CZECH SCIENCE FOUNDATION ANNUAL REPORT 2018

... from curiosity to discovery

GAČR
CZECH SCIENCE FOUNDATION

CONTENTS

1 FOREWORD BY THE PRESIDENT

For the Czech Science Foundation („GACR"), year of 2018 was influenced by the changes in the composition of GACR Presidium which had already occurred at the beginning of 2018. Professor Jana Roithová resigned from her position in the Presidium due to her moving abroad. From February to May, the Presidium only worked in a four-member composition. At the end of May, Professor Drochytka was appointed as a Presidium member responsible for Technical Sciences.

Due to the end of excellence projects funding in the year of 2018, the Presidium commenced to deal with a new concept of the EXPRO excellent projects' class already in 2017. The government approved this new concept in October 2017 and the call was announced in May 2018. The new call demanded changes in the evaluation process of projects. Projects were evaluated by eight-member international Discipline Committees which were chosen by a foreign agency Science Connect from Strassburg. Both the Office and the Presidium were able to handle this new challenge without major difficulty. In the end, 36 excellent projects in total were selected in November, whose funding was to be launched in 2019.

On 26 September 2018, the GACR President's Award was awarded to the best projects that concluded in 2017. The selection of the best projects becomes harder and harder every year due to the high standard of competition. As every year, five awards were given. The winners were: doc. Ing. Jiří Houška, Ph.D., Mgr. Jakub Švenda, Ph.D., doc. RNDr. Aleš Panáček, Ph.D., RNDr. Petr Kopáček, CSc. and PhDr. Alena Volrábová, Ph.D. We were pleased to find out that four of the awarded scientists work at regional workplaces and thus quality science is not tied to traditional Prague institutions.

On 4–5 April, GACR organised a meeting of representatives of Slovenia, Austria, Hungary, Poland, Slovakia, Croatia and Switzerland in Prague in order to agree on possible future cooperation. GACR representatives were also involved in several international activities within Science Europe (SE), the Global Research Council (GRC) and participated in a number of other meetings, visits, seminars and discussions both at home and abroad. For example, the President attended the GRC Global Meeting in May in Moscow and the GRC European Meeting in November in Vienna. At the meeting in Moscow, Memorandum of Understanding was signed with Russian grant agency, Russian Foundation for Basic Research (RFBR), on submitting joint Czech-Russian projects. The call will be announced for the first time in a regular term in 2019. At the Science Europe meeting held in late May 2018 in Madrid, the issues of "open science", peer review evaluation etc. were discussed. On 21–22 October 2018, the President attended a conference followed by a discussion (as a member of a Panel) organised by the Austrian Institute of Science and Technology (IST) in Vienna. The topic was, for instance, whether the scientific gap between the so-called "old" and "new" EU countries is narrowing. Further informal discussions with representatives of European and particularly Central European agencies on future cooperation took place at all meetings. On 12 September 2018, in the presence of representatives of all participating countries, the Letter of Intent was signed in Vienna with the aim of developing future scientific cooperation on the Lead Agency principle in the Central European context. A new form of cooperation is being developed under the heading of the Central European Science Partnership (CEUS). The founding members of the CEUS are Austria, Poland, Slovenia and the Czech Republic. Switzerland, Croatia and Slovakia should also join in the future. The cooperation could result in the establishment of a multilateral cooperation, the strengthening of the influence of the research agencies of these countries within Europe, the exchange of experience in evaluation processes etc. In November 2018, a contract on collective calls for submission of international projects was signed with São Paulo Research Foundation (FAPESP) This call is also planned to be announced already in 2019.

On 10 October 2018, GACR signed a joint Memorandum with the President of Technology Agency of the Czech Republic (TACR), Professor Konvalinka. Altogether 19 principal investigators of successfully completed projects within the GACR competition stated that they could imagine that their project outcomes could have a potential in applied research in the future. The researchers of these projects will not only receive basic information about the conditions of the tender, but their projects will be further developed in

the framework of the TACR competitions. On 8 March, GACR together with TACR organised a theatre performance „QED" – Quantum Electrodynamics for members of the Offices and invited guests in the Činoherní klub (The Drama Club).

The whole year 2018 in GACR was in the spirit of celebrating 25 years of the activities of the GACR. On 10 December, a commemorative celebration of the members of the Office, the Presidium, the Supervisory and Scientific Advisory Board and other invited guests was held in connection with this anniversary. The meeting summarised the activities of GACR for the whole period and outlined the foreseen activities in the coming years. On 26 and 27 November 2018, GACR Presidium and the heads of the individual sections of the GACR Office met at an external meeting in Březnice attended by doc. Ing. Havlíček, vice-chairman of the R&D Council, Professor Michl, chairman of the International Advisory Panel to the R&D Council, representatives of the Council of Universities, Czech Rectors Conference, Czech Academy of Sciences, the European Research Council, Technology Agency of the Czech Republic, GACR Discipline Committees, Scientific Advisory Board and Supervisory Board. The representatives of the Czech Academy of Sciences and Universities and R&D Council presented some ideas that could facilitate the work of the researchers of GACR projects in the future. Positive news for all the parties involved is that some of the suggestions have already been incorporated into the calls of 2019. Other suggestions will require longer preparation, or some would even require an amendment to the law.

During 2018, several meetings of GACR bodies with the R&D Council Presidium took place and on 29 November 2018, a meeting of the GACR President with the members of the International Advisory Panel to the R&D Council was held. The international R&D Council had previously offered some suggestions which could be taken into consideration by the Presidium and the GACR Office. These suggestions were thoroughly discussed at the meeting and it was concluded that some of them had already been successfully settled and some require an amendment to the law. The R&D International Council therefore stated that in comparison with other providers of targeted support in the Czech Republic GACR is performing very well.

The evaluation of the proposed projects in comparison with previous years occurred without any significant changes. Compared to the year of 2017, the success rate of grant acquisition was higher in case of the standard projects, respectively junior grants: around 30 % in case of standard projects and 40 % in case of junior grants. The success rate in EXPRO excellent projects was around 20 %. Initially, we expected higher interest from the scientific community in these prestigious projects. We are planning to announce a call for EXPRO projects in 2019 as well.

RNDr. Alice Valkárová, DrSc.
President of the Czech Science Foundation

2 BASIC INFORMATION

The Czech Science Foundation (hereinafter "GACR") is an independent public organisation supporting basic research in all scientific disciplines by public funds. Since its establishment in 1993, GACR provides financial support for both experienced and young and early-stage researchers based on the Calls for Proposals approved by the Government of the Czech Republic (hereinafter the "Government"). Moreover, it also funds international research projects.

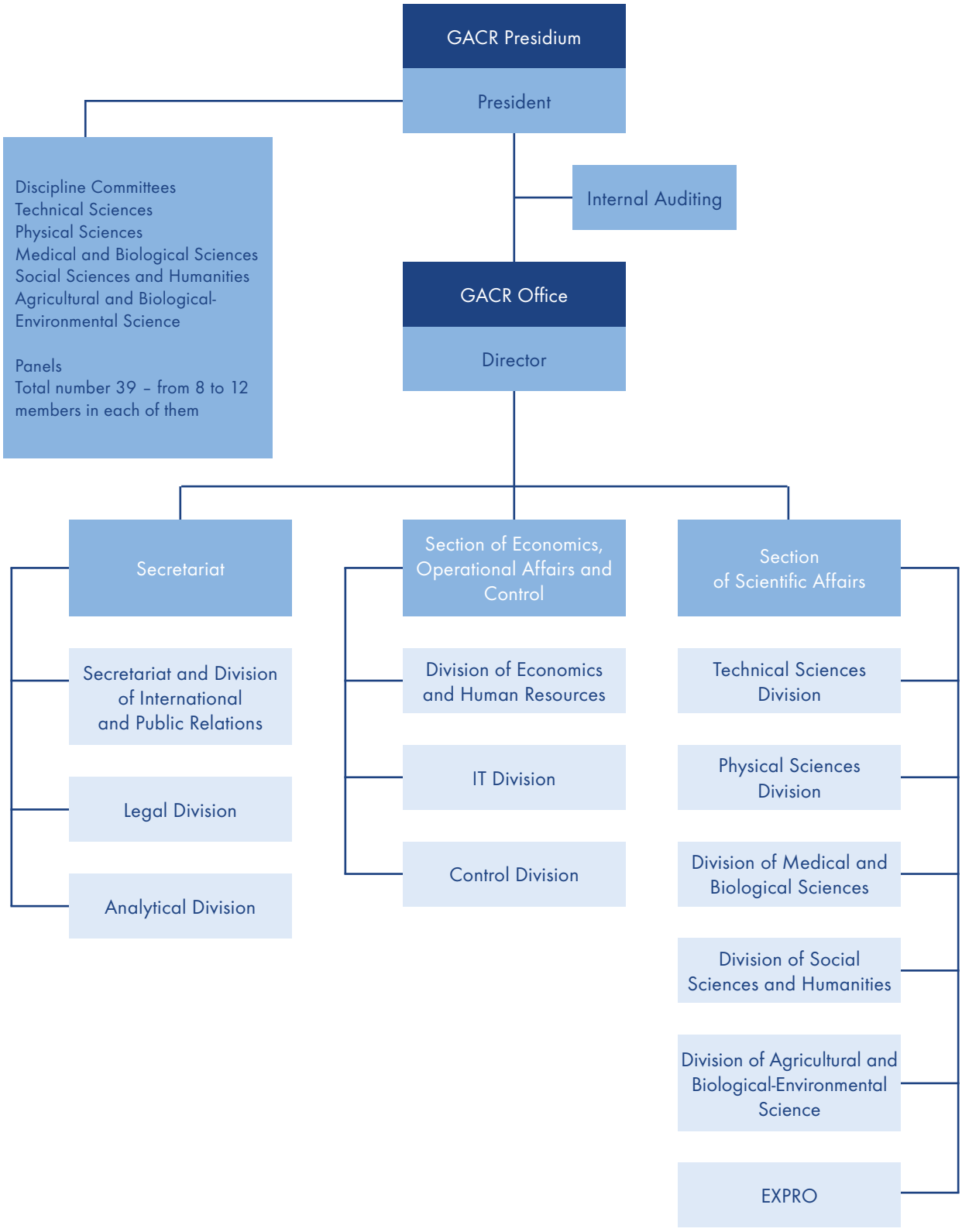
GACR is the only institution in the Czech Republic that provides public funding exclusively for basic research projects. Its activity is regulated by Act No. 130/2002 Coll., on Support of Research, Experimental Development and Innovation from public funds and amending certain related laws (hereinafter the "Act on Support of Research, Development and Innovation"). GACR independently manages targeted and institutional resources allocated directly from the state budget.

GACR provides financial support for basic research across the entire range of scientific fields. The scientific fields are divided into five following domains: Technical Sciences, Physical Sciences, Medical and Biological Sciences, Social Sciences and Humanities, Agricultural and Biological-Environmental Sciences.

The main GACR objectives are:

- To provide financial support for basic research projects at an international level via public tender in research and development,
- To promote and further expand international scientific cooperation in basic research,
- To contribute to creation of attractive conditions for the career development of young and early-stage researchers,
- To ensure that the entrusted state funds are used most effectively for the benefit of the Czech scientific community,
- To inform scientific community and general public about its activities and plans.

Scheme no. 1: Organisational structure



3 GACR AUTHORITIES AND OFFICE

GACR authorities are represented by the President, the Presidium, the Scientific Advisory Board and the Supervisory Board. The GACR Office is the organisational and administrative body of GACR.

3.1 PRESIDENT

President of GACR (hereinafter the "President") represents the organisation externally and acts on its behalf in all matters. The main activity of the President is the management of the GACR Presidium, which is the executive body of GACR.

The President regularly attends the Scientific Advisory Board meetings and most of the Supervisory Board meetings. Moreover, the President participates in meetings of the Parliamentary Committee on Science, Education, Culture, Youth and Sport of the Chamber of Deputies of the Parliament of the Czech Republic (hereinafter the "Chamber of Deputies") for the budget proposal negotiations and the final account of the GACR budget chapter.

3.2 PRESIDIUM

GACR Presidium (hereinafter the "Presidium") is the executive body of GACR. Its role and position are defined by § 36 para. 5 of the Act on Support of Research, Development and Innovation. The Presidium is authorised to approve calls for proposals, to award grants, present proposals of the GACR Statute and its changes together with the GACR budget proposal to the Government for approval. Moreover, the Presidium is responsible for coordination of the Discipline Committee, advisory bodies of GACR, which evaluate the project proposals.

The Presidium consists of five members including the President. Members of the Presidium are appointed for four years with the possibility of two consecutive terms at maximum. The Presidium members are appointed and recalled by the Government on the basis of Research, Development and Innovation Council (hereinafter the "R&D Council") proposal.

The composition of Presidium in the year of 2018:

- **RNDr. Alice Valkárová, DrSc.**
  (President; first term of office) – Physical Sciences
- **Prof. Ing. Stanislava Hronová, CSc., dr. h. c.**
  (Vice-president; second term of office) – Social Sciences and Humanities
- **Prof. Mgr. Jana Roithová, Ph.D.**
  (first term of office) – Technical Sciences, on 28 February 2018, at her own request due to moving abroad, she resigned from her position
- **Prof. Ing. Rostislav Drochytka, CSc., MBA**
  (first term of office) – Technical Sciences – was appointed as a Presidium member on 30 May 2018
- **Prof. RNDr. Jaroslav Koča, DrSc.**
  (first term of office) – Medical and Biological Sciences
- **doc. RNDr. Petr Baldrian, Ph.D.**
  (first term of office) – Agricultural and Biological-Environmental Sciences

The fundamental activities of the Presidium arise from the project evaluation schedule, which covers evaluation of the newly submitted grant project proposals as well as the evaluation of on-going and completed projects.
Below are the main points, which were discussed or approved at the Presidium's meetings during given period.

Throughout the year, the Presidium thoroughly discussed the strategy of the new EXPRO projects of excellence. The Presidium selected foreign project evaluators to eight Discipline Committees (based on the recommendations and pre-selection of the Science Connect Agency) and acquainted with the evaluation process. At the December meeting, the Presidium assessed the course of the tender and proposed minor changes in the evaluation process.

Based on preliminary discussions with the GACR Scientific Advisory Board and the scientific community, the Presidium started to prepare a new material concerning the reintroduction of a post-doctoral projects group based on completely new foundations than in the past. In 2017, the first three-year period of junior grants ended, and the Presidium analysed the results concluding that the three-year project

duration was not sufficient to meet the main condition of these projects – the creation of its own research group; and decided to extend the project duration to five years. The Presidium prepared a proposal of a new concept for both postdoctoral and junior grants; and once approved by the Scientific Advisory Board, the GACR Office will start preparing a new government material for these new public tenders.

During 2018, the Presidium discussed the PR strategy several times at its meetings and commented on the concept of the new GACR website. The Presidium has prepared a material concerning the Open Access issue, which was sent to the Science Europe Office as this issue is intensively debated at the Science Europe meetings. The Presidium also discussed possible forms of cooperation with the Technology Agency of the Czech Republic (TACR) throughout the year and in October 2018, a joint memorandum of the two agencies was signed.

At its meeting in October 2018, the Presidium discussed the proposal of the "Code of Ethics for Investigators of the Czech Science Foundation".

Based on the Discipline Committees proposals, the Presidium decided on the GACR President´s awards, which were awarded in September 2018.

During the year, the Presidium approved modifications of the contents of several Panels in the Discipline Committee of Technical Sciences. At each of its meetings, the Presidium discussed and approved proposed changes in grant projects, and in April, the Presidium approved the results of the evaluation of interim and final reports of projects by the Discipline Committees. The Presidium was also continuously updated on the progress and results of the controls concerning beneficiaries spending. During its several meetings, the President discussed proposal of Tender documents for 2020.

In public tenders announced in 2018, GACR received 2,325 proposals in total (1,975 standard projects, 278 junior grants, 72 international projects.) After the expert Panels and Discipline Committees evaluated the proposals, the first phase of evaluation was approved in June 2018.

In November 2018, the Presidium decided on the basis of expert bodies recommendations to finance 585 standard projects, 103 Junior grants, 22 international projects in cooperation with Deutsche Forschungsgemeinschaft (DFG), Ministry of Science and Technology (MOST) and National Research Foundation of Korea (NRF). Since several already funded projects were expected to be returned due to the simultaneous acquisition of the EXPRO project by the principal investigator, in February 2019, the Presidium decided to additionally finance 42 projects (37 Standard projects and 5 Junior grants), which followed in the ranking.

In 2018, 11 Presidium meetings took place including one external meeting.

3.3 SCIENTIFIC ADVISORY BOARD

The Scientific Advisory Board (hereinafter the "SAB") is a conceptual body of GACR. Its activities are governed by § 36 para. 3, 6 of the Act on Support of Research, Development and Innovation. SAB's scope is determined by its Statute approved by the Presidium. In accordance with the Statute, the SAB's main tasks are:

- To propose the Discipline Committees´ composition and their focus,
- To propose grant project groups and their focus,
- To evaluate GACR´s contribution to the development and quality of basic research in the Czech Republic,
- To discuss and submit problem solving proposals related to GACR´s activities,
- To comment on GACR's international cooperation and facilitate its development.

The SAB consists of 12 expert members representing different scientific disciplines, who are appointed and recalled by the Government on the R&D Council's recommendation. Members are appointed for four years with the possibility of two consecutive terms at maximum.

Until 22 December 2018, the SAB acted in the following composition:

- **Prof. Ing. Zdeněk Bittnar, DrSc.** (Chair)
- **Prof. MUDr. Tomáš Zima, DrSc., MBA** (Vice-Chair)
- **Prof. Ing. Jana Hajšlová, CSc.**

- **Prof. RNDr. Václav Hampl, DrSc.**
- **Prof. RNDr. Jan Hanousek, CSc.**
- **Prof. RNDr. Jan Kratochvíl, CSc.**
- **Prof. PhDr. Jiří Kuthan, DrSc., dr. h. c.**
- **Prof. Ing. Jiří Málek, DrSc.**
- **Prof. RNDr. Bedřich Moldan, CSc.** (Mandate ended in October 2017)
- **doc. RNDr. Vojtěch Petráček, CSc.**
- **Prof. PhDr. Jan Sokol, CSc., Ph.D.**
- **Prof. MUDr. Julius Špičák, CSc.**

Since 22 December 2018, the SAB acts in the following composition:

- **Prof. Ing. Jaroslav Doležel, DrSc.** (Chair)
- **Prof. RNDr. Pavel Exner, DrSc.**
- **Prof. Ing. Martin Hartl, Ph.D.**
- **Prof. Ing. Štěpán Jurajda, Ph.D.**
- **Prof. Bengt J. F. Nordén, Dr. mult, honFRSC**
- **Prof. Jana Roithová, Ph.D.**
- **Prof. Dr. Helmut Schwarz**
- **Prof. Avner Shaked, Ph.D.**
- **Prof. PhDr. Petr Sommer, CSc., DSc.**
- **Prof. MUDr. Aleksi Šedo, DrSc.**
- **Prof. Ing. František Štěpánek, Ph.D.**
- **Prof. MUDr. Jiří Zeman, DrSc.**

During 2018, four SAB meetings took place: on 26 February, 26 June, 2 October and 6 December.

SAB intensively discussed the preparation of a new group of EXPRO grant projects, a proposal for the reorganisation of Panels within the Medical and Biological sciences (DC 3), changes in the Tender Document for Junior Grants, and a proposal from Prof. Kratochvíl to reintroduce post-doctoral projects. The SAB was actively involved in the development of mutual cooperation between GACR and TACR and was also involved in the preparation of ERC CZ and CEUS "Central European Partnership" agreement. Further information can be found on the GACR website.

3.4 SUPERVISORY BOARD

The Supervisory Board (hereinafter the "SB") is the auditing body of GACR, which was set up by Act No. 110/2009 Coll., replacing the Act on Support of Research, Development and Innovation, in accordance with § 36, para. 7 of this Act. The main tasks of the SB consist of financial supervision of GACR, discussing and dealing with complaints about violation of the conditions of a Call for proposals in awarding grants, participating in improving the current mechanism of targeted support of scientific projects in the Czech Republic. If required, the SB may propose statements to the Presidium which then become obligatory.

The SB should consist of 10 members which are appointed and recalled by the Chamber of Deputies of the Czech Republic. Members are appointed for four years with the possibility of two consecutive terms at maximum. The SB submits the annual report about its activity to the Chamber of Deputies twice a year.

The SB members as of 31 December 2018:

- **Prof. PhDr. Jana Geršlová, CSc.** (Chair)
- **Prof. Ing. Mária Režňáková, CSc.** (Vice-Chair)
- **JUDr. Ing. Zdeněk Dufek, Ph.D.**
- **Prof. Mgr. Libor Jan, Ph.D.**
- **Prof. JUDr. Věra Kalvodová, Dr.**
- **Prof. Ing. Petr Konvalinka, CSc.**
- **Prof. Ing. Jan Roda, CSc.**
- **Prof. RNDr. Omar Šerý, Ph.D.**
- **Ing. Mirka Wildmannová, Ph.D.**

On 30 May 2018, the mandate of Prof. Ing. Rostislav Drochytka ended due to his appointment to GACR Presidium. On 3 October 2018, Ing JUDr. Zdeněk Dufek, Ph.D. was elected by the Chamber of Deputies.

SB handled in total 17 complaints about the grant project proposal evaluation, as well as evaluation of progress and final reports.

SB members attended individual Panels and Discipline Committee meetings to supervise their activity.

3.5 GACR OFFICE

In accordance with the GACR Statute, the GACR Office (hereinafter the "Office") is responsible for delivering

technical, economical, supervisory, organisational and administrative tasks following the activities carried out by GACR. The Office also takes care of communication with outside subjects.

The Office is managed by the Director, who is appointed and recalled by the President. The Office consists of the Section of Scientific Affairs, Section of Economics, Operational Affairs and Control and Secretariat. The Division of Internal Auditing is subordinated directly to the President.

GACR Secretariat is further divided into the Division of Secretariat and International Affairs and Public Relations, Legal Division and Analytical Division. The main responsibilities of the Secretariat and Division of International and Public Relations include providing administrative support for the Office, President, Presidium and SAB. It is also responsible for relations with external subjects, both at national and international level, as well as publicity and presentation of GACR activities. Legal Division ensures complex legal services for GACR and is responsible for legal and formal part of internal regulations. Furthermore, this division prepares public tenders in basic research and proposal of tender documents for public tenders. Analytical Division ensures database administration, as well as publication and announcement of calls for proposals and drafts of guidelines. It ensures the operation of the call centre and other information channels.

Section of Economics, Operational Affairs and Control consists of Division of Economics and Human Resources, IT Division and Control Division. Division of Economics and Human Resources ensures the GACR accounting, provision of funds to the GACR projects and their supervision. It prepares a GACR draft budget and deals with human resources. The IT Division´s main tasks are operation and maintenance of the GACR computer network, development, operation and maintenance of the GACR database and information system together with the email correspondence. Control Division monitors the economic effectiveness, compliance with legal regulations and regulation on the side of the grant recipients and the compliance with the GACR Statute and other binding documents.

Grant Support Section is divided into Technical Sciences Division, Physical Sciences Division, Division of Medical and Biological Sciences, Division of Social Sciences and Humanities, Division of Agricultural and Biological-Environmental Sciences, and EXPRO Division. They ensure the evaluation process of submitted project proposals and prepare background materials for the Presidium, the Discipline Committees and Panels. They also deal with the agenda of ongoing and completed projects.

3.6 INTERNAL AUDIT

The internal audit is ensured by an independent and organisationally separated employee who, apart from audit and further supervision, is also responsible for consultation with the heads of GACR. The responsibility and the activities of internal audit are explicitly stipulated in GACR´s Internal Code of Conduct.

FINANCIAL SUPPORT OF GRANT PROJECTS

4

At the beginning of this chapter we would like to mention that all the data sources used in the document are derived from our own calculation, updated as of 21 February 2019.

The total approved budget for the year of 2018 equalled 4,333,066,000 CZK with no income being planned. GACR's expenditures are divided into institutional and targeted expenditures. The institutional expenditures are intended for GACR's operation including the management of public tenders, the evaluation of project proposals, monitoring of on-going projects and further work related to the administration. The targeted expenditures are intended for grant projects. In 2018, the GACR's institutional expenditures were 109,783,000 CZK, representing 2.5 % of the total GACR´s financial means. In 2018, the GACR's targeted expenditures approved by the State Budget Act of the Czech Republic were in total 4,223,283,000 CZK. The financial support for on-going projects was 22,875,890,000 CZK, representing 68.1 % of the total targeted financial means. The amount of 1,347,393,000 CZK was planned for the starting projects, representing 31.9 % of the total GACR's targeted expenditures.

In 2018 GACR distributed financial means for these types of projects:

- funding for standard projects,
- funding for international projects,
- funding for projects of excellence in basic research,
- funding for international projects evaluated on the basis of Lead Agency principle,
- funding for Junior grants
- funding for projects of international cooperation for acquiring ERC grants ("Support of ERC Grant Applicants").

The allocation of targeted support according to project groups may be seen in the following.

In accordance with § 10 par. 2 of Act on Support of Research, Development and Innovation, GACR provides grants for projects upon the grant funding decision and after the conclusion of the contract with the beneficiary. If a state organisation is the beneficiary, or co-beneficiary, the transfer of funds is carried out according to the financial arrangements made by the Ministry of Finance of the Czech Republic. Funds intended for the beneficiary, or co-beneficiary, are transferred through the budget of the respective authority. Other recipients receive targeted funds through direct transfer from the provider's account to the beneficiary's bank account.

Table no. 1: Approved targeted expenditures of GACR according to project groups in 2018

Project groups	"Approved targeted expenditures of GACR (in thousands CZK)"	"Distribution of targeted expenditures (in %)"
Standard projects	3,027,762	71.7
Bilateral projects	129,059	3.1
Support of excellent research projects	483,479	11.4
Lead Agency projects	72,983	1.7
Junior projects	500,000	11.8
Support of ERC Grant Applicants	10,000	0.2
Total	4,223,283	100

5 GACR PROJECTS IN 2018

During the reported period, public tenders in different stages took place. These public tenders include those that were announced and evaluated in 2017, with starting date in 2018; and those announced in 2018 with the anticipated launch of projects in 2019.

Public tender for standard, junior and international grant projects with expected project launch on 1 January 2018 was announced on 21 February 2017. The joint call for the submission of bilateral Austrian-Czech projects of basic research with the launch of projects on 1 January 2018 was neither announced by GACR nor FWF. In all public tenders announced in 2017, GACR received 2,408 project proposals; out of which 9 proposals were not accepted for not meeting the conditions of the public tender proposals, and 7 proposals, i.e. 0.3 %, were rejected as ineligible. Moreover, 3 applicants withdrew from the public tender. The number of successful grant projects in public tenders announced in 2017 with project launch in 2018 equalled 636, of which it was decided to finance 548 standard projects, 68 junior grants, 20 international projects (14 projects in cooperation with the German organisation DFG, 4 projects in collaboration with the Taiwanese organisation MOST and 2 projects in cooperation with Korean organisation NRF).
On 26 February 2018, GACR announced a public tender for support of standard, junior and international grant projects with an expected project launch from 1 January 2019.
The tender period started on the day following the announcement date, i.e. on 27 February 2018, and ended on 11 April 2018. In 2018, GACR announced for the first time a public tender for the support of EXPRO grant projects of excellence in the basic research with expected project launch in 2019. The tender period was set from 15 May 2018 until 28 June 2018. At the end of 2017, GACR announced a joint call with the Austrian Agency (FWF) for submission of Austrian-Czech Lead Agency-based project proposals starting on 1 January 2019 and set the deadline for submitting project proposals on 16 March 2018. The number of submitted project proposals in all tenders announced in 2018 and in Lead Agency calls for proposals equalled 2,580 (1,975 standard projects, 278 junior grants, 72 international (bilateral) projects, 185 grant projects of excellence in EXPRO basic research and 70 international projects on the Lead Agency principle), of which 20 project proposals were not accepted for not meeting the conditions of the public tender proposals and 20 project proposals in total, i.e. 0.8 %, were rejected as ineligible. Furthermore, 3 applicants withdrew from public tenders.

The total number of successful grant projects 2019 was 798 – 622 standard projects, 108 junior grants, 22 international projects (13 projects in cooperation with the German organisation Deutsche Forschungsgemeinschaft (DFG), 6 projects in cooperation with Taiwanese Ministry of Science and Technology (MOST), 3 projects in cooperation with the Korean National Research Foundation of Korea (NRF), 36 grant projects of excellence in basic EXPRO research and 10 international projects based on Lead Agency evaluation.

5.1 STANDARD PROJECTS

GACR has supported this type of projects since its establishment in 1993. The duration of projects is 2 – 3 years. Project proposals in all scientific fields of basic research can be submitted. The topic of a project proposal is determined by the applicant. A natural person, a legal person, an organisational unit of the State or self-governing territorial unit, or organisational unit of the Ministry of Defence or Ministry of the Interior active in research and development, are eligible applicants for funding. Projects are implemented by single or several Principal Investigators from one or more institutions. The call for proposals is announced annually, usually in February. The evaluation process goes until autumn and the results are usually announced before the end of the year. A project proposal is accepted provided that all conditions stated in the Act on Support of Research, Development and Innovation and in the guidelines for standard projects are met. The main evaluation criteria of project proposals are quality and originality of the project proposal, applicant´s expertise to reach the objectives, and costs adequacy.

In public tender to support standard projects announced in 2017, GACR received 2,067 project proposals in total.

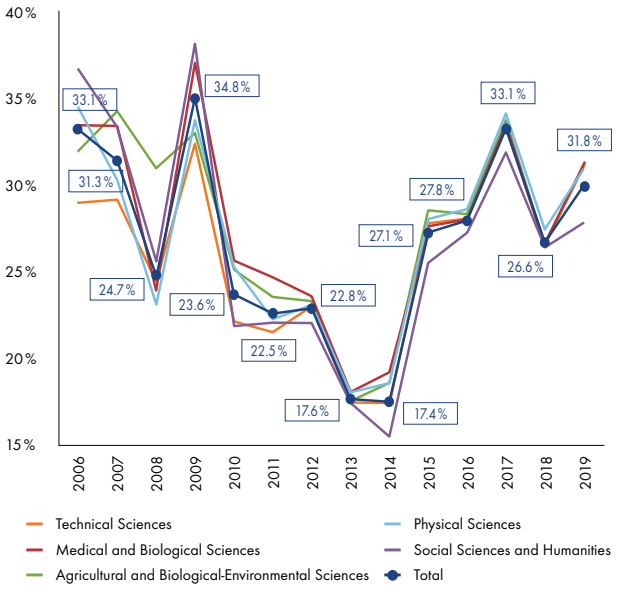
Out of these proposals, 4 proposals were not accepted for not meeting the conditions of the public tender proposals and 1 proposal was rejected from the public tender. Out of 2,062 evaluated standard project proposals, most of them were submitted in the field of Social Sciences and Humanities (689 proposals), the second largest group of proposals was in the field of Physical Sciences with 417 proposals, Technical Sciences had 357 proposals, Agricultural, and Biological-Environmental Sciences had 303 project proposals and the lowest number of submitted proposals was 296 project proposals in Medical and Biological Sciences. According to the distribution of the project proposals by the candidates, GACR evaluated 1,268 project proposals from universities, 662 project proposals from institutes of the Academy of Sciences, 67 other project proposals (hospitals, libraries, museums, state institutes other than CAS) and 28 project proposals in private category (natural persons, limited liability companies, joint stock companies, public benefit organisations, registered institutes). 20 project proposals from public research organisations other than institutes of Czech Academy of Sciences and 17 project proposals from private universities. Based on the recommendation of the advisory bodies and under consensus, the Presidium decided to finance 548 standard projects. Out of 548 standard grants in total, the most grants awarded were in the field of Social Sciences and Humanities (181 grants), the second largest group include Physical Sciences with 115 grants followed by Technical Sciences with 94 grants and Agricultural, Biological-Environmental Sciences with 80 grants. The lowest number of funded projects was in the field of Medical and Biological Sciences – 78 grants. The highest number of grants was awarded to public universities (328 grants) and to the institutes of the Academy of Sciences of the Czech Republic (192 grants).

In a public tender announced in 2018, GACR received 1,975 project proposals in total. Out of these proposals, 4 were not accepted for not meeting the conditions of the public tender proposals, 16 were rejected from the public tender and 2 applicants withdrew their applications. Out of 1,953 evaluated standard project proposals, most of them were in the field of Social Sciences and Humanities (629 proposals), the second largest group was in the field of Physical Sciences and Technical Sciences with 379 proposals. Furthermore, Agricultural, and Biological-Environmental Sciences had 288 project proposals, and the lowest number of submitted proposals was 278 proposals for projects in Medical and Biological Sciences. When taking into account the distribution of project proposals by the candidates, GACR evaluated 1,193 project proposals from universities, 645 project proposals from institutes of the Academy of Sciences, 63 other project proposals (hospitals, libraries, museums, state institutes other than CAS), 26 project proposals from private universities, 18 project proposals from public research organisations other than institutes of the Czech Academy of Sciences, and 8 project proposals in private category (natural persons, limited liability companies, joint stock companies, public benefit organisations, registered institutes). Compared to the previous year, the highest drop in the number of evaluated project proposals by 52.9 % was recorded in the private category.

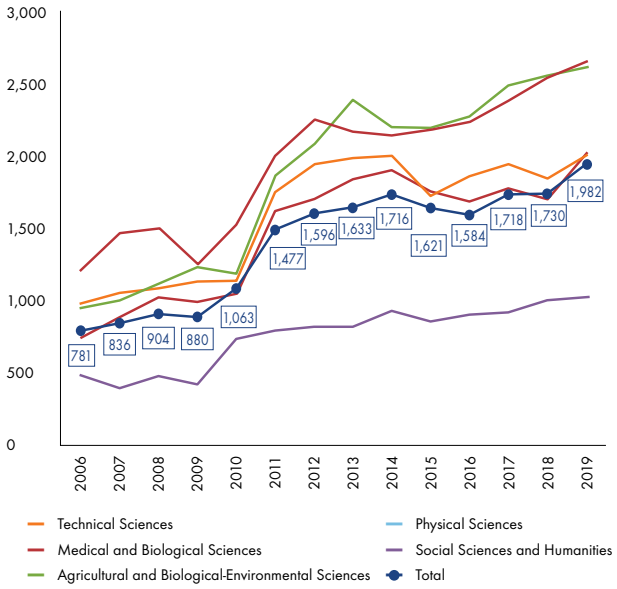
Based on the recommendation of the advisory bodies and under consensus, the Presidium at its meeting on 26 November 2018 decided to finance 585 standard projects. The success rate of standard grant projects launching in 2019 was 31.8 % which compared to last year represents an increase of more than 5.3 %. Over the reported period, the lowest success rate was recorded in 2013 and 2014, where the success rate was around 17.5 %, as shown in Graph no. 1.

In a public tender for standard projects announced in 2018, Physical Sciences were the most successful with 27.6 % success rate. On the contrary, the lowest success rate was recorded in the field of Technical Sciences (26.3 % success rate of projects with the project launch in 2018). One year later, the highest success rate was recorded in the Agricultural and Biological-Environmental Sciences (reaching over 34.0 % success rate). Social Sciences and Humanities have long-term lowest success rates (26.3 % success rate of projects starting in 2018 and 28.5 % success rate for projects starting in 2019), despite the fact that these fields receive the highest number of funded standard projects (181 standard projects with the project launch in 2018 and 179 funded standard projects with the project launch in 2019). Out of 622 standard projects in 2019, the most grants awarded were in the field of Social Sciences and Humanities; the second largest group includes Technical Sciences with 126 grants and Physical Sciences with 125 grants, followed by Agricultural, Biological-Environmental Sciences with 98 grants. The lowest number of funded projects was in the field of Medical and Biological Sciences – 94 grants.

Graph no. 1: Success rate development of standard projects with the project launch in the years 2006–2019



Graph no. 2: Average costs development of standard projects in the first year of project realisation in the years 2006–2019, in thousands CZK



The highest average annual costs for the first year of carrying out the project are recorded in the long term in the fields of Medical and Biological Sciences (1,970 thousand CZK on average for the first year of carrying out the project per one funded standard project launched in 2006–2019), and Agricultural, Biological-Environmental Sciences (1,866 thousand CZK on average for the first year of carrying out the project per one funded standard project launched in 2006–2019). On the other hand, Social Sciences and Humanities report in the long term the lowest average costs for the first year of successful standard grants (on average 752 thousand CZK for the first year of carrying out the project per one funded standard project launched in 2006–2019). The development of the average costs for the first year of carrying out the project for funded standard projects is shown in the following Graph no. 2.

In terms of distribution of standard projects with the project launch in 2018 and 2019 by regions, GACR evaluated 4,015 project proposals in total, most of which came from Prague and the South Moravian Region. Over the reported period, almost 53 % of all standard project proposals were submitted from Prague and more than 18 % of all standard project proposals were submitted from the South Moravian Region. On the contrary, no standard project proposal was submitted from the Karlovy Vary region and only one project proposal from the region of Vysočina was evaluated. Less than 1 % of all evaluated standard project proposals were submitted by applicants from Liberec region, Zlín region and Ústí and Labem region. The highest number of successful project proposals was received from Prague (679 grants) and the South Moravian region (212 grants). GACR did not finance any standard project from Vysočina region. A low number of standard projects implemented is also recorded in Ústí nad Labem region, Liberec region and Zlín region, due to the low number of evaluated project proposals from these regions. The highest average success rate is recorded in Prague, where 32.0 % of the 2,124 standard project proposals are supported. The second largest success rate was recorded in Pardubice region with 29.5 % success rate. These two regions have higher success rate than the average success rate of GACR (29.1 %). The lowest success rate was recorded in Ústí nad Labem region (5.3 %) and Liberec region (9.4 %). The highest average annual costs for the first year of carrying out the project for the funded standard project launching in 2018 are in the Pardubice region (2,133 thousand CZK for the first year of carrying out the project) and the South Bohemian region (2,094 thousand CZK for the first year of carrying out the project). On the contrary, projects from the Pilsen region are cheaper by more than half (1,032 thousand CZK for the first year of carrying out the project).

The most expensive standard projects funded by GACR with the project launch in 2019 come from the Central Bohemian region (average costs of 2,330 thousand CZK for the first year of carrying out the project) and from the South Bohemian region (average costs of 2,314 thousand CZK for the first year of carrying out the project). As in the previous year, the cheapest standard projects are from the Pilsen region (1,299 thousand CZK for the first year of carrying out the project).

5.2 JUNIOR GRANTS

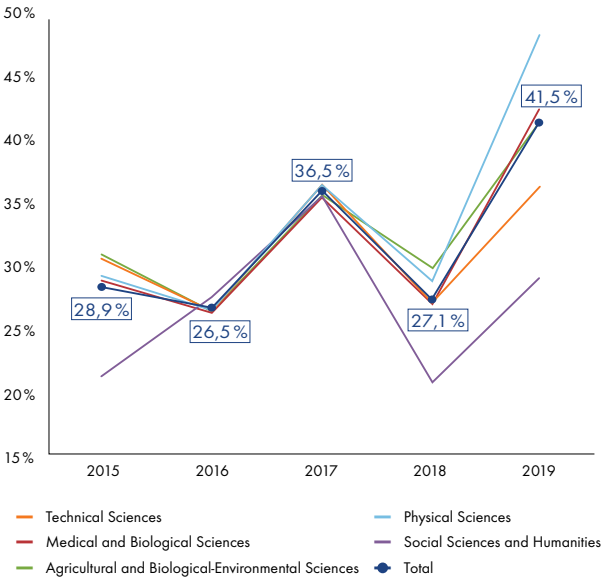
GACR supports junior grants in basic research since 2014. The duration of projects is 2–3 years. The topic of a project proposal is determined by the applicant. Only one applicant can be mentioned in the project proposal. Eligible applicants are scientists in basic research who gained their Ph.D. before the submission deadline, and who finished their Ph.D. studies not more than 8 years ago. Maternity and parental leave are not included in the mentioned time limit. At least six-month long post-doctoral internship abroad is a necessary condition for submitting the proposal. It is possible to divide this internship into two short ones. The call for proposals is announced annually, usually in February. The evaluation process runs until autumn and the results are usually published before the end of the year. A project proposal is admissible provided that all conditions stated in the Act on Support of Research, Development and Innovation and in the guidelines for junior projects are met. The main evaluation criteria of project proposals are quality and originality of the project proposal. Junior projects differ from post-doctoral projects by character. This type of grants is designated for excellent early-stage researchers and it enables them to create an independent research team equipped with appropriate research facilities for basic research at international level.

In the public tender on support of junior grant projects announced in 2017, GACR received 263 project proposals in total, out of which 5 proposals did not meet the tender conditions, 6 proposals were rejected as ineligible and 1 applicant withdrew from the tender. The highest number of junior grant proposals (80) was submitted in the Physical Sciences; the next largest group include Medical and Biological Sciences with 52 project proposals; followed by Agricultural, Biological-Environmental Sciences with 44 project proposals; and Social Sciences and Humanities with 38 project proposals. The lowest number of submitted project proposals (37) was in the field of Technical Sciences. In terms of the distribution of projects by candidates, GACR evaluated 153 project proposals from universities, 87 project proposals from institutes of the Academy of Sciences, 5 other project proposals (from hospitals, libraries, museums, state institutes other than CAS), 4 project proposals from public organisations other than CAS, 2 project proposals from private universities and no project proposal in the private category (natural persons, limited liability companies, joint stock companies, private universities, charity organisations).

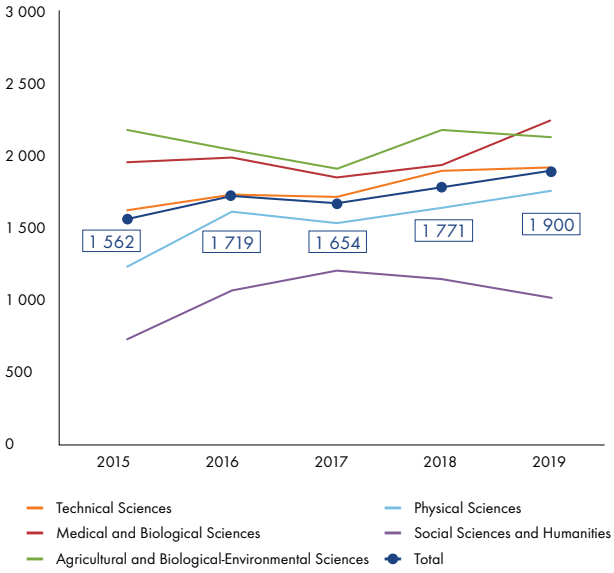
Based on the recommendation of the advisory bodies and under consensus, the Presidium at its meeting decided to finance 68 junior grants. From 68 junior grants in total, the most grants awarded were in the field of Physical Sciences with 23 grants, the second largest group include Medical and Biological Sciences with 14 grants, followed by Agricultural, Biological-Environmental Sciences with 13 grants and Technical Sciences with 10 grants. The lowest number of funded projects was in the field of Social Sciences and Humanities – 9 projects. Out of 68 funded junior grants, the highest number of grants was awarded to public universities and to institutes of the Czech Academy of Sciences.

In the public tender on support of junior grant projects announced in 2018, GACR received 278 project proposals, out of which 15 were not admitted for not meeting the tender conditions and 3 proposals were rejected from the public tender. In comparison with the previous year, the number of received junior grants increased. Out of 260 evaluated junior grants, the highest number of proposals (83) was submitted in the Physical Sciences; followed by Agricultural, Biological-Environmental Sciences with 58 proposals, Medical and Biological Sciences with 52 project proposals, Technical Sciences with 36 proposals, and lowest number of submitted project proposals (31) was in the field of Social Sciences and Humanities. In terms of the distribution of projects by candidates, GACR evaluated 146 project proposals from universities, 106 project proposals from institutes of the Academy of Sciences, 6 other project proposals (from hospitals, libraries, museums, state institutes other than CAS), and 2 project proposals from private universities. No project proposal came from public organisations. In comparison with the previous year, institutes of the Academy of Sciences showed the highest increase in the number of

Graph no. 3: Success rate of junior project with the project launch in 2015–2019



Graph no. 4: Average costs development of junior projects in the first year of project realisation in the years 2006–2019, in thousands CZK



project proposals evaluated.

At its meeting on 26 November 2018, The Presidium decided to finance 103 junior grants, based on the recommendation from the advisory bodies and under consensus. When the funds were distributed, the Presidium decided at its meeting on 21 February 2019 to additionally finance 5 junior grants. The success rate in the public tender of junior grants with the project launch in 2019 thus increased to more than 41.5 % compared to the previous year. This is the highest success rate so far during the monitored period. The development of success rate of junior grants can be seen in Graph no. 3.

The average annual costs for the first year of carrying out the project with the project launch in 2019 is 1,900 thousand CZK; which is an increase of more than 7.3 % compared to the previous year. Graph no. 4 below shows the average costs development of junior grants in the first year of project.

5.3 INTERNATIONAL PROJECTS (BILATERAL)

GACR has supported this type of projects since 2005, when cooperation with the National Research Foundation of Korea (NRF) and with the Deutsche Forschungsgemeinschaft (DFG) has started. In 2008, GACR partnered with the Taiwan organisation National Science Foundation (NSC), presently called the Ministry of Science and Technology (MOST). The duration of projects is 2–3 years. They include all scientific fields of basic research. The topic of a project proposal is determined by the Czech applicant in cooperation with the foreign applicant. The evaluation is conducted independently in both partner organisations. The grant award is conditioned by its approval from both organisations (GACR and the foreign partner organisation). Each national funding agency supports the costs of the approved projects only within its own territory. In the Czech Republic, the call for proposals is announced annually, usually in February. The evaluation process runs until autumn and the results announcement depends on the date of project approval by the foreign partner organisation. All categories of beneficiaries can take part in the public tender if they meet the conditions set by Act on Support of Research, Development and Innovation and the conditions defined in the document on public tender in basic research, experimental development and innovation on the support of grant projects of basic research – international projects, and also conditions for submitting proposals of partner organisations.

In the public tender for international (bilateral) projects

with the project launch in 2018, GACR has received 78 project proposals in total, out of which 51 project proposals were in cooperation with DFG, 20 project proposals with MOST and 7 proposals with NRF. In cooperation with MOST, GACR funds 4 international projects starting in 2018, and in cooperation with Korean organisation NRF, GACR funds 2 international projects starting in 2018. In the public tender for international projects together with the German organisation DFG, 14 projects succeeded based on an agreement of both agencies.

In the public tender for support of international (bilateral) projects with project launch in 2019, GACR has received 72 project proposals in total, out of which 52 project proposals were in cooperation with DFG, 1 project was rejected as no proposals were submitted on the German side, 12 project proposals with MOST and 8 proposals with NRF. In cooperation with MOST, GACR funds 6 international projects launching in 2019, and in cooperation with Korean organisation NRF, GACR funds 3 international projects starting in 2019. In the public tender for international projects with the German organisation DFG, 13 projects in total succeeded based on based on an agreement of both agencies.

5.4 INTERNATIONAL PROJECTS (LA GRANTS)

On 27 May 2013 at GRC Summit in Berlin, GACR signed the Memorandum of Understanding of Scientific Cooperation in basic research with the Austrian organisation Fonds zur Förderung der wissenschaftlichen Forschung (FWF). The aim of the Memorandum is to establish and increase scientific cooperation between researchers and institutions of these two countries and enable the exchange of information and techniques and the use of specialised equipment available in the countries involved. This Czech-Austrian bilateral cooperation constitutes an entirely new group of grant projects where the evaluation process is based on a Lead Agency (LA) principle. The first call for proposals on the LA principle was announced at the end of the year 2013, for projects starting in 2015. The duration of projects is 2–3 years. They include all scientific fields of basic research. The topic of a project proposal is determined by the Czech applicant in cooperation with the foreign applicant. The joint research proposal is submitted to one funding agency only, which then becomes the Lead Agency. The evaluation process is grounded in the international peer review system. The LA updates the partner agency on the evaluation result and prepares a project funding proposal. The evaluation system is based on mutual trust between the partner organisations. Each research funding organisation funds its national part of awarded projects in accordance with the approved budget proposal. A call for proposals is announced annually, usually in autumn and the results are usually published at the end of the year.

In 2017 no joint call for proposals with the project launch in 2018 was announced.

In the joint call for proposals of bilateral Austrian-Czech basic research projects with the project launch on 1 January 2019, 70 project proposals in total were received and 10 projects were recommended by Austrian agency FWF for funding.

5.5 INTERNATIONAL COOPERATION IN SUPPORT OF ERC GRANT APPLICANTS

At the beginning of 2016, the European Research Council (hereinafter the "ERC") stated that some European Union member states (EU) report a significantly lower number of scientists in its competitions, resulting in, among other things, unused scientific research potential. In January 2016, ERC published a document called Fellowship to visit the ERC grantee, inviting national agencies to develop programs of study internships, through which visits of future ERC applicants at workplace of existing ERC projects investigators would be funded. A study internship abroad should enable top Czech scientists to gain insight into the competitive environment of international research. As a result, applicants will be more successful in receiving the prestigious ERC grant.

"Support of ERC grant applicants" is designated for investigators of GACR Junior grants across all scientific disciplines (Technical Sciences; Physical Sciences; Medical and Biological Sciences; Social Sciences and Humanities; Agricultural, Biological-Environmental Sciences), where before submitting an application for "Support of ERC grant applicants", the last evaluation of the project was marked as completed or excellent. The project is carried out at a foreign workplace where the "Principal Investigator" of ERC

grant ("Mentor") solves the ERC project. The investigator of a grant project "Support of ERC grant applicants" is required, following the completion of the project, to produce and submit an application for ERC grant (in programs – ERC Starting Grants; ERC Consolidator Grants or ERC Advanced Grants) with the host organisation in the Czech Republic.

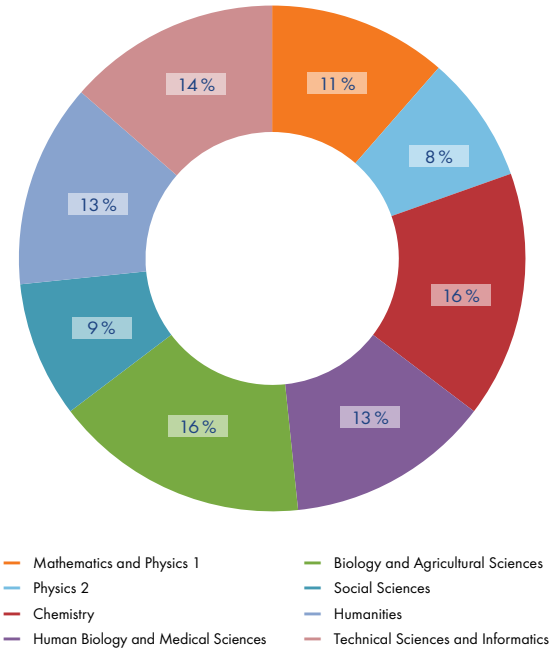
With effect from 1 August 2018, GACR modified the amount to compensate increased living costs from the original 40,000 CZK per month to 80,000 CZK per month.

5.6 GRANT PROJECTS OF EXCELLENCE IN BASIC RESEARCH EXPRO

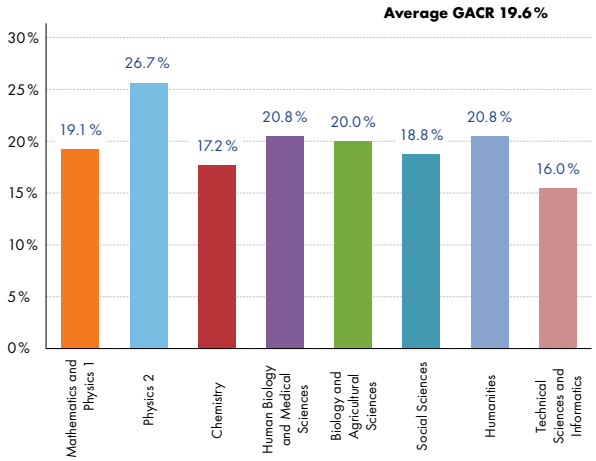
GACR announced the first public tender of this type in 2018. The projects duration is 5 years. Project proposals from all basic research fields can be submitted. The topic of a project proposal is determined by the applicant. Eligible applicants are legal entity based in the Czech Republic, an organisational unit of the State or self-governing territorial unit, or organisational unit of the Ministry of Defence or Ministry of the Interior active in research and experimental development. Only one applicant and one co-applicant at maximum can be indicated in the project proposal. The project is carried out by one person or a team of researchers from one or more institutions. Only a researcher in basic research who achieves excellent scientific results on international scale can be an applicant, i.e. can lead the team of researchers. To submit an application, the applicant has to be an internationally distinguished scientist and an author (co-author) of recent top publications that are proven to be highly accepted by international scientific community. Previous engagement of the applicant as the main investigator of projects provided by national or supranational providers is also evaluated. The evaluation is based on the peer review system (international discipline committee and external foreign reviewers). One of the conditions to fulfil the project successfully is to submit a project proposal in one of the main ERC calls for proposals with a host organisation in the Czech Republic within one-year period at maximum since the project end date. The main criteria of the project proposals evaluation are eligibility of the applicant – particularly technical and institutional background of the facilities, applicant's and co-applicant's expertise, their creative contribution to the scientific field of the proposed project, their existent scientific results, the quality of the proposed grant project in terms of the proposed solution methods, project objectives and outputs, international cooperation, previous cooperation of the applicant and proposer with GACR and the adequacy of financial requirements.

In the first public tender announced in 2018, GACR received 185 EXPRO project proposals, out of which 1 applicant withdrew from the competition. Out of 184 evaluated project proposals, the majority was submitted in the field of Biology and Agricultural Sciences (30 proposals) and Chemistry (29 proposals), as demonstrated in Graph no. 5. In terms of distribution of EXPRO project proposals with the project launch in 2019, GACR evaluated 112 project proposals from public universities, 65 project proposals from institutes of Czech Academy of Sciences, 5 other project proposals (hospitals, libraries, museums, state-funded institutions, associations, galleries, foundations, state organisational units), one project proposal from R&D institutions other than institutes of Czech Academy of Sciences and one project proposal from private universities.

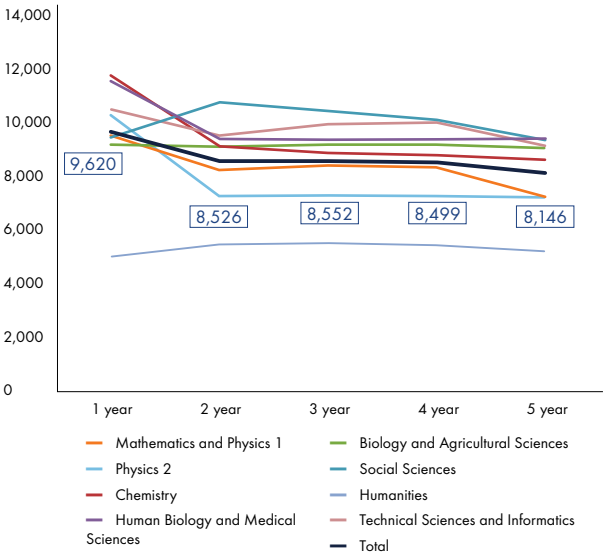
Graph no. 5: Proportion of evaluated EXPRO project proposals with the starting date in 2019 by scientific fields



Graph no. 6: Success rate of EXPRO projects with the starting date in 2019 by scientific fields



Graph no. 7: Average costs of successful EXPRO projects with project launch in 2019 in the respective year, in thousands CZK



Average annual costs of successful EXPRO projects with project launch in 2019 differ each year. The most expensive projects are submitted in the field of Social Sciences and Technical Sciences and Informatics. On the contrary, the lowest average annual costs were reported in the field of Humanities, as shown in the following graph.

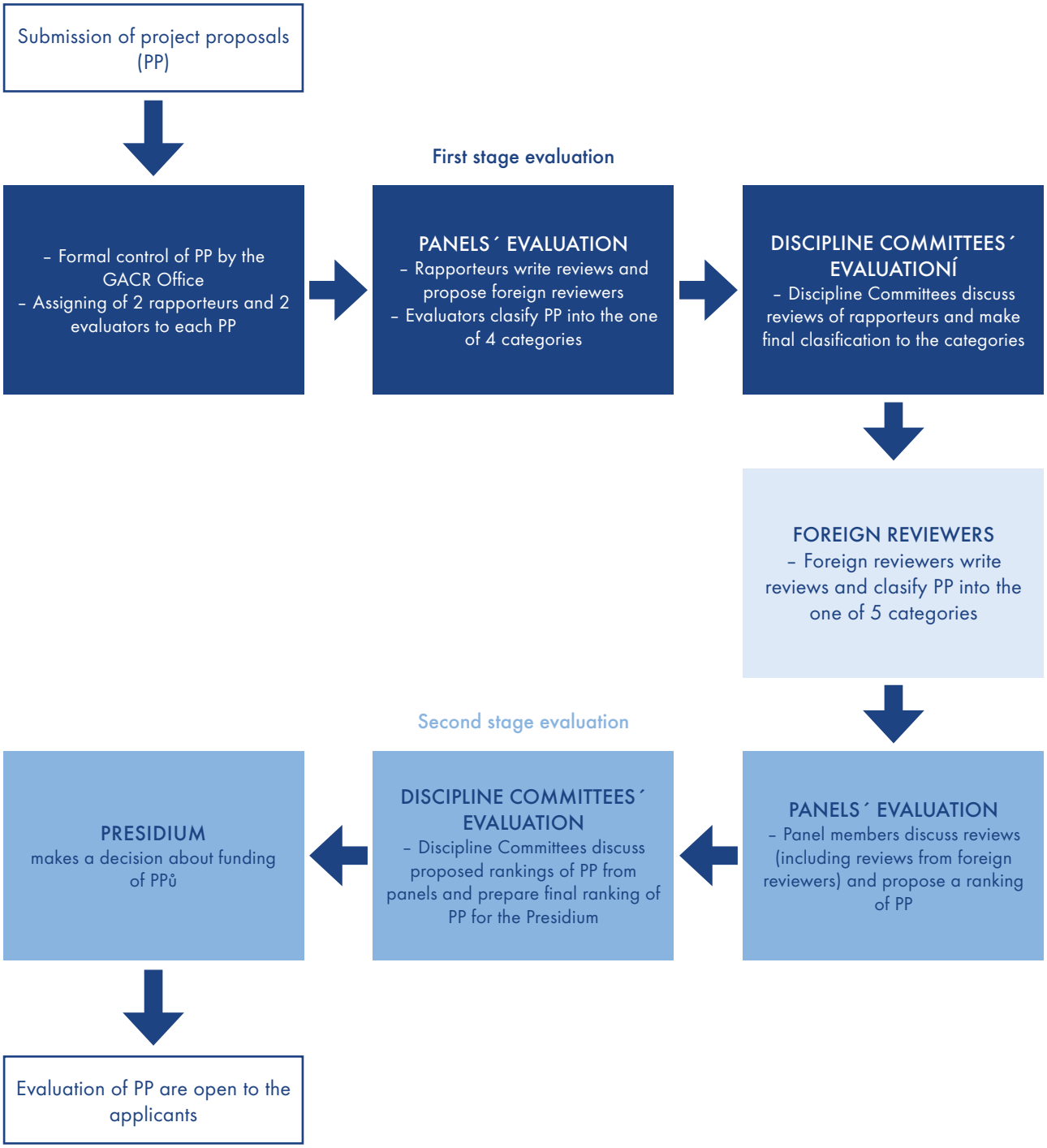
5.7 METHODS OF EVALUATION OF PROJECT PROPOSALS

The process of project proposals evaluation is illustrated in Diagram no. 2. This evaluation process meets the following conditions: the statutory evaluation period is 8 months; three – level evaluation system (Evaluation Panels, Discipline Committees, the Presidium); statutory number of at least two independent assessments for each project proposal; at least one foreign assessment for projects that advanced to the second phase of the evaluation; the participants of the project evaluation are bounded to maintain confidentiality. Proposals for standard, junior and international projects that meet the requirements of the Act on the Support of Research, Experimental Development and Innovation and the conditions set out in the call for public tenders are assigned to Evaluation Panels.

In the first stage of the evaluation, two members of the Evaluation Panel independently assess the grant project proposal and classify the projects into A, B, C or Cn categories, where category A includes the best-rated projects. As for interdisciplinary projects, the report is also written by the rapporteur of the side panel. The other two panel members assess the project's level of expertise by assigning projects to the A, B, C or Cn categories without producing their own reports. Afterwards, a panel meeting is held where at least 30 % of grant project proposals are suspended due to their low level of expertise (compared to other project proposals) and their further evaluation is discontinued. Other project proposals that achieved a better evaluation are submitted for evaluation conducted by foreign opponents. After receiving at least one report from a foreign opponent for each proposal (typically two reports are obtained), the proposals are evaluated in panels in the second stage of evaluation and then ranked according to their level. In this second stage of evaluation, no more than 25 % of the project proposals are included in Category A; no restrictions are stipulated for Categories B and C.

Discipline Committees draw up the order of projects from the individual panels, which is the basis for the Presidium's decision on the results of public tenders and for confirming the amount of the subsidy for the relevant year. The

Scheme no. 2: Evaluation Processs



project evaluation process is described in more detail on the GACR website – www.gacr.cz/en.

As in the previous year, all projects that advanced to the second stage were evaluated by foreign opponents in 2018. Graph no. 8 shows the average number of foreign assessments per project by scientific fields.

5.8 METHODS OF EVALUATION OF EXPRO PROJECT PROPOSALS

The evaluation process of EXPRO project proposals is demonstrated in Diagram no. 3. This evaluation process meets the following conditions: the statutory evaluation period is 8 months; a two-stage evaluation system; the governing body is the Presidium; the Discipline Committees (8) are expert advisory bodies pursuant to Act No. 130/2002 Coll., the Act on Support of Research, Experimental Development and Innovation; for each project proposal, 4 independent assessments from the members of the relevant OK-EX; as for interdisciplinary projects, one of the 4 assessments will be conducted by a member of the other OK-EX; exactly three external assessments for projects advancing to the second assessment phase; participants of the evaluation process are bound by the obligation of confidentiality; neither an external opponent nor a member of OK-EX may be active in any institution in the Czech Republic during the previous five years.

Graph no. 8: Average number of foreign reviews per one evaluated project in the years 2017 and 2018 by disciplines

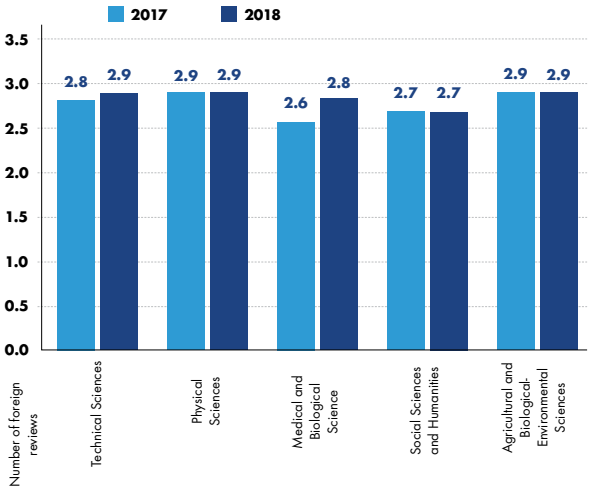
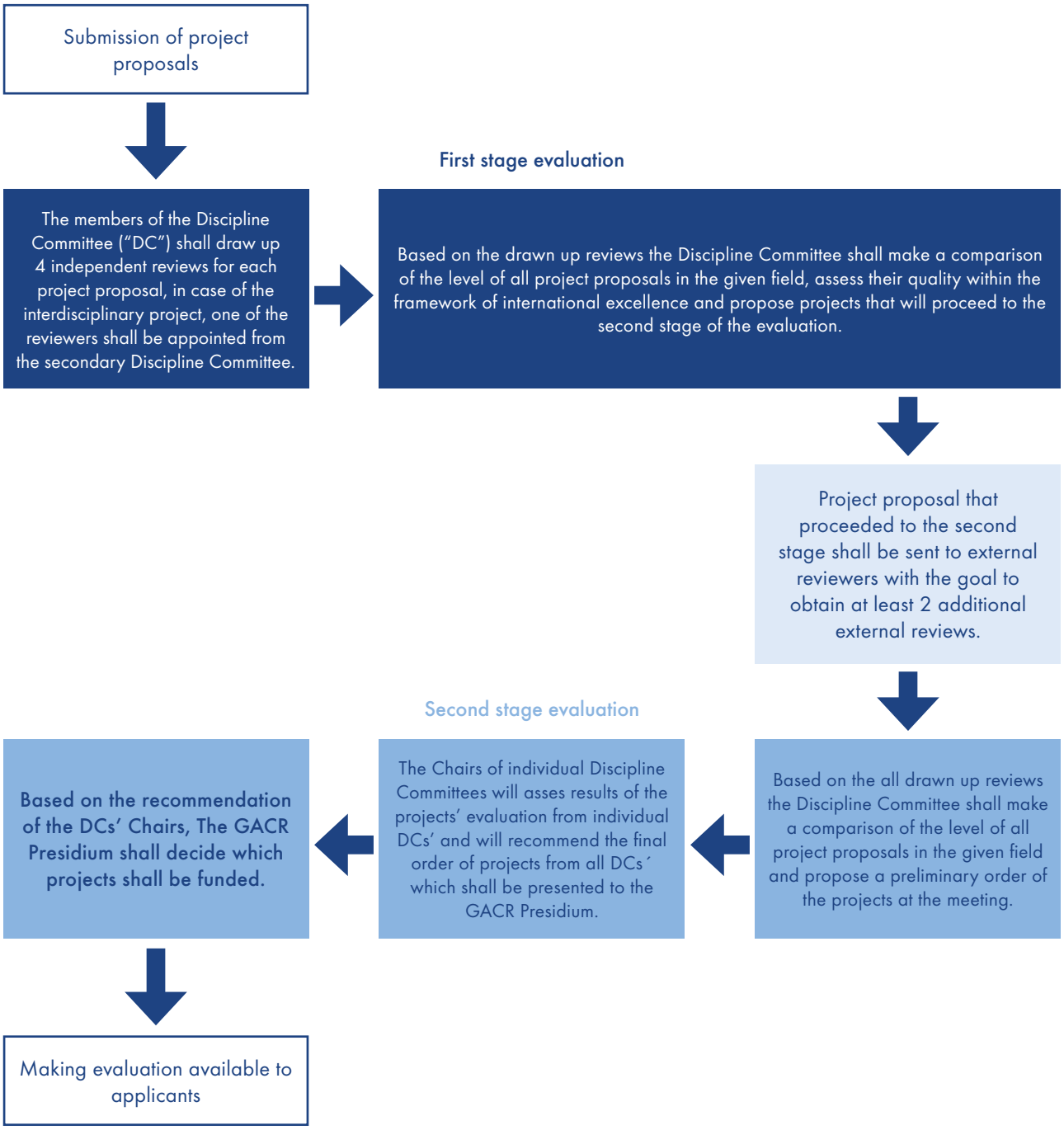


Table no. 2: Number of projects according to final evaluation and respective discipline committee evaluated in March 2018

Discipline Committees	Total number of grant projects	Out of which:				
		Excellent	Accomplished	Accomplished with reservation	Failed	Deferred evaluation
Technical Sciences	134	15	80	6	0	33
Physical Sciences	169	35	117	4	2	11
Medical and Biological Science	129	24	63	3	1	38
Social Sciences and Humanities	221	13	48	15	15	130
Agricultural and Biological-Environmental Sciences	129	25	53	5	2	44
Total	782	112	361	33	20	256

Scheme no. 3: Evaluation process of the EXPRO project proposals



5.9 EVALUATION OF CLOSED GRANT PROJECTS

In March 2018, 782 grant projects in total were evaluated, for which GACR provided targeted aid, and whose investigators submitted final reports as of 31 January 2018.

The Evaluation Panels and then the Discipline Committees assessed the outcomes of the grant projects according to predetermined criteria and proposed their final evaluation to the Presidium. Table no. 2 shows the number of projects according to the overall evaluation and the relevant Discipline Committee, which were evaluated in March 2018. During 2018, another 166 final reports were evaluated.

INTERNATIONAL ACTIVITIES

6

GACR gives a priority to expanding and deepening the possibilities of international cooperation for researchers working in the field of basic research at Czech institutions.

Since 2005, traditional form of bilateral cooperation has been implemented to support joint grant projects with partner organizations from Germany, Taiwan and South Korea. Memoranda of mutual cooperation were specifically concluded with the Deutsche Forschungsgemeinschaft (DFG) – Germany, the Ministry of Science and Technology, the Republic of China (MOST) – Taiwan and the National Research Foundation of Korea (NRF) – Republic of Korea.

In 2018, GA CR concluded memoranda of mutual cooperation with the Russian Foundation for Basic Research (RFBR) – Russia and the São Paulo Research Foundation (FAPESP) – Brazil, State of São Paulo. The first joint calls are foreseen for 2019, with the starting date of carrying out the projects in 2020.

The cooperation based on the Lead Agency principle was successfully established with the Austrian partner agency Fonds zur Förderung der Wissenschaftlichen Forschung (FWF). The memorandum of cooperation was signed in 2013.

In terms of international cooperation development, GACR has become one of the founding organizations of the Central European Science Partnership – CEUS, whose main aim is to contribute to broadening and deepening the possibilities of scientific cooperation in basic research in the Central European region. Other founding members are Austria, Slovenia (ARRS) and Poland (NCN). Switzerland, Croatia and Slovakia contributed as observers. One of the main goals of CEUS is to offer researchers the opportunity to apply for both bilateral and multilateral LA grants. In the initial pilot phase, the cooperation would involve GACR, FWF, NCN and ARRS. Other partner grant agencies could be actively involved later.

In addition, GACR was actively involved in the "Science Europe Task Force on Multilateral Lead Agency (MLA)". Under this initiative, preparatory work is under way to create multilateral LA cooperation, which would currently include the following countries: Switzerland, United Kingdom, France, Slovenia, Germany, Portugal, Luxembourg, Belgium, Sweden, Austria, Croatia, Poland, the Netherlands, Norway, Ireland and the Czech Republic. Researchers from the countries mentioned above would have an opportunity of bilateral and multilateral cooperation based on LA evaluation. Other options for multilateral LA grants may be envisaged in the future.

The GACR's President represented the agency at international meetings of the highest level. In the framework of membership in the Science Europe, GACR participated in the SAC Symposium and the General Assemblies Science Europe, where "open science" and "NWO and SE Initiative on Research Data Management" were discussed, and also in the ongoing preparatory work to create a framework for multilateral cooperation based on the Lead Agency principle. Furthermore, GACR participated in the 9th Science Europe High Level Workshop, the main topic of which was the discussion on "mission oriented research". The President also attended the annual global conference Global Research Council meeting in Moscow, where the main points of discussions were "peer/merit review" and scientific diplomacy. She also attended the annual meeting of the European level meeting of the GRC in Vienna, with a topic of "Expectations of Societal and Economic Impact". The President also spoke at the "High Profile Public Event on the occasion of the Austrian Presidency of the Council of the EU", held in Klosterneuburg.

The GACR President welcomed several foreign delegations at the GACR premises in order to deepen international cooperation. The President also met Mr Jörn Achterberg, Director of the International Relations Section for Central and Eastern Europe at DFG and Deputy Minister of Science and Technology of Taiwan (MOST), Ms Yu-Han Tsou. The Deputy Minister was accompanied by a delegation of representatives from the National Synchrotron Radiation Research Center (NSRRC) and the National Applied Research Laboratories (NARLabs). The main purpose of the working meetings was to build on excellent long-term relations. Possibilities for further development of bilateral cooperation between partner agencies were discussed.

7 REPRESENTATION OF WOMEN AND MEN IN THE INSTITUTIONS OF GACR AND GACR PROJECTS

7.1 THE GOVERNING BODIES OF GACR

The governing bodies of GACR include the Presidium, the Scientific Advisory Board and the Supervisory Board. The Presidium is appointed by the Government of the Czech Republic on the basis of Research, Development and Innovation Council's proposal. Members of the Scientific Advisory Board are appointed and recalled by the Government of the Czech Republic on the basis of Research, Development and Innovation Council's proposal. The Chamber of Deputies of the Czech Republic appoints expert members of the Supervisory Board based on the proposal by legal entities active in R&D. GACR does not interfere in the process of selection of the governing bodies' members and therefore does not influence the representation of women in these bodies.

In May 2018, the Presidium saw changes in membership, where Prof. Ing. Rostislav Drochytka, CSc., MBA replaced Prof. Mgr. Jana Roithová, Ph.D. At the end of 2018, there were also changes in the Scientific Advisory Board of GACR; the original Scientific Advisory Board of GACR consisting of 1 woman and 10 men was replaced by a new Scientific Council, see Table no. 3.

Table no. 3: Proportion of women and men in the GACR bodies

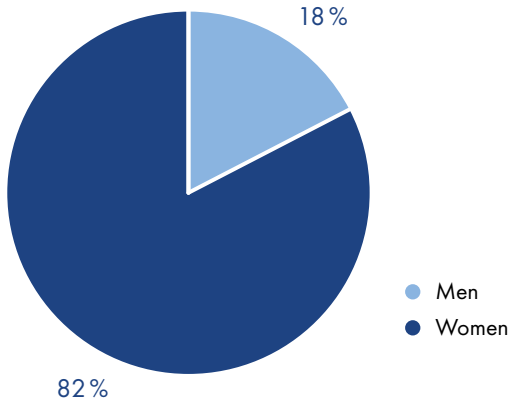
GACR	Total	Number of women	Number of man	Proportion of women
Presidium	5	2	3	40.0%
Scientific Advisory Board	12	1	11	8.3%
Supervisory Board	9	4	5	44.4%

7.2 GACR OFFICE

GACR's employees are selected by the senior management of the Office, on the basis of their professional qualities and experience. GACR is committed to systematic support that leads to achieving gender equality. The Office, for example, allows its own employees and co-workers to adjust working hours, flexible contracts and, thanks to modern technologies and remote connectivity, home office, upon agreement.

In 2018, 60 employees in total worked in the Office, out of which 49 were women and 11 were men.

Graph no. 9: Proportion of women and men employed in the GACR Office



7.3 PANELS

The Evaluation Panels are expert bodies of the Discipline Committees. Legal entities and natural persons engaged in research in the Czech Republic submit nominations for panel members in the call announced by the GACR Presidium. Working groups consisting of a representative of the R&D Council, a member of the GACR Presidium and a representative of the Scientific Advisory Board of GACR then decide on selection of members for individual panels.

In 2018, the panels were replaced in accordance with the Statute and Rules of Procedure of the GACR's Discipline Committees and Evaluation Panels. 9 panel members were replaced, and another 6 panel members joined. The new experts began their first term of office on 1 April 2018. At the end of 2018, 406 experts in total worked in 39 panels, of which 320 men and 86 women. The total representation of women in panels was 21.2 %.

7.4 DISCIPLINE COMMITTEES

GACR's Discipline Committees (hereinafter referred to as "DC") are expert advisory bodies for the evaluation of grant project proposals, their partial and final reports. DCs consist of 10 to 20 members who are experts in the scientific field and who are chairs and vice-chairs of the panels. The chair and vice-chair of the Discipline Committee is appointed by the Presidium for a two-year term of office and they are selected among persons elected by the relevant Discipline Committee by a secret vote of its members.

In 2018, there were 39 chairs and 39 vice-chairs of panels. In the total number of chairs, 6 were women (i.e. 15.4 %) and 33 men (i.e. 84.6 %). 12 women (30.8 %) and 27 men (69.2 %) held the office of vice-chair.

7.5 GACR PROJECTS

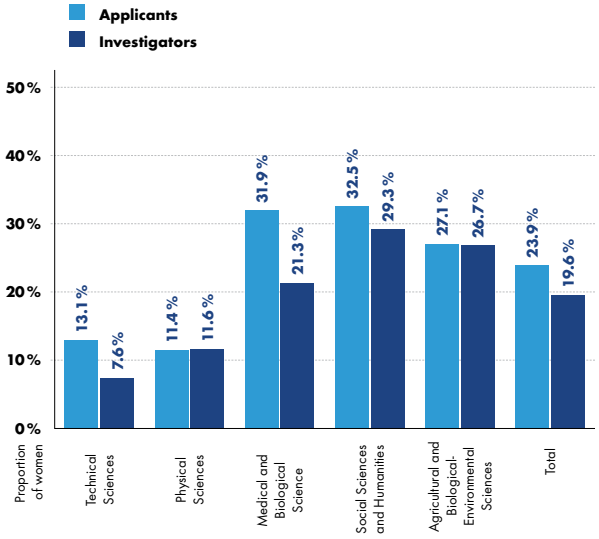
At the beginning of 2015, GACR approached the Office for Personal Data Protection (hereinafter referred to as the "OPDP") with a request for an opinion on the possible demand and further use of gender information of proposers or co-proponents of grant projects directly in the project proposal, with an aim of keeping a record of the information on the representation of men and women in the role of applicants. However, according to the opinion of the OPDP of 21 January 2015, GACR must not require such information and its communication by the applicants or co-applicants can only be stated as voluntary. Therefore, GA CR cannot guarantee the completeness of the data.

7.6 STANDARD PROJECTS

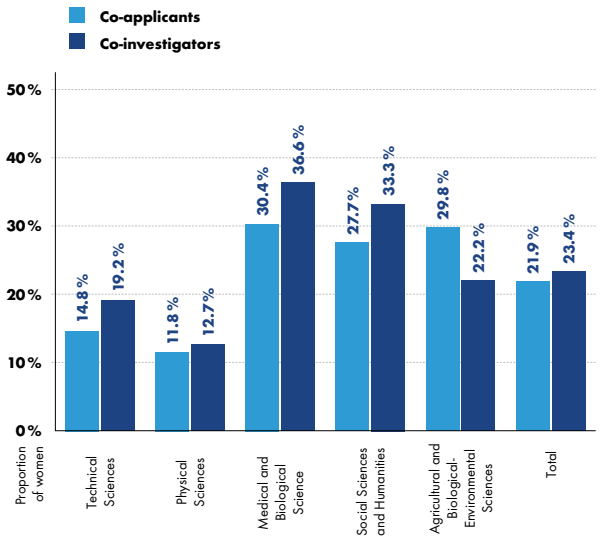
We present information on the representation of women and men among the standard projects' applicants, with the remark that these are only those projects in which it was possible to determine whether they were women or men.

In the public tender for the support of standard projects with expected project launch in 2019, 1 953 project proposals were assessed. It was possible to determine whether it was a man or a woman in 1,784 project proposals. A total of 426 project proposals (i.e. 23.9 %) were submitted by female applicants, out of which 112 projects received funds (i.e. 19.6 %). 136 women (i.e. 21.9 %) figured as co-applicants in the project proposals and 50 (i.e. 23.4 %) in the role of co-investigators. The success rate of women in this tender was 26.3 %, for men 33.7 %.

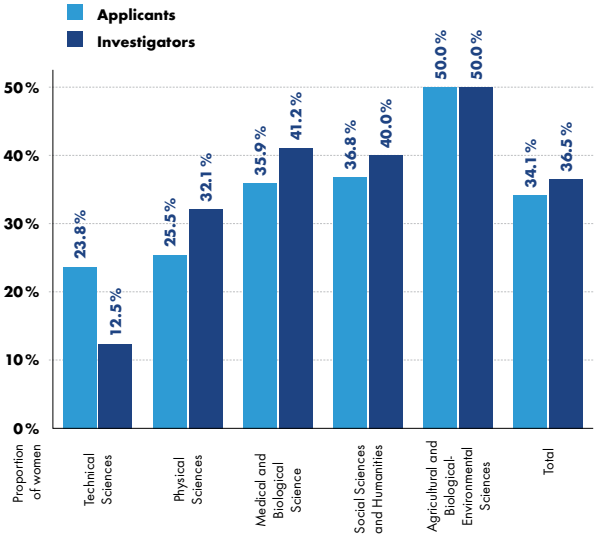
Graph no. 10: Proportion of women as applicants and investigators of standard projects with the project launch in 2019 according to the discipline committees



Graph no. 11: Proportion of women as co-applicants and co-investigators of standard projects with the project launch in 2019 according to the discipline committees



Graph no. 12: Proportion of women as applicants and investigators of junior projects with the project launch in 2019 according to the discipline committees



7.7 JUNIOR PROJECTS

We present information on the representation of women and men among the standard projects' applicants, with the remark that these are only those projects in which it was possible to determine whether they were women or men.

In the public tender for the support of junior projects with expected project launch in 2019, 260 project proposals were assessed. It was possible to determine whether it was a man or a woman in 164 project proposals. A total of 56 project proposals (i.e. 34.1 %) were submitted by female applicants, out of which 27 projects received funds (i.e. 36.5 %). The success rate of women in this tender for junior projects with expected project launch in 2019 was 48.2 %, for men 43.5 %.

GACR'S PUBLIC RELATIONS

8

In 2018, the GACR worked intensively on building relationships with professional and general public, informing them on successful projects and the importance of basic research. In addition to the events attended by the GACR representatives, the agency was dedicated to promoting excellent project results through the media, its own website and the Facebook social network.

During 2018, new website was being prepared, with a more modern and clearer design for users. The final form of the GA ČR web presentation, which was launched in January 2019, was discussed at interim meetings.

Last year, the Director of the GACR Office, Ing. Lada Knetlová presented the GACR rules valid according to the tender documents for the support of basic research grant projects to the grant department employees, grant applicants and scientists; and provided practical information for submitting project proposals via the GRIS online application. Seminars for candidates in the competitions announced in 2018 were held in Prague, Brno and Pilsen – on 8 March, 2018, the seminar took place at the University of Economics in Prague, on 9 March, 2018, at Masaryk University in Brno and on 16 March, 2018, at the University of West Bohemia.

During 2018, the GACR President attended several expert sessions. In Prague in January and in March, the President attended a meeting of the Council of Higher Education Institutions; in December, a meeting of the Czech Rectors Conference and also of the Assembly of the Czech Academy of Sciences. In April, a meeting of the Scientific Council at the Business and Innovation Centre (BIC) was held in Brno; in September, the Seminar to celebrate the 95th birthday of Prof. Martin Černohorský took place.

On 26 and 27 November 2018, the GACR Presidium and the heads of the individual departments of the GACR Office met at the external meeting in Březnice, that was also attended by doc. Ing. Karel Havlíček, Ph.D., MBA, Prof. Josef Michl, Ph.D., chairman of the International Panel of R&D Council, Prof. RNDr. Tomáš Jungwirth, Ph.D., member of the ERC Scientific Council, representatives of the Council of Universities, the Czech Rectors Conference, the Czech Academy of Sciences, the Ministry of Education, Youth and Sports, the TACR, the Discipline Committees of GACR, and representatives of the Scientific Advisory Board and the Supervisory Board of GACR. Guest representatives (e.g. of the Academy and universities) presented some suggestions that could facilitate the work of the GACR in project administration in the future. Furthermore, the current state of science policy at Czech universities was also discussed.

On its website www.gacr.cz and social networks, GACR announces important news, upcoming events and news about basic research. GACR operates a helpdesk for scientists and administrators, which can be reached through the e-mail address info@gacr.cz, via phone number +420 227 088 841 or via online form. Frequently asked questions are processed into the FAQ folder and published on the GA CR website. Last year, the operators of these communication channels received almost 10,000 queries. During the year, GACR cooperated with 4 JAN Public Relations, s.r.o. that deals with publicity in order to further promote and expand public relations. During the year, the agency cooperated with Multimedia Atelier s.r.o. on launching new, more modern and clearer webpage.

8.1 AWARD FOR MOST SUCCESSFUL RESULTS

On 26 September 2018, the GACR President's Award was awarded to the best basic research projects in the Refectory of the Professional House at the Faculty of Mathematics and Physics of Charles University in Prague on Malostranské Square. The 2018 laureates are one female scientist and four male scientists: Alena Volrábová from the National Gallery in Prague was awarded for a monograph of Václav Hollar's artwork published in Czech and English, biologist Petr Kopáček from the Biology Center of the Czech Academy of Sciences, whose research examined the digestive system of ticks and whose results will lead to better anti-tick vaccines in the future; chemist Jakub Švenda from the Faculty of Science of Masaryk University, who managed to develop a chemical synthesis of forskolin, which is currently the shortest published preparation of this structurally complex molecule. Other laureates are Jiří Houška from the University of West Bohemia in

Pilsen – Faculty of Applied Sciences, whose project led to the design of new functional materials, physical chemist Aleš Panáček from Palacký University Olomouc – Faculty of Science studied overcoming bacterial resistance, in vivo and in silico.

The GACR President's Award is awarded annually as an appreciation of outstanding results achieved within projects funded by GACR and focused on basic research. The projects are supported by GACR in accordance with the Act on Support for Research, Experimental Development and Innovation. In addition to press releases for the media, GACR also prepared short video-medallions that report on each of the awarded scientists and their project.

8.2 INFORMATION ON THE GACR PRESIDENT'S AWARD WINNERS' PROJECTS

doc. Ing. Jiří Houška, Ph.D.
University of West Bohemia in Pilsen – Faculty of Applied Sciences
Design of new functional materials, and pathways for their atom-by-atom preparation, using advanced computer modelling

The project's subject is using advanced simulation techniques to design novel functional materials and pathways for their preparation in the form of thin films (micrometres at maximum). Materials should show the most important features simultaneously, such as transparency, hardness, electrical conductivity or photoactivity. The aim was also to design and test in the experimental part of the project such procedures that allow large-area low-temperature preparation of materials under conditions favourable to industry. The theoretical part of the project included calculations of structures and properties of materials and modelling the growth of thin films atom by atom in different conditions. A part of the project was also modelling of discharge plasma, in which thin film formation takes place. Some modelling algorithms were apparently used for the first time. The results of the project were published in 8 articles in key subject journals.

Mgr. Jakub Švenda, Ph.D.
Masaryk University – Faculty of Science
Access to unique modulators of adenylyl cyclase

The aim of the project was the preparation of forskolin and its synthetic analogues. Forskolin is a natural substance with significant biological activity – it is an organic molecule that binds to the enzyme adenylyl cyclase. Adenylyl cyclases are an essential part of human biology such as embryogenesis, cardiac activity or aging processes. The project succeeded in developing the chemical synthesis of forskolin, which is currently the shortest published preparation of this structurally complex

molecule. This strategy made it possible to prepare several unique forskolin analogues which exhibit significantly different selectivity in the cells to different forms of adenylyl cyclase. Some of the results of this chemical-biological research were published in the journal Angewandte Chemistry, and scientists are working to complete the synthesis of second generation forskolin analogues. In close cooperation with biologists, they have the ambition to make the most of the biomedical potential of this natural substance.

doc. RNDr. Aleš Panáček, Ph.D.
Palacký University in Olomouc – Faculty of Science
In vitro, in vivo and in silico study on overcoming bacterial resistance via combination of antibiotics with silver nanoparticles and silver compounds

The research team investigated one of the biggest current problems in healthcare: overcoming the resistance of bacteria to antibiotics with the use of silver. Scientists added nano-silver to ineffective antibiotics and discovered that it is possible to restore their therapeutic effect at a very low concentration of silver that is harmless to human cells. Silver nanoparticles, however, lose their antibacterial effect if they aggregate into larger units – aggregates. This weakness was also revealed by bacteria in the development of resistance to nano-silver. By producing bacterial flagellins, they cluster silver nanoparticles, losing biological activity. However, the resistance can be overcome by adding natural substances, such as pomegranate bark extract, which block the production of flagellin. The description of the mechanism of formation and overcoming of the resistance of bacteria to nano-silver is also the greatest benefit of the project, which was published in the prestigious journal Nature Nanotechnology.

PhDr. Alena Volrábová, Ph.D.
National Gallery in Prague
Václav Hollar: Drawing

The aim of the project was to discover, scientifically elaborate and publish all drawings of one of the most important graphic artists and cartoonists of the 17th century – Václav Hollar. Most of the artist's drawings are placed in collections in Europe and North America. All of them had to be examined, expertly assessed, documented in detail and published in chronological order. In addition, Alena Volrábová discovered 53 other drawings that she assigned to Hollar's work. On the other hand, some drawings were excluded from the artist's oeuvre based on a research. The result of the project is a monograph – a catalogue raisonné of all Václav Hollar's known drawings in Czech and English versions, which also includes the artist's biography based on archival surveys and other specialized articles. The book is now the basic source for all who will pursue the work of Václav Hollar. An article in the world's most prestigious Master Drawings magazine has also been published.

RNDr. Petr Kopáček, CSc.
The Biology Centre of the Czech Academy of Sciences – Institute of Parasitology
The role of hemoglobin in tick metabolism and transmission of tick-borne pathogens

The project examined the physiology of the digestive system of ticks. Scientists discovered the mechanisms by which ticks cope with an enormous excess of potentially toxic heme and iron from host blood. During the evolution of its parasitic way of life, ticks have lost the ability to synthesize heme and at the same time are unable to obtain iron by heme degradation, which makes them fundamentally different from most organisms on Earth. The researchers used a unique method of artificial membrane suction of ticks on bovine blood and hemoglobin-free serum. Basic research on sucking and digestion of host blood in the future should lead to precisely targeted anti-tick agents and vaccines to combat ticks and tick-borne diseases (e.g. Lyme disease). The scientific community greatly appreciates the work of Petr Kopáček's team on a project whose results have been published in 19 world periodicals.

8.3 INFORMATION ON SELECTED OUTSTANDING PROJECTS

The project results can be used in the fields of electronics or tissue engineering

Ing. Alena Řezníčková Ph.D.
Department of Solid State Engineering

Most of us perhaps know that we divide burns by intensity into four basic groups. Even though extensive burns can be fatal, modern ways of treatment greatly improved the treatment results. Scientists are currently working on full replacement of the burnt skin.

One of them is Ing. Alena Řezníčková Ph.D., who has been dealing with this task for three years as part of the project "Physically deposited and anchored metal nanostructures on solid substrate". The main objective of the project was to modify the surface of the sample, polymer or glass, using physical and chemical methods to improve its properties for medical and electronics applications. The polymeric substrate itself is inert and therefore not suitable for other applications.

The Czech Republic is one of the best in the world in the research of space asteroids

doc. Mgr. Josef Ďurech, Ph.D.
Astronomical Institute of MFF Charles University

There are hundreds of thousands of known asteroids in the Solar System. We have detailed information on only a few thousand of them so far. The Czech Republic is a world power in creating models of these cosmic bodies. The GACR project "A big picture of the main asteroid belt – physical properties of asteroids derived by inversion of optical and infrared photometry" focused on the analysis of data on asteroids. The team led by doc. Mgr. Josef Ďurech, Ph.D., achieved to describe more than a thousand new cosmic bodies.

In the area of asteroids modelling, the Czech Republic is the most productive in the world and these models are used by scientists around the world for further research and measurement. The results also serve for further basic research, for example to derive and obtain further information about the asteroid, such as its thermophysical parameters etc.

The HelD protein is important for correct gene expression

Mgr. Libor Krásný, Ph.D.
Institute of Microbiology of the Czech Academy of Sciences

The project "Deciphering the Cellular Role of HelD, a Helicase-like Protein Associated with Bacterial RNA Polymerase" was a follow-up to the previous project, which focused on the study of several proteins that interact with bacterial RNA polymerase (RNAP) – an enzyme that is crucial for transcription of DNA into RNA. In this previous project, HelD was discovered as a new RNAP interaction partner, and given the central role of RNAP for gene expression that determines a cell's ability to adapt to environmental changes or pathogens to survive in the host, it was very attractive to further study this protein and to obtain new information on functioning of the transcriptional apparatus.

The primary aim of the project was to characterize HelD protein structurally and to determine its effect on RNAP and transcription, and subsequently to identify conditions under which it is important for the cell – for example, various stress situations were tested.

Compared to the situation in Western Europe and the USA, Czech suburbs are not at risk of segregation

doc. RNDr. Martin Ouředníček, Ph.D.
Faculty of Science of the Charles University

During 2014–2016, the team led by doc. Martin Ouředníček, the Head of the Research Team of the Urban and Regional Laboratory and Vice-Dean of the Faculty of Science of the Charles University, carried out the GACR project "Dynamics of social environment and spatial mobility in metropolitan regions of the Czech Republic". The main objective of the project was to examine the dynamics of the social environment, which is influenced by various types of spatial mobility, such as migration or commuting.

The research focused on processes taking place in outer parts of post-socialist cities: residential suburbanization and transformation of housing estates. These processes differ significantly from developments in Western Europe and the United States, and the Czech Republic is quite unique in many areas.

The relationship between fish and bivalve molluscs is an excellent model system for studying survival and the risk of coexistence in a rapidly changing environment

doc. RNDr. Martin Reichard, Ph.D.
Institute of Vertebrate Biology of the Czech Academy of Sciences

The project dealt with various aspects of inter-population variability in the success rate of biological invasions and their impact on native species. Experimental and field studies in the areas of invasion and original occurrence were combined. Population genetic studies of both native and invasive species were also an important part of the project. The project was covered by the topic of the relationship between bitterling and host bivalve molluscs.

The most important discovery was the confirmation of the fundamental impact of inter-popular differences in the success of invasions, their impact, but also in the degree of vulnerability of native organisms. This finding may help to explain the known fact that some species may enter non-indigenous areas in the long term without any visible impact on native organisms. Suddenly, however, there is a dramatic change, after which this non-native species has significant negative impacts.

9 LIST OF CHAIRS AND VICE-CHAIRS OF THE EVALUATION PANELS AND THE DISCIPLINE COMMITTEES

9.1 PANELS

CHAIRS AND VICE-CHAIRS OF THE EVALUATION PANELS:
TECHNICAL SCIENCES

P101 Mechanical Engineering
Prof. Ing. Ivan Křupka, Ph.D. (chair)
– Brno University of Technology, Faculty of Mechanical Engineering
Prof. Dr. Ing. Tomáš Vampola (vice-chair)
– Czech Technical University in Prague, Faculty of Mechanical Engineering

P102 Electrical Engineering and Electronic Engineering
Ing. Vladislav Krzyžánek, Ph.D. (chair)
– Institute of Scientific Instruments, the Czech Academy of Sciences
Prof. Mgr. Jaroslav Řeháček, Ph.D. (vice-chair)
– Palacký University Olomouc

P103 Cybernetics and Information Processing
doc. Mgr. Martin Nečaský, Ph.D. (chair)
– Charles University – Faculty of Mathematics and Physics
doc. Mgr. Zdeněk Valenta, M.Sc., MS, Ph.D. (vice-chair)
– Institute of Computer Science, the Czech Academy of Sciences

P104 Construction Materials, Architecture and Building Science
doc. Ing. Vlastimil Bílek, Ph.D. (chair)
– Technical University of Ostrava, Faculty of Civil Engineering
Prof. Ing. arch. Ing. Zuzana Pešková, Ph.D. (vice-chair)
– Czech Technical University in Prague, Faculty of Civil Engineering

P105 Structural Mechanics and Construction, Fluid Mechanics and Geotechnics
Prof. Ing. Zdeněk Kala, Ph.D. (chair)
– Brno University of Technology, Faculty of Civil Engineering
Ing. Jan Boháč, CSc. (vice-chair)
– Charles University, Faculty of Science

P106 Technical Chemistry
Prof. Ing. Jiří Čejka, DrSc. (chair)
– Charles University, Faculty of Science
Prof. Ing. Michal Přibyl, Ph.D. (vice-chair)
– University of Chemistry and Technology Prague, Faculty of Chemical Engineering

P107 Metallic Materials – Preparation and Properties
doc. Ing. Pavel Novák, Ph.D. (chair)
– University of Chemistry and Technology Prague, Faculty of Chemical Technology
Prof. RNDr. Miloš Janeček, CSc. (vice-chair)
– Charles University, Faculty of Mathematics and Physics

P108 Materials Sciences and Engineering
Mgr. Otakar Frank, Ph.D. (chair)
– J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences
Prof. Ing. Jiří Burša, Ph.D. (vice-chair)
– Brno University of Technology, Faculty of Mechanical Engineering

CHAIRS AND VICE-CHAIRS OF THE EVALUATION PANELS:
PHYSICAL SCIENCES

P201 Mathematics
Prof. RNDr. Jan Slovák, DrSc. (chair)
– Masaryk University, Faculty of Science
Prof. RNDr. Jaromír Antoch, CSc. (vice-chair)
– Charles University, Faculty of Mathematics and Physics

P202 Computer Science
Prof. RNDr. Roman Barták, Ph.D. (chair)
– Charles University, Faculty of Mathematics and Physics
doc. Ing. Hana Tomášková, Ph.D. (vice-chair)
– Univerzity of Hradec Králové, Faculty of Informatics and Management

P203 Nuclear and Particle Physics, Plasma Physics and Low Temperature Physics
Prof. Ing. Jiří Limpouch, CSc. (chair)
– Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering
RNDr. Jana Bielčíková, Ph.D. (vice-chair)
– Nuclear Physics Institute of the Czech Academy of Sciences

P204 Condensed Matter and Material Physics
Ing. Oldřich Schneeweiss, DrSc. (chair)
– Palacký University Olomouc, Faculty of Science
Ing. Dominik Legut, Ph.D. (vice-chair)
– Technical University of Ostrava, IT4Innovations-National Supercomputing Center

P205 Biophysics, Macromolecular Physics and Optics
doc. Ing. Ivan Richter, Dr. (chair)
– Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering
Prof. RNDr. Viktor Brabec, DrSc. (vice-chair)
– Institute of Biophysics of the Czech Academy of Sciences

P206 Analytical Chemistry – Chemical and Structural Analysis of Atomic, Molecular and (Bio)Molecular Systems
Prof. RNDr. Patrik Španěl, Dr. rer. nat. (chair)
– J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences
Prof. RNDr. Karel Lemr, Ph.D. (vice-chair)
– Palacký University Olomouc, Faculty of Science

P207 Chemical and Biochemical Transformations
Prof. Ing. Aleš Růžička, Ph.D. (chair)
– University of Pardubice, Faculty of Chemical Technology
Ing. Zdeňka Sedláková, CSc. (vice-chair)
– Institute of Macromolecular Chemistry, Czech Academy of Sciences

P208 Chemical Physics and Physical Chemistry
doc. Ing. Pavel Čičmanec, Ph.D. (chair)
– University of Pardubice, Faculty of Chemical Technology
Prof. RNDr. Petr Slavíček, Ph.D. (vice-chair)
– University of Chemistry and Technology Prague, Faculty of Chemical Technology

P209 Astronomy and Astrophysics, Atmospheric Physics, Meteorology, Climatology and Hydrology, Physical Geography)
doc. RNDr. Tomáš Halenka, CSc. (chair)
– Charles University, Faculty of Mathematics and Physics
RNDr. Bruno Jungwiert, Ph.D. (vice-chair)
– Astronomical Institute of the Czech Academy of Sciences

P210 Geophysics, Geochemistry, Geology and Mineralogy, Hydrogeology
Prof. RNDr. Martin Mihaljevič, CSc. (chair)
– Charles University, Faculty of Science
doc. RNDr. František Gallovič, Ph.D. (vice-chair)
– Charles University, Faculty of Mathematics and Physics

CHAIRS AND VICE-CHAIRS OF THE EVALUATION PANELS:
MEDICAL AND BIOLOGICAL SCIENCES

P301 Genetics, Experimental Oncology, Medical Biochemistry, Metabolism and Nutrition
Prof. Ing. Miroslav Strnad, CSc. DSc. (chair)
– Institute of Experimental Botany of the Czech Academy of Science
Prof. RNDr. Marie Stiborová, DrSc. (vice-chair)
– Charles University, Faculty of Science

P302 Morphological Disciplines, Microbiology, Immunology, Epidemiology and Hygiene
RNDr. Šárka Němečková, DrSc. (chair)
– Institute of Hematology and Blood Transfusion
doc. Ing. Jaroslav Hrabák, Ph.D. (vice-chair)
– Charles University, Faculty of Medicine in Pilsen

P303 Physiological Disciplines, Pharmacology, Neurosciences and Toxicology
Prof. RNDr. Pavel Anzenbacher, DrSc. (chair)
– Palacký University Olomouc, Faculty of Medicine and Dentistry
MUDr. Jiří Paleček, CSc. (vice-chair)
– Institute of Physiology of the Czech Academy of Sciences

P304 Clinical and Preclinical Research, Experimental Medicine
Prof. MUDr. Bohuslav Melichar, Ph.D. (chair)
– Palacký University Olomouc, Faculty of Medicine and Dentistry

Prof. MUDr. Manuela Vaněčková, Ph.D. (vice-chair)
– Charles University, First Faculty of Medicine

P305 Molecular, Cellular, Structural and Developmental Biology and Bioinformatics
Prof. RNDr. Marek Jindra, CSc. (chair)
– Biology Centre of the Czech Academy of Sciences
RNDr. Petr Man, Ph.D. (vice-chair)
– The Institute of Microbiology of the Czech Academy of Sciences

CHAIRS AND VICE-CHAIRS OF THE EVALUATION PANELS:

SOCIAL SCIENCES AND HUMANITIES

P401 Philosophy, Theology, Religious Studies
doc. PhDr. Luboš Bělka, CSc. (chair)
– Masaryk University, Faculty of Arts
Prof. PhDr. Zdeňka Kalnická, CSc. (vice-chair)
– University of Ostrava, Faculty of Arts

P402 Economic Sciences, Macroeconomics, Microeconomics, Econometrics except Financial Econometrics, Quantitative Methods in Economics except Operational Research
doc. Ing. Jakub Fischer, Ph.D. (chair)
– University of Economics, Prague, Faculty of Informatics and Statistics
Mgr. Marek Kapička, Ph.D. (vice-chair)
– The Economics Institute of the Czech Academy of Sciences

P403 Business and Management Science, Financial Econometrics and Operational Research
doc. Ing. Tomáš Tichý, Ph.D. (chair)
– Technical University of Ostrava, Faculty of Economics
doc. Ing. Klára Antlová, Ph.D. (vice-chair)
– Technical University of Liberec, Faculty of Economics

P404 Sociology, Demography, Social Geography and Media Studies
PhDr. Václav Štětka, Ph.D. (chair)
– Charles University, Faculty of Social Sciences
Prof. PhDr. Dana Hamplová, Ph.D. (vice-chair)
– Institute of Sociology of the Czech Academy of Sciences

P405 Archeology and Pre-Modern History until 1780
Mgr. Klára Šabatová, Ph.D. (chair)
– Masaryk University, Faculty of Arts
PhDr. Lucie Storchová, Ph.D. (vice-chair)
– Charles University, Faculty of Humanities

P406 Linguistics and Literature
doc. Mgr. Irena Radová, Ph.D. (chair)
– Masaryk University, Faculty of Arts
Mgr. Václava Kettnerová, Ph.D. (vice-chair)
– Charles University, Faculty of Mathematics and Physics

P407 Psychology, Pedagogy
doc. Mgr. Radovan Šikl, Ph.D. (chair)
– Institute of Psychology of the Czech Academy of Sciences
doc. Mgr. Klára Šeďová, Ph.D. (vice-chair)
– Masaryk University, Faculty of Arts

P408 Juridical Science and Political Science
doc. Ing. Mgr. Štěpánka Zemanová, Ph.D. (chair)
– University of Economics, Prague, Faculty of International Relations
doc. JUDr. PhDr. Robert Zbíral, Ph.D. (vice-chair)
– Palacký University Olomouc, Faculty of Law

P409 Art Sciences
doc. PhDr. Jana Zapletalová, Ph.D. (chair)
– Palacký University Olomouc, Faculty of Arts
Mgr. Libor Jůn, Ph.D. (vice-chair)
– Film and TV School, Academy of Performing Arts

P410 Modern History (since 1780) and Ethnology
PhDr. Jiří Woitsch, Ph.D. (chair)
– The Institute of Ethnology of the Czech Academy of Sciences
doc. Dr. Phil. Rudolf Kučera, Ph.D. (vice-chair)
– Masaryk Institutes and Archives of the Czech Academy of Sciences

CHAIRS AND VICE-CHAIRS OF THE EVALUATION PANELS:

AGRICULTURAL AND BIOLOGICAL-ENVIRONMENTAL SCIENCES

P501 Plant Physiology and Genetics, Plant Medicine

Prof. RNDr. Jiří Fajkus, CSc. (chair)
– Masaryk University in Brno, Faculty of Science
doc. RNDr. Vladimír Špunda, CSc. (vice-chair)
– University of Ostrava, Faculty of Science

P502 Animal Physiology and Genetics, Veterinary Medicine

Prof. MVDr. Jiří Pikula, Ph.D. (chair)
– University of Veterinary and Pharmaceutical Sciences Brno, Faculty of Veterinary Hygiene and Ecology
Prof. Ing. Otomar Linhart, DrSc. (vice-chair)
– University of South Bohemia in České Budějovice, Faculty of Fisheries and Protection of Waters

P503 Food technology, Ecotoxicology and Environmental Chemistry

RNDr. Miroslav Machala, CSc. (chair)
– Veterinary Research Institute
doc. Mgr. Roman Grabic, Ph.D. (vice-chair)
– University of South Bohemia in České Budějovice, Faculty of Fisheries and Protection of Waters

P504 Landscape Management, Forestry and Soil Biology, Ecosystem Ecology

Ing. Lenka Pavlů, Ph.D. (chair)
– Czech University of Life Sciences Prague, Faculty of Agrobiology, Food and Natural Resources
Ing. Jan Kopecký, Ph.D. (vice-chair)
– Crop Research Institute

P505 Animal and Plant Ecology

Prof. Ing. Zdeněk Žalud, Ph.D. (chair)
– Global Change Research Institute of the Czech Academy of Sciences
RNDr. Petr Kotlík, Ph.D. (vice-chair)
– Institute of Animal Physiology and Genetics of the Czech Academy of Sciences

P506 Botany and Zoology

Prof. Ing. Pavel Kozák, Ph.D. (chair)
– University of South Bohemia in České Budějovice, Faculty of Fisheries and Protection of Waters
Prof. Mgr. Bohumil Mandák, Ph.D. (vice-chair)
– Czech University of Life Sciences Prague, Faculty of Environmental Sciences

9.2 CHAIRS AND VICE-CHAIRS OF THE DISCIPLINE COMMITTEES

DC 1 – Technical Sciences

doc. Ing. Pavel Novák, Ph.D. (chair)
– University of Chemistry and Technology Prague, Faculty of Chemical Technology
Prof. Ing. arch. Ing. Zuzana Pešková, Ph.D. (vice-chair)
– Czech Technical University on Prague, Faculty of Civil Engineering

DC 2 – Physical Sciences

Prof. RNDr. Patrik Španěl, Dr. rer. nat. (chair)
– J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences
Prof. RNDr. Jan Slovák, DrSc. (vice-chair)
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DC 4 – Social Sciences and Humanities

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– The Institute of Ethnology of the Czech Academy of Sciences
doc. PhDr. Dana Hamplová, Ph.D. (vice-chair)
– Institute of Sociology of the Czech Academy of Sciences

DC 5 – Agricultural and Biological-Environmental Sciences

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