

Faculty of Science

Annual Activity Report 2001

Dean:	Assoc. Prof. RNDr. Jan Slovák, DrSc.
Vice-deans:	Prof. RNDr. Rostislav Brzobohatý, CSc. Assoc. Prof. RNDr. Viktor Kanický, CSc. Assoc. Prof. RNDr. Jana Musilová, CSc. Prof. RNDr. Jiřina Relichová, CSc.
Chairman of the Academic Senate:	Assoc. Prof. RNDr. Pavel Kubáček, CSc.
Secretary:	Ing. Hana Michlíčková

The Faculty of Science (FoS) comprises the Physics, Chemistry, Biology, Earth Sciences and Mathematics sections. These sections use different methodological approaches, methods of work and levels of development, which is reflected in differences in their research and teaching activities as well as in different levels of formalisation of knowledge and its integration into universal viewpoints.

Faculty of Science organized seven degree programmes in the 5-year Master's programme of study, and six in the 3-year Bachelor's programme of study.

Last year, the number of successfully completed final state examinations was 208 in the Master's programme and 48 in the Bachelor's programme.

Special attention of the Faculty population is focused on post-graduate studies. The present post-graduate programme offers courses in 35 areas to graduates of Master's studies. There are 527 students in the post-graduate programme; 309 in its full-time courses and 218 in combined studies. The basic pre-requisite for participating in Ph.D. courses are intensive research work and presentation of its results at scientific conferences, in high-quality dissertations or papers published in reputable foreign journals. Post-graduates are also asked to provide teaching assistance in their particular fields. Their study stays abroad in places such as Germany, France, the USA, Austria, Great Britain and Russia, or under various international programmes such as SOCRATES / ERASMUS, as well as visits to particular specialised institutions through personal contacts with foreign partners are of a great importance.

Full-time post-graduate students have a preferential status in housing at MU halls of residence, and are granted monthly scholarships.

In 2001, 37 students successfully completed the Ph.D. programmes and received Ph.D. degree. Three students got their degree abroad: Markéta Munzarová in Physical Chemistry, Pavla Sitková in Organic Chemistry and Martina Gonyševová in Anthropology.

For academic achievements and exceptional results in research, publication and organisational activities and noteworthy athletic achievements, the dean conferred a total of eight awards to students and individual sections conferred another 20. The Rector's Prize for the best post-graduate students went to Iveta Matějusková, Ph.D. (Parasitology), Robert Mařík, Ph.D. (Mathematical Analysis) and Jakub Častulík, Ph.D. (Organic Chemistry).

In 2001, more than half of all the MU grant projects were projects of the Faculty of Science teachers and the overall financial value of the grants awarded corresponds to that fact.

A detailed summary of Czech and foreign grants, including their financial value, is listed in the in the Research and Development chapter of MU Annual Report.

We believe that one of our greatest achievements is the establishment of the National Centre for the Research into Biomolecules at the Faculty of Science, with Professor Jaroslav Koča as its director. The Centre was officially opened in September 2001.

Another new centre built at the Faculty is the Centre for Biostatistics and Analyses, which is a joint research and teaching facility of the Faculties of Science and Medicine. Head of the centre is Dr. Ladislav Dušek.

The botanical garden conservatory was the venue of the *5th Garden Party*, which was held in conjunction with a book launching and exhibition opening entitled *Works by Vladimír Drápal and by Masters of Cast Iron, in the Botanical garden of the MU Faculty of Science*. The importance of this garden party was highlighted by the fact that it held under the auspices of both the Rector and the Mayor of Brno. The Garden Parties are becoming an annual cultural tradition.

Other events organized by the Botanical Garden include the activities of the Friends of the Botanical Garden Association (established in 1996), which provides a basis for a broad-based cooperation with the public.

The premises of the Botanical Garden played host to three specialized exhibitions: an exhibition of carnivorous plants, cacti and succulents, sale exhibition of bulbs and succulents and an exhibition of exotic birds.

The Ministry of the Environment authorised the Faculty of Science botanical garden with the housing of plants confiscated by the custom officers at the Preservation Centre. These include plants subject to the Washington Agreement.

The Small Centre bookstore located on the premises of the reception of the FoS organized a sale exhibition of textbooks and technical literature in November.

The “PF Galerie”, located in the building of the Dean's Office organized three exhibitions in 2001: “Mongolia 2000”, an exhibition of photographs documenting the geological trip of students and teachers of the Department of Mineralogy, Petrology and Geochemistry, an exhibition photographs of European cities, mountains and other beauty spots by Lenka Zajíčková, and the exhibition of photographs “Irian Jaya – mountains, forests and people of New Guinea” by Dr. Alena Žáková and Milan Daněk.

MU Faculty of Science management organised the traditional “Concerts on the Staircase”. One was “Spring Concert – Songs from Musicals” performed by 4th year JAMU students majoring in Musical Performance (Jana Janěková Studio) and “Christmas Concert”, where songs by Jiří Šlitr and Jiří Suchý, and carols and songs from musicals (sung by first and third year JAMU students of Musical Performance) were heard in the Faculty of Science Dean's Office building.

The Faculty of Science has a Central Library that operates centralized textbook lending services and features a study room.

The MU Faculty of Science welcomed many outstanding foreign guests. The main objectives of their visits were lecturing and teaching, as well as co-operation between the various institutions in the field of research and development.

One of the most prominent guests of the FoS MU was Dr. Alfred Bader from the United States, who was awarded the title Doctor Honoris Causa of MU in 2000 in Chemical Science. Dr. Bader is a prominent industrialist and sponsor of chemical and painting projects. One of the reasons for Dr. Bader's visit was drafting a contract for the funding of the Josef Loschmidt Chair in the department of Organic Chemistry of the FoS for a professor of physical and organic chemistry, which will make it possible to invite some leading expert from abroad to the Department.

The departments of the Faculty of Science organized a number of conferences, seminars and symposia, often with foreign participants. Amongst the most significant were:

- the *7th Correspondence Seminar in Physics*, an all-year popularizing and educational event for talented secondary schools students;
- *Atmosphere 2001*, the 5th Czechoslovak Conference on air pollution and its effects on all segments of the environment;
- the *Meeting of biochemists and molecular biologists*, a traditional one-day conference with lectures and posters on the latest findings in biochemistry and molecular biology;
- the 4th *Scientific Methods in Archaeology and Anthropology* conference;
- the 10th *Czech and Slovak Helminthological Days*, a regularly held seminar with foreign participation and lectures on the latest findings in the field of parasitic helminths;
- *Quaternary 2001*, an international inter-disciplinary seminar on research and its results in geology, geomorphology, archaeology and phyto- and zoopaleontology;
- the summer school of *History of mathematics* for scientists, lecturers and students of post-graduate studies of mathematics.

The following is a short list of some other highlights of the Faculty life:

- The newly reconstructed Faculty hall furnished with the latest audiovisual and teaching aids was opened at a ceremony under the auspices of the MU Rector, Prof. Jiří Zlatuška.
- A world-class facility to be used by the entire university for the proteom analysis with MALDI-TOF Bruker reflex TM IV mass spectrometer and Bio-Rad 2-D gel electrophoresis was built.

In 2001, the title of professor was conferred to the following members of the Faculty of Science:

- Ondřej Došlý (Mathematics and mathematical Analysis),
- Václav Holý (Physics of Condensed Substances),
- Milan Novák (Geology, with specialization in mineralogy and petrography),
- Jan Slovák (Mathematics – Geometry).

MU conferred the title of Doctor Honoris Causa in mathematical and physical sciences to Prof. Jaroslav Kurzweil, the emeritus director of the Institute of Mathematics of the AS of the CR.

MU awarded gold medals in 2001 to Prof. Dr. Ferdinand Šamaja, emeritus director of the State Hydrometeorology Institute in Bratislava and to Prof. Dr. František Šik, emeritus professor of the FoS MU.

The silver medal was awarded to Dr. Zbyněk Stránil from the Institute of Geology of the AS of the CR in Brno.

Prof. Dr. Ivan Kolář was given the City of Brno Award in natural sciences.

Other major acknowledgements:

Markéta Munzarová, Ph.D. (DSP student) was the winner of the Prix de Chemie 2001 competition awarded by the French Embassy in the Czech Republic; Lukáš Trantírek, Ph.D. (DSP student) won the third prize in the same competition.

Richard Štefl (DSP student) won the Ministry of Education Award given to the best students and graduates.

The Prizes for the best student scientific work awarded by the French Embassy in Prague went to Markéta Munzarová, Ph.D. (Chemistry) and to Richard Štefl, Ph.D. (Pharmacy).

Pavel Švec, Ph.D. was awarded the Prize of the Young Czech and Slovak Microbiologist.