

30478

1st INTERNATIONAL CONFERENCE

of the

**HUNGARIAN
BIOCHEMICAL SOCIETY**

August 29 – September 1, 1993

Debrecen, Hungary

WELCOME ADDRESS

It is our pleasure to welcome our guests, members of the Hungarian Biochemical Society and researchers of the national and international scientific communities, who came to Debrecen to attend the First International Conference of our society. The main reason for starting the organization of a conference with the participation of colleagues from abroad is to offer something new and different to the nearly one thousand Hungarian biochemists and to their colleagues in the neighbouring countries. We wish to express our thanks to all of you responding to our call with enthusiasm and full of help. We strongly believe that the regular appearance of such regional conferences can provide the necessary framework and impact to make biochemistry one of the driving forces of science and education in our countries.

The symposia and the plenary lectures of the scientific program cover selected topics of the broad area of biochemistry. Some of these topics reflect the interest of the several biochemistry oriented research groups of the three universities in Debrecen. Others have been organized by helpful colleagues from other cities. In addition, there are two poster sessions related to symposia topics and other exciting areas of biochemistry. A commercial exhibition and several events related to biochemical education help to make the conference a useful event with a rich program.

It is also our hope that you will take some time to enjoy the recreation facilities around the conference site, the unique atmosphere of the historical city and the nearby Hortobágy National Park.

We will do our best to make your visit to Debrecen pleasant, and wish you an enjoyable and scientifically rewarding stay.

Pál Elődi László Fésüs Pál Gergely
Organizers of the Conference

Péter Friedrich
President of the Society

PROGRAM

Sunday, August 29 (Lecture Hall A)

17:00 **Conference Opening**

17:10 **Albert Szent-Györgyi Commemorative Lecture**
Szent-Györgyi, Andrew: Regulation of contraction by calcium binding
myosins

18:00 **Plenary Lecture**
Heilmeyer, Ludwig M.G.: Molecular basis of signal integration in
phosphorylase kinase (PL1)

19:15 **Banquet** (Kossuth Lajos University)

SYMPOSIA

Monday morning, August 30 (Lecture Hall A)

Posttranslational Modification of Proteins (S1)

Organizers: Faragó, Anna (Budapest) and Gergely, Pál (Debrecen)

Chairpersons: Heilmeyer, L.M.G., jr. and Gergely, P.

- 8:30 Downward, J., Buday, L.
Regulation and function of ras proteins in the control of cellular growth (S1-1)
- 9:00 Dudits, D., Magyar, Z., Bakó, L., Bögre, L., Dedeoglu, D., Golovkin, M., Kapros, T., Felföldi, F., Györgyei, J., Fehér, A.
Expression of cell cycle genes and phase specific cdc2-related kinase complexes in hormone stimulated plant cells (S1-2)
- 9:30 Szamel, M., Kracht, M., Uciechowski, P., Bartels, F., Heiner, A., Resch, K.
Protein kinases C: structure, biochemistry and cellular signalling (S1-3)

10:00 Break

Chairpersons: Downward, J. and Faragó, A.

- 10:15 Csermely, P., Schnaider, T., Somogyi, J.
Autoregulation of the 90 kDa heat shock protein (hsp90) (S1-4)
- 10:45 Dombrádi, V.
Molecular biology of protein phosphatase 1 in *Drosophila melanogaster* (S1-5)
- 11:15 Muszbek, L., Hatvani, J., Haramura, G., Laposata, M.
Posttranslational modification of proteins with fatty acids (S1-6)

Plenary Lecture (Lecture Hall A)

- 12:00 Oroszlan, Stephen
The life cycle of human immunodeficiency virus, the causative agent of AIDS (PL2)

Monday morning, August 30 (Lecture Hall B)

Biotechnology: DNA Techniques and Antisense Approaches (S2)

Organizer: Aradi, János (Debrecen)

Chairpersons: Lengyel, P. and Aradi, J.

- 8:30 Opening
- 8:35 Lengyel, P.
Biochemistry of interferon action (S2-1)
- 9:10 Ádány, R., Fodor, F., Diószeghy, P., Mechler, F.
Oligonucleotides in diagnostic molecular pathology (S2-2)
- 9:35 Aradi, J.
Antitemplate and antisense effects of modified oligo- and
polynucleotides (S2-3)
- 10:00 Break
- 10:15 Bottka, S., Puskás, L.G.
A simple approach to evaluate oligonucleotide affected antisense
inhibition (S2-4)
- 10:40 Marcsek, Z., Zabarovsky, E.R.
Mapping with functional approaches: gene-cloning along the human
chromosome 3p (S2-5)
- 11:05 Feike, R.
Automated sequencing - from basic science to application in clinical
chemistry (S2-6)

Monday afternoon, August 30 (Lecture Hall A)

Knauer lecture

- 13:30 Reiman, F.
New developments in protein sequence analysis

Monday afternoon, August 30 (Lecture Hall A)

Retroviral Biochemistry (S3)

Organizers: Oroszlan, Stephen (Frederick) and Tózsér, József (Debrecen)

Chairpersons: Oroszlan, S. and Tózsér, J.

- 14:45 Sarngadharan, M.G.
HIV glycoprotein and virus-cell interaction (S3-1)
- 15:10 Hizi, A.
Structure-function relationship in the reverse transcriptase (RT) of human immunodeficiency viruses (S3-2)
- 15:35 Chandra, P.
Regulatory genes as targets for developing inhibitors of HIV replication (S3-3)
- 16:00 Adachi, Y., Copeland, T.D., Pavlakis, G.N., Hatanaka, M., Oroszlan, S.
Possible mechanism of nucleolar translocation and activation of HIV-1 Rev and HTLV-I Rex (S3-4)
- 16:10 Hatanaka, M., Nosaka, T.
Cell death by HIV (S3-5)
- 16:35 Break
- 16:45 Tózsér, J., Weber, I.T., Oroszlan, S.
Studies on the substrate specificity of retroviral proteinases (S3-6)
- 17:10 Meek, T.D.
Kinetic and chemical mechanisms of HIV-1 protease (S3-7)
- 17:35 Samson, C. Gustchina, A., Tózsér, J., Weber, L.
Energetics of substrate and inhibitor binding to HIV protease (S3-8)
- 17:45 Bláha, I., Velek, J., Černá, V., Štorp
Synthetic peptides used in the research of retroviral proteases (S3-9)
- 17:55 Nagy, K., Young, M., Merson, J., Whittle, P., Oroszlan, S.
Prevention of primary HIV-1 infection *in vitro* by inhibitors of viral proteinase (PR) (S3-10)

18:05 Köppe, B., Menéndez-Arias, L., Oroszlan, S.
Expression and purification of the mouse mammary tumor virus
dUTPase (S3-11)

This symposium has been supported by Merck Kft. (Budapest, Hungary) and by Pfizer Central Research Ltd. (Sandwich, United Kingdom).

Monday afternoon, August 30 (Lecture Hall B)

Neurobiochemistry: from Receptors to Neuronal Morphogenesis (S4)

Organizers: Friedrich, Péter (Budapest), Ádám-Vizi, Vera (Budapest)

Chairpersons: Wiche, G. and Friedrich, P.

15:00 Erdő, S.
Excitatory amino acid receptors: dissociation of pharmacological and
excitotoxic responses (S4-1)

15:30 Borsodi, A.
Opiate receptors: structure and function (S4-2)

16:00 Rakonczay, Z., Hlavati, I., Brimijoin, S., Kása, P.
Selective destruction of cholinergic system induced by antibodies to
acetylcholinesterase (S4-3)

16:30 Break

Chairpersons: Ádám-Vizi, V. and Borsodi, A.

17:00 Wiche, G.
High molecular weight MAPs: structure and role in neuronal
morphogenesis (S4-4)

17:30 Tompa, P., Alexa, A., Friedrich, P.
Calpain digestion of microtubule-associated protein 2 (MAP2) in
different phosphorylational states (S4-5)

Tuesday morning and afternoon, August 31 (Lecture Hall A)

Biochemistry of cell death (S5)

Organizers: Fésüs, László (Debrecen) and Szondy, Zsuzsa (Debrecen)

Morning session

Chairperson: Fésüs, L.

- 8:30 Wyllie, A.
The role of oncosuppressor genes in the regulation of apoptosis (S5-1)
- 9:00 Jaggi, R., Marti, A., Jehn, B., Costello, E., Keon, N., Ke, G.,
Martin, F., Friis, R.R.
Transcription factor AP-1 (cFos/JunD) is induced during apoptosis of
mouse mammary epithelial cells (S5-2)
- 9:25 Cotter, T.G., McGahon, A.
Oncogene expression in the control of apoptosis in tumour cells (S5-3)
- 9:50 Melino, G., Raschellá, G., Piacentini, M.
c-myb down regulation induces apoptosis in neuroblastoma cells (S5-4)
- 10:05 Break

Chairperson: Cotter, T.G.

- 10:20 Szende, B., Kéri, Gy.
Apoptosis as the basis of regression of hormone-sensitive tumors after
hormonal treatment (S5-5)
- 10:40 Debatin, K-M.
Sensitivity and resistance to APO-1 mediated apoptosis (S5-6)
- 11:00 Lord, J.M., Pongracz, J.P., Burnett, D.
Activation of protein kinase C- β 1 induces apoptosis in U937
promyeloid cells (S5-7)
- 11:15 Lanotte, M., Houge, G., Ruchaud, S., Gjersten, B., Duprez, E.,
Doskeland, S.O.
Molecular mechanism of cAMP-induced apoptosis in normal
hemopoiesis and myeloid leukemia cells (S5-8)

- 11:35 Szondy, Z.
Adenosine stimulates DNA fragmentation in human thymocytes by Ca^{2+} -mediated mechanisms (S5-9)

Plenary Lecture (Lecture Hall A)

- 12:00 Kun, Ernest
Cell biological significance of the asymmetric zinc finger motif in retroviral propagation and poly(ADP-ribose)-related DNA control in eukaryotic cells (PL3)

Biochemistry of cell death (S5)

Afternoon session

Chairperson: Szondy, Z.

- 14:45 Mannherz, H.G., Polzar, B., Loos, R., Pattenberg, R., Rauch, F., Stephan, H., Weber, A., Zanotti, S., Peitsch, M., Tschopp, J.
Evidence for deoxyribonuclease I (DNase I) being identical to the apoptotic Ca^{2+} , Mg^{2+} -dependent endonuclease and its expression in cellular systems undergoing apoptosis (S5-10)
- 15:15 Peitsch, M.C., Polzar, B., Stephan, H., Müller, C., Mannherz, H.G., Tschopp, J.
Characterization of the endonuclease involved in DNA degradation during apoptosis (S5-11)
- 15:35 Bursch, W., Oberhammer, F., Tenniswood, M., Shulte-Hermann, R.
Apoptosis: pathophysiological and biochemical aspects (S5-12)
- 16:00 Break

Chairperson: Wyllie, A.

- 16:15 Fésüs, L.
Transglutaminases in naturally occurring forms of cell death (S5-13)
- 16:35 Piacentini, M., Melino, G.
"Tissue" transglutaminase primes neuroblastoma cells for apoptosis (S5-14)
- 17:00 Griffin, M., Knight, C.R.L., El-Alaoui, S., Johnson, T., Mian, S.
Transglutaminase, programmed cell death and tumor growth (S5-15)
- 17:25 Franek, F.
Spontaneous and induced apoptosis in hybridoma cultures (S5-16)
- 17:45 Martin, S.J., Upton, C.P., Hajibagheri, N.M.A., Vyakarnam, A.
Induction of cell death by HIV-1 and HIV-2 strains (S5-17)
- 18:10 Krajcsi, P., Scaria, A., Tollefson, A.E., Stewart, A.R.,
Wold, W.S.M.
The human adenovirus E3-14.K protein and the E3-10.4K protein complex efficiently inhibit both cytolysis and activation of PLA₂ by TNF (S5-18)

This symposium has been officially supported by the EC Phare-Accord Program (OMFB) and by the Debrecen Medical School Apoptosis Research Foundation.

Tuesday morning, August 31 (Lecture Hall B)

Analytical and Applied Biochemistry (S6)

Organizer: Kiss, László (Debrecen)

Chairpersons: Feike, R. and Kiss, L.

8:30 Bardócz, Z., Grant, G., Brown, D.S., Duguid, T.J., Pusztai, A.
Role of dietary polyamines in growth (S6-1)

8:50 Pusztai, A., Grant, G., Spencer, R.J., Duguid, T.J., Brown, D.S.,
Ewen, S.W.B., Peumans, W.J., Van Damme, E.J.M., Bardócz, Z.
Kidney bean lectin-induced *E. coli* overgrowth in the small intestine
is blocked by GNA, a mannose-specific lectin (S6-2)

9:10 Boross, L.
Soluble and immobilized multienzyme analytic systems (S6-3)

9:30 Tyihák, E., Sárdi, É., Füstös, E.
Measurement of formaldehyde in biological samples by OPLC and
HPLC (S6-4)

9:50 Break

Chairpersons: Bardócz, Z. and Pusztai, Á.

10:10 Székács, A.
A novel immunoanalytical method for analytical biochemistry (S6-5)

10:30 Kandra, L., Wagner, G.J.
The biosynthesis of sucrose esters in tobacco trichomes (S6-6)

10:50 Benedek, Á., Győri, Z.
Investigation of wheat proteins by HPLC (S6-7)

11:10 Feike, R.
Smart system – an innovative tool for micropreparative
chromatography (S6-8)

Wednesday morning, September 1 (Lecture Hall B)

Regulation of Gene Expression (S7)

Organizer: Duda, Ernő (Szeged)

Chairperson: Duda, E.

- 8:30 Weihe, E.
Opioid gene expression in rat spinal cord (S7-1)
- 9:00 Cancedda, R.
Cellular and molecular control of endochondral bone formation (S7-2)
- 9:30 Moitra, J.
Analysis of a silencer involved in the tissue and developmental stage specific expression of the chicken CMP gene (S7-3)
- 10:00 Break
- 10:15 Medveczky, P.
The effect of Herpesvirus saimiri transformation on gene expression in T cells (S7-4)
- 10:45 Duda, E.
Transcriptional control of the tumor necrosis factor gene in different cell types (S7-5)

Young Biochemists' Competition Lectures (CL) (Lecture Hall A)

Chairpersons: Faragó, A. and Friedrich, P.

- 11:30 Dalmay, T., Russo, M., Burgyán, J
Repair *in vivo* of altered 3' terminus of a plant virus genomic RNA (CL1)
- 11:40 Nagy, Z.
The posttranslational enzymatic cleavage of influenza virus hemagglutinin influences T and B cell recognition of the intersubunit region (CL2)

Plenary Lecture (Lecture Hall A)

- 12:00 Deák, Ferenc
Structure and regulation of genes for two cartilage proteins (PL4)

Wednesday morning, September 1 (Lecture Hall A)

Biochemical Education: New Trends and their Introduction in Central-Eastern Europe (S8)

Organizer: Elődi, Pál (Debrecen) and Punyiczki, Mária (Debrecen)

Chairpersons: Elődi, P. and Ostrowski, W.S.

- 8:30 Wood, E.
Problems of problem-based education in biochemistry (S8-1)
- 9:10 Bánfalvi, G.
Structural organization of DNA demonstrated by molecular models and video-tape presentation (S8-2)
- 9:30 Biosym software presentation during the break
- Chairpersons: Wood, E. and Punyiczki M.
- 10:15 Bergendi, L., Halčák, L.
Teaching of medical chemistry and biochemistry in relation to the other medical disciplines at the faculty of medicine in Bratislava (S8-4)
- 10:35 Fésüs, L.
M.Sc. degree in biochemistry; a new teaching program at the Debrecen University (S8-5)
- 10:50 Ostrowski, W.S.
New trends in teaching biochemistry in Polish universities
- 11:10 Bøg-Hansen, T.C.
Future collaboration between universities in Hungary and Western Europe (S8-7)

This symposium has been officially supported by The International Union of Biochemistry and Molecular Biology (Committee of Education)

Wednesday afternoon, September 1, (Lecture Hall A)

13:30 **Hungarian Biochemical Society General Assembly**

POSTERS

Posters shown in the abstract section with PM-1 to PM-34 labels will be presented on August 30 (Monday), and with PT-1 to PT-35 labels will be presented on August 31 (Tuesday).