



Brno **Ph.D.** Talent

Guide for Applicants

2020 Competition Round



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Introduction of the Competition

This Guide for Applicants is related to the Brno Ph.D. Talent Competition announced on the www.icmm.cz website. The competition is open to students of technical and life sciences enrolled in the first year of doctoral study program at one of the four partner universities in Brno.

The aim of this competition is to identify 25 talented students and provide them a long-term support through an additional scholarship of 100 thousand CZK per year and through the coherent support scheme for career development in the research sphere. The scholarship is granted for the period of three years and can thus amount to 300 thousand CZK in total. The support scheme offers the students a 3-years series of workshops and lectures on soft skills and transferrable skills for researchers. The purpose of this support is to eliminate the need for raising extra income, give the students an opportunity to focus fully on their studies and research and to lead the students to research excellence and leadership.

1. Basic Information

1.1 Terms

For the purposes of this competition, the following terms mean:

- **provider** is the Brno City Municipality which provides financial support for the competition
- **administrator** is the JCMM which organizes the competition
- **applicant** is a student of technical or life sciences enrolled in an accredited doctoral study program at a partner university who applies for the scholarship
- **evaluators** are experts in technical and life sciences working in academia outside of the partner universities as well as professionals from the private sector who provide their expertise to evaluate the applications
- **beneficiary** is an applicant who, based on the competition results, is awarded the scholarship

1.2 Partner Universities

The partner universities are:

- **Brno University of Technology**
- **Masaryk University**
- **Mendel University in Brno**
- **University of Veterinary and Pharmaceutical Sciences Brno**

1.3 Talented Ph.D. Student

The competition aims to support talented doctoral students. The selection of beneficiaries is based on excellent academic track record, experience and extraordinary activities of the applicants related to the research. The quality of the submitted scientific project and the team and facilities are also taken into account.

Talented Ph.D. students manifest the following characteristics:

- are hardworking, motivated and creative,
- carry out their studies faster than the average students,
- demonstrate excellent study record and results,
- involve actively in scientific projects,
- present clearly their ideas and intentions.

Talented Ph.D. graduates should:

- engage in basic or applied research, development or innovation,

- have analytical power, advanced research skills and personal management skills,
- be able to work in a team and network internationally,
- manage scientific projects with uncertain outcomes in diverse conditions,
- have a high level of creative thinking and critical analysis,
- be efficient, initiative and independent.

1.4 Eligibility Criteria

The competition is open and its rules set no quota of applicants for partner universities, faculties or departments. Therefore do not hesitate to register. Ranking in the list is determined by the date of the first initial registration in the programme, no further changes in the application have any influence on the listing.

Eligibility Criteria:

- study full-time at a partner university
- be enrolled in the first year of a doctoral study program¹
- be under age of 32 years including
- study technical or life sciences

The competition is open only to doctoral students of technical and life sciences. Doctoral students of social sciences, humanities or arts are not eligible. This criterion applies to the applicant's field of study as well as the scientific project. If you are not sure whether you can apply for the competition, please, contact the administrator.

All applicants declare their compliance with the eligibility criteria before submitting the application. The declaration is part of an electronic form in the registration system. Only the beneficiaries document officially their compliance with the eligibility criteria before signing an agreement with the administrator. Compliance with the criteria can be documented by a study confirmation issued by a partner university.

All applicants must also grant the administrator their approval to process the data provided in the application and its transfer to the third parties in order to evaluate the application. The full name and academic degrees of the applicants and their supervisors, the scientific project title and the training department can be made public.

If a beneficiary has a permanent residence in a country where double taxation agreement with the Czech republic is not signed, their scholarship will be automatically taxed by 35% and the beneficiary will be granted only 65 thousand CZK yearly.

1.5 Time Schedule

The following schedule is indicative and minor changes may occur.

Table 1: Time schedule of the Brno Ph.D. Talent 2020 Competition

Activity	Date
Registration of Applicants	17. 8. - 30. 9. 2020
Formal Review of Applications (1st Round)	1. 10. - 11. 10. 2020
Expert Review of Applications (2nd Round)	12. 10. - 27. 11. 2020
Final Project Presentations (3rd Round)	1. 12. - 11. 12. 2020
Publication of Competition Results	14. 12. 2020

2. Application Form

The applicants, who meet the eligibility criteria, can apply for the competition by submitting an electronic application.

¹ I.e. to be enrolled in the 1st or the 2nd semester of the 1st year of doctoral studies in the autumn semester 2020.

The applications are submitted during the registration period (see Time Schedule above) via a registration system available at www.jcmm.cz.

The applicants register, create a personal account, fill in the online form and upload a PDF file. By the end of the registration period all applicants must confirm their application by clicking on the "save" icon.

The registration system is quite simple and provides guidance; therefore this guide does not describe it in more detail.

The applicant is responsible for the accuracy and completeness of the information provided in the application.

If the applicant does not provide all the mandatory information, the application is formally invalid and cannot be accepted for evaluation. If the applicant provides inaccurate or incomplete information, it will be reflected in a reduced score. Applications containing false or unsupported data will be rejected. If any part of the application exceeds the maximum length allowed, it will not be taken into account during the evaluation.

Overview of the application and its mandatory parts:

- **Applicant's CV** (2-3 pages)
 - discipline and the start date of doctoral studies
 - education and qualification for solving the proposed project
 - professional practice/practical experience, internships, solved scientific projects
 - results of scientific activities and academic awards
 - career plan
 - other relevant information
- **Scientific Project** (4-6 pages)
 - motivation for solving the presented project and your role
 - objectives and original contribution
 - theoretical framework, methods and techniques, basic references
 - time schedule and key milestones
 - relation between the project and the applicant's doctoral thesis
- **Team and Facilities** (2-3 pages)
 - supervisor and expert consultants, their contribution to the project, their qualification for guiding the applicant, main research activities, selected results of scientific and pedagogical activities, awards and recognitions, etc.
 - institutions where the project will be solved, including planned internships
 - other relevant information

All three parts of the application must be following the above order and presented in a **single PDF file**. The maximum size of the file is **10 MB**. The application should not be shorter than 8 pages, the maximum length is **12 pages of A4 paper size**. The application may begin with a start page, which contains the project title, the applicant's name, the applicant's email and the name of supervisor of the project and it is not counted in the page limit. The application must be uploaded into the registration system.

The document must have the following format: font size of at least **11 points** (references and notes can be written in 10 pt. font); single spacing or higher; all margins at least 2 cm wide; the heading of each page must contain the applicant's surname_name and the competition title "Brno PhD Talent 2020" and document must contain date of birth, nationality, current university, faculty and field of study; page number must be indicated at the footnote. Other text format and graphic layout depend on the needs and preferences of each applicant.

2.1 Applicant's CV

The professional CV provides information on your education and qualification. Highlight the results of your previous studies and scientific activities, particularly those related to your discipline and the topic of your project. We also recommend mentioning student awards, language exams and other accomplishments.

Write your CV structured in one of the commonly used forms while keeping in mind the mandatory content.

The permitted length of the CV is **two to three pages**. Be brief and give only relevant and verifiable information.

The evaluators can check the information and the administrator may require its documentation.

Mandatory content of the applicant's CV:

1) DISCIPLINE AND THE START DATE OF DOCTORAL STUDIES

Provide the name of your training institution and your field of study, date of admission and date of inscription in the first or the second semester.

2) EDUCATION AND QUALIFICATION FOR SOLVING THE PROJECT

Detail your education and qualification in logical sequence, so that it clearly explains your specific competencies and qualities. Emphasize those that will help you solve the proposed project. You can also provide a list of special courses you have attended.

3) PRACTICAL EXPERIENCE, INTERNSHIPS, SCIENTIFIC PROJECTS

Mention your experience with scientific projects that you have designed and solved yourself. You can also provide a list of scientific projects in which you have participated and explain how. Provide information on your practical experience and training including a brief job description. Give a list of your internships or participation in university and professional organizations. Mention also summer schools you have attended and indicate their focus.

4) RESULTS OF SCIENTIFIC ACTIVITIES AND ACADEMIC AWARDS

List the results of your scientific activities and academic awards, including the high-school level.

5) CAREER PLAN

Describe briefly your future career plan you wish to achieve in your professional life.

6) OTHER RELEVANT INFORMATION

Finally, you can mention the knowledge and skills you have acquired in your everyday activities, which are not necessarily evidenced by official certificates and diplomas. In other words, make the list of your skills, knowledge and qualification complete. Describe clearly your language, technical, computer, presentation and other skills and abilities acquired during your studies, through seminars or informal training courses and free-time activities.

2.2 Scientific Project

The scientific project is a basic set of chronological activities necessary to achieve objectives of research, development and innovation formulated by the applicant which is directly linked to his or her doctoral studies.

a) For the purposes of this competition, the scientific project means:

- i. Theoretical or experimental work undertaken principally to acquire new knowledge of fundamental principles of phenomena or observable facts, not primarily directed towards the application or use in practice (basic research).
- ii. Theoretical and experimental work aimed at obtaining new knowledge and skills for developing new or significantly improved products, processes or services (applied research).
- iii. Acquiring, combining, shaping and using existing scientific, technological, commercial and other relevant knowledge and skills for the design of new or significantly improved products, processes or services (experimental development).
- iv. Introduction of new or significantly improved products, processes or services into practice (innovation).

b) The result of the scientific project should be:

- i. In basic research, new knowledge about fundamental principles of phenomena or observable facts, published by the rules common in the given scientific field.
- ii. In applied research, new knowledge and skills to develop products, processes or services that are protected under the law of copyright protection, results of research or similar activities or used by the professional public or other users.
- iii. In development, design of new or substantially improved products, processes or services.
- iv. In innovation new or substantially improved products, processes or services introduced into practice

The scientific project may have a length from **four to six pages** of A4 paper size, including all charts, diagrams and references. Your supervisor can help you with its elaboration; however, do not forget to highlight your own contribution and explain the share of your work. Write the text for an expert in your discipline who is not informed about your specific project. Write clearly, be informative and brief.

Mandatory content of the scientific project description:

1) MOTIVATION, YOUR ROLE, OBJECTIVES AND ORIGINAL CONTRIBUTION

Give a short overview of the proposed project. Explain clearly your personal role in the project and your motivation to solve the identified problem, reveal the expected benefits. The introduction should describe clearly and concisely the objectives and original contribution. Beware general statements.

Explain how you plan to approach the problem addressed in the project so that the evaluators clearly understand what you intend to achieve. Also explain why your scientific project is important, up to date and why it should be carried out. The evaluators will want to understand the main idea of the project as well as its importance and innovativeness. The recommended length is 1 page.

2) THEORETICAL FRAMEWORK, METHODS AND TECHNIQUES, BASIC REFERENCES

In this part of the project, describe the project design. Demonstrate the viability and originality of the proposed approach and its professional level. Explain what techniques and methods you chose and why you prefer them. If the methods or techniques are commonly used, they do not require description in detail.

Describe briefly the current state of knowledge of the problem addressed in your project and mention the previous work on the topic. There is no need to give redundant references. Focus on the key references to show that you are familiar with relevant literature and that you are able to manage the project in detail. The recommended length is 3 pages.

3) TIME SCHEDULE AND KEY MILESTONES

The project should be divided into stages. Each stage should have its own target and the achievement of all stages should guarantee the accomplishment of the overall objective. Define the milestones and set them in a time frame so that you can monitor and evaluate the implementation of the project. The recommended length is 0.5 page.

4) RELATION BETWEEN THE PROJECT AND THE APPLICANT'S DOCTORAL THESIS

The title and the content of the project do not have to match fully the name or topic of your doctoral thesis. However, the project must be related to the thesis, e.g. it may be its sub-project. Explain the link between the proposed project and your thesis. The recommended length is 0.5 page.

2.3 Team and Facilities

An effective supervision over the applicant's project and training as well as high quality facilities guarantee that he or she manages both successfully. The permitted length is **two to three pages** A4.

1) SUPERVISOR AND EXPERT CONSULTANTS

Give a list of expert consultants who will significantly contribute to the project and ensure its professional quality. Explain their specific contribution, their qualification and key results of their previous work as well as their experience in supervision and mentoring of the students. It is not necessary to mention all the consultants or collaborators.

2) DEPARTMENT AND COOPERATING INSTITUTIONS

High quality facilities are crucial for successful implementation of the project. Describe briefly the facilities available at your training institution necessary for the proposed project. If your training institution lacks some special equipment, consider collaboration with other academic institutions or private sector and describe its benefits. Provide a list of planned internships.

3) OTHER RELEVANT INFORMATION

Finally, it is possible to provide other relevant information that you want to emphasize and which cannot be mentioned in other parts of the application.

2.4 Preparing the Application

The number of applications will certainly exceed the number of scholarships to be awarded. Therefore a selection of beneficiaries must be carried out. Dedicating enough time to designing your project and writing the application is the key for passing to the final competition round. The evaluators focus on your detailed state-of-the-art knowledge of the chosen problem. The evaluators will also examine whether your project addresses an important and current scientific problem. The project design and viability are also very important criteria.

Your application must give clear answers to the following questions:

- **What problem is addressed in the project?**
- **Why are you interested in this topic and what is your role in the project?**
- **How do you plan to solve the problem?**
- **Is the way you solve the problem innovative, does it involve the latest research and news?**
- **What are the expected results of the project?**

Keep in mind that the evaluators decide whether your project is worthwhile and well-designed, whether you are able to carry it out and the proposed outcomes are realistic. The addressed problem must be important, but not overly ambitious. It is important to clearly and strictly distinguish what you intend to do yourself and what will be done by your collaborators.

All of the above will be judged only upon your application. **The evaluators will only learn the facts you provide them in your application.** Your goal is to "sell" your previous results and achievements and to highlight your exceptional qualities in comparison to other applicants. Therefore, pay extra attention to make your application clear and informative. Avoid inaccurate or misleading data. Remember that vague or incomprehensible information may be the cause for a reduced score or even disqualification.

Ask yourself whether each sentence is clear and really necessary for understanding the project. Let your colleague or friend, who is not familiar with the project, read the proposal. Ask whether he or she understands your proposal. This informal criticism can be very helpful.

3. The Competition

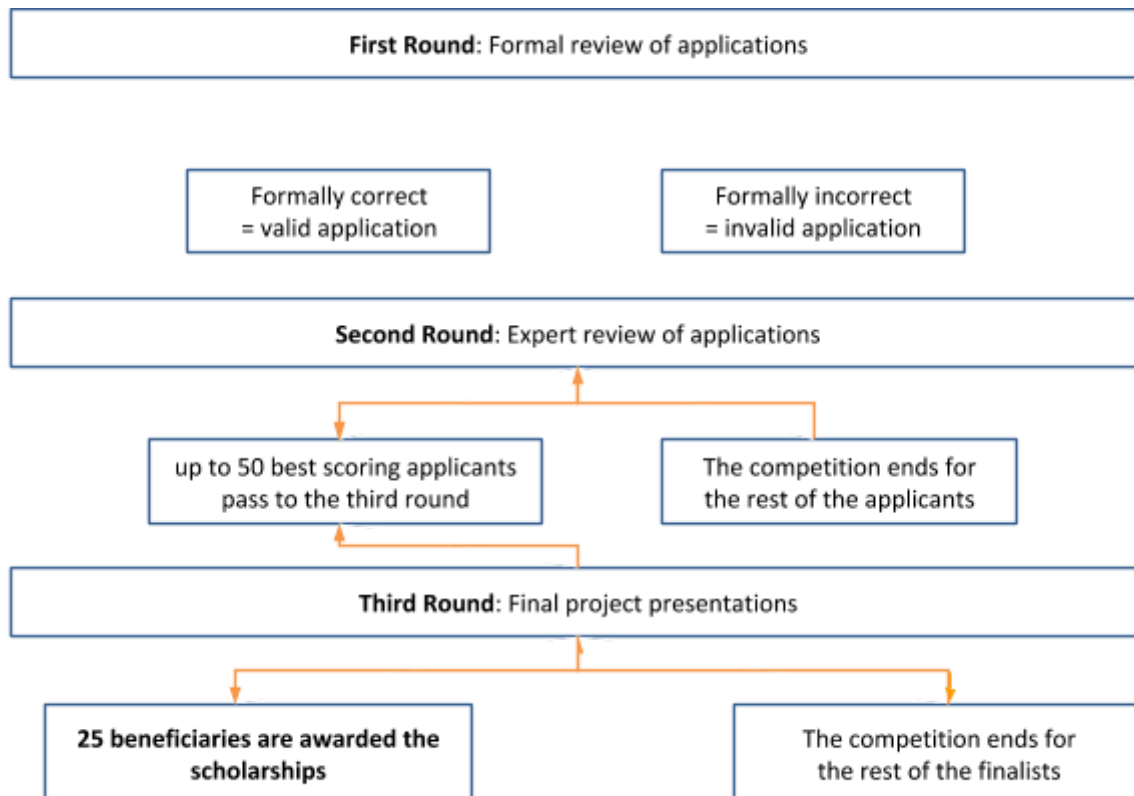
The competition has three rounds:

1. Formal review of applications
2. Expert review of applications
3. Final project presentations

In the first competition round the applications are formally reviewed. In the second round the content of the applications is evaluated. Applicants with the highest score pass to the third round and present their projects to our expert committee. See Figure 1: Scheme of the competition rounds.

The evaluation process is anonymous; the names of the evaluators are not public. The results of each round are announced via the registration system and the administrator notifies the applicants by e-mail.

Figure 1: Scheme of the competition rounds



3.1 Formal Review of Applications

In the first competition round, the administrator carries out a formal review of applications. Only the applications that meet all the formal criteria pass to the second round for expert review. Applications that do not meet the formal criteria are invalid and cannot be accepted for further evaluation.

The application is checked against the following formal criteria:

- The application has been submitted via the registration system during the registration period
- The application provides all the mandatory information specified in the second chapter of this guide
 - the application is complete and provides all the required information
 - the application has the required form, layout and length

As a part of the formal review, the applicant's field of study as well as the project are checked to correspond to the criterion of technical and life sciences. If at least three evaluators conclude that the proposed project or applicant's field of study does not meet the criterion, the application is rejected.

3.2 Expert Review of Applications

In the second round of the competition the applications are reviewed remotely by expert evaluators. The administrator ensures that each application is reviewed by at least 2 evaluators in order to establish the ranking of applicants in the second competition round. In the first phase, the evaluators review all assigned applications independently by scoring and commenting each evaluated area. The aim of the comments is to provide feedback to the applicants, which they may use to improve their projects regardless of their result in the competition.

Table 2: Evaluation Scale

	EXCELLENT (81-100 p.)	ABOVE AVERAGE (61-80 p.)	AVERAGE (41-60 p.)	BELOW AVERAGE (21-40 p.)	POOR (0-20 p.)
Applicant	<ul style="list-style-type: none"> + demonstrates excellent results, his or her level is unique compared to other applicants + shows great qualification and motivation for doctoral studies, for reaching the project objectives and obtaining original and scientifically valuable results 	<ul style="list-style-type: none"> + demonstrates very good results, which are above average compared to others + great motivation for successful studies and accomplishment of the project objectives, expectations of acquiring original and scientifically valuable results 	<ul style="list-style-type: none"> + demonstrates average results + well motivated to complete the doctoral degree and the project + expected results may be a useful addition to the current knowledge 	<ul style="list-style-type: none"> + the information provided shows that results and experience of the applicant are below average + It can be assumed that the applicant is not sufficiently qualified and motivated to complete the project and obtain scientifically valuable results 	<ul style="list-style-type: none"> + the information provided shows very poor results and experience of the applicant + It can be assumed that the applicant is not qualified and motivated to complete the project and obtain scientifically valuable results
Project	<ul style="list-style-type: none"> + very well designed, based on an original idea, with clear objectives + in terms of originality, importance and proposed solutions, the project proves an extraordinary quality which well exceeds the common level + the results promise a significant original contribution to the scientific knowledge 	<ul style="list-style-type: none"> + very well designed, based on a new idea, with clear objectives + In terms of originality, importance of ideas and proposed solutions, the project's quality is above average + the results may be useful for further development of scientific knowledge 	<ul style="list-style-type: none"> + based on correct assumptions, contains interesting ideas, the proposed solution is viable, its quality is average compared to other projects + the project design is generally correct but not fully clear in details and requires additional work + the project objectives can be achieved 	<ul style="list-style-type: none"> + original contribution of the project is unclear, expected results have minimal impact on the development of scientific knowledge + methodology is incomplete and the objectives cannot be achieved without additional adjustments + the design and the time schedule are not suitable for reaching the objectives 	<ul style="list-style-type: none"> + the original contribution of the project is negligible or none + the project is just a variation of a known solution + the methodology does not allow the achievement of the objectives, the time schedule is inadequate, it is not based on correct assumptions
Team and Facilities	<ul style="list-style-type: none"> + supervisor, external consultants and department facilities provide a supportive and inspiring environment + their experience and excellent results guarantee successful project implementation and applicant's training 	<ul style="list-style-type: none"> + very good department facilities and reputable supervisor and external consultants with necessary experience and significant results + It can be considered as a guarantee for successful project implementation and applicant's training 	<ul style="list-style-type: none"> + department facilities, supervisor and consultants are at average level + standard results and experience + the team and facilities are sufficient for successful project implementation and applicant's training 	<ul style="list-style-type: none"> + the information provided shows that the department, supervisor and consultants are below the average, demonstrate minimum international experience and collaboration + the team and facilities do not provide a credible guarantee for successful project implementation and applicant's training 	<ul style="list-style-type: none"> + the information available suggests that the results of the department, supervisor and consultants are very poor + negligible or no international experience + the team and facilities do not guarantee successful project implementation and applicant's training

Table 3: Score Calculation

Evaluated Area	Partial score	Weight	Total points
Applicant	0 – 100 points	30 %	0 – 30 points
Project	0 – 100 points	40 %	0 – 40 points
Team and Facilities	0 – 100 points	30 %	0 – 30 points
Total	–	100 %	max. 100 points

In the next phase, the second review is made available to the evaluator for revision of his or her scoring and comments. At this stage, the evaluators can correct their views having taken into account the opinion of the second evaluator. If, after the revision, any two reviews of the same application differ significantly, the application will be reviewed by a third evaluator.

When all the applications are reviewed, the administrator sets up the ranking of applicants after the second competition round. The ranking of applicants is determined by the overall score of their application. The overall score is a simple average of two expert reviews. If there are three reviews, the overall score of the application is the simple average of two reviews with closer score.

3.3 Final Project Presentations

Up to 50 applicants (finalists) who receive the highest overall score pass to the third and final round of the competition. However, in order to pass to the final round, the applicant must receive at least 60 points in both expert reviews and also achieve the minimum of 60 points for the overall score. In the final round the finalists present their scientific project in front of an expert committee.

The expert committee and the presentation:

The expert committees are composed of minimum three experts on technical sciences and life sciences, respected experts capable of evaluating adequately the qualities of the finalists and their scientific projects in a broader context (i.e. distinguished researchers, representatives of centres of excellence and innovative enterprises, etc.). The expert committee ensures an impartial assessment of the applicants with regard to the expert reviews from the second round, which are at their disposal.

Each presentation lasts approximately 10 minutes, about 6 minutes to present the project and the team and facilities and 4 minutes for a discussion. Apart from the applicant's professional knowledge the committee members take into account their overall expression. We therefore recommend focusing on the form of the presentation as well.

The committee will evaluate the presentation skills, the ability to defend the project design and its contribution, motivation, reaction time, assertiveness, etc.

The final ranking of applicants:

After hearing all presentations and discussion with each finalist the committees select the beneficiaries. The selection is based primarily on the consensus of all committee members. If the consensus is not reached, the committee decides by the majority of its members. The committee can vote only in the presence of at least three members.

The scholarships are awarded to the top 25 finalists. If the committee members conclude that less than 25 finalists meet the competition requirements, they may award fewer scholarships. The committee may appoint substitute beneficiaries among the remaining finalists and set their ranking. If any of the beneficiaries withdraw or is disqualified, his or her scholarship passes to the first substitute. A disqualification of a beneficiary is possible only if he or she fails to prove the information provided in the application or withdraws him or herself voluntarily from the competition.

There will be selected additional 10 finalists from those who have not been selected among beneficiaries and they will be awarded a title "Brno Ph.D. Talent Finalist". They will be included in the support scheme for career development, which is available both for beneficiaries and finalists.

The final results of the competition will be announced on the JCMM website.

Conclusion

The beneficiaries will sign an agreement with the administrator. The agreement is expected to be signed in December 2020. One of the prerequisites to conclude the agreement is to provide a study confirmation and, if requested by the administrator, other documents referred to in the application.

The scholarship in the total amount of 300 thousand CZK will be paid to the beneficiary periodically, usually every three months, during the period from January 2021 till December 2023. However, the beneficiary must fulfil a series of commitments stated in the agreement; otherwise the financial contribution will be withdrawn. A brief project description will be annexed to the agreement.

The main commitment is to submit a monitoring report for every concluded semester. Furthermore, the beneficiary agrees to study without interruption and notify the administrator of any substantial change in the scientific project. The beneficiary also confirms that he or she will observe the rules of publicity and will cooperate with the administrator.

The programme includes a support scheme for career development, which includes presentations and workshops focused on communication skills, career guidance, teaching skills, academic writing, presentation skills, grant opportunities, open access, project management and other skills necessary for a successful researcher.

The beneficiaries will present their project progress in the second year and the project results in the third year in front of an expert committee.

If you have any further questions regarding the competition, please, do not hesitate to contact us.

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