registration  
09:00 – 09:20 **Opening Ceremony**
- 09:20 – 10:05 **Plenary Lecture**  
**M. Maršala** (San Diego)  
*Recovery of motor function and modulation of spasticity after spinal grafting of human hNT neurons or neuronal precursors in animals with ischemic paraplegia*
- 10:05 – 10:20 Coffee Break
- 10:20 – 13:35 **WORKSHOP „Programmed Cell Death“**
- 10:20 – 10:50 **M. Kalbáčová** (Praha)  
*Suicide (apoptosis) - when, where, why and how*
- 10:50 – 11:05 **D. Žůrek** (Praha)  
*Techniques for apoptosis detection*
- 11:05 – 11:35 **E. Matalová, L. Dubská** (Brno)  
*Apoptosis identification in histological sections*
- 11:35 – 11:50 Coffee Break
- Chairs: K. Smetana, Sr., M. Červinka
- 11:50 – 12:05 **K. Smetana, I. Jirásková, J. Čermák, Z. Hrkal** (Praha)  
*To the nucleolar participation in the apoptotic process*
- 12:05 – 12:20 **M. Červinka, J. Cerman, E. Rudolf** (Hradec Králové)  
*Dynamic aspects of apoptosis*

- 12:20 – 12:35 **J. Procházková, J. Marečková, B. Erdšová, D. Kylarová, V. Lichnovský** (Olomouc)  
*The process of ubiquitination in human embryonal tissues undergoing programmed cell death*
- 12:35 – 12:50 **J. Neradil, R. Veselská, A. Svoboda** (Brno)  
*Apoptosis during induced neuronal differentiation of EC cell line P19*
- 12:50 – 13:05 **I. Klusáková, P. Dubový** (Brno)  
*A balance of apoptosis and proliferation of the satellite cells in the rat dorsal root ganglia after dorsal rhizotomy*
- 13:05 – 13:20 **J. Martinek, Z. Jirsová, T. Kučera, H. Mlěchová, J. Hořejší** (Praha)  
*Programmed cell death in the ovary of adolescent girls*
- 13:20 – 13:35 **D. Kylarová, J. Procházková, B. Erdosová, M. Gálik, K. Herdová, V. Lichnovský** (Olomouc)  
*c-Myc and Bcl-2 family proteins in developing human embryo*
- 13:35 – 14:15 Lunch, CHCS Committee Assembly
- 14:15 – 14:45 Painting Vernissage
- 14:45 – 19:30 **WORKSHOP**
- „Stem Cells and Cellular Differentiation“  
Chairs: E. Syková, P. Dvořák
- 14:45 – 15:00 **D. Duspivová, J. Mokřý** (Hradec Králové)  
*Breakthroughs in stem cell biology*
- 15:00 – 15:20 **P. Dvořák, A. Hampl, S. Kosková** (Brno)  
*Human embryonic stem cells*
- 15:20 – 15:40 **E. Syková, P. Jendelová, K. Glogarová, L. Urziková, P. Lesný, A. Hampl, P. Dvořák** (Praha)  
*Stem cells and therapy of brain and spinal cord injury*
- 15:40 – 15:55 **R. Pytlík, T. Purkrábková, H. Strnadová, D. Stehlík, P. Obrtlíková, E. Novotová, J. Karban, K. Smetana, Jr.** (Praha)  
*Mesenchymal stem cells in health and disease*

|               |   |  |
|---------------|---|--|
| 15:55 – 16:10 | <b>K. Smetana, Jr., T. Purkrábková, R. Pytlík, C. Böck, K. Smetana, H.-J. Gabius</b><br>(Praha, Munich)<br><i>Galectin-1 recognizes ribonucleoproteins of bone marrow stromal cell nuclei</i>   | Chairs: M. Grim, Z. Jirsová  |
| 16:10 – 16:25 | Coffee Break<br><br>Chairs: K. Smetana Jr., J. Motlík   | 18:15 – 18:30 <b>M. Grim, V. Szeder, Z. Halata, M. Sieber-Blum</b><br>(Praha, Milwaukee, Hamburg)<br><i>Identification of Merkel cell precursors</i>   |
| 16:25 – 16:40 | <b>M. Klabusay, J. Mayer, J. Adler</b> (Brno)<br><i>Hematopoietic and mesenchymal stem cells: Selection, expansion, and differentiation ex vivo - gates to cellular therapies</i>   | 18:30 – 18:45 <b>P. Šnajdr, V. Karafiát, E. Krejčí, M. Dvořák, M. Dvořáková, O. Naňka, M. Grim</b> (Praha)<br><i>The role of c-myc gene in developing neural crest</i>                         |
| 16:40 – 17:00 | <b>M. Bláha, P. Měříčka, L. Jebavý, J. Malý, P. Žák, S. Filip, J. Mokřý, V. Měrka</b><br>(Hradec Králové)<br><i>Blood stem cell separation and cryopreservation in clinical practice (Review to our 15 years anniversary)</i>             | 18:45 – 19:00 <b>R. Veselská, K. Zitterbart, J. Auer, J. Neradil</b> (Brno)<br><i>Caffeic acid enhances differentiation of HL-60 myeloid leukemia cells induced by all-trans retinoic acid</i> |
| 17:00 – 17:15 | <b>J. Vávrová, D. Vokurková, M. Řezáčová, M. Bláha, S. Filip</b> (Hradec Králové)<br><i>Antiapoptotic cytokine IL-3+SCF+FLT3L influence on proliferation and differentiation of AC133<sup>+</sup>/CD34<sup>+</sup> progenitor cells</i>   | 19:00 – 19:15 <b>Z. Holíková, K. Smetana, Jr., B. Dvořánková, H.-J. Gabius</b> (Praha, Munich)<br><i>Galectin binding to epidermal cell nuclei – relation to cell differentiation</i>          |
| 17:15 – 17:30 | <b>J. Mokřý, J. Karbanová, D. Duspivová, D. Šubrtová</b> (Hradec Králové)<br><i>Brain as a source of remarkable stem cells</i>  | 19:15 – 19:30 <b>Z. Jirsová, J. Martinek, T. Kučera, F. Liška, D. Křenová, V. Křen</b> (Praha)<br><i>Differentiation and distribution of Sertoli cells in the HD rats</i>                      |
| 17:30 – 17:45 | <b>S. Filip, J. Mokřý, J. Karbanová, J. Vávrová</b><br>(Hradec Králové)<br><i>Neural stem cells transplantation and hematopoietic recovery</i>  | 20:30 – 24:00 <b>Welcome Party (Nové Adalbertinum)</b>   |
| 17:45 – 18:00 | <b>Y. Mazurová, V. Valoušková</b><br>(Hradec Králové, Praha)<br><i>The reaction of the subependymal layer of lateral brain ventricles to the neurodegenerative process within the striatum in an animal model of Huntington's disease</i> |  |
| 18:00 – 18:15 | Coffee Break  |  |

Wednesday, September 17 (Faculty of Medicine)

08:00 – 14:30 Registration

08:30 – 09:00 CSHC Plenary Meeting

**09:00 – 10:30 ORAL PRESENTATIONS, Part I**

Chairs: Dubový P., Soukup T.

- 09:00 – 09:15 **J. Maršala, N. Lukáčová, K. Kuchárová, D. Čížková, M. Maršala** (Košice, San Diego)  
*The peculiarities of the segmental and laminar distribution of NADPHd positive and NOS immunoreactive nerve terminal fields in the spinal cord of the dog*
- 09:15 – 09:30 **P. Dubový, I. Klusáková, R. Jančálek** (Brno)  
*Changes of immunofluorescence staining for ECM molecules in the rat dorsal root ganglia following chronic compression of the peripheral nerve*
- 09:30 – 09:45 **I. Sviženská, P. Dubový, I. Klusáková** (Brno)  
*Expression of IGF-1 in the afferent and motor Schwann cells after central and peripheral axotomy – a comparison by quantitative immunofluorescence staining*
- 09:45 – 10:00 **Y. Mazurová, J. Österreicher, I. Látr, J. Cerman** (Hradec Králové)  
*Double-staining methods used for phenotypization of cells generated within the subependymal layer of lateral brain ventricles in response to the striatal neurotoxic lesion*
- 10:00 – 10:15 **J. Ehrmann, Z. Kolář, J. Mokry** (Olomouc, Hradec Králové)  
*Nestin – a new diagnostic and prognostic marker in pathology: Immunohistochemical analysis of expression in different tumors*
- 10:15 – 10:30 **M. Chovanec, K. Smetana, Jr., J. Plzák, J. Betka, Z. Holíková, H.-J. Gubius** (Praha, Munich)  
*Differentiation dependent pattern of sialylation in squamous epithelia and carcinomas of the head and neck*
- 10:30 – 10:45 Coffee Break

**10:45 – 12:30 ORAL PRESENTATIONS, Part II**

Chairs: Tribulová N., Martinek J.

- 10:45 – 11:00 **W. Schulze, L. Okruhlicová, V. Homuth, G. Wallukat** (Berlin, Bratislava)  
*Transcription nuclear factor-kappa B was activated by autoantibodies against alpha1-adrenergic receptors from hypertonic patients*
- 11:00 – 11:15 **N. Tribulová, L. Okruhlicová, A. Dzurba, J. Slezák, J. Styk** (Bratislava)  
*Myocardial connexin 43 alterations and arrhythmias*
- 11:15 – 11:30 **Z. Jirsová, Z. Zemanová, M. Jirkovská, J. Martinek** (Praha)  
*Functional differentiation of the interface between capillary and tubular wall in the chick mesonephros*
- 11:30 – 11:45 **Z. Zemanová, Z. Jirsová, M. J. Murphy** (Praha, Cobleskill)  
*Development of tubular and vascular component in the mesonephros of chick embryos with unilateral renal agenesis (URA)*
- 11:45 – 12:00 **J. Martinek, T. Kučera, D. Veselý, J. Astl** (Praha)  
*Expression of some cytokine markers in vascular bed of the human parathyroid gland*
- 12:00 12:15 **J. Mokry, D. Duspivová, J. Ehrmann, S. Němeček, J. Karbanová, D. Šubrtová, Z. Kolář** (Hradec Králové, Olomouc)  
*Expression of nestin in newly formed blood vessels in human tissues*
- 12:15 – 12:30 **T. Soukup, H. Rauchová, G. Zachařová, S. Hudecová, A. Vadászová, O. Křižanová** (Praha, Bratislava)  
*Activity of the liver mitochondrial GPDH and expression of muscle MHC isoforms in rats with altered thyroid status*
- 12:30 – 13:00 Lunch

13:00 - 14:00 POSTER PRESENTATIONS

- P1 **S. Jergová, D. Čížková, J. Maršala** (Košice)  
*The effect of nonspecific inhibitor on nitric oxide synthase immunoreactivity in the spinal cord after peripheral injury*
- P2 **K. Saganová, L. Urdžiková, P. Ondřejčák, J. Maršala, I. Vanický** (Košice)  
*Localization and distribution of NADPH diaphorase positive structures in the thoracic spinal cord after compression injury*
- P3 **N. Lukáčová, D. Čížková, J. Pavel, I. Lukáč, M. Maršala, J. Maršala** (Košice)  
*Axotomy-induced changes of nitric oxide synthase immunoreactivity and catalytic activity in the white matter*
- P4 **M. Némethová, V. Danielisová, M. Silvášiová, J. Burda** (Košice)  
*Ischemic tolerance and c-Fos immunoreactivity in the rat brain hippocampal CA1 region*
- P5 **J. Burda, M. Hrehorovská, I. Domoráková, V. Danielisová, M. Némethová, E. Mechírová** (Košice)  
*Effect of tanakan on postischemic activity of protein synthesis machinery in rat brain*
- P6 **E. Račeková, J. Orendáčová, M. Martončíková, B. Poušová, D. Kluchová** (Košice)  
*Developmental expression of nitric oxide in the areas of adult neurogenesis*
- P7 **J. Orendáčová, E. Račeková, M. Martončíková, T. Ondřejčák, B. Poušová, J. Maršala** (Košice)  
*Ependymal lining of rat brain and spinal cord in response to injury: unilateral olfactory bulbectomy and ischemia*
- P8 **A. Perželová, I. Máčíková, P. Mráz** (Bratislava)  
*Immunocytochemical identification of glial cells in primary cultures derived from human brain*
- P9 **I. Máčíková, A. Perželová, P. Mráz** (Bratislava)  
*Fibronectin is present in a majority of cells in adult human brain cultures*
- P10 **M. Kočíšová, M. Siroťáková, K. Schmidtová, F. Dorko, E. Mechírová** (Košice)  
*The NADPH-d positive innervation in the thymus of quails*
- P11 **K. Schmidtová, J. Danko, M. Siroťáková** (Košice)  
*Distribution of the AChE-positive nerve structures innervating GALT in the sheep*
- P12 **M. Siroťáková, K. Schmidtová** (Košice)  
*Innervation of the spleen in the rats*
- P13 **O. Naňka, P. Valášek, M. Grim** (Praha, Londýn)  
*The role of moderate hypoxia in embryonic angiogenesis*
- P14 **Z. Haviarová, P. Weismann, L. Okruhlicová, N. Tribulová, R. Sotníková, E. Ujházy, M. Mach, P. Mráz** (Bratislava)  
*Mast cell density of the aortal wall in rat after peroral administration of phenytoin and E vitamin*
- P15 **V. Danielisová, M. Némethová, J. Burda** (Košice)  
*Iron deposition in brain following ischemia in a rat model of ischemic tolerance*
- P16 **M. Klobušická, J. Kusenda, O. Babušiková** (Bratislava)  
*Argyrophilic nucleolar organizer regions (AgNORs) in relation to p53 and bcl-2 protein expression in leukemia patients*
- P17 **D. Duspivová, J. Mokry, S. Mičuda, J. Karbanová, J. Martínková** (Hradec Králové)  
*Immunohistochemical analysis of human hepatocytes in vivo and in vitro*
- P18 **Z. Lazarová, L. Turecký** (Bratislava)  
*The influence of diltiazem on the carbohydrate and lipid content in the blood and liver of rats. The biochemical and histochemical study*
- P19 **T. Kučera, H. Pácová, J. Martinek, D. Veselý, J. Astl** (Praha)  
*The parathyroid gland - functional dysregulation – morphological aspects*
- P20 **L. Vajner, V. Konrádová, J. Uhlík, J. Adášková** (Praha)  
*The influence of the methylxanthine intravenous administration on the proportion of fucosylated glycoconjugates in tracheal goblet cells*
- P21 **R. Vagnerová, Z. Zemanová** (Praha)  
*Prenatal development of ATPases in the rat colon*
- P22 **M. Buchtová, F. Tichý, P. Matulová, K. Witter, I. Mišek** (Brno)  
*Epithelial cell proliferation in the developing hamster palate*
- P23 **D. Černochová, E. Pospíšilová, D. Kylarová, V. Lichnovský** (Olomouc)  
*Programmed cell death and proliferation in the developing human oral vestibule*

- P24 **V. Lichnovský, I. Oborná, M. Kubinyiová, D. Kylarová, P. Havelka, J. Procházková** (Olomouc)  
*Simultaneous detection of estrogen or progesterone receptors and apoptosis in human endometrium*
- P25 **P. Vodička, J. Motlík** (Liběchov)  
*In vitro cultivation and differentiation of fetal porcine neural stem cells*
- P26 **J. Karbanová, J. Mokřý, D. Duspivová, S. Filip** (Hradec Králové)  
*Differentiation potential of stem cells derived from murine CNS*
- P27 **E. Krejčí, M. Dvořáková, M. Grim, V. Karafiát, J. Králová, P. Šnajdr, M. Dvořák** (Praha)  
*The expression of c-Myb transcription factor in the chick embryo*
- P28 **L. Guller, V. Jakubovská, Š. Polák, P. Mráz, L. Danihel, J. Beňuška, E. Rovenská, J. Jakubovský** (Bratislava)  
*Localisation of chondroitin sulfates A, B and C in the human spleen*
- P29 **L. Guller, Š. Polák, M. Kopáni, J. Beňuška, V. Jakubovská, P. Mráz, R. Pardubský, J. Papinčák, J. Jakubovský** (Bratislava)  
*On the eosin fluorescence in histological sections*
- P30 **M. Rezáčová, J. Vávrová, D. Vokurková** (Hradec Králové)  
*Combined effect of tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) and ionizing radiation on induction of leukemia cells apoptosis*
- 14:45 - 15:00 **H. Pavlíková, P. Matulová, K. Witter, I. Míšek** (Brno)  
*Immunohistochemical detection of proliferating cell nuclear antigen (PCNA) in cells of the developing oral vestibule in the field vole (*M. agrestis*, Rodentia)*
- 15:00 - 15:15 **J. Plzák, K. Smetana, Jr., O. Měříčka, Z. Holíková, Z. Csotoová, M. Chovanec, J. Bartůňková, S. Saeland, H.-J. Gabius** (Praha, Dardilly, Munich)  
*The binding of mannosides in Langerin positive Langerhans cells in vivo and in vitro*
- 15:15 - 15:30 **M. Kopecký, V. Semecký, P. Nachtigal** (Hradec Králové)  
*Prohibitin expression in the testes of busulfan pretreated Wistar rats*
- 15:30 **Closing Ceremony**
- 14:00 - 15:45 ORAL PRESENTATIONS, Part III**  
Chairs: Lichnovský V., Smetana K., Jr.
- 14:00 - 14:15 **J. Čáp, J. Cerman, S. Němeček, M. Mareková, J. Náhlovský** (Hradec Králové)  
*Histochemical changes in GH-secreting pituitary adenomas pre-treated before surgery with somatostatin analogues*
- 14:15 - 14:30 **J. Cerman, J. Mokřý, S. Němeček, J. Čáp, M. Červinka, E. Rudolf, S. Kopecká** (Hradec Králové)  
*Enhancing signal in immunocytochemistry*
- 14:30 - 14:45 **V. Baran, H. Kovářová, J. Klíma, P. Hozák, J. Motlík** (Košice, Praha, Liběchov)  
*The location of nuclear DNA helicase II during mammalian oocyte growth*

**Thursday, September 18 (Faculty of Pharmacy)**

**09:00 - 13:00 CHEMICON IHC WORKSHOP**

**Fiona Smith (product manager)**

Introduction to Chemicon International and Scintila

Staining Protocol, Reagents

Methods of Staining

Staining of slides from primary antibody through to final  
cover slipped

Presentation on the products in the IHC Select® range

Presentation of the slides stained during the workshop