

**THE BIOLOGICAL RESEARCH INSTITUTE  
OF THE  
HUNGARIAN ACADEMY OF SCIENCES  
1976—1980**



**TIHANY  
1981**

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Editor:  
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## ORGANIZATION

1. Department of Experimental Zoology  
Head of Department: Prof. J. Salánki Director, Corr. member of the Hungarian Academy of Sciences
2. Department of Hydrobiology  
Head of Department: Dr. J. Ponyi Candidate of Biological Sciences
3. Secretariat of Environmental Protection  
Head: Dr. F. Máté Deputy Director /scientific/, Candidate of Agricultural Sciences
4. Financial Department  
Head of Department: T. Forró Deputy Director /financial/

## SCIENTIFIC PROGRAMME

The two scientific departments were working on the following themes between 1976-1980:

1. Mechanisms of generation and transmission of excitation in the nervous system and muscle of molluscs and insects  
Research staff: J. Salánki, Corr.m. of the Hungarian Academy of Sciences /head/, D. Budai, T. Kiss, I. Vadász
2. Mechanisms of integration in the neural regulation of molluscs and insects.  
Research staff: Katalin S.-Rózsa, Dr.Biol.Sci.,/head/ Katalin H.-Dobó, G. Kemenes, I. Kiss, I. Varanka, Ágnes Vehovszky
3. Synthesis, storage, mobilization and inactivation of biologically active substances especially of transmitters and hormones in molluscs and insects  
Research staff: I. Benedeczky, Cand.of Biol.Sci. /head/, K. Elekes, L. Hernádi, L. Hiripi, J. Nemcsók
4. Processes of eutrophication in Lake Balaton  
Research staff: B. Entz, Cand.Biol.Sci. /head/, S. Herodek, Cand.Biol.Sci., Vera Istvánovits, L. Vörös

5. Feeding, population-dynamics and production of animals in Lake Balaton  
Research staff: J. Ponyi, Cand.Biol.Sci. /head/, P. Biró, Cand.Biol.Sci., Ilona B.-Muskó, Judit N.-Horváth, Eleonóra P.-Zánkai, Cand.Biol.Sci., I. Tátrai, L. Tóth  
Themes 1, 2 and 3 are included in the National Scientific Research Programme "Mechanisms of regulation of life processes" /"Bioregulation"/ while themes 4 and 5 are parts of the portfolio research programme "Protection of man and his natural environment" /"Biosphere"/.

The Secretariat of Environmental Protection was established in 1976 under the supervision of the Deputy Secretary General of the Hungarian Academy of Sciences to coordinate themes of 34 research places which are involved in the environmental protection research of Lake Balaton.

Besides these middle-distance themes the Institute took part in special embassy works and some temporary researches for the Academy.

#### Aim schedules

1. Effect of pesticides on the fauna and flora of Lake Balaton
  - Responsible leader: J. Ponyi, Candidate of Biol.Sci., research staff: L. Bankós, M. Présing, Katalin V.-Balogh
2. Examination of the sediment of Balaton-bed - Responsible leader: F. Máté, Cand.Agricultural Sciences.
3. Examination of physiological basis of chemical protection against insect pests in order to work out new insecticides
  - Responsible leader: Katalin S.-Rózsa, Dr. Biol.Sci., research staff: Z. Aranyi.

Special embassy works were carried out for Institute for Heavy Chemical Industries /Veszprém/, Research Center for Water Resources Development /Budapest/, South-Transdanubian Watering Authority /Pécs/, Fisheries Research Institute /Szarvas/, Fishing Company of Lake Balaton /Siófok/, Chinoin Factory of Pharmacological and Chemical Wares /Budapest/, North-Transdanubian Watering Authority /Székesfőhérvar/.

CHRONICLE  
1976-1980

#### Qualifications for doctor's degree:

- Vörös, L. assistant scientific research worker "The role of the quantity and quality of phytoplankton in the Mohács part of river Danube" 1976  
Tátrai, I. assistant scientific research worker "Feeding habits and energy utilization by ruffe /Acerina cernua L./ in Lake Balaton" 1977  
Présing, M. assistant scientific research worker "Effect of Dikonirt on crustacea planktons /Eudiaptomus gracilis G.O.Sars, Daphnia magna Straus/" 1978  
Hernádi, L. assistant scientific research worker "Light and electron microscopic investigation of the sensory cells in the epiderms of the foot and the lower tentacles of the snail, Helix pomatia L." 1980  
Tóth, L. assistant scientific research worker "The use of dializing sacks in estimation of turnover time and production of bacterioplankton, short term investigations of primary and bacterio production in Lake Balaton" 1980

#### Qualifications for candidate's degree:

- Biró, P. scientific research worker "Examination of food, growth and production of pike-perch /Stizostedion lucioperca L./ in Lake Balaton" 1977  
Herodek, S. scientific research worker "Studies on composition and origin of animal depot fats" 1978  
Kiss, I. scientific research worker "Functional specificities of identified neurones in the central nervous system of Lymnaea stagnalis L." 1978

P.-Zánkai, N. scientific research worker "About nutrition biology and population dynamism of Eudiaptomus gracilis /G.O.Sars 1863/ /Copepoda, Calanoida/ in Lake Balaton" 1979

Permanent staff on 31 December, 1980

The permanent staff of the basic activities, special works and embassy works includes: 70 persons; research workers: 25, technical advisers: 1, technical assistants: 17, clerks: 7, others: 20.

Changes in the research staff between 1976-1980

#### Departures from the Institute:

- 1 August 1976, Zs.-Nagy, I. senior scientific research worker, to the Biological Institute of Medical University /Debrecen/
- 1 October 1977, H.-Dobó Katalin, scholar assistant scientific research worker, to the Institute for Heavy Chemical Industries /Veszprém/
- 1 January 1978, Kiss, I. scientific research worker, to the Institute for Heavy Chemical Industries /Veszprém/
- 1 September 1978, Vadász, I. scientific research worker, to the Institute for Heavy Chemical Industries /Veszprém/
- 1 April 1979, Nemcsók, J. scientific research worker, to the Department of Biochemistry, József A. University /Szeged/
- 1 November 1979, N.-Horváth, Judit assistant scientific research worker, to the College of Food Industry /Szeged/
- 1 July 1980, Bankós, L. assistant scientific research worker, to the Geological Research Institute /Budapest/

#### Nominations:

- 1 January 1976, Máté, F. scientific deputy Director, Head of Secretariat of Environmental Protection
- 1 February 1976, Vörös, L. scientific research worker at the Department of Hydrobiology
- 1 September 1978, Aranyi, Z. assistant scientific research worker at the Department of Experimental Zoology
- 1 September 1978, Vehovszky Ágnes assistant scientific research worker at the Department of Experimental Zoology
- 8 September 1978, A.-Rehák, Margit assistant scientific research worker at the Department of Hydrobiology
- 1 August 1979, Kemenes, Gy. assistant scientific research worker at the Department of Experimental Zoology
- 1 August 1979, Tóth, L. assistant scientific research worker at the Department of Hydrobiology
- 1 September 1979, Budai, D. assistant scientific research worker at the Department of Experimental Zoology
- 3 October 1979, Istvánovits, Vera assistant scientific research worker at the Department of Hydrobiology
- 1 March 1980, V.-Balogh, Katalin assistant scientific research worker at the Department of Experimental Zoology

#### Honours

- Adamik, J. mechanic "Order of Labour" 1977
- Mrs. József, Adamik laboratory assistant "Outstanding Worker", 1979
- Mrs. Vilmos Balázs laborant "Outstanding Worker", 1977
- Baranyai, F. laborant, "Outstanding Worker", 1977
- Mrs. Elek Bálint cook, "Outstanding Worker", 1977
- Entz, B. senior scientific research worker, "Outstanding worker of Water Economics", 1979, "Order of Labour", 1979
- Forró, T. deputy Director /financial/, "Order of Labour", 1977

Ponyi, J. head of Department of Hydrobiology, Praises of the  
Secretary-General of the Hungarian Academy of Sciences,  
1977

S.-Rózsa, Katalin scientific adviser, Praises of the Secretary-General of the Hungarian Academy of Sciences, 1977

Salánki, J. Director, "Order of Labour", 1977

Vérő, M. technical adviser, "Outstanding Worker", 1977

#### Research Awards

Biró, P. "Effects of exploitation introductions and eutrophication on percids in Lake Balaton" in 1978 and "Human impacts on biomass population size and yield-per-recruits of asp /Aspius aspius L./ in Lake Balaton", in 1980 awarded by the President of the Hungarian Academy of Sciences

Herodek, S. "Eutrophication of Lake Balaton according to primary production of phytoplankton" in 1976 awarded by the Veszprém Committee of the Hungarian Academy of Sciences

Ponyi, J. "Pesticide residues in the water of tributaries of Lake Balaton" in 1977 awarded by the Veszprém Committee of the Hungarian Academy of Sciences

S.-Rózsa, Katalin "Analysis of the neural network regulating the cardio renal system in the central nervous system of Helix pomatia L." in 1980 awarded by the President of the Hungarian Academy of Sciences

Vadász, I. "Metabolic dependence of membrane permeability" in 1976, awarded by the Hungarian Biophysical Society

#### Home Scientific Relations

A/ According to earlier experience our Institute conducted mutual research work with different Institutions and Universities. Some of our research workers took part in University education.

Cooperation was established with:

- Botanical Research Institute of the Hungarian Academy of Sciences /Vácrátót/ and Agricultural University /Keszthely/ in the research of water macrophyton
- Computer and Automatization Research Institute of the Hungarian Academy of Sciences /Budapest/ in mathematical modelling of lake ecosystems
- Department of Microbiology, Eötvös, L. University /Budapest/ and Fisheries Research Institute /Szarvas/ in water microbiology research
- Department of Ecology, Kossuth, L. University /Debrecen/ in studying zoobentos
- Research Center for Water Resources Development /Budapest/ in examination of lake metabolism and quality of water
- Department of Comparative Physiology, József, A. University /Szeged/ in neurophysiological research
- Department of Comparative Physiology, Eötvös, L. University /Budapest/ in neurophysiological research and in education
- Department of Biochemistry, Biological Research Center of the Hungarian Academy of Sciences /Szeged/ in neurochemical research
- Department of Zoology, Agricultural College /Kaposvár/ in feeding of fishes and in education

B/ Our institute is annually visited by about 50 Hungarian research workers for 1-2 days' consultation, or for visiting the library. The following persons worked at the Institute between 1976-1980 for longer periods:

Görcs, T. Institute of Anatomy, Medical University /Pécs/; Pongrácz, F. Department of Comparative Physiology, József, A. University /Szeged/; Erdélyi, L. Department of Comparative Physiology, József, A. University /Szeged/; Kovács, Margit Botanical Research Institute of the Hungarian Academy of Sciences /Vácrátót/; Török, A. Institute of Biology, Medical University /Szeged/; Kilián, P. Dermatological Hospital of the Medical University /Pécs/; Garádi, P. Warm Water Fish Hatchery /Százhalombatta/; Vigh, B. Institute of Anatomy, Semmelweis Medical University /Budapest/; Kelemen, Krisztina and Gulya, K. Department of Comparative Physiology, József, A. University /Szeged/; Gerencsér, L. and Mrs. Gerencsér-Bély, Olga Teachers' Training College /Pécs/; Várkonyi, T. Public Health Institute /Budapest/; Dankó, M. Institute of Physiology, Medical University /Debrecen/; Tánczos, J. Juhász, Gy. Teachers' Training College /Szeged/; Dévai, Gy. Department of Zoology, Kossuth, L. University /Debrecen/.

#### Education

Special courses were given at different Universities by Benedeczky, I. senior scientific research worker, at the Department of Biochemistry of the József, A. University /Szeged/ under the title "Histochemistry"

Biró, P. senior scientific research worker at Kossuth, L. University /Debrecen/: "Introduction into the dynamism of fish populations"

Entz, B. senior scientific research worker, at Agricultural University /Gödöllő/: "Tropical hydrobiology, tropical fishing" Ponyi, J. senior scientific research worker, at Agricultural University /Keszthely/: "Balaton research and environmental protection" and at Agricultural College /Kaposvár/: "Selected topics in hydrobiology"

S.-Rózsa, Katalin scientific adviser, at Eötvös, L. University "Specificities of chemical mediation in phylogenesis"

Ponyi, J. was appointed to an associate professorship at the Agricultural College, /Kaposvár/.

Every Summer 4-6 students have their summer practice in our laboratories. Students of the 3rd course of the Agricultural University /Keszthely/ get acquainted with the research works carried out at the Institute every year. A few students have written their diploma work at the Institute. We support the biological education at the primary school in Tihany.

#### C./ Programmes organized at the Institute

1. Every year in the Autumn "Days of hydrobiologists" are held by the Institute together with the Hungarian Hydrobiological Society and the Veszprém Committee of the Hungarian Academy of Sciences.
2. The Research Center for Water Resources Development organizes a training course yearly for the hydrobiologists of the developing countries and our Institute joins the organization every year.
3. An international symposium was held by Szentágothai, J., Hámori, J. and Vizi, E.S. under the title "Neuron concept today" on 26-28 August, 1980.
4. The Environmental Protection Committee of SCOPE held its meeting under the leadership of Láng, I. Deputy Secretary General of the Hungarian Academy of Sciences, in June 1977.
5. The Neurobiological Committee and our Institute organized a microelectrophysiological course in August 1976
6. On the occasion of the 50th anniversary of our Institute a scientific meeting was organized and an international symposium was joined to it under the title "Human impacts on life in fresh waters". The material of the jubilee meeting was published in the Hungarian journal: MTA Biológiai Osztály Közleményei - Proceedings of the Biology Department of the Hungarian Academy of Sciences, Vol. 21, /1978/ while papers of the symposium were published by the Publishing House of the Hungarian Academy of Sciences /Symposia Biologica Hungarica, Vol. 19, Eds: Salánki, J. and Biró, P./.

7. The Department of Experimental Zoology took part in the organization of the XXVIII International Congress of Physiological Sciences in 1980. Salánki, J., Director of the Institute, was the chairman of the 01 General Cell Physiology section. Lectures were published by the Publishing House of the Hungarian Academy of Sciences and Pergamon Press in two volumes:

1. Physiology of Non-Excitable Cells
2. Physiology of Excitable Membranes /Advances in Physiological Sciences Vol.3,4/.

8. Two satellite symposia of the XXVIII International Congress of Physiological Sciences were organized by the Institute. The proceedings were published:

1. Neurotransmitters in invertebrates. Ed. S.Rózsa, Katalin /Publishing House of the Hungarian Academy of Sciences and Pergamon Press/
2. Neurobiology of Invertebrates: Mechanisms of Integration. Ed. Salánki, J. /Publishing House of the Hungarian Academy of Sciences and Pergamon Press/.

Besides the above mentioned programmes the Institute gave room for a number of other scientific and non-scientific meetings.

#### Exhibitions

1. An exhibition was presented for the 50th anniversary of the Institute showing its development. The collection was exhibited in Veszprém during the "Days of Biologists" and in the Culture Centre of Tihany in 1977.

2. For internal use, films were produced in 1977, to show the history and work of the Institute in Hungarian, English and Russian languages.

3. The institute took part in the International Budapest Fair with the exhibitions: "Hungarian Science for the environmental protection of Lake Balaton" and "There is only one Lake Balaton".

#### Foreign scientific relations

##### A./ Cooperations:

1. Comecon biophysical cooperation /membranes/:  
Biophysical Institute of the USSR Academy of Sciences, Pushchino /USSR/  
Physiological Institute of the Ukrainian Academy of Sciences, Kiev /USSR/  
Physiological Institute of the Slovak Academy of Sciences, Bratislava /Czechoslovakia/
2. In the frame-work of "Ecosystems /biogeocenosis/ and protection of environs" we coordinate in Hungary "Spreading of pesticides in the water ecosystems and its effect on hidrobionts".
3. In the frames of "INTERMOZG" Cooperation among Socialist Academies: in excitation research  
Physiological Institute of the Ukrainian Academy of Sciences, Kiev /USSR/  
Institute of Developmental Biology of the USSR Academy of Sciences, Moscow /USSR/
4. Bilateral agreements:  
Institute of Developmental Biology USSR Academy of Sciences, Moscow /USSR/  
Institute of Evolutionary Physiology and Biochemistry of the USSR Academy of Sciences, Leningrad /USSR/  
Institute of Ecology of the Polish Academy of Sciences, Warsaw /Poland/  
Institute of Entomology of the Czechoslovak Academy of Sciences, Prague /Czechoslovakia/  
Stejarul Biological, Geographical and Geological Research Station, Pingarati-Neamt /Rumania/  
International Brain Research Laboratory of the Serbian Academy of Sciences, Kotor /Yugoslavia/

1976

- Benedeczky, I. senior scientific research worker; Institute of Entomology of the Czechoslovak Academy of Sciences, /Czechoslovakia/ 2 weeks
- Biró, P. senior scientific research worker; participation in II International Congress of Ichthyology /France/ and in "International symposium on percid communities, PERCIS", Ontario /Canada/ 23 September - 9 October
- Elekes, K. scientific research worker; participation in "Fluorescence and lipidhistochemistry" conference, Leipzig /GDR/ 7-11 March
- Entz, B. senior scientific research worker; participation in the conference of the American Fishery Association, Dearborn /USA/ and in the "International symposium on percid communities, PERCIS", Ontario /Canada/ 23 September - 5 October
- Kiss, I. scientific research worker; Hungarian State Fellowship; Southampton /England/ 12 May - 13 September
- Nemcsók, J. scientific research worker; Institute of Developmental Biology, Moscow /USSR/ 2 weeks
- Ponyi, J. head of Department of Hydrobiology; Stejarul Biological Geographical and Geological Research Station, Pingarati-Neamt /Rumania/ 11-23 August and 7-20 November
- S.-Rózsa, Katalin scientific adviser; participation in the symposium "Mechanisms of integration" Moscow /USSR/ 17-22 May
- Salánki, J. director, participation in a Conference in Moscow /USSR/ 3-6 May and in XIX General Assembly of IUBS Delhi /India/ 27 September - 2 October
- Vadász, I. scientific research worker; Department of Physiology, Max-Planck-Institute of Psychiatry, Munich /FRG/ 1 August - 11 December.

- Benedeczky, I. senior scientific research worker; Institute of Entomology of the Czechoslovak Academy of Sciences, Prague /Czechoslovakia/ 2 weeks; participation in the International Congress of Malacology in The Netherlands 15-20 August; study tour by agreement at Institute of Evolutionary Physiology and Biochemistry, Leningrad /USSR/ 19-30 September
- Biró, P. senior scientific research worker; participation in the XX Congress of the International Limnological Society Copenhagen /Denmark/ 8-14 August; in the frames of environmental protection agreement participation in the coordination session in Sofia /Bulgaria/ 13-16 December
- Elekes, K. scientific research worker; University of Lund, Department of Zoology, Lund /Sweden/ 7 March - 10 June and participation in the XXVII International Congress of Physiological Sciences, Paris /France/ 17-25 July
- Kiss, T. scientific research worker; participation in the XXVII International Congress of Physiological Sciences, Paris /France/ 17-25 July
- Véró, M. technical adviser; participation in the XXVII International Congress of Physiological Sciences, Paris /France/ 17-25 July
- Entz, B. senior scientific research worker; participation in the XX Congress of the International Limnological Society, Copenhagen /Denmark/ 8-14 August
- Herodek, S. senior scientific research worker; visit to the Institute of Zoology, Leningrad /USSR/ 5-13 June, participation in the XX Congress of the International Limnological Society /SIL/ Copenhagen /Denmark/ 8-14 August and in IFAC-Symposium on Control Mechanisms in Bio- and Ecosystems Leipzig /GDR/ 11-17 September
- Hiripi, L. scientific research worker; participation in the 6th International Congress of the International Society for Neurochemistry, Copenhagen /Denmark/; visit to the Institute of Entomology of the Czechoslovak Academy of Sciences, Prague /Czechoslovakia/ 15-31 October

Nemcsók, J. scientific research worker; participation in the 6th International Congress of the International Society for Neurochemistry, Copenhagen /Denmark/ 8-28 August; and in a training course of IBRO-UNESCO /GDR/

Ponyi, J. senior scientific research worker; head of Department of Hydrobiology; study tour to Stejarul Biological, Geographical and Geological Research Station, Pingarati-Neamt /Rumania/ 12-25 September

S.-Rózsa, Katalin scientific adviser; participation in the symposium "Enzymology and permeability of membranes" Erevan /USSR/ 23-29 May; XXVII International Congress of Physiological Sciences, Paris /France/ and at a satellite symposium of this Congress in Gif-sur-Yvette /France/ 17-30 July. In the exchange programme between NAS and Hungarian Academy of Sciences, she went on a study tour to the USA and visited 8 institutes, 3 October - 3 December

Salánki, J. Director; participation in the symposium "Enzymology and permeability of membranes" Erevan /USSR/ 23-29 May, in the XXVII International Congress of Physiological Sciences, Paris /France/ and at the satellite symposium of this Congress in Gif-sur-Yvette /France/ 17-30 July. He was invited to the jubilee session of the Institute of Ecology of the Polish Academy of Sciences, Warsaw /Poland/ 12-16 October. In the frames of the Hungarian-Sweden Cultural Agreement he went on a study tour to Sweden, 27 October - 10 November; and took part in the IUBS Executive Committee Meeting in Paris /France/ 22-24 November

Tátrai, I. scientific research worker; Institute of Ecology of the Polish Academy of Sciences, Warsaw /Poland/ 1 August - 30 October

Vadász, I. scientific research worker; participation in the XXVII International Congress of Physiological Sciences, Paris /France/ 17-25 July and in the frames of bilateral agreement he went on a study tour to the International Brain Research Laboratory of the Serbian Academy of Sciences, Kotor /Yugoslavia/ 1-31 August

P.-Zánkai Nóra scientific research worker; participation in XX Congress of the International Limnological Society, Copenhagen /Denmark/ 7-14 August; and on the jubilee meeting of the Institute of Ecology of Polish Academy of Sciences, Warsaw /Poland/ 27 October - 10 November.

1978

Benedeczky, I. senior scientific research worker; participation in II Neuroscience Meeting, Florence /Italy/ 1-10 September

Elekes, K. scientific research worker; participation in II Neuroscience Meeting, Florence /Italy/ 1-10 September

Entz, B. senior scientific research worker; participation on UNESCO request in "Ecological studies on the River Nil" meeting 21 April - 6 May and in 4th Neusiedlersee Tagung meeting, Illmitz /Austria/ 9-10 November

Herodek, S. senior scientific research worker; participation in the meeting of IIASA /International Institute of Applied Systems Analyses/ and the Environmental Protection Coordination Council of Balaton Region, Illmitz /Austria/ 21 August - 1 September. Visit to the Botanic Garden of the Czechoslovak Academy of Sciences, Prague /Czechoslovakia/ 18-29 September

Hiripi, L. scientific research worker; participation in the Second Meeting of the European Society for Neurochemistry Göttingen /FRG/

Máté, F. Deputy Director, participation in the "Modelling of shallow waters" symposium in Illmitz /Austria/ 21 August - 1 September

S.-Rózsa, Katalin scientific adviser; work at the International Brain Research Laboratory, Kotor /Yugoslavia/ 14 August - 24 September

Salánki, J. Director; participation in symposium "The cholinergic synapse", Zinkovy /Czechoslovakia/ 15-19 May, in a conference in GDR, 18-22 October and in the Executive Committee meeting of IUBS, Paris /France/ 20-23 November. He worked at the International Brain Research Laboratory, Kotor /Yugoslavia/ 14 August - 24 September

Véró, M. technical adviser; work at the International Brain Research Laboratory, Kotor /Yugoslavia/ 14 August - 24 September

Vörös, L. scientific research worker, study tour by agreement to the Institute of Ecology of the Czechoslovak Academy of Sciences, Prague /Czechoslovakia/ 1 April - 31 May; participation in V International Congress of Fossils and Diatoms, Antwerpen /Belgium/ 3-9 September

1979

Bankós, L. assistant scientific research worker, study tour to the Institute of Ecology of the Polish Academy of Sciences, Warsaw /Poland/ 1-15 October

Benedeczky, I. senior scientific research worker; two weeks at the Institute of Entomology of the Czechoslovak Academy of Sciences, Prague /Czechoslovakia/

Biró, P. senior scientific research worker; coordination meeting, Halle /GDR/ 15-19 January; XX General Assembly of IUBS, Helsinki /Finland/ 19-27 August; III European Congress of Ichthyology, Warsaw /Poland/ 18-25 September

Elekes, K. scientific research worker; study tour to C.N.R.S. Laboratory of Neurophysiology, Gif-sur-Yvette /France/ 13 June 1979 - 15 June 1980

Entz, B. senior scientific research worker; consultant for FAO in Egypt 1-30 April; participation in Shallow Lake Symposium, Illmitz /Austria/ 23-30 September; visit to the Boden-see Research Institute, Langenargen /FRG/ 17 October - 15 November

Herodek, S. senior scientific research worker, in the frames of cooperation, visit to the International Institute of Applied Systems Analyses /IIASA/, Illmitz /Austria/ 28 May - 9 June, 9-20 July and 26-30 November. He went on a one month's long study tour to the Department of Limnology University of Uppsala, Uppsala /Sweden/

Hiripi, L. scientific research worker, a one month's long study tour to the Institute of Developmental Biology of the Soviet Academy of Sciences, Moscow /USSR/

Kiss, T. scientific research worker, study tour to the Department of Zoology, University of Birmingham /Great Britain/ 2 November 1978 - 30 April 1979

Máté, F. Deputy Director, visit to the Institute of Limnology of the Soviet Academy of Sciences, Irkutsk /USSR/ 21-28 August; UNDP fellowship to the Monitoring and Assessment Research Center, London /England/ 9 October - 29 December

Ponyi, J. Head of Department of Hydrobiology, work at the Department of Biology, University of Waterloo, Ontario /Canada/ 4 September - 24 December

S.-Rózsa, Katalin scientific adviser worked at the Institute of Developmental Biology of the Soviet Academy of Sciences Moscow /USSR/ 3-31 July and took part in III Conference of European Neuroscience Association, Rome /Italy/ 10-14 September

Salánki, J. Director, Cairo, /Egypt/ 25-30 May; work at the Institute of Developmental Biology of the Soviet Academy of Sciences, Moscow /USSR/ 3-31 July. Scientific meeting in Brno /Czechoslovakia/; XX General Assembly of IUBS, Helsinki /Finland/ 19-27 August; participation in the III Conference of European Neuroscience Association, Rome /Italy/ 10-14 September and in the meeting of biophysics cooperation, Taskent /USSR/

Tátrai, I. scientific research worker, visit to the Fertő Lake Research Station and participation in Shallow Lake Symposium, Illmitz /Austria/ 23-30 September

Vörös, L. scientific research worker, participation in Shallow Lake Symposium, Illmitz /Austria/ 23-30 September

P.-Zánkai, Eleonóra senior scientific research worker, work at the Department of Biology, University of Waterloo, Ontario /Canada/ 4 September - 24 December

1980

Biró, P. senior scientific research worker, scientific meeting in Warsaw /Poland/ 6-9 May, Winter School and scientific coordination session, Riga /USSR/ 8-16 December  
Budai, D. assistant scientific research worker, training course in neurosciences, Narva /USSR/ 1-9 December  
Elekes, K. scientific research worker, study tour to C.N.R.S. Laboratory of Neurophysiology, Gif-sur-Yvette /France/ 13 June 1979 - 15 June 1980  
Entz, B. senior scientific research worker participation in Neusiedler-see Days, Illmitz /Austria/ 20-21 November  
Herodek, S. senior scientific research worker, visit to the International Institute for Applied Systems Analysis /IIASA/ Illmitz /Austria/ 27-28 March, 2-6 June and 10-21 November  
Hiripi, L. scientific research worker; participation in Third Meeting of European Society for Neurochemistry, Bled /Yugoslavia/ 31 August - 5 September  
Kiss, T. scientific research worker, visit to the Institute of Evolutionary Physiology and Biochemistry of Soviet Acad.Sci. Leningrad /USSR/ 10-24 November and to the University of Saarland, Homburg/Saar /FRG/ 10-20 December  
Máté, F. Deputy Director, coordination session at IIASA, Illmitz /Austria/ 17-21 November  
Présing, M. scientific research worker, Winter School on Biological Monitoring, Riga /USSR/ 8-13 December  
Ponyi, J. Head of Department of Hydrobiology; participation in Biological Bases of Aquaculture symposium, Pingarati-Neamt /Rumania/ 28-29 April  
S.-Rózsa, Katalin scientific adviser, cooperation in Brain Research, Institute of Higher Nervous System and Neurophysiology, Moscow /USSR/ 12-26 October  
Salánki, J. Director; Cairo, /Egypt/ 12-17 May. Participation in the International Congress on Cell Biology, West-Berlin /FRG/ 25 August - 1 September; at the conference "Physiology and Biochemistry of Mediator substances", Moscow /USSR/ 13-15

October. Executive Committee meeting of IUBS Paris /France/ 27-30 October; Winter School for Biological Monitoring, Riga /USSR/ 8-12 December

Tátrai, I. scientific research worker; consultation of candidacy plans, Lodz /Poland/ 2 weeks

Tóth, L. assistant scientific research worker; participation in III International Congress of Hydrobiology, Smolenice /Czechoslovakia/ 3-6 June

Vehovszky, Ágnes assistant scientific research worker; visit to the Institute of Developmental Biology, Moscow and to the Institute of Biophysics of the Soviet Academy of Sciences, Pushchino /USSR/ 6-14 October

Vérő, M. technical adviser; worked at the Welcome Research Laboratory, Berkhamstead /England/ 19 April - 19 May and at the International Brain Research Laboratory, Kotor /Yugoslavia/ 5 August - 7 September

Vörös, L. scientific research worker; study tour to Water Research Institute of the Soviet Academy of Sciences, Borok /USSR/ 1 April - 1 October

P.-Zánkai, Eleonóra senior scientific research worker, participation in the symposium "Biological basis of Aquaculture" Pingarati-Neamt /Rumania/ 28-29 April

C./ Foreign research workers at the Institute

1976

Safonova, T.A. Department of Physiology, State University of Leningrad, /USSR/ 22 January - 22 February and 22 June - 31 July; Konievic, D. International Brain Research Laboratory, Kotor /Yugoslavia/ 25 April - 6 May; Berdisheva, L. Institute of Developmental Biology of the Soviet Academy of Sciences, Moscow /USSR/ 27 May - 25 June; Granmo, H.Å. Kristineberg Marinbiological Station, Fiskebäckskil, /Sweden/ 15 March - 15 May; Stefano, G.B. Fordham University, Department of Biological Science, Northport /USA/ 20 June - 14 August;

Lipskaya, J. Institute of Normal and Pathological Physiology, Slovak Academy of Sciences, Bratislava /Czechoslovakia/ 21-25 September; Pogorelaya, N.K. Institute of Physiology of the Ukrainian Academy of Sciences, Kiev /USSR/ 22 September 1976 - 22 March 1977; Myhrberg, H. and Elofsson, R. University of Lund /Sweden/ 25-30 September; Arefjeva A.M. Institute of Developmental Biology of the Soviet Academy of Sciences, Moscow /USSR/ 15-30 November; Simalcsik, F. Stejarul Biological, Geographical and Geological Research Station, Pingarati-Neamt /Rumania/ 21-29 December.

1977

Mala, J. Institute of Entomology, Czechoslovak Academy of Sciences, Prague /Czechoslovakia/ 10 days; Rujinschi, C. Stejarul Biological, Geographical and Geological Research Station, Pingarati-Neamt /Rumania/ 27 September - 8 October; Pogorelaya, N.K. Institute of Physiology of the Ukrainian Academy of Sciences, Kiev /USSR/ 22 September 1976 - 22 March 1977.

1978

Miller, T.A. University of California, Division of Toxicology and Physiology, Department of Entomology, Riverside, California /USA/ 19 October 1978 - 22 March 1979; Nguyen Kim Bang aspirant /candidate/ Viet-Nam 13-23 April; Sorokin, V.L. Institute of Developmental Biology of the Soviet Academy of Sciences, Moscow /USSR/ 18 April - 30 May; Stefano, G.B. East Coast Neuroscience Foundation Inc. Northport, New York /USA/ 12 June - 29 July; Kokina, N.N. Institute of Physiology of the Soviet Academy of Sciences, Moscow /USSR/ 30 June - 9 July; Chillemi, S. Institute of Cibernetics, CNR, Napoli /Italy/ 13-19 November; Turpaev T.M. and Sakharov, D.A. Institute of Developmental Biology of the Soviet Academy of Sciences, Moscow /USSR/ 18-21 December.

1979

Miller, T.A. University of California, Division of Toxicology and Physiology, Department of Entomology, Riverside, California /USA/ 19 October 1978 - 22 March 1979; Funk, F. Institute of Plant Physiology, Göttingen, /FRG/ 1 April - 2 May; Suleimanian, M.A. Institute of Biochemistry, Erevan /USSR/ 12 April - 30 June; Zhuravlev, V.L. State University of Leningrad, Institute of Zoology, Leningrad /USSR/ 23 April - 23 July; Sakharov, D.A. Institute of Developmental Biology of the Soviet Academy of Sciences, Moscow /USSR/ 21 May - 1 July and 17-21 December; Volina, E. Institute of Developmental Biology of the Soviet Academy of Sciences, Moscow /USSR/ 7 August - 7 November; Pevzner, R. Sechenov Institute of Biology, Leningrad /USSR/ 27 August - 27 December; Logunov, D.B. Institute of Higher Nervous System, Moscow /USSR/ 8 October - 8 December; Kononenko N.I. Bogomoletz Institute of Physiology, Kiev /USSR/ 14 November - 1 December; Khodorov, B.I. Vishnevsky Surgery Institute, Moscow /USSR/ 3-9 December; Turpaev, T.M. Institute of Developmental Biology of the Soviet Academy of Sciences, Moscow /USSR/ 17-22 December.

1980

Carmichael, S. Department of Anatomy, West Virginia University School of Medicine, Morgantown /USA/ 19-30 May; Stefano, G.B. East Coast Neuroscience Foundation Incorporation, Northport, New York /USA/ 1 July - 1 September; Pettersson, K and Boström, B. University of Uppsala, Institute of Limnology, Uppsala /Sweden/ 30 June - 16 July and 24 November - 10 December; Poskonova, M. Lomonosov University, Department of Comparative Physiology, Moscow /USSR/ 20 July - 10 August; Rossknecht, H. Boden-see Research Institute, Langenargen /FRG/ 26 August - 12 September; Esakov, A.I. Institute of Physiology of the Soviet Academy of Sciences, Moscow /USSR/ 22 September -

3 October; Flerov, B. and Gdovsky, P. Water Research Laboratory  
of the Soviet Academy of Sciences, Borok /USSR/ 27 October -  
1 November.

- Amplival research microscope VEB Zeiss Jena
- High pressure liquidchromatograph 204 Waters.

#### B./ New Laboratory

A new laboratory was established in Keszthely for the  
research of the sediment of Lake Balaton.

#### IMPROVEMENTS OF RESEARCH FACILITIES

A./ In 1976-1980 the following equipments were obtained:

- Dual Beam Oscilloscope, Tektronix
- Four channel analog recorder, Gould Brush
- Liquid scintillations spectrometer, Typ ISOCAP/30,  
Nuclear Chicago
- Programmable Calculator, Typ EMG-666
- motor boats
- Microforge /Capillar puller/
- Portable Hydrolab Surveyor System, Typ 113-WA-001,  
Kahl.Sci.Instr.Corp.
- High Speed Plankton Centrifuge
- Clarke-Bumpus Automatic Plankton Sampler, Typ 012-WA-300,  
Kahl.Sci.Instr.Corp.
- Electron Microscope, Tesla, Typ BS500
- Spectrophotometer, Carl Zeiss, Typ Second UV-visible
- Two channel analog recorder, MFE Corporation
- Dual Beam Storage Oscilloscope, Tektronix
- Multichannel Analyzer System /frequency and time  
histogram analyzer/, ORTEC Inc.
- Critical Point Drier, Typ 25, Balzers Union
- Temperature /Humidity Room/Climatic Cabinet/KTLK-1250/
- Water Quality Control Station, Typ Aquadat-M, MMG
- Invertoscope-D, Opton
- Stereomicroscope, Typ Wild-M5A
- Electronic microbalance, Typ Mettler, ME-30
- Atomic Absorption Spectrophotometer, Typ Zeiss - AAS1
- Tape Reader, Typ EMG - ER300
- Four channels analog data recorder R400C, TEAC

#### LIBRARY

The holdings increased during these five years:  
books from 4214 to 4365, periodicals from 8839 to 9317.

LIST OF SCIENTIFIC PUBLICATIONS

1976

- Arefyeva, A., Nemcsók, J., Salánki, J., Brodsky, W.: Dry weight and 5HT concentration in the cerebral ganglia of *Anodonta* /Mollusca/ during activity - *Acta biol. Acad. Sci.hung.* 27, 275-279 /1976/.
- Biró, P. and Gy. Fürész: The growth of asp /*Aspius aspius* L./ in Lake Balaton - *Annal. Biol. Tihany*, 43, 47-67 /1976/.
- Biró, P. and P. Garádi: A dévérkeszeg /*Abramis brama* L./ alapvető populáció paraméterei a Balatonban - *Halászat Tud. Melléklete*, 2-6 /1976/.
- Elekes, K.: Electron microscopic autoradiography of serotonin uptake in the ganglia of freshwater mussel /*Anodonta cygnea* L./ - *Acta biol. Acad. Sci. hung.* 27, 183-189 /1976/.
- Elekes, K., Hiripi, L., S.-Rózsa, K., Nemcsók, J.: Subcellular localization of biogenic monoamines in the central nervous system and the heart of the snail *Helix pomatia* L. as revealed by density gradient centrifugation - In: *Neurobiology of Invertebrates, Gastropoda Brain* /Ed. J. Salánki/ Akadémiai Kiadó, Budapest, 1976, pp. 207-217.
- Elekes, K., Hiripi, L., S.-Rózsa, K., Nemcsók, J.: Biogén monoaminok szubcelluláris lokalizációjának vizsgálata sűrűséggradiens centrifugálási módszer segítségével az éticsiga /*Helix pomatia*/ központi idegrendszerében és szivében - *Biológia*, 24, 45-51 /1976/.
- Entz, B.: Regional and circadian oxygen determinations in Lake Balaton concerning the eutrophication of the Lake - *Annal. Biol. Tihany*, 43, 69-82 /1976/.
- Herodek, S. and G. Tamás: A fitoplankton tömege, termelése és a Balaton eutrofizálódása - *Hidrológiai Közlöny*, 219-227 /1976/.

- Hiripi, L., V. Neuhoff and N.N. Osborne: The uptake of biogenic monoamines by the isolated auricle of the snail /*Helix pomatia*/ - J.Neurochem., 26, 335-343 /1976/.
- Hiripi, L. and N.N. Osborne: Serotonin and dopamine uptake by the snail /*Helix pomatia*/ auricle and CNS - In: Neurobiology of Invertebrates, Gastropoda Brain /Ed. J. Salánki/ Akadémiai Kiadó, Budapest, 1976, pp.163-176.
- Kiss, I., Salánki, J.: Functional and branching characteristics of neurones identified by  $\text{CoCl}_2$  staining in the central nervous system of *Lymnaea stagnalis* L. - In: Neurobiology of Invertebrates, Gastropoda Brain /Ed. J. Salánki/ Akadémiai Kiadó, Budapest, 1976, pp. 61-73.
- Kiss, I. and J. Salánki: Examination of some morphological properties and axonal pathways of giant neurones in the central nervous system of *Lymnaea stagnalis* - Comp. Biochem.Physiol.54A,1-8 /1976/.
- Kiss, I. and I. Vadász: A comparative study of the ionic currents of giant neurones identified in the central nervous system of *Lymnaea stagnalis* - Comp.Biochem. Physiol.56A,433-437 /1977/.
- S.-Rózsa, K.: A szívumkodést szabályozó neuronhálózat szerveződése *Helix pomatia* L. /Gastropoda/ központi idegrendszében - MTA Biol.Oszt.Közl.19,63-107 /1976/.
- S.-Rózsa, K.: Neural network underlying the regulation of heart beat in *Helix pomatia* L. - In: Neurobiology of Invertebrates, Gastropoda Brain /Ed. J. Salánki/ Akadémiai Kiadó, Budapest, 1976, pp. 597-613.
- S.-Rózsa, K. and T.Kiss: Role of cyclic nucleotides in the effect of transmitters on the heart of *Helix pomatia* L. - Comp.Biochem.Physiol.53C,13-16 /1976/.
- Salánki, J.: Results and perspectives in research on Gastropoda brain. Introductory remarks - In: Neurobiology of Invertebrates, Gastropoda Brain /Ed. J. Salánki/ Akadémiai Kiadó, Budapest, 1976,pp. 21-23.
- Salánki, J.: Kagyló-teszt vizszennyezések biológiai hatásának vizsgálatára - Hidrológiai Közlöny, 281-284 /1976/.

- Salánki, J. and Truong Van Bay: Peripheral and central discrimination of chemoreceptor stimulation in the snail, *Helix pomatia* L. - In: Neurobiology of Invertebrates, Gastropoda Brain /Ed. J. Salánki/ Akadémiai Kiadó, Budapest, 1976, pp. 497-510.
- Salánki, J. and I. Varanka: Effect of copper and lead compounds on the activity of the fresh-water mussel /*Anodonta cygnea* L./ - Annal.Biol.Tihany 43,21-27 /1976/.
- Skvaril, J., J. Krehule and M. Véró: Two-dimensional histograms of forward and backward recurrence time intervals for two pulse series analysis - Electroencephalography and clinical Neurophysiology, 41,637-640 /1976/.
- Tátrai, I. and J. Ponyi: On the food of pike-perch fry /*Stizostedion lucioperca* L./ in Lake Balaton 1970. - Annal. Biol.Tihany, 43,93-104 /1976/.
- Truong Van Bay, and I. Kiss: Rhythmic activity of neurones identified in the central nervous system of *Helix pomatia* and its changes caused by Dazomet and Dipterex - Annal. Biol.Tihany, 43,3-19 /1976/.
- Vadász, I. and J. Salánki: Mechanisms of spike and burst generation in the bimodal pacemaker RPal neuron of *Helix pomatia* L. - In: Neurobiology of Invertebrates, Gastropoda Brain /Ed. J. Salánki/ Akadémiai Kiadó, Budapest, 1976. pp. 371-380.
- Véró, M.: Glass capillar drawing machine for electrophysiological purposes - Annal.Biol.Tihany, 43,29-35 /1976/.
- Véró, M.: Movement indicator for biological objects with electro-optical sensing device - Annal.Biol.Tihany, 43, 37-49 /1976/.
- P.-Zánkai, N. and J. Ponyi: Seasonal changes in the filtering rate of *Eudiaptomus gracilis* /G.O.Sars/ in Lake Balaton - Annal.Biol.Tihany, 43,105-116 /1976/.

- Benedeczky, I.: Ultrastructure of epithelial sensory region in the lip of snail *Helix pomatia* - Neuroscience 2,781-789 /1977/.
- Biró, P.: Recent results of ichthyological research of Lake Balaton and its perspectives - Annal.Biol.Tihany, 44, 161-180 /1977/.
- Biró, P.: Effects of exploitation, introductions and eutrophication on percids in Lake Balaton - J.Fish Res.Board Can. 34,1678-1683 /1977/.
- Biró, P.: Food consumption, production and energy transformation of pike-perch /*Stizostedion lucioperca*/ population in Lake Balaton - Ichthyologia, 9,47-60 /1977/.
- Each, J.H., M.G. Johnson, J.R.M. Kelso, J. Hartmann, W. Nümann and B. Entz: Responses of percid fishes and their habitats to eutrophication - J.Fish.Res.Board Can. 34, 1964-1971 /1977/.
- Elekes, K.: Localization of biogenic monoamines in the central nervous system of fresh water mussel /*Anodonta cygnea* L./ - Annal.Biol.Tihany, 44,37-60 /1977/.
- Elekes, K.: Fluorescence histochemical and autoradiographical methods for the investigation of the nervous system - Acta histochem, Suppl.-Band XIX, 99-111 /1977/.
- Elekes, K., L. Hiripi and J. Nemcsók: Ultrastructural effects of 6-OHDA and 5,6-DHT on the central nervous system of fresh water mussel - Acta biol.Acad.Sci.hung. 28, 259-272 /1977/.
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- Hiripi, L., J. Nemcsók, K. Elekes and J. Salánki: Monoamine level and periodic activity in 6OHDA treated mussels /*Anodonta cygnea* L./ - Acta biol.Acad.Sci.hung. 28, 175-182 /1977/.
- Kiss, I. and I. Benedeczky: Physiological and ultrastructural investigation of an identified neurosecretory cell of *Lymnaea stagnalis* - Acta biol.Acad.Sci.hung. 28,355-360 /1977/.
- Kiss, I. and J. Salánki: Examination of some morphological properties and axonal pathways of giant neurones in the central nervous system of *Lymnaea stagnalis* - Comp. Biochem.Physiol. 57A,107-114 /1977/.
- Kiss, T.: Electrical properties of the cardiac muscle cell membrane and its role in the excitation-contraction coupling - Acta Bioch.Biophys.Acad.Sci.Hung.12,291-302 /1977/.
- Kiss, T. and J. Salánki: Functional heterogeneity of the excitable membranes - Annal.Biol.Tihany, 44,77-97 /1977/.
- Máté, F.: The role of the Biological Research Institute in the research programme of environmental protection of Lake Balaton - Annal.Biol.Tihany,44,215-226 /1977/.
- Pogorelaya, N.K., I. Kiss and K. Elekes: Electron microscopic investigation of a giant neuron identified in the right parietal ganglion of *Lymnaea stagnalis* L. - Acta biol. Acad.Sci.hung. 28,451-460 /1977/.
- Ponyi, J. and A. Frankó: A szervesszén horizontális eloszlása a Balaton felső íszaprétegében - Hidrológiai Közlöny, 163-166 /1977/.
- Ponyi, J. and I. Dévai: A Fertő magyar területének rákjai /Crustacea/ - Hidrológiai Közlöny, 262-270 /1977/..
- Ponyi, J.: New results of the zoo-plankton studies in Lake Balaton - Annal.Biol.Tihany, 44,199-214 /1977/.
- S.-Rózsa, K.: Central representation and integration of sensory inputs from the cardiorenal system of the *Helix pomatia* L.- J.Vusch.Nerv.Deat. 27,1224-1233 /1977/. /in Russian/
- S.-Rózsa, K.: Studies on the mechanism of the neural integration - Annal.Biol.Tihany, 44,99-122 /1977/.

S.-Rózsa, K. and T. Kiss: Role of cyclic nucleotides in the effect of transmitters on invertebrate hearts. - In: Comparative Pharmacology of Synaptic Receptors. /Ed.: J. Michelson/, Publishing House "Nauka", Leningrad, 1977 pp. 121-127.

Salánki, J.: Function of molluscan neurones as revealed in isolated and in intact preparations. - In: Neuron concept today /Eds: J.Szentágothai, J.Hámori, E.S.Vizi/, Akadémiai Kiadó, Budapest, 1977. pp. 119-131.

Salánki, J.: Effect of environmental factors on the endogenous rhythm of the fresh water mussel /*Anodonta cygnea* L./ - Annal.Biol.Tihany, 44,123-136 /1977/.

Tátrai, I.: A balatoni vágódurbincs /*Acerina cernua* L./ aktiv anyagcseréje és táplálékszükséglete különböző hőmérsékleteken - Halászat, 23,109-112 /1977/.

Vadász, I., Dj. Konjevic and Lj. Rakic: Some characteristics of the slow wave oscillatory mechanism in neuron R15 /*Aplysia depilans*/ - Jugoslav Physiol.Pharmacol.Acta, 13,301-307 /1977/.

Vérő, M.: New instruments and measurements methods - Annal. Biol.Tihany, 44,137-160 /1977/.

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Benedeczky, I. and P. Somogyi: Cytochemical localization of exogeneous peroxidase in adrenal medullary cells of hamster - Acta biol.Acad.Sci.hung.29,155-163 /1978/.

Biró, P.: A halászat hatása a balatoni ragadozó őn /*Aspius aspius* L./ biomasszájára, állomány nagyságára és hozamára - Halászat tudományos melléklete 4,21-24 /1978/.

Biró, P.: Yield-per-recruit estimates for bream /*Abramis brama* L./ in Lake Balaton /Hungary/ - Rev.Trav.Inst.Peches marit., 40,505-506 /1978/.

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Elekes, K.: Autoradiographic localization of monoamine uptake in the central nervous system of a marine mollusc /*Mactra stultorum* L., Pelecypoda/ - Neuroscience,3,49-58 /1978/. Elekes, K.: Ultrastructure of synapses in the central nervous system of lamellibranch molluscs - Acta biol.Acad.Sci.hung,29,139-154 /1978/.

Eloffson, R., K. Elekes and H.M. Myhrberg: Catecholaminergic innervation of muscles in the hindgut of Crustaceas. An ultrastructural study - Cell Tiss.Res.,189,257-266 /1978/.

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Kiss, T. and K. S.-Rózsa: Pharmacological properties of 5HT receptors of the *Helix pomatia* L. /Gastropoda/ heart muscle cells - Comp.Biochem.Physiol.61C,41-46/1978/.

Nemcsók, J. and Z. Rakonczay: A szerotonin in vitro felvétele a tavi kagyló központi idegrendszerébe - Magyar Kémikusok Lapja,33,27-31 /1978/.

Ponyi, J. and L. Bankós: Különböző növényvédő szerek hatása a *Gammarus roeseli* Gervais nevű Amphipoda fajra - Állattani Közlemények 65,115-126 /1978/.

S.-Rózsa, K.: A szivműködést szabályozó neuronhálózat *Achatina fulica* Féruccac /Gastropoda, Mollusca/ központi idegrendszerében - Biológia,26,175-194 /1978/.

Salánki, J.: Elemi neuronális mechanizmusok az idegi szabályzásban - MTA Biol.Oszt.Közl.21,37-60 /1978/.

Salánki, J. and I. Varanka: Effect of some insecticides on the periodic activity of the fresh-water mussel /*Anodonta cygnea* L./ - Acta biol.Acad.Sci.hung.29,173-180 /1978/.

- Stefano, G.B., L. Hiripi and E.J. Catapane: The effects of short and long term temperature stress on serotonin, dopamine and noradrenaline concentration in molluscan ganglia - J.Thermal Biology, 3, 79-83 /1978/.
- Varanka, I.: Afferents of the anterior adductor muscle in the freshwater pelecypod *Anodonta cygnea* L. - Acta Physiol. Acad.Sci.hung. 51, 371-383 /1978/.
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