CZECH SCIENCE FOUNDATION 2019 ANNUAL REPORT

...from curiosity to discovery

GAČR
CZECH SCIENCE FOUNDATION

CONTENTS

1 FOREWORD FROM THE PRESIDENT

Based on the feedback received from the broad scientific community, the Czech Science Foundation (hereinafter "GACR") can boast of being perceived as the most stable and credible agency supporting basic scientific research in the Czech Republic. Over the past few years, the Presidium and the Office of GACR have worked hard to further simplify the administrative agendas in the process of grant applications and evaluations. We have also introduced the option to substitute the Beneficiary, which is something the scientific community has been proposing for years. EXPRO and JUNIOR STAR projects will now be evaluated by international panels only, which has reduced and will continue to reduce the problem of insufficient capacity of the Czech scientific community and any possible conflict of interest.

In a sense, GACR is unique as far as the overhead costs are concerned (i.e. the operating costs of the Office and the entire evaluation process). If you compare the total grant funds distributed by GACR to the budget for operations and evaluations, you get 2.5%. In other words, the balance (97.5%) goes directly into the research projects the researchers involved.

The year 2019 was preceded by demanding preparations of new grant project groups for junior researchers, and by preparations to expand the existing group of international projects based on the Lead Agency principle; those projects had already received government approval as early as October 2019. JUNIOR STAR projects, which will replace junior projects in the future, are going to focus more on the excellence of the young researchers. These five-year projects will undergo evaluations by the same international subject-matter committees as EXPRO excellence projects. The evaluations will place great emphasis on the applicant's potential to create a new working group to deal with a brand new subject. This group of grant projects was approved in late 2019 by the Government of the Czech Republic at its December session.

Another group of grant projects we are proposing – the Postdoct Individual Fellowship – facilitates the researcher's mobility, which we can support by covering the costs of a young scientist staying and working with an institution abroad or, vice versa, the costs of a scientist abroad staying and working at an institution in the Czech Republic. The amendment to the original proposal took some time – after discussions at the Research, Development and Innovation Council (hereinafter the "R&D Council") – and the proposal was not passed by the government until early 2020. Besides, GACR had no budget allocated to such projects. A public tender to support this group of grant projects is likely to be announced in 2022.

The President of GACR and some members of the Presidium took part in all four meetings of GACR'S newly appointed international Scientific Advisory Board (SAB) in 2019 to discuss the concept of newly introduced grant project groups, the project evaluation processes, composition of the panels, and further important issues.

GACR representatives were also involved in a number of international activities within Science Europe (SE), Global Research Council (GRC), and a number of events, visits, seminars, and discussions both domestically and abroad.

All meetings presented the opportunity to discuss future cooperation informally with the representatives of European and particularly Central European agencies.

A new cooperation platform titled the "Central European Science Partnership" (CEUS) had been created in 2018 already. Founding members include Austria, Poland, Slovenia, and the Czech Republic. A joint memorandum of all the countries participating in CEUS was signed on the occasion of the ceremony held by Start und Wittgenstein Festakt in Vienna in 2019. The announcement of the first tenders organised jointly is expected in 2020.

Meetings and discussions were held in 2019 with the Swiss National Science Foundation (SNSF), culminating in the signature of a Lead Agency Cooperation Agreement in Brussels in November 2019. The first joint tender will be announced in 2020 as well. GACR also had preliminary meetings with the National Science Foundation (NSF) of the United States in September 2019. NSF would be interested to cooperate in certain selected areas such as nanotechnologies, artificial intelligence, particle physics, and certain areas of chemistry.

The Presidium and the department heads from the Office had an off-site meeting at the Štiřín castle on 21–22 November, 2019. The off-site was attended by science leaders including doc. Ing. Karel Havlíček, members of the Czech University Council, Czech Rectors Conference, the Chair of the Czech Academy of Sciences, European Research Council, Technology Agency of the Czech Republic, discipline committees of GACR, members of the Supervisory Board and the Scientific Advisory Board of GACR. Members of the Czech Academy of Sciences, Universities and the R&D Council discussed various suggestions to simplify the work of GACR project investigators in the future. The Presidium incorporated some of these suggestions in tenders in 2019 and 2020, others require a broader discussion among experts or even an amendment to the R&D Funding Act.

Several meetings took place in 2019 between GACR bodies and the presidium of the R&D Council and the President of GACR held discussions with members of the international advisory body of the R&D Council on 30 May and 24 October 2019. The international board of the R&D Council gave certain suggestions to improve GACR's activities, and at the same time said GACR was doing very well in comparison to other providers of targeted funding in the Czech Republic.

No substantial changes were implemented in the evaluation of proposed projects in 2019 in comparison to previous years. The success rate of standard and junior projects was lower than in 2018 due to a lower budget. The success rate was approx. 25% for standard projects, and approx. 31% for junior projects. The success rate for the prestigious excellence projects in basic research (EXPRO) was approx. 17%. The scientific community showed lower interest in these prestigious projects than it did in the previous year. We plan to announce tenders for EXPRO projects in 2020 but moving forward, future EXPRO tenders will be announced in odd-numbered calendar years only.

The President's Awards were handed over to the best projects completed in 2018 in a traditional ceremony held on 1 October 2019. The award ceremony was held in the Professed House of the Faculty of Mathematics and Physics of the Charles University in Malá Strana and attended by a number of public leaders, Vice-Chair of the R&D Council, doc. Ing. Karel Havlíček, the Chair of the Czech Academy of Sciences, prof. Eva Zažímalová, members of the Czech Universities Association, Czech Rectors Conference, members of the European Research Council, Technology Agency of the Czech Republic, discipline committees of GACR, members of the members of the Supervisory Board and the Scientific Advisory Board of GACR. The President of GACR presented her view of how GACR fulfilled its role of the leading provider of targeted funding for basic research, summarised the developments of the last year, and presented GACR's plans for the upcoming year.

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

2 KEY FACTS

The Czech Science Foundation is an independent public organisation supporting basic research in all scientific disciplines using public funds only. Since its establishment in 1993, GACR provides financial support for both seasoned scientists 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 provides funds for international research projects.

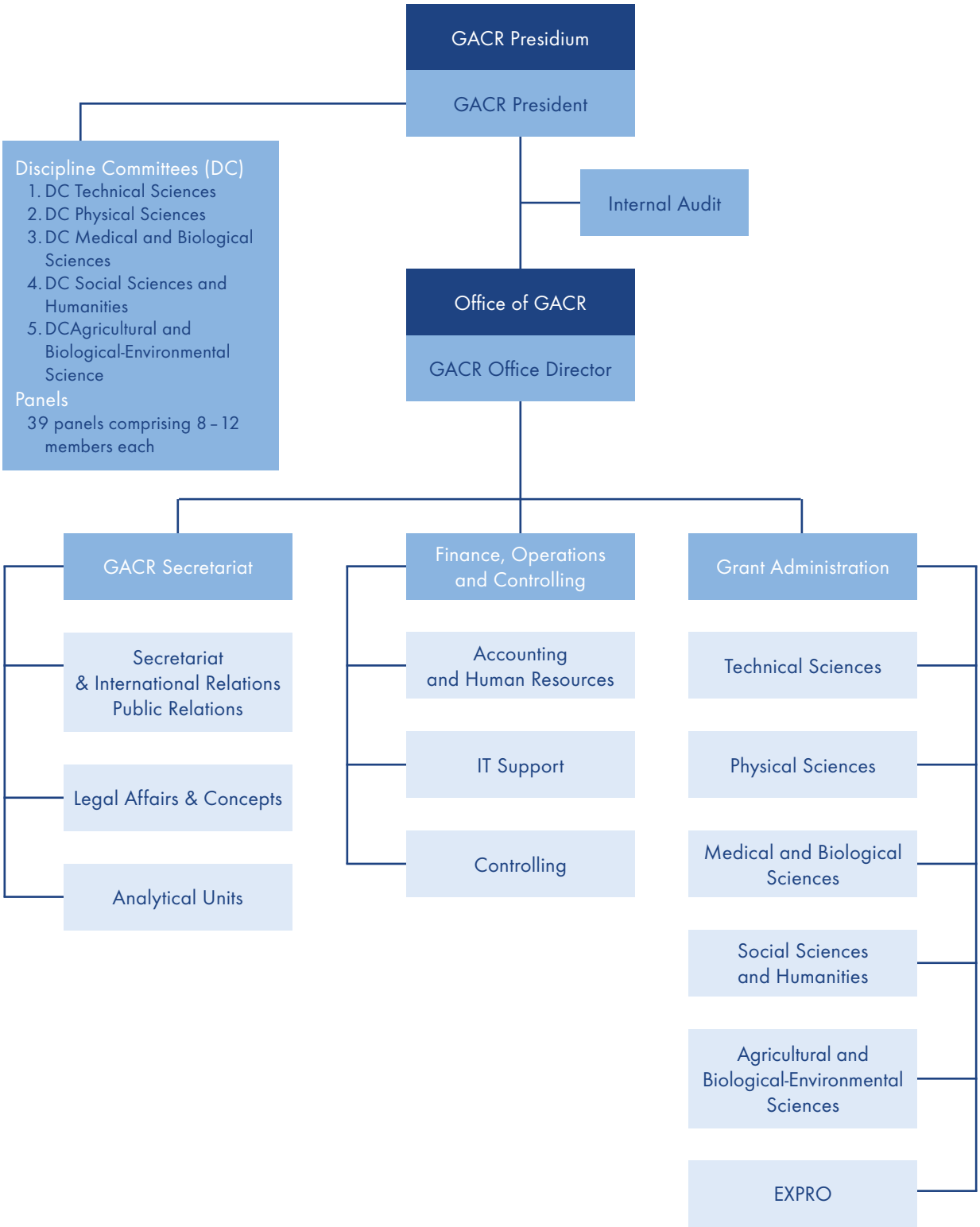
GACR is the only institution in the Czech Republic that provides public funding exclusively for basic research projects. Its activity is regulated by Act No. 130/2002, on Support of Research, Experimental Development and Innovation from Public Funds and Amending Certain Related Act (hereinafter the "R&D Funding Act"). 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 categorised into five domains: Technical Sciences, Physical Sciences, Medical and Biological Sciences, Social Sciences and Humanities, Agricultural and Biological-Environmental Sciences

The main objectives of GACR 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 facilitate attractive conditions for the career development of young and early-stage researchers.
- To ensure that the state funds are used most effectively for the benefit of the Czech scientific community.
- To inform the scientific community and general public about its activities and plans.

Exhibit 1: Organizational structure



3 GACR GOVERNANCE AND OFFICE

GACR governing bodies are made up of the President, the Presidium, the Scientific Advisory Board, and the Supervisory Board. The Office of GACR is the organisational and administrative unit of GACR.

3.1. PRESIDENT OF GACR

The 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. GACR PRESIDIUM

The Presidium (hereinafter the "Presidium") is the executive body of GACR. Its role and position are defined by Article 36 (5) of the R&D Funding Act. The Presidium is authorised to approve calls for proposals, to award grants, present proposals of the GACR Charter and any amendments to it along with the proposed budget for GACR to the Government for approval. Moreover, the Presidium is responsible for coordination of the Discipline Committees (the advisory bodies of GACR), which evaluate the project proposals.

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

The Presidium comprised the following members in 2019:

- **RNDr. Alice Valkárová, DrSc.** (President; 1st term) – Physical Sciences
- **prof. Ing. Stanislava Hronová, CSc., dr. h. c.** (Vice-President, 2nd term) – Social Sciences and Humanities
- **prof. Ing. Rostislav Drochytka, CSc., MBA** (1st term) – Technical Sciences
- **prof. RNDr. Jaroslav Koča, DrSc** (1st term) – Medical and Biological Sciences
- **doc. RNDr. Petr Baldrian, Ph.D.** (1st term) – Agricultural and Biological-Environmental Sciences

The cornerstone activities of the Presidium are developed from the project evaluation schedule, which includes the evaluation of the newly submitted grant project proposals as well as the evaluation of on-going and completed projects. The composition of the Presidium did not change in 2019 and prof. Stanislava Hronová, responsible for Social Sciences and Humanities, began to serve her second four-year term.

The list below summarises the main points discussed and/or approved at the Presidium meetings:

- The Presidium prepared a broader outline of the new concept of junior and post-doctoral projects. The Presidium discussed this concept with members of GACR's Scientific Advisory Board and subsequently with members of the R&D Council. While the concept of junior projects (now referred to as JUNIOR STAR) received approval from the R&D council after minor modifications, the post-doctoral projects (now referred to as Postdoc Individual Fellowships) was modified a number of times throughout 2019. A decision was made that these projects would serve to support mobility, and GACR would finance fellowships at institutions abroad for two years, and three-year fellowships for scientists from abroad at Czech institutions. The Government approved a new group of JUNIOR STAR grant projects in December 2019, and tenders may now be announced in 2020. The

governmental proposal of projects within Postdoc Individual Fellowships was not approved until early 2020. No funds have been allocated to this group of grant project in the 2021 budget, and the announcement of it has therefore been postponed until 2022. A new project approved by the Government related to international projects evaluated by the Lead Agency Principle was being prepared with a view to future cooperation by 15 European countries associated in Science Europe. This material was approved in 2019, and the announcement of joint tenders is expected to be made in 2021.

- The Presidium chose five recipients of the GACR President's Award on the basis of nominations from discipline committees and handed out the awards in October 2019.

- The Presidium approved modifications of the content of certain panels within discipline committees for Medical Sciences (DC 3), Physical Sciences (DC 2), and Technical Sciences (DC 1). In each of its meetings, the Presidium discussed and approved proposed changes in grant projects, and in February and April it approved the results of interim and final reports as issued by discipline committees. The Presidium also periodically reviewed the due process and results of cost audits on part of Beneficiaries, and discussed GACR budget modifications for 2020–2022. Presidium meetings also discussed changes in draft tender documentation for tenders in 2020.

- The Presidium initiated a bibliometric analysis of GACR grant groups, which was later processed based on data contained in the Results Information Register (RIR) and Web of Science (WoS).

- GACR received a total of 2,634 project proposals within all of the tenders announced in 2019 (of which 1,889 standard projects, 314 junior projects, 231 international (bilateral) projects, 134 EXPRO excellence grant projects, and 66 international projects evaluated by the Lead Agency principle).

- After these projects were evaluated in expert panels and discipline committees, the Presidium approved in 2019 the entries of proposed projects into categories within the first phase of the evaluation.

- The Presidium decided in a general consensus on the basis of recommendations from the advisory bodies in its off-site meeting in 2019 to fund a total of 457 standard projects, 94 junior projects, and 38 international ones in cooperation with the German Research Foundation (Deutsche Forschungsgemeinschaft, DFG), the Ministry of Science and Technology (MOST), National Research Foundation of Korea (NRF), Russian Foundations for Basic Research (RFBR) and Sao Paulo Research Foundation (FAPESP).

A total of 10 Presidium meetings took place in 2019, including one off-site. The information from the Presidium meetings is available at https://gacr.cz/en/authorities/.

3.3. GACR SCIENTIFIC ADVISORY BOARD

The Scientific Advisory Board (hereinafter the "SAB") is a conceptual body of GACR. Its activities are governed by Article 36 (3) and (6) of the R&D Funding Act. SAB's scope is determined by its by-laws approved by the Presidium. Under these by-laws, the SAB's assignments include, without limitation, the following:

- to propose the establishment of Discipline Committees´ 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.

Under GACR'S Charter, the SAB comprises 12 expert members representing various scientific disciplines. Members are appointed and removed by the Government upon the recommendation of the R&D Council. Members are appointed for a term of four years and may serve no more than two consecutive terms.

The Scientific Advisory Board comprised the following members in 2019:

- **prof. Ing. Jaroslav Doležel, DrSc.** (Chair)

- **prof. Ing. František Štěpánek, Ph.D.** (Vice-Chair)
- **prof. RNDr. Pavel Exner, DrSc.**
- **prof. Ing. Martin Hartl, Ph.D.**
- **prof. Ing. Štepán 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., DrSc.**
- **prof. MUDr. Aleksi Šedo, DrSc.**
- **prof. MUDr. Jiří Zeman, DrSc.**

3.4. GACR SUPERVISORY BOARD

The Supervisory Board (hereinafter the "SB") is the oversight body of GACR established by Act No. 110/2009, replacing the R&D Funding Act, pursuant to Article 36 (7) of the said Act. The main tasks of the SB consist of financial supervision over GACR and the grants which it awards, handling and dealing with complaints about any violation of the conditions of a Call for Proposals, and improving the current mechanism of targeted aid to scientific projects in the Czech Republic. Opinions issued by the SB are binding upon the Presidium.

The SB is composed of 10 members who are appointed and removed by the Chamber of Deputies of the Czech Republic. Members are appointed for a four year term and may serve no more than two consecutive terms. The SB submits its annual report to the Chamber of Deputies twice a year.

Members of the SB as of 31 December 2019:

- **prof. Ing. Stanislav Labík, CSc.** (Chair)
- **prof. PhDr. Jana Geršlová, CSc.** (Vice-Chair)
- **JUDr. Ing. Zdeněk Dufek, Ph.D.**
- **prof. Ing. František Hrdlička, CSc.**
- **prof. Mgr. Libor Jan, Ph.D.**
- **prof. Ing. Petr Konvalinka, CSc.**
- **prof. Ing. Jan Roda, CSc.**
- **prof. Ing. Vladimír Smejkal CSc., LL.M.**
- **prof. RNDr. Omar Šerý, Ph.D.**
- **prof. PhDr. Hana Vykopalová, CSc.**

The first terms of several members of the Supervisory Board expired during 2019: prof. Ing. Petr Konvalinka, CSc. (on 1 April), prof. Mgr. Libor Jan, Ph.D., prof. Ing. Mária Režňáková CSc. and Ing. Mirka Wildmannová, Ph.D. (on 10 April), and prof. JUDr. Věra Kalvodová, Dr. (16 September).

The Chamber of Deputies of the Czech Parliament elected new members of the SB during 2019: prof. Ing. František Hrdlička, CSc., prof. Ing. Petr Konvalinka, CSc., and prof. PhDr. Hana Vykopalová (on 11 April), prof. Ing. Vladimír Smejkal, CSc. (on 10 July), prof. Ing. Stanislav Labík, CSc. (on 25 September), and prof. Mgr. Libor Jan, Ph.D. (on 27 November).

In 2019, the SB dealt with 22 appeals on evaluations of project proposals and evaluations of interim and final reports.

SB members attended individual meetings of panels and discipline committees to monitor the due course of those meetings.

You can find more information about the SB meetings at https://gacr.cz/en/authorities/.

3.5. OFFICE OF GACR

Under the Charter of GACR, the Office of GACR (hereinafter the "Office") is responsible for performing technical, accounting, financial, supervisory, organisational, and administrative assignments generated by the activities carried out by GACR. The Office is also in charge of communication with outside entities.

The activities of the Office follow the Organizational Policy. The Office is managed by the Office Director, who gets appointed and removed by the President. The Office consists of the Scientific Affairs Department, Accounting, Finance, Operations and Controlling Department, Grant Aid Department, and the Secretariat.

The Secretariat of GACR is further divided into the following sections: The Secretariat, International Affairs and Public Relations, Legal, and Analytical. The main responsibilities of the Secretariat and the International and Public Relations Section include providing administrative

support for the Office, President, Presidium and SAB. It is also responsible for relations with external entities, both at national and international level, as well as publicity and presentation of GACR's activities. The Legal Sections delivers complex legal services for GACR and is responsible for the legal and formal content of internal regulations. Furthermore, the Legal Section prepares public tenders in basic research and proposals of tender documents for public tenders. The Analytical Section 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.

The Accounting, Finance, Operations and Controlling Department consists of the Finance, Accounting and Human Resources Section, IT Section, and Controlling Section. Finance, Accounting and Human Resources Section runs GACR's book-keeping, provision of funds to the GACR projects and their supervision. It prepares GACR's draft budget and deals with human resources. The IT Sections' main assignments are operation and maintenance of GACR's computer network, the development, operation, and maintenance of GACR's databases and information systems including e-mail servers. The Controlling Section monitors compliance with generally binding legislation on part of grant recipients, the compliance with the Charter of GACR, and other binding documents.

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

3.6. INTERNAL AUDIT

Internal audit is performed by an independent, fully empowered employee who has autonomy within in the organization structure. Apart from internal audit, this employee is also responsible for internal audit and subsequent reviews, and also provides consultancy to the senior management of GACR. The responsibility and the activities of internal audit are stipulated explicitly in the Organizational Policy of the Office of GACR.

TARGETED AID TO GRANT PROJECTS

4

At the beginning of this chapter we would like to mention that all the data sources used in this document are derived from our own calculation, updated as of 25 February 2020.

The total budget approved for 2018 reached CZK 4.39 billion with no revenue 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 other administrative work. The targeted expenditures are designated to grant projects. In 2019, GACR's institutional expenditures were CZK 109.78 million, representing 2.5% of GACR´s total budget. In 2019, GACR's targeted expenditures approved by the State Budget Act of the Czech Republic totalled CZK 4.28 billion. The financial aid for on-going projects amounted to CZK 2.46 billion, representing 57.5% of the total targeted funds. The amount of CZK 1.82 billion was designated to new projects, representing 42.5% of GACR's total targeted financial aid.

In 2019, GACR distributed funds into these types of projects:

- funding for standard projects
- funding for international projects
- funding for projects of excellence in basic research within EXPRO
- funding for international projects evaluated on the basis of Lead Agency principle
- funding for Junior Grants
- funding for projects to support ERC grants

The breakdown of targeted support by project groups is shown in Exhibit 2 below.

Exhibit 2: Approved targeted funds per group of projects in 2019

Project Groups	Approved Targeted Funds (in CZK million)	Share of Total (as a percentage)
Standard projects	3,258.96	76.1%
International projects	89.06	2.1%
Excellence in basic research	350.00	8.2%
Lead Agency	72.98	1.7%
Junior Grants	500.00	11.7%
Support for ERC grants	10.00	0.2%
TOTAL	4,281.00	100%

5 GACR PROJECTS IN 2019

Public tenders in various stages were administered throughout 2019. These public tenders include those that had been announced and evaluated in 2018, with a starting date in 2018, as well as those announced in 2019 with the anticipated launch of projects in 2020.

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, i.e. 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 Science Fund (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 project proposals submitted in all tenders announced in 2018 and in Lead Agency calls for proposals reached 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 failing to meet the conditions of the public tender proposals and 20 project proposals in total, i.e. 0.8%, were rejected as ineligible. In addition, 3 applicants withdrew from tenders. The total number of successful grant projects in 2019 was 798 – of which 622 were standard projects, 108 junior grants, 22 international projects (13 projects in cooperation with the German Research Foundation, 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.

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GACR announced public tenders for standard, junior, and international grant projects and EXPRO excellence projects on 21 February 2019 with 1 January 2020 as the expected launch date. The deadline of the tender was set for 8 April 2019. The joint call for bilateral Austrian-Czech proposals on the Lead Agency basis with a launch date on 1 January 2020 was made by FWF and GACR in early 2019. The tender period started on 7 January 2019 and ended on 12 April 2019. The total number of project proposals in all tenders was 2,634 (of which 1,889 standard ones, 313 junior projects, 231 international (bilateral) ones, 134 EXPRO excellence projects, and 66 international projects under Lead Agency. A total of 34

project proposals were disqualified due to non-compliance with the terms of the public tender, a total of 4 projects were rejected because they did not meet the terms of the requirements of the tender, i.e. 0.2%, and one project proposal was disqualified by the Austrian institution on formal grounds. Another 6 applicants withdrew from public tenders. The number of successful project proposals in tenders announced in 2019 that received funding in 2020 was 641, of which 475 were standard projects, 94 junior ones, 38 international ones (17 of them in cooperation with DFG, 2 of them with MOST of Taiwan, 3 of them with NRF of Korea, 2 of them with FAPESP of Brazil, 14 projects with RFBR of Russia), 22 grant EXPRO excellence projects and 12 international projects within Lead Agency.

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 entity, an organisational unit of the State or self-governing territorial unit, or an organisational unit of the Defence Ministry or Interior Ministry active in research and development, are all applicants eligible for funding. Projects are implemented by a single Principal Investigator or several ones from one or more institutions. The call for proposals is made annually, usually in February. The evaluation process lasts until the autumn and the results are usually announced before the end of the year. A project proposal is accepted provided that all conditions defined in the R&D Financing and in the guidelines for standard projects are met. The main evaluation criteria of project proposals are quality and originality of the project proposal, the applicant´s expertise to reach the objectives, and reasonable costs.

In public tenders to support standard projects announced in 2018, GACR received a total of 1,975 project proposals in total. Out of these proposals, 4 ones were not accepted for failing to meet the terms of the public tenders, 16 proposal were disqualified from the public tenders, and 2 applicants withdrew. Of the 1,953 standard project proposals evaluated, the highest number was submitted in the field of Social Sciences and Humanities (629 proposals), the second largest group of proposals was in the fields of Physical Sciences and Technical Sciences with 379 proposals each, Agricultural, and Biological-Environmental Sciences received 288 project proposals and the lowest number of submitted proposals was 278 project proposals in Medical and Biological Sciences. The distribution of the project proposals by the candidates was the following: 1,193 project proposals from public universities, 645 project proposals from institutes of the Czech Academy of Sciences, 63 project proposals from other categories (hospitals, libraries, museums, state institutes, associations, galleries, foundations, public administration), 26 project proposals from private universities, 18 from public research organisations other than institutes of the Czech Academy of Sciences, and 8 from private entities (natural persons, limited liability companies, joint stock companies, public benefit organisations, registered institutes). Following the recommendation of the advisory bodies and having reached consensus, the Presidium decided to finance 622 standard projects. The most grants awarded were in the field of Social Sciences and Humanities (179 grants), the second largest group was Physical Sciences with 126 grants, followed by Technical Sciences with 125 grants and Agricultural, Biological-Environmental Sciences with 98 grants. The lowest number of funded projects was in the field of Medical and Biological Sciences – 94 grants. The highest number of grants was awarded to public universities (342 grants) and to the institutes of the Czech Academy of Sciences (253 grants).

In public tenders to support standard projects announced in 2019, GACR received a total of 1,889 project proposals. Out of these proposals, 17 ones were not accepted for failing to meet the terms of the public tenders, 2 proposals were disqualified from the public tenders, and 3 applicants withdrew. In a year-on-year comparison, the number of project proposals received for evaluation dropped. Of the 1,867 evaluated standard projects, the highest number was submitted in the field of Social Sciences and Humanities (578 proposals), the second largest group of proposals was in the fields of Physical Sciences with 360 proposals, Technical Sciences with 357 proposals, Agricultural, and Biological-Environmental Sciences with 292 project proposals and the lowest number of submitted proposals was 280 project proposals in Medical and Biological Sciences. The distribution of the project proposals by the candidates was the following: 1,151 project proposals from public universities, 617 project proposals from institutes of the Czech Academy of Sciences, 55 project proposals from other categories (hospitals, libraries, mu-

Exhibit 3: Success rate of proposals for standard projects for those initiated in 2010–2020

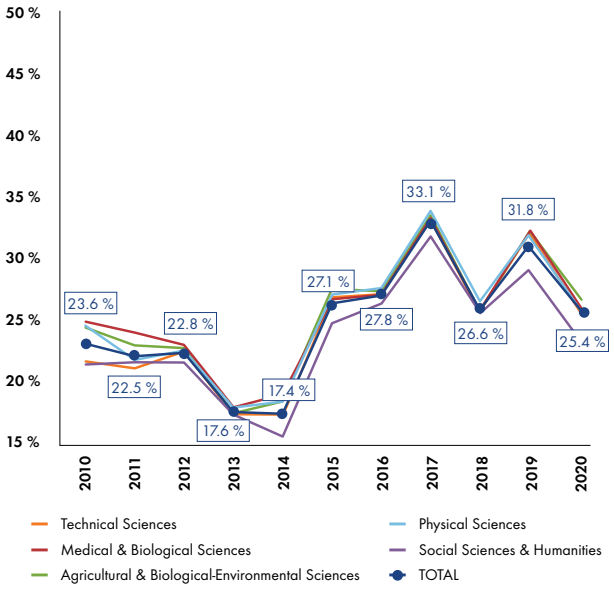
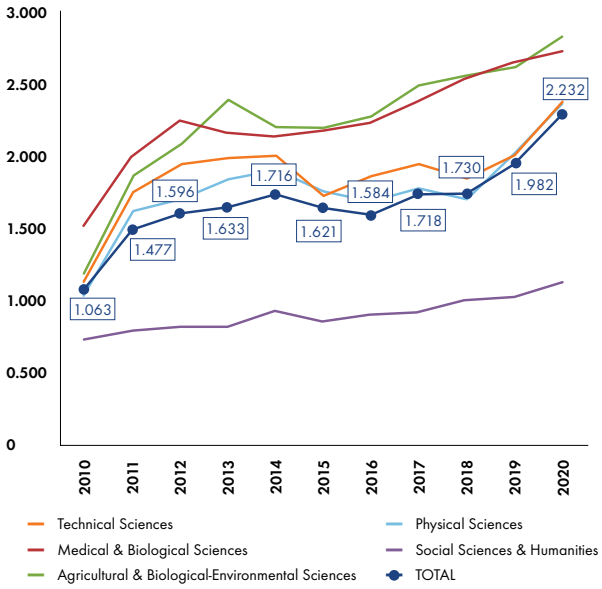


Exhibit 4: Average costs per standard project in the first year of investigation for projects funded in 2010–2020 (in CZK million)



seums, state institutes, associations, galleries, foundations, public administration), 20 project proposals from private universities, 16 from public research organisations other than institutes of Czech Academy of Sciences, and 8 from private entities (natural persons, limited liability companies, joint stock companies, public benefit organisations, registered institutes). Following the recommendation of the advisory bodies and having reached consensus, the Presidium decided to finance 457 standard projects in its meeting on 22 November 2019, and another 18 standard projects in its meeting on 25 February 2020 after the funds were allocated. The success rate compared to the previous year dropped down to 25.4%. The decline was by 6.4 percentage points from the success rate of 31.8% the year before. The lowest success rate through the period under examination was recorded in 2013 and 2014 at a mere 17.5%.

The most successful projects in public tenders in 2018 were in the area of Agricultural, Biological-Environmental Sciences with a 34% success rate. These projects were on top again in 2019 with a success rate of 27.1%. By contract, Social Sciences and Humanities have reported the lowest success rate based on long-term observation (28.5% with projects launched in 2019 and 24.2% for those launched in 2020, as shown in Exhibit 3) despite the fact that these projects manage to receive the highest number of funded standard projects. Of the 475 standard grants, the highest number was awarded to Social Sciences and Humanities (140 grants), Physical Sciences placed second with 93 grants, followed by Technical Sciences with 90 grants, Agricultural and Biological-Environmental Sciences with 79 grants, and the lowest number (73) won by Medical and Biological Sciences. The distribution of the project proposals by the candidates was the following: 256 project proposals from public universities, 202 project proposals from institutes of the Czech Academy of Sciences, 9 project proposals from other categories (hospitals, libraries, museums, state institutes, associations, galleries, foundations, public administration), 4 project proposals from public research organisations other than institutes of Czech Academy of Sciences, 3 from private universities, and 1 project proposal from private entities (natural persons, limited liability companies, joint stock companies, public benefit organisations, registered institutes). The highest success rate for standard projects was achieved by the institutes of the Czech Academy of Sciences at 32.7%.

The average costs per standard project in the first year of investigation launched in 2019 amounts to CZK 1.98 million and this number increased to CZK 2.23 million per project for those launched in 2020. The year-on-year

increase was 12.6 percentage points. In a long-term comparison back to 2010, the highest cost per project in the first year of investigation is incurred in Medical and Biological Sciences (an average of CZK 2.29 million per project launched in 2010–2020) and Agricultural and Biological-Environmental Sciences (an average of CZK 2.29 million per project). By contrast, through the 2010–2020 period, Social Sciences and Humanities report the lowest average costs for the first year of successful standard grants (on average CZK 906 thousand per project in the first year of the project launched in 2010–2020). The development of the average costs in the first year of the project for standard projects is shown in Exhibit 4.

In terms of distribution of standard projects with the project launch in 2019 and 2020 by regions, GACR evaluated 3,820 project proposals in total, most of which came from Prague and the South Moravian Region. Over the reported period, almost 57% of all standard project proposals were submitted from Prague and more than 19% 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 the regions of Liberec and Ústí nad Labem, and Zlín. The highest number of successful project proposals was received from Prague (629 grants) and the South Moravian region (205 grants). GACR did not finance any standard project from the Vysočina Region. A low number of standard projects implemented is also recorded in the regions of Liberec, Ústí nad Labem, and Zlín, due to the low number of evaluated project proposals from these regions. The highest average success rate is recorded in the Central Bohemian Region, where 32% of the 203 standard project proposals received funding. The second highest success rate was recorded in Prague at 31%.

The average success rate of standard projects at GACR launched in 2019 and 2020 reached 28.7% (1,097 grants were awarded out of 3,820 project proposals). The South Bohemian Region with 29.9% and the South Moravian Region at 29.4% scored higher than the GACR average. The highest cost per standard project in the first year of investigation for projects launched in 2019 and 2020 was recorded in the South Bohemian Region at CZK 2.71 million. The Regions of Hradec Králové and Central Bohemia also scored above the GACR average (CZK 2.09 million) at CZK 2.61 million and 2.57 million, respectively. By contrast, the lowest cost per project in the first year of investigation was found in the regions of Pilsen and Olomouc (CZK 1.42 million and CZK 1.58 million, respectively).

5.2. JUNIOR GRANTS

GACR has supported junior grants in basic research since 2014. The duration of projects is 2–3 years. Proposals may be submitted from all areas of basic research. 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 graduated with a Ph.D. no more than 8 years before the submission deadline. Maternity and parental leave are not included in the mentioned time limit. A post-doctoral internship abroad of at least 6 months is a prerequisite 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 lasts until the autumn and the results are usually published before the end of the year. A project proposal is admissible provided that all conditions defined in the R&D Funding Act 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 their nature. 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 2018, GACR received 278 project proposals in total, of which 15 proposals did not meet the tender conditions, and 3 proposals were rejected as ineligible. The highest number of junior grant proposals (83) was submitted in Physical Sciences; the next largest group include Medical and Biological Sciences with 58 project proposals; followed by Agricultural and Biological-Environmental Sciences with 52 project proposals, and Technical Sciences with 36 project proposals; Social Sciences and Humanities generated the lowest number (31) of project proposals. In terms of the distribution of projects by candidates, GACR evaluated 146 project proposals from public universities,

106 project proposals from institutes of the Czech Academy of Sciences, another 6 project proposals (from hospitals, libraries, museums, subsidised institutions, associations, galleries, foundations and independent institutions), 2 project proposals from private universities, no project proposal from R&D institutions other than the Czech Academy of Sciences, and no project proposal in the private category (natural persons, limited liability companies, joint-stock companies, private universities, charities or registered institutes). Based on the recommendation of the advisory bodies and having reached consensus, the Presidium decided to finance 108 junior grants. Of the total 68 junior grants, the highest number was awarded in the field of Physical Sciences with 40 grants, the second largest group was Medical and Biological Sciences with 24 grants, Technical Sciences with 13 grants. The lowest number of funded projects was in the field of Social Sciences and Humanities – 9 projects. Of the 108 junior grants funded by GACR, the highest number of grants was awarded to public universities (56 grants) and to institutes of the Czech Academy of Sciences (49 grants). The remaining 3 grants were awarded to other entities (hospitals, libraries, museums, state institutes, associations, galleries, foundations, public administration).

In the public tender on support of junior grant projects announced in 2018, GACR received 314 project proposals, of which 12 were disqualified due to non-compliance with the terms of the tender, and one applicant withdrew from the tender. In a year-on-year comparison, the number of junior grants accepted for evaluation increased. The highest number of proposals was submitted in Physical Sciences and Agricultural, Biological-Environmental Sciences with 82 proposals each, followed by Technical Sciences with 57 proposals, Medical and Biological Sciences with 48 project proposals, and Social Sciences and Humanities (32). In terms of the distribution of projects by candidates, GACR evaluated 174 project proposals from public universities, 118 project proposals from institutes of the Czech Academy of Sciences, 4 project proposals from other entities (hospitals, libraries, museums, subsidised organisations, associations, galleries, foundations, public administration), 3 project proposals from research organisations other than institutes of Czech Academy of Sciences, and 2 proposals from private universities.

At its meeting on 22 November 2019, the Presidium reached a general consensus to finance 94 junior grants, following the recommendation from the advisory bodies. The success rate in the public tender of junior grants with the project launch in 2020 thus dropped to 31.2% compared to the previous year. Of the 94 junior grants, Physical Sciences received the highest number of grants

Exhibit 5: Success rate of proposals for junior projects for those initiated in 2015–2020

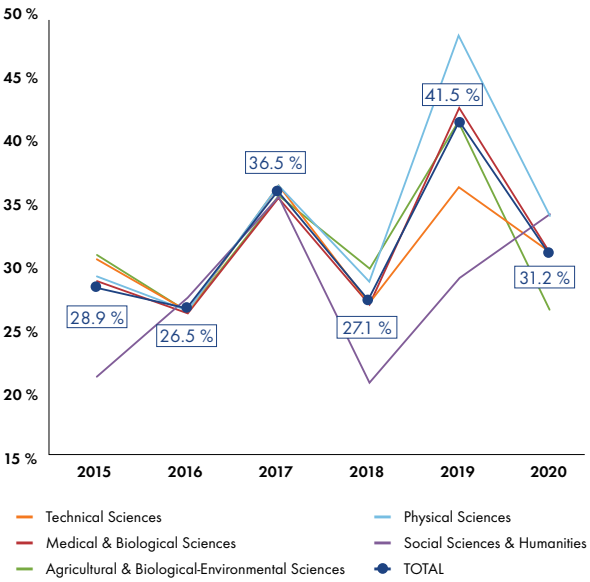
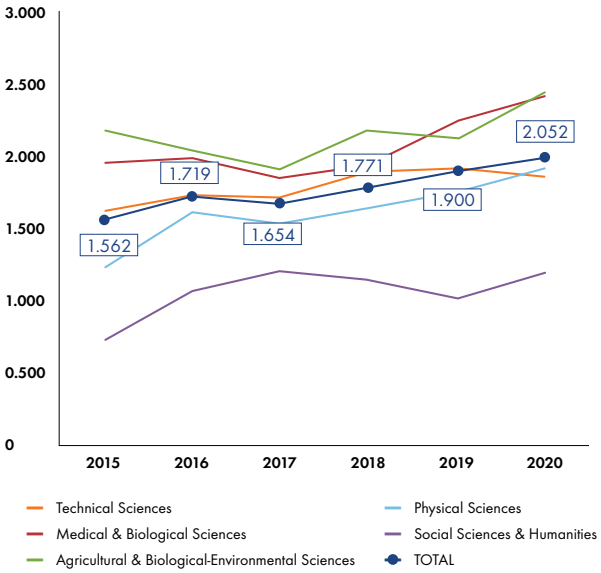


Exhibit 6: Average costs per junior project in the first year of investigation for projects funded in 2015–2020 (in CZK million)



(28), followed by Agriculture and Biological-Environmental Sciences with 22 grants, Technical Sciences with 18 grants, Medical and Biological Sciences with 15 grants, and the lowest number (11) was achieved by Social Sciences and Humanities. The highest number of project proposals receiving funding came from public universities (58) and the institutes of the Czech Academy of Sciences (35), as shown in Exhibit 5.

The average costs per junior project in the first year of investigation for those launched in 2020 reached CZK 2.05 million. Compared to the previous year, there was an increase of 8 percentage points – this average cost amounted CZK 1.90 million in 2019. Except 2017 when the cost per project in the first year of examination dropped, all other years during period under examination showed an increasing trend, as shown in Exhibit 6.

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 German Research Foundation (Deutsche Forschungsgemeinschaft, DFG). In 2008, GACR partnered with the National Science Foundation (NSC) of Taiwan, which evolved later on into the Ministry of Science and Technology (MOST). In 2018, GA CR started cooperation with two agencies, the São Paulo Research Foundation (FAPESP) – Brazil, State of São Paulo, and the Russian Foundation for Basic Research (RFBR) – Russia. The first joint calls are foreseen for 2019, with the starting date of carrying out the projects in 2020. Project duration is 2–3 years. Projects can be proposed in all areas of basic research. The topic is chosen by the Czech applicant in cooperation with the one from abroad. This type of project is evaluated independently by both partner agencies. The funding is provided on condition that the project is approved by both national foundations. Each national foundation provides funding to components of the project carried out in that foundation's country. The tenders for this type of projects are announced once a year, usually in February. The evaluation process last until the autumn and the date of publishing the results depends on the date of funding approval in the partner country. All categories of beneficiaries who satisfy the conditions stipulated by the R&D Funding Act, the conditions defined by the tender documentation for international grant projects, and the rules for tenders as defined by the partner organisations.

GACR received a total of 72 project proposals in public tenders for international (bilateral) projects launched in 2019, of which 52 were received in cooperation with DFG. One project proposal was disqualified because it had not been submitted in Germany at the same time. Another 12 project proposals were received in cooperation with MOST and 8 with NRF. GACR and MOST of Taiwan are jointly funding 6 international projects, GACR and NRF are funding another 3 projects, all launched in 2019. There were 13 projects approved in international project tenders jointly with DFG of Germany, and both agencies agreed to grant funding to them.

GACR received a total of 231 project proposals in public tenders for international (bilateral) projects launched in 2020, of which 72 were received in cooperation with DFG. One project proposal was disqualified due to non-compliance with the terms of the tender, and another one was dismissed from the tender. GACR and MOST jointly received a total of 8 project proposals, of which one was later withdrawn by the applicant. GACR and NRF jointly received 8 project proposals as well, of which one was disqualified due to non-compliance with the terms of the tender. GACR and RFBR jointly receive 133 project proposals, of which one was disqualified due to non-compliance with the terms of the tender and another one was dismissed from the tender. GACR and FAPESP jointly received 10 project proposals.

International projects with a launch date in 2020 funded by GACR include 2 international projects funded jointly with MOST of Taiwan, 3 projects with NRF of Korea, 17 projects jointly with DFG of Germany, 14 projects jointly with RFBR of Russia, and 2 projects jointly with FAPEST of Brazil.

5.4. INTERNATIONAL PROJECTS (LA GRANTS)

On 27 May 2013 at GRC Summit in Berlin, GACR signed an Agreement for Scientific Cooperation in basic research with the Austrian Science Fond (Fonds zur Förderung der wissenschaftlichen Forschung, FWF). This Agreement gives Czech scientists and research teams an

opportunity to submit project proposals in basic research jointly with their Austrian colleagues and 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 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 chosen 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 based on the international peer review system. The LA notifies the partner agency of the evaluation result and prepares a project funding proposal. The LA evaluation system is based on trust between the partner organisations. Each research funding organisation funds its national part of the projects. A call for proposals is announced annually, usually in the autumn, and the results are usually published at the end of the same year.

On 17 June 2019, the top leaders of GACR, FWF (Austria), NCN (Poland) and ARRS (Slovenia) held a signing ceremony of the "CEUS – Central European Science Partnership Lead Agency Agreement: Memorandum of Understanding on the unilateral administration and mutual recognition of evaluation procedures". This new type of cooperation will give scientists from the Czech Republic, Austria, Poland and Slovenia the opportunity to carry out scientific projects with new international partners on the basis of Lead Agency evaluations, which is now among more and more preferred cooperation methods among international foundations and agencies funding basic research because it reduces the administrative burden. The CEUS initiative to support basic research in Central and Eastern Europe will allow scientists submit bilateral and trilateral project proposals based on the LA principle.

On 27 November 2019, the President of GACR signed a Memorandum of Understanding for Scientific Cooperation with the Swiss National Science Foundation. This will help Czech scientists expand their basic research activities by one more country. The first call will be announced in 2020.

In 2018, 70 project proposals were submitted within the call for project proposals for Czech-Austrian projects based on the LA principle with an expected launch on 1 January 2019. The Presidium of GACR approved in late October 10 international grant projects recommended for funding by FWF of Austria.

In 2019, 66 project proposals were submitted within the call for project proposals for Czech-Austrian projects based on the LA principle with an expected launch on 1 January 2020. One proposal was disqualified in Austria due on formal grounds. In its December meeting, the Presidium of GACR approved 12 international grant projects recommended for funding by FWF of Austria.

5.5. INTERNATIONAL COOPERATION IN SUPPORT OF ERC GRANT APPLICANTS (FELLOWSHIP TO VISIT ERC GRANTEE)

The European Research Council (ERC) noted in early 2016 that certain European Union (EU) member states are substantially under-represented in its tenders and that one of the consequences of such under-representation is that the scientific and research potential of scientists from those states is not fully realize. The ERC published a document in January 2016 titled Fellowship to Visit ERC Grantee, in which the Council invited national agencies to develop fellowship programmes to help future ERC grants applicants cover the costs of their visits to the locations of ongoing ERC projects abroad. Fellowships abroad should give top Czech scientists the opportunity to get a perspective of the competitive environment of international research. As a result, applicants will be more likely to win the prestigious ERC grant.

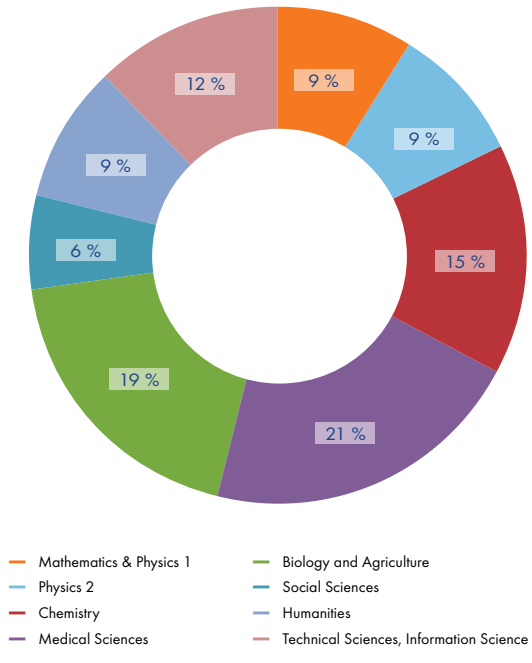
The "Fellowship to Visit ERC Grantee" is intended for the investigators in GACR junior grants in all scientific fields (Technical Sciences, Physical Sciences, Medical and Biological Sciences, Social Sciences and Humanities, Agricultural and Biological-Environmental Sciences) who were graded as "accomplished" or "excellent" in their last evaluations before submitting an application for the Fellowship to Visit ERC Grantee. The project is carried out at an institution abroad where the applicant selects the Principal Investigator of an ERC grant ("Mentor") which is ongoing at that time. Once the Fellowship to Visit ERC Grantee is completed, the Beneficiary is required to develop and submit an application for one of ERC grants (ERC Starting Grants, ERC

Consolidator Grants and ERC Advanced Grants) with the host organisation in the Czech Republic.

5.6. EXPRO: GRANT PROJECTS OF EXCELLENCE IN BASIC RESEARCH

GACR announced the first public tender of this type in 2018. Project 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: a legal entity based in the Czech Republic, an organisational unit of the State or self-governing territorial unit, an organisational unit of the Defence Ministry or Interior Ministry active in research and experimental development. No more than one applicant and one co- may be part of 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 internationally may apply, i.e. only that researcher can lead the team. To submit an application, the applicant has to be an internationally distinguished scientist and author (or co-author) of recent top publications that are proven as universally accepted in the international scientific community. Previous engagement of the applicant as the main investigator of projects provided by domestic or international providers is also evaluated. The evaluation is based on a peer review system (international discipline committee and external reviewers from abroad). 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 no later than one year after the project end date. The main criteria of the project proposals evaluation are: the 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 scientific results so far, 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 author of the proposal with GACR and reasonable financial requirements.

Exhibit 7: Structure of the evaluated EXPRO projects with a launch date in 2020 by field of science



In the first public tender announced in 2018, GACR received 185 EXPRO project proposals, of which 1 applicant withdrew from the tender. Of the 184 project proposals evaluated, the majority was submitted in the field of Biology and Agricultural Sciences (30 proposals) and Chemistry (29 proposals), Technical and Information Science (25), Medical Sciences (24), Humanities (24), Mathematics and Physics (21), Social Sciences (15) and Physics (15). In terms of distribution of EXPRO project proposals to be launched in 2019, GACR evaluated 112 project proposals from public universities, 65 project proposals from institutes of the 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 the institutes of the Czech Academy of Sciences, and one project proposal from a private university.

In the second round of tenders for EXPRO excellence in basic research announced in 2019, GACR received a total of 134 project proposals, of which one was disqualified due to non-compliance with the terms of the tender, and one applicant withdrew from the tender. Of the 132 EXPRO project proposals evaluated, the highest number came from the field of Medical Sciences (27 proposals), and Biology and Agricultural Sciences (25 proposals). By contrast, the lowest number of proposals came from the field of Social Sciences (8 proposals). The highest number of EXPRO excellence in basic research proposals was submitted by public universities (78 proposals) and

Exhibit 8: Projects evaluated and funded in EXPRO excellence in basic research with a launch date in 2020 by field of science

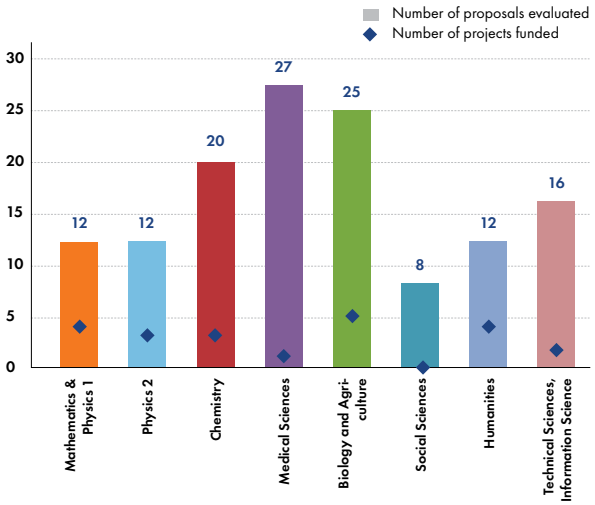
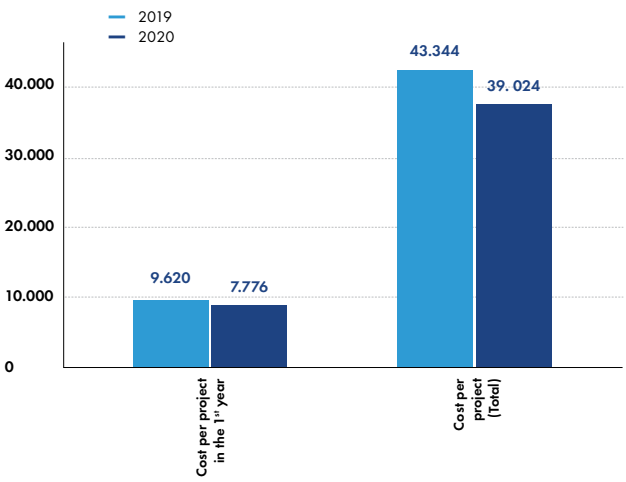


Exhibit 9: The average cost per project in the first year and the total cost per EXPRO funded project launched in 2019 and 2020 (in CZK million)

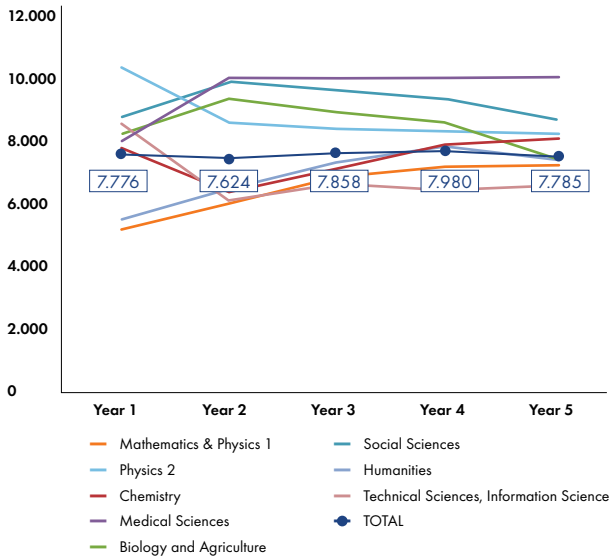


the institutes of the Czech Academy of Sciences (51 proposals), see Exhibit 7.

Following the recommendations of the advisory bodies, the Presidium decided to fund a total of 22 EXPRO projects with a launch date in 2020. In 2019, a total of 36 grants were awarded. The success rate of EXPRO proposals for projects to be launched in 2020 dropped in 2019 down to 16.7%. The decrease was by 2.9 percentage points. The breakdown of the funded EXPRO projects with a launch date in 2020 by field of science is shown in Exhibit 8.

The average cost per EXPRO project in the first year of investigation for projects with a launch date in 2019 was higher than in the following year, specifically CZK 1.84 million, than the average cost of projects with a launch date in 2020. There was also a drop in the average total cost per project; those with a launch date in 2019 had an average budget of CZK 43.34 million, which dropped to CZK 39.02 million. The most expensive projects starting in 2020 came from the field of Medical Sciences. And by contrast, the "cheapest" projects came from the fields of Mathematics and Physics – see Exhibits 9 and 10.

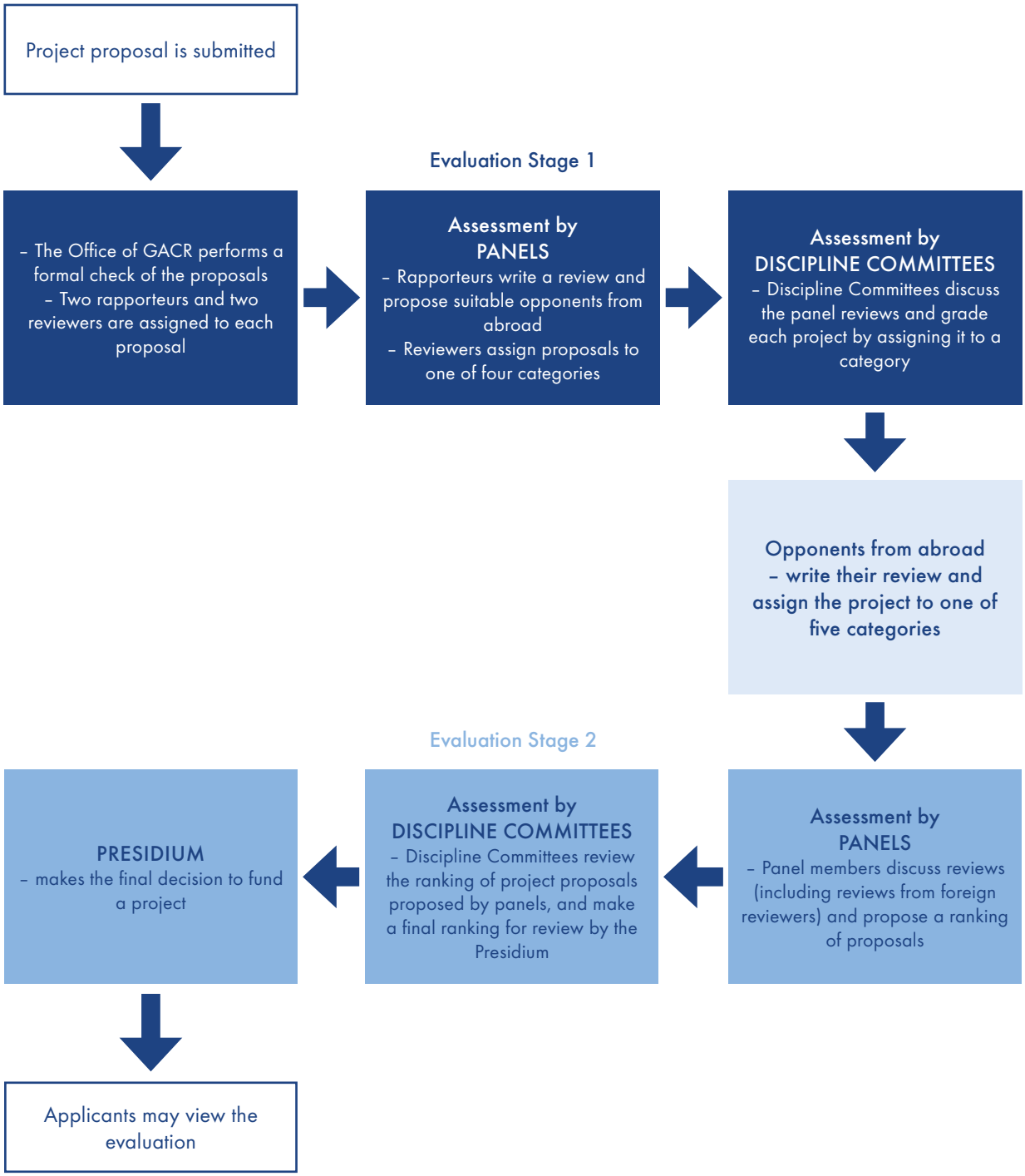
Exhibit 10: The average cost per EXPRO project per year by field of science for projects launched in 2020 (in CZK million)



5.7. PROCESS TO EVALUATE PROJECT PROPOSALS

The process of the evaluation of project proposals is illustrated in Exhibit 11 below. 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 assessment from abroad for projects which advanced to the second phase of the evaluation;

Exhibit 11: Process to evaluate project proposals



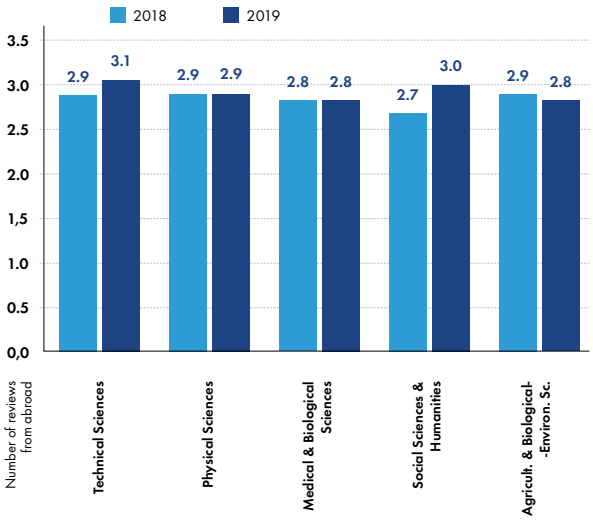
the participants of the project evaluation are required to maintain confidentiality. Proposals for standard, junior and international projects that meet the requirements of the Act on the Support of Research, Experimental Development and Innovation and the conditions set out in the call for public tenders 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 means the best-rated projects. In case of 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 turned down due to their low level of expertise (relative to other project proposals) and they are not evaluated any further. The other project proposals that achieved a better score are submitted for evaluation conducted by opponents abroad. After receiving at least one opponent report from abroad for each proposal (typically two reports come in), the proposals are evaluated in panels in the second stage of evaluation and then ranked in order of quality. In this second stage of evaluation, no more than 25% of the project proposals are included in Category A; Categories B and C are subject to no such limit. 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 funds for the relevant year – see Exhibit 11 above.

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

Same as in the previous year, all projects that advanced to the second stage were evaluated by reviewers from abroad in 2019. Exhibit 12 shows the average number of assessments from abroad per project by scientific field.

Exhibit 12: The average number of reviews from abroad per project evaluated in 2018 and 2019 by field of science



5.8. PROCESS TO EVALUATE EXPRO PROJECT PROPOSALS

The evaluation process of EXPRO project proposals is illustrated in Exhibit 13. This evaluation process meets the following conditions: the statutory evaluation period is 8 months; a two-stage evaluation system; the Presidium is the executive body; the Discipline Committees (8) are expert advisory bodies pursuant to the R&D Funding Act; for each project proposal, 4 independent assessments are delivered by the members of the relevant Discipline Committee (EX); in case of interdisciplinary projects, one of the 4 assessments will be conducted by a member of the other Discipline Committee (EX); exactly three external assessments for projects advancing to the second assessment phase; participants of the evaluation process must maintain confidentiality; neither an external opponent nor a member of a Discipline Committee (EX) may have a history with any institution in the Czech Republic during the previous five years. See Exhibit 13 below.

5.9. PROCESS TO EVALUATE COMPLETED GRANT PROJECTS

In March 2019, a total of 767 grant projects funded by GACR were evaluated. The investigators had submitted final reports for those projects by 31 January 2019. The Evaluation Panels and the Discipline Committees assessed the outcomes of the grant projects using predefined criteria, and proposed their final scores to the Presidium. Exhibit 14 shows the number of projects and their overall scores received from the relevant Discipline Committees in March 2019. During 2019, another 156 final reports were evaluated.

Exhibit 13: Process to evaluate EXPRO project proposals

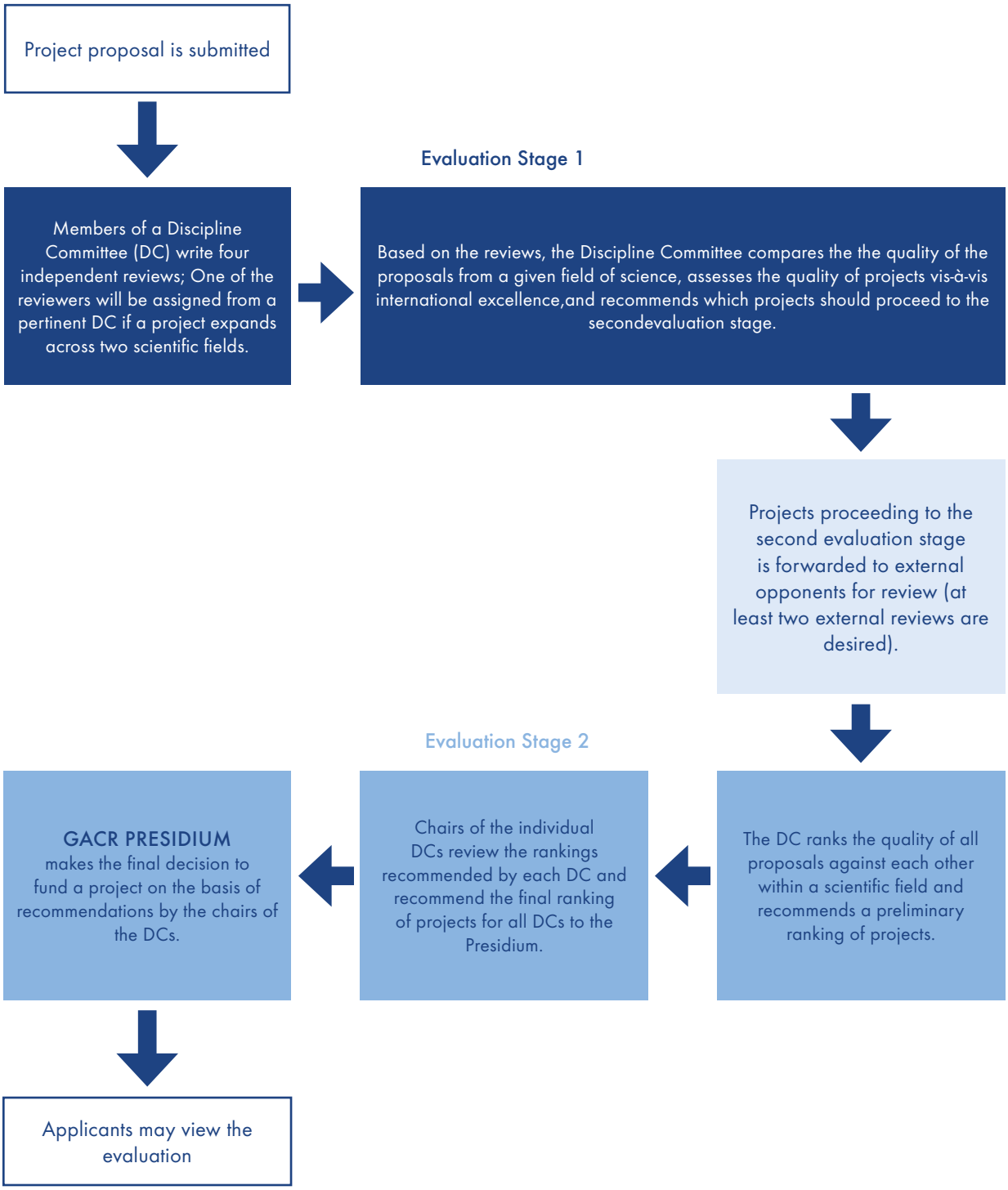


Exhibit 14: Projects by total score and by Discipline Committee as evaluated in March 2019

Discipline Committee	Grant projects in total	Of which:				
		Excellent	Accom-plished	Accom-plished with reservation	Failed	Evaluation postponed
Technical Sciences	143	17	92	1	1	32
Physical Sciences	151	27	89	5	0	30
Medical & Biological Sciences	118	16	49	2	4	47
Social Sciences & Hu-manities	239	11	51	11	12	154
Agricultural & Biological--Environmental Sciences	116	19	38	1	2	56
Total	767	90	319	20	19	319

INTERNATIONAL ACTIVITIES

6

Among GACR'S priorities is the expansion and further development of international basic research projects for scientists at Czech institutions.

Since 2005, bilateral cooperation has taken its traditional form to support joint grant projects with partner organizations from Germany, Taiwan, and South Korea. Memoranda of Understanding were signed with the German Research Foundation (Deutsche Forschungsgemeinschaft, DFG) of 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 signed Memoranda of Understanding with the Russian Foundation for Basic Research (RFBR) of Russia, and the São Paulo Research Foundation (FAPESP) of Brazil, State of São Paulo.

In line with the trends of international cooperation among agencies, GACR has focused on developing cooperation based on the Lead Agency (LA) principle. The first cooperation based on Lead Agency was successfully established with the Austrian Science Fund (Fonds zur Förderung der Wissenschaftlichen Forschung, FWF). The memorandum of cooperation was signed in 2013. In the autumn of 2019, GACR signed a new Memorandum of Understanding with the Swiss National Science Foundation (SNSF) based on Lead Agency. The first call will be published in 2020, and the Czech and Swiss agencies will take turns in the Lead Agency role. The SNSF will take on this role in 2020. In December 2019, GACR started preliminary discussions with the National Science Foundation (NSF) of the United States to develop Lead Agency-based cooperation.

Intensive meetings and discussions took place in 2019 in order to prepare new Lead Agency-based cooperation within the Central European Science Partnership (CEUS). GACR had become one of CEUS, whose main goal is to expand and further develop the opportunities for scientific cooperation in basic research in the Central European region. Other founding members are Austria, Slovenia (Javna agencija za raziskovalno dejavnost, ARRS), and Poland (Narodowe Centrum Nauki, NCN). One of the main goals of CEUS is to offer researchers the opportunity to apply for both bilateral and multilateral LA grants. The top leaders of the national agencies signed a Memorandum of Understanding for Lead Agency-based cooperation in the spring of 2019. The first calls will be announced in 2020. All of the participating agencies will act both as lead agencies and partner agencies.

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 include the following countries at present: Switzerland, United Kingdom, France, Slovenia, Germany, Portugal, Luxembourg, Belgium, Sweden, Austria, Croatia, Poland, the Netherlands, Norway, Ireland and the Czech Republic. Researchers from these countries would have an opportunity for bilateral and multilateral cooperation based on LA evaluation. Other options for multilateral LA grants can be expected in the future.

The President of GACR represented the agency at top level international meetings. Among others, as a member of Science Europe, GACR took part in the SAC Symposium and General Assemblies Science Europe with the main agenda being "approaches to competitive funding", the goals of sustainable development, public engagement, and the ongoing preparations of a framework for multilateral cooperation based on the Lead Agency principle. The President also took part at the " General Assembly – High Level Workshop & Participation in Research Assessment Processes Activities". She also took part in the anniversary European meeting of the Global Research Council in Oslo where the main point on the agenda was sustainable development in the context of science. The President delivered a speech at the Global Science and Technology Leaders Forum in Taipei, Taiwan.

The President received several delegations from abroad on GACR premises in order to further develop international cooperation. Delegates included the representatives of China International Talent Exchange Foundation (CITEF), the newly appointed Science Director of the Taipei Industrial and Cultural Office, prof. Hong-Wei Yen, Ph.D., the new diplomat in charge of science in Taiwan, Mrs. Leflerová, and the representatives of NSF (United States) and SNSF (Switzerland).

7 REPRESENTATION OF WOMEN AND MEN IN GACR BODIES AND PROJECTS

7.1. GACR GOVERNING BODIES

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 the R&D Council's proposal. Members of the Scientific Advisory Board are appointed and removed by the Government of the Czech Republic on the basis of the R&D 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 late September 2019, the Scientific Advisory Board saw changes in membership. One member resigned and no replacement was appointed. GACR's SAB thus continued with 11 members instead of the original 12 (11 men and 1 woman), see Exhibit 15. The Supervisory Board saw changes in membership as well. The original number of members (9, of which 5 men and 4 women) grew to 10 (8 men, 2 women), as shown in Exhibit 15 below.

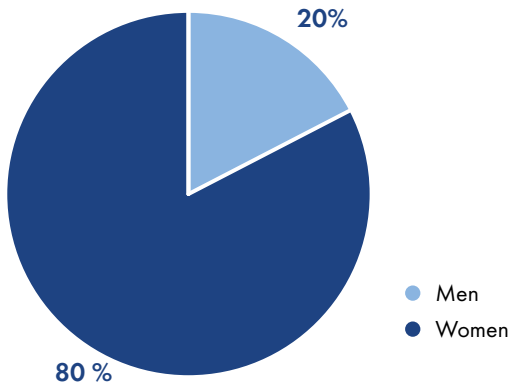
Exhibit 15: Men and Women in the governing bodies of GACR

GACR	Members in total	of which women	of which men	Representation of women
Presidium	5	2	3	40.0%
Science Advisory Board	11	1	10	9.1%
Supervisory Board	10	2	8	20.0%

7.2. THE OFFICE OF GACR

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 external co-workers to adjust working hours, work on flexible contracts and, thanks to modern technologies and remote connectivity, to work from home.

Exhibit 16: The proportion of men and women employed at the Office of GACR



In 2019, the Office's headcount was 60, of which 48 were women and 12 were men, as shown in Exhibit 16.

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. Individual panel members are then selected by the 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.

In 2019, the panels saw substantial changes and replacements of members pursuant to the Charter and the Rules of Procedure of GACR's Discipline Committees and Evaluation Panels. Nearly half the panel members were replaced. The new experts began their first term of office on 1 April 2019. At the end of 2019, a total of 415 experts worked in 39 panels, of which 332 were men and 83 women.

The total representation of women in panels was 20%.

7.4. DISCIPLINE COMMITTEES

GACR's Discipline Committees (hereinafter "DC") are expert advisory bodies for the evaluation of grant project proposals, their interim 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 are appointed by the Presidium for a two-year term, and they are selected from among individuals nominated by the relevant Discipline Committee by a secret vote of its members.
In 2019, there were 39 panel chairs and 39 vice-chairs. Of the total number of Chairs, 7 were women (i.e. 17.9%) and 32 men (i.e. 82.1%). Among Vice-Chairs, there were 8 women (20.5%) and 31 men (79.5%).

7.5. GACR PROJECTS

In early 2015, GACR approached the Office for Personal Data Protection (hereinafter "OPDP") with a request for an opinion on the possible demand and further use of gender information of applicants or co-applicants of grant projects directly in the project proposal in order to keep track of the representation of men and women in the role of applicants. However, in the opinion of the OPDP of 21 January 2015, GACR may not require such information and applicants or co-applicants may only share this information on voluntary basis. Therefore, GACR 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 caveat that only within those projects was it possible to determine the investigators' gender.

In the public tender for the support of standard projects with expected project launch in 2002, a total of 1,867 project proposals were assessed. It was possible to determine the gender in 1,854 project proposals. A total of 457 project proposals (i.e. 24.6%) were submitted by female applicants, out of which 95 projects received funding (i.e. 20.1%). A total of 142 women (i.e. 22.6%) were co-ap-

Exhibit 17: Representation of women in the role of project applicant or investigator for standard projects with an expected launch date in 2020 by Discipline Committees

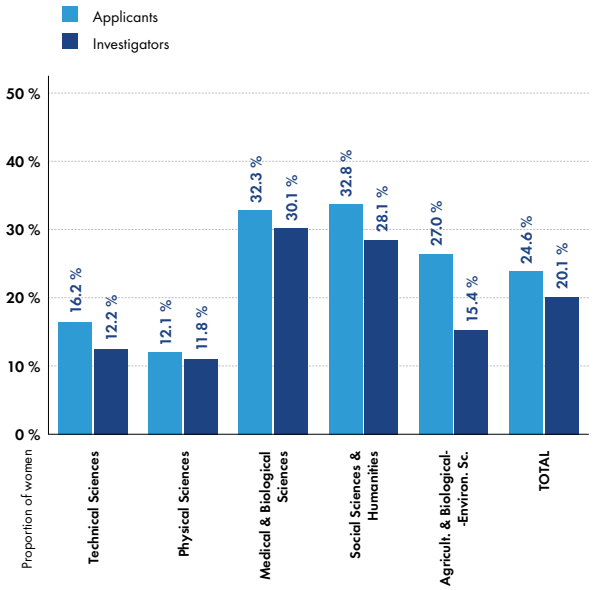


Exhibit 18: Representation of women in the role of project co-applicant or co-investigator for standard projects with an expected launch date in 2020 by Discipline Committees

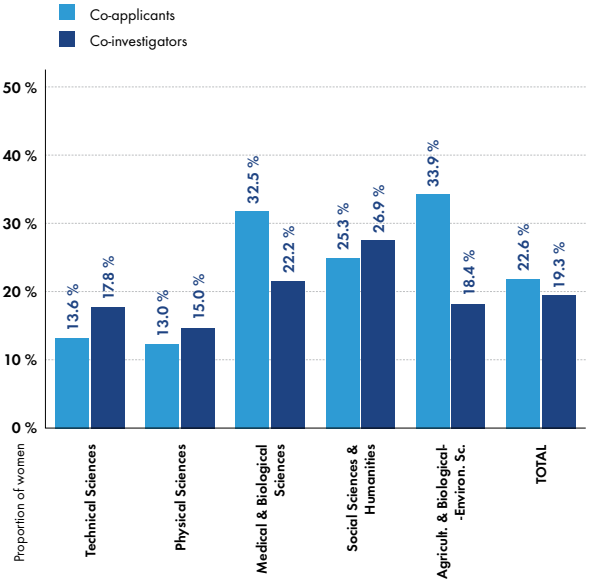
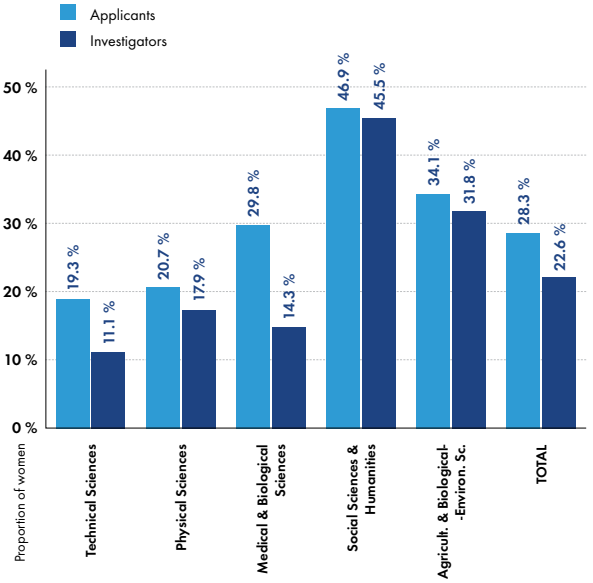


Exhibit 19: Representation of women in the role of project applicant or investigator for junior projects with an expected launch date in 2020 by Discipline Committees



plicants in the project proposals, and 34 (i.e. 19.3%) in the role of co-investigators. The women's success rate in this tender turned out at 20.8%, and that of men at 27.1% (see Exhibits 17 and 18).

7.7. JUNIOR PROJECTS

We present information on the representation of women and men among applicants for standard projects, with the caveat that only within those projects was it possible to determine the investigator's gender.

In public tenders for junior projects with an expected launch date in 2020, a total of 301 project proposals were evaluated. It was possible to determine the applicant's gender from 300 proposals. A total of 85 proposals were submitted by women (28.3%), of which 21 received funding (22.6%). The success rate of female applicants was 24.7% compared to 33.5% among male ones – see Exhibit 19.

PUBLIC RELATIONS OF GACR

8

In 2019, the GACR continued to work intensively on building relationships with the 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 excellency through the media, its own website and Facebook.

The website went through a major upgrade and got a new, attractive design in late January 2019 in line with the high standards of these days. The Presidium and the department heads from the Office had an off-site meeting at the Štiřín castle on 21–22 November, 2019. The off-site was attended by science leaders including doc. Ing. Karel Havlíček, members of the Czech University Council, Czech Rectors Conference, the Chair of the Czech Academy of Sciences, European Research Council, Technology Agency of the Czech Republic, discipline committees of GACR, members of the Supervisory Board and the Scientific Advisory Board of GACR. Members of the Czech Academy of Sciences, Universities and the R&D Council discussed various suggestions to simplify the work of GACR project investigators in the future.

Last year, Ing. Lada Knetlová, the Office Director of the GACR Office, continued to communicate the GACR existing rules defined in the tender documents for the support of basic research grant projects to the grant department employees, grant applicants and scientists; she also provided practical information for submitting project proposals through the GRIS online application. Seminars for candidates in the tenders announced in 2019 were held in Prague, Brno and Pilsen – the seminar was held at the University of Economics in Prague on 7 March, 2019, at the Masaryk University in Brno on 8 March, 2019, and at the University of West Bohemia in Pilsen on 11 March, 2019.

GACR announces important news, upcoming events, and news about basic research, through its website at www.gacr.cz and through social networks. GACR operates a helpdesk for scientists and administrators at info@gacr.cz or +420 227 088 841 (landline) or through an online contact form. Frequently asked questions are aggregated in the FAQ section of the GACR website. Last year, the operators of these communication channels received almost 10,000 queries.

GACR continued to work in 2019 with 4 JAN Public Relations, s.r.o., in order to maintain and further develop communication with both the professional public and the broad general public.

8.1. OUTSTANDING ACHIEVEMENT AWARDS

The GACR President's Award is awarded annually as an appreciation of outstanding results achieved within basic research projects funded by GACR under the R&D Funding Act. The Presidium of GACR chose the winners from among dozens of competing projects. Five investigators of the best basic research projects were awarded the President's Award for 2019.

Zdeněk Sofer received the award for a study on ion beam modifications of graphene-based structures. Jiří Bruthans examined the effect of gravity-induced stress on sandstone erosion. Marek Mráz received the award for a study of the regulation of B cell receptor signalling through MicroRNAs. Václav Štětka, another laureate, analysed the role of social media in the transformation of political communication and citizen participation in the Czech Republic. Last but not least, Robert Černý focused his study on the oro-pharyngeal interface in the evolution of the vertebrate primary mouth.

The President's Award is associated with a financial prize dedicated to the award winner and the members of his or her grant project team. In keeping with tradition, the award ceremony was held at the refectory of the Professed House of the Faculty of Mathematics and Physics of the Charles University.

In addition to press releases for the media, GACR also prepared short video profiles featuring each of the awarded scientists and their projects. You can watch the videos on GACR's YouTube channel: https://www.youtube.com/user/GrantovaAgentura.

8.2. MORE INFORMATION ABOUT PROJECTS RECEIVING THE PRESIDENT'S AWARD

prof. Ing. Zdeněk Sofer, Ph.D.
University of Chemistry and Technology in Prague – Faculty of Chemical Technology
Ion beam modifications of graphene-based structures

The project examined 2D materials – graphen and layered chalcogen in particular – and how they interact with ion beams. The interaction with high-energy ions results in structural and chemical changes in the material exposed to the beams. For example, exposure of graphen oxide coatings to ion beams results in the decomposition of oxygen functional groups accompanied by a substantial increase in electric conductivity. A localised exposure to the beams from what is called the ion microprobe enabled the creation of complex conductive structures on a flexible resistive graphen-oxide coatings for various applications in flexible electronics. The study also examined the interaction of ion beams with layered chalcogenides with an observable increase in catalytic activity as a result of the creation of catalytically active defects on the surface of materials. In the course of the project, a sizeable amount of new graphite derivatives as well as other 2D materials were synthesised. The results were published in prestigious publications such as the ACS Nano and Angewandte Chemie ("Applied Chemistry" in German).

doc. RNDr. Jiří Bruthans, Ph.D.
Charles University – Faculty of Science
Effect of gravity-induced stress on sandstone erosion: Physical and numerical modelling

The study examined the effect of stress (tension) in rocks on sandstone weathering and erosion and the creation of rock formations such as archways, crags, or rock vaults. Gravity-induced stress is present in every rock on Earth. Until recently, however, the influence of gravity-induced stress on weathering had not been considered very significant. Physical modelling of sandstone from the Střeleč quarry as well as other materials from the Czech Republic and other countries proved that the pressure field has a strong influence on the intensity of erosion and weathering by salt and frost, and is the cause of the creation of rock formations. For the first time ever, this study achieved to simulate the creation of perfectly formed rock arches (e.g. Arches, USA; an article in "Geology") and to model the creation of rock formations on a computer (an article in "Earth Science Reviews").

doc. MUDr. Mgr. Marek Mráz, Ph.D.
FN Brno – Internal hematology and oncological clinic and the Masaryk University – Faculty of Medicine; CEITEC
Regulation of B cell receptor signalling through MicroRNAs

Doc. Mráz's laboratory is dedicated to the research of B cell leukaemias and lymphomas – diseases created from B cells. These tumours are often a result of an interruption of the molecular pathway which controls the production of antibodies in case of B cells – signalling through the B cell receptor (BCR). This award-winning study was the first to describe the existence of a mechanism through which malign B cells inhibit the activities of the BCR pathway once their DNA is damaged. The mechanism discovered by this study includes p53 protein and what is called non-coding RNA miR-34a and its target molecules. The measurement of miRNA levels can also be used to predict the response to treatment in patients with chronic lymphocytic leukaemia (CLL) and B cells. Patients who do not show a functional p53 pathway (approx. 15% CLL patients) still have active BCR signalling despite the administration of chemotherapy, and it is highly desirable to give them a different treatment, such as direct BRC inhibitors.

PhDr. Václav Štětka, Ph.D.
Charles University – Faculty of Social Sciences – Institute of Sociological Studies; Loughborough University – School of Social Sciences (UK)
Role of social media in the transformation of political communication and citizen participation in the Czech Republic

The study carried out a comprehensive survey of the adoption of social networks for the communication of political parties and individual politicians related and unrelated to elections in the Czech Republic. It helped us better understand the growing role of social media among citizens and political players, including factors that drive internet users' willingness to participate in the political process through digital technologies. The study surveyed the decisive moment of the advent of populist and alternative parties into the Czech political system, and helped clarify the key significance of social networks for these new political formations and their communication strategies. In relation to the use of social networks for political communication by citizens, the study discovered that virtual and physical forms of participation are not mutually exclusive but rather mutually supportive. In addition, the study revealed striking differences between men and women in the intensity and nature of political participation.

Mgr. Robert Černý, Ph.D.
Charles University – Faculty of Natural Sciences
Oro-pharyngeal interface in the evolution of the vertebrate primary mouth: a comparative analysis of gene expression in the context of the unforeseen dynamics of ecto-endodermal interactions

The project team achieved to discover and document what is called the pre-oral gut in the embryonic stage of Actinopterygii. Authorities in the field had suspected this enigmatic structure in our mutual predecessors but it was never found in any currently living vertebrate. The fish examined by the team – cladistia, acipenser, and alligator gar – have retained this archaic attribute in the early development stage of their larvae – an attribute that other vertebrates lost way back in the evolution as the yolk deposits in their eggs had grown. The species under investigation represent a unique evolutionary developmental model. In addition, the work of the scientific team published in "Nature" proved that this embryonic domain represents an unforeseen contribution of the internal germ layer (endoderm) to the surface of a head.

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

9.1. CHAIRS AND VICE-CHAIRS OF THE EVALUATION PANELS

TECHNICAL SCIENCES

P101 Mechanical Engineering
Dr. Ing. Pavel Polach (chair)
– Výzkumný a zkušební ústav Plzeň, s.r.o. (Pilsen Research Institute & Testing Lab)
Ing. Josef Foldyna, CSc. (vice-chair)
– Institute of Geonics of the Czech Academy of Sciences (hereinafter "CAS") (vice-chair)

P102 Electrical Engineering and Electronic Engineering
prof. Ing. Jan Franc, DrSc. (chair)
– Charles University, Faculty of Mathematics & Physics
Pavel Peterka, Ph.D. (vice-chair)
– CAS Institute of Photonics & Electronics

P103 Cybernetics and Information Processing
doc. Mgr. Martin Nečaský, Ph.D. (chair)
– Charles University – Faculty of Mathematics & Physics
prof. RNDr. Olga Štěpánková, CSc. (vice-chair)
– Czech Technology University, Prague, Czech Institute of Informatics, Robotics & Cybernetics

P104 Construction Materials, Architecture and Building Science
doc. Ing. Jiří Bydžovský, CSc. (chair)
– Brno University of Technology, Faculty of Civil Engineering
doc. Ing. Jiří Kolísko, Ph.D. (vice-chair)
– Czech Technical University in Prague, Klokner Institute

P105 Structural Mechanics and Construction, Fluid Mechanics and Geotechnics
doc. Ing. Stanislav Pospíšil, Ph.D. (chair)
– CAS Institute of Theoretical and Applied Mechanics
prof. Ing. Zbyněk Keršner, CSc.
– Brno University of Technology, Faculty of Civil Engineering

P106 Technical Chemistry
prof. Ing. Jiří Čejka, DrSc. (chair)
– Charles University, Faculty of Science
Dr. Ing. Jan Macák (vice-chair)
– University of Pardubice – Faculty of Chemical Technology

P107 Metallic Materials – Preparation and Properties
prof. RNDr. Vladimír Šíma, CSc. (chair)
– Charles University, Faculty of Mathematics & Physics
RNDr. Aleš Kroupa, CSc. (vice-chair)
– CAS Institute of Physics of Materials

P108 Materials Sciences and Engineering
RNDr. Ing. Martin Kalbáč, Ph.D. (chair)
– CAS Heyrovsky Institute of Physical Chemistry
prof. Ing. Ivo Dlouhý, CSc. (vice-chair)
– CAS Institute of Physics of Materials

PHYSICAL SCIENCES

P201 Mathematics
prof. RNDr. Jan Slovák, DrSc. (chair)
– Masaryk University, Faculty Sciences
doc. Ing. Petr Girg, Ph.D. (vice-chair)
– University of West Bohemia in Pilsen, Faculty of Applied Sciences

P202 Computer Science
doc. Ing. Hana Tomášková, Ph.D. (chair)
– University of Hradec Králové, Faculty of Informatics and Management
prof. Dr. Ing. Ivana Kolingerová (vice-chair)
– University of West Bohemia in Pilsen, Faculty of Applied Sciences

P203 Nuclear and Particle Physics, Plasma Physics and Low Temperature Physics
RNDr. Jana Bielčíková, Ph.D. (chair)
– CAS Nuclear Physics Institute
doc. RNDr. Miloš Rotter, CSc. (vice-chair)
– Charles University, Faculty of Mathematics & Physics

P204 Condensed Matter and Material Physics
Ing. Dominik Legut, Ph.D. (chair)
– Technical University of Ostrava, IT4Innovations-National Supercomputing Center
Ing. Jan Grym, Ph.D. (vice-chair)
– CAS Institute of Photonics & Electronics

P205 Biophysics, Macromolecular Physics and Optics
prof. RNDr. Viktor Brabec, DrSc. (chair)
– CAS Institute of Biophysics
doc. Mgr. Jan Soubusta, Ph.D. (vice-chair)
– Palacky University Olomouc, Faculty of Natural Sciences

P206 Analytical Chemistry – Chemical and Structural Analysis of Atomic, Molecular and (Bio)Molecular Systems
prof. Ing. Michal Holčapek, Ph.D. (chair)
– University of Pardubice – Faculty of Chemical Technology
prof. RNDr. Viktor Kanický, DrSc. (vice-chair)
– Masaryk University, Faculty of Science

P207 Chemical and Biochemical Transformations
prof. RNDr. Petr Hermann, Dr. (chair)
– Charles University, Faculty of Science
prof. RNDr. Petr Klán, Ph.D. (vice-chair)
– Masaryk University, Faculty of Science

P208 Chemical Physics and Physical Chemistry
doc. Ing. Pavel Čičmanec, Ph.D. (chair)
– University of Pardubice, Faculty of Chemical Technology
Ing. Jiří Brus, Dr. (vice-chair)
– CAS Institute of Macromolecular Chemistry

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)
– CAS Astronomical Institute

P210 Geophysics, Geochemistry, Geology and Mineralogy, Hydrogeology
doc. RNDr. František Gallovič, Ph.D. (chair)
– Charles University, Faculty of Mathematics and Physics
prof. Ing. Ondřej Šráček, Ph.D., M.Sc. (vice-chair)
– Palacky University Olomouc, Faculty of Science
Chairs and vice-chairs of the Evaluation Panels:

MEDICAL AND BIOLOGICAL SCIENCES

P301 Genetics, Experimental Oncology, Medical Biochemistry, Metabolism and Nutrition
prof. MUDr. Tomáš Stopka, Ph.D.
– Charles University, First Faculty of Medicine
RNDr. Jana Kašpárková, Ph.D. (vice-chair)
– CAS Institute of Biophysics

P302 Morphological Disciplines, Microbiology, Immunology, Epidemiology and Hygiene
prof. RNDr. Václav Hořejší, CSc. (chair)
– Institute of Institute of Molecular Genetics
doc. Ing. Jaroslav Hrabák, Ph.D. (vice-chair)
– Charles University, Faculty of Medicine in Pilsen

P303 Physiological Disciplines, Pharmacology, Neurosciences and Toxicology
prof. Ing. Kamil Kuča, Ph.D. (chair)
– University of Hradec Králové, Faculty of Science
prof. MUDr. Romana Šlamberová, Ph.D. (vice-chair)
– Charles University, Third Faculty of Medicine

P304 Clinical and Preclinical Research, Experimental Medicine
doc. MUDr. Jan Polák, Ph.D., MBA (chair)
– Charles University, Third Faculty of Medicine
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)
– CAS Biology Centre
RNDr. Petr Man, Ph.D. (vice-chair)
– CAS Institute of Microbiology

SOCIAL SCIENCES AND HUMANITIES

P401 Philosophy, Theology, Religious Studies
doc. PhDr. Luboš Bělka, CSc. (chair)
– Masaryk University, Faculty of Arts
doc. PhDr. Tomáš Nejeschleba, Ph.D. (vice-chair)
– Palacky University Olomouc, Faculty of Arts

P402 Economic Sciences, Macroeconomics, Microeconomics, Econometrics except Financial Econometrics, Quantitative Methods in Economics except Operational Research
prof. Ing. Martin Macháček, Ph.D. et Ph.D.
– Technical University in Ostrava
Mgr. Marek Kapička, Ph.D. (vice-chair)
– CAS Economics Institute

P403 Business and Management Science, Financial Econometrics and Operational Research
doc. RNDr. Ing. Miloš Kopa, Ph.D. (chair)
– Charles University, Faculty of Mathematics & Physics
prof. Ing. Karel Janda, M.A., Dr., Ph.D. (vice-chair)
– Charles University, Faculty of Social Sciences

P404 Sociology, Demography, Social Geography and Media Studies
prof. PhDr. Dana Hamplová, Ph.D. (chair)
– CAS Institute of Sociology
PhDr. Jan Jirák, Ph.D. (vice-chair)
– Charles University, Faculty of Social Sciences

P405 Archeology and Pre-Modern History until 1780
PhDr. Lucie Storchová, Ph.D. (chair)
– Charles University, Faculty of Humanities
Mgr. Gabriela Blažková, Ph.D. (vice-chair)
– CAS Institute of Archaeology

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

P407 Psychology, Pedagogy
doc. RNDr. Jana Straková, Ph.D. (chair)
– Charles University, Faculty of Education
doc. PhDr. Matúš Šucha, Ph.D. (vice-chair)
– Palacky University Olomouc, Faculty of Arts

P408 Juridical Science and Political Science
PhDr. Lukáš Linek, Ph.D. (chair)
– CAS Institute of Sociology
prof. JUDr. Naděžda Rozehnalová, CSc. (vice-chair)
– Masaryk University, Faculty of Law

P409 Art Sciences
Mgr. Libor Jůn, Ph.D. (chair)
– National Museum in Prague
doc. Mgr. Martina Pachmanová, Ph.D. (vice-chair)
– Academy of Arts, Architecture and Design in Prague

P410 Modern History (since 1780) and Ethnology
doc. Dr. Phil. Rudolf Kučera, Ph.D. (chair)
– Masaryk Institutes and Archives of the Czech Academy of Sciences
doc. PhDr. Daniel Drápala, Ph.D. (vice-chair)
– Masaryk University, Faculty of Arts

AGRICULTURAL AND BIOLOGICAL-ENVIRONMENTAL SCIENCES

P501 Plant Physiology and Genetics, Plant Medicine
doc. RNDr. Vladimír Špunda, CSc. (chair)
– University of Ostrava, Faculty of Science
doc. RNDr. David Honys, Ph.D. (vice-chair)
– CAS Institute of Experimental Botany

P502 Animal Physiology and Genetics, Veterinary Medicine
Ing. Michal Kubelka, CSc. (chair)
– CAS Institute of Animal Physiology and Genetics
Ing. Jiří Plachý, CSc. (vice-chair)
– CAS Institute of Macromolecular Genetics

P503 Food technology, Ecotoxicology and Environmental Chemistry
prof. Ing. Jiří Kopáček, Ph.D. (chair)
– CAS Biology Center, CAS Institute of Hydrobiology
Ing. Jan Kopečný, DrSc. (vice-chair)
– CAS Institute of Animal Physiology and Genetics

P504 Landscape Management, Forestry and Soil Biology, Ecosystem Ecology
Mgr. Jan Jansa, Ph.D. (chair)
– CAS Institute of Microbiology
Ing. Jan Kopecký, Ph.D. (vice-chair)
– Crop Research Institute

P505 Animal and Plant Ecology
Mgr. Martina Janoušková, Ph.D. (chair)
– CAS Institute of Botany
doc. Mgr. Otmar Urban, Ph.D. (vice-chair)
– Global Change Research Centre, Brno

P506 Botany and Zoology
prof. RNDr. Tomáš Scholz, CSc. (chair)
– CAS Biology Centre, CAS Institute of Parasitology
RNDr. Roman Hobza, Ph.D. (vice-chair)
– CAS Institute of Biophysics

9.2. CHAIRS AND VICE-CHAIRS OF THE DISCIPLINE COMMITTEES

DC 1 – Technical Sciences
prof. Ing. Jan Franc, DrSc. (chair)
– Charles University, Faculty of Mathematics & Physics
RNDr. Ing. Martin Kalbáč, Ph.D. (vice-chair)
– CAS Heyrovsky Institute of Physical Chemistry

DC 2 – Physical Sciences
prof. RNDr. Jan Slovák, DrSc. (chair)
– Masaryk University, Faculty of Science
RNDr. Bruno Jungwiert, Ph.D. (vice-chair)
– CAS Astronomical Institute

DC 3 – Medical and Biological Sciences
prof. Ing. Kamil Kuča, Ph.D. (chair)
– University of Hradec Králové, Faculty of Science
prof. MUDr. Manuela Vaněčková, Ph.D. (vice-chair)
– Charles University, First Faculty of Medicine

DC 4 – Social Sciences and Humanities
doc. Dr. Phil. Rudolf Kučera, Ph.D. (chair)
– CAS Masaryk Institute and Archives
prof. Ing. Martin Macháček, Ph.D. et Ph.D. (vice-chair)
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doc. RNDr. David Honys, Ph.D. (chair)
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