

# The Austrian Science Fund (FWF) in the International Context

## Introduction

Scholarly exchanges, cooperation, and competition across national boundaries are typical characteristics of today's global system of science and research. The trend towards international cooperation has accelerated noticeably in recent years. For example, between 2010 and 2020, the share of scholarly publications involving authors from at least two EU countries rose from 43.2% to 55.6%.<sup>1</sup> By 2020, the share of publications written by Austrian researchers in cooperation with international authors had already reached 68%.<sup>2</sup> However, according to the *European Innovation Scoreboard 2023*,<sup>3</sup> Austria still lags behind comparable small and medium-sized European countries with strong science and research communities in terms of the share of international co-publications per million inhabitants.

The need to integrate complementary expertise and to achieve international visibility through cross-border cooperation arrangements is naturally greater in the scientific communities of small countries with strong science and research bases. National research funding agencies need to account for this trend and to develop suitable instruments and measures to support the internationalization efforts of their national science and research systems, thus ensuring their international integration and competitiveness. In Austria's case, this need is highlighted in the federal government's RTI strategy,<sup>4</sup> which recommends the creation of specific institutional structures within the framework of a coordinated policy for international science and research activities.

Parallel to – and in close connection with – the ongoing internationalization of science and research efforts, the cooperation and coordination process has also intensified at the level of science and research policy, be it within European institutional structures or through cross-border cooperation in umbrella organizations of funding agencies, research institutions, universities, and academies of sciences. In this context, stakeholders at the national level have a responsibility to help to shape the process by taking on an active role in the international research policy discourse and supporting the international ability to create links between national science and research systems.

The FWF has recognized the importance of these developments<sup>5</sup> and is actively involved in shaping them:

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<sup>1</sup> *Science, research and innovation performance of the EU 2022*. European Commission, 2022: 443

<sup>2</sup> *ibidem*

<sup>3</sup> *European Innovation Scoreboard 2023*. European Commission, 2023

<sup>4</sup> *FTI-Pakt 2024-2026*. Bundesregierung der Republik Österreich, 2022: 9

<sup>5</sup> In 2022, approximately 17% of the FWF's funding budget was allocated directly to internationalization efforts.

- As **Austria's most important funding agency for basic research**, the FWF makes efforts to ensure that its funding portfolio provides Austria's researchers with outstanding opportunities to cooperate with their colleagues abroad.
- As an **active stakeholder in research policy** with close ties to the Austrian scientific community, the FWF contributes to shaping science at the global level.
- **Procedurally**, the FWF supports the development of international standards, and its administrative procedures are aligned with international best practice models.

## How the FWF supports international cooperation

### Internationalization as a principal objective of funding activities

In essence, the FWF regards the establishment of cooperation arrangements with researchers from outside Austria as a self-organizational process within the scientific community, and supports this process by offering appropriate funding instruments. The increasing importance of quality-assured, third-party-funded research certainly also applies to international cooperation activities. In this context, there is an increasing need to provide a secure financial basis for opportunities to cooperate with international partners to enhance the efficiency of this joint work. Organized forms of cooperation can create a competitive advantage for a country's scientific community.

In this context, the FWF focuses on scholarly and scientific standards and views the specific forms of administrative support as an extension of the possibilities for science and research-driven cooperation rather than focusing on selected subject areas or geographical areas from the top down. This bottom-up approach provides research institutions with an opportunity to realize their own strategic objectives with support from the FWF's quality-assured programs. At the same time, the FWF supports the strengths of the Austrian scientific community by taking part in programs dedicated to specific subject areas.

In general, the FWF strives to leverage synergies in cooperation with partner organizations both within and outside Europe in cases where the FWF's procedure-related quality standards are met and where its scope for action is preserved.

### Individual cooperation arrangements

Funding for individual cooperation arrangements with researchers abroad represents an important opportunity to support international exchange; the FWF offers funding for such cooperation arrangements across multiple programs.<sup>6</sup> This low-threshold form of support for international cooperation is not coordinated at the level of funding agencies, nor is additional

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<sup>6</sup> In more than 75% of all ongoing FWF projects, researchers are taking advantage of this funding opportunity. In this context, most cooperation partners are from Germany, followed by the US, UK, France, Switzerland, and Italy.

funding provided for the cooperation partners abroad, with the exception of project partners in developing countries. When considering how to create more opportunities in this area, care must be taken to ensure they are as flexible and effective as possible for the Austrian scientific community.

## International mobility

The increasing mobility of scientists and researchers is among the key characteristics of a globalized science and research system. Leveraging this phenomenon for the benefit of Austria as a science and research location is an essential element of the FWF's internationalization efforts, especially its support for "brain circulation." This is achieved through specific funding programs for incoming and outgoing researchers<sup>7</sup> for the purpose of strengthening human resources, and through general support measures such as the option to continue previously initiated projects under certain conditions when a researcher switches institutions ("Money follows Researcher"<sup>8</sup>), the option to apply for certain programs from abroad (regardless of the applicant's nationality), and the opportunity to employ international project staff in ongoing FWF projects.

## Agreements with international partner organizations

The FWF's goal is to support sustainable research cooperation through coordinated administrative procedures together with partner organizations abroad to coordinate funding for transnational research projects.

For this purpose, the FWF has a number of cooperation agreements with international partner organizations.<sup>9</sup> These agreements aim at the joint funding of closely integrated, usually bilateral research projects that require funding both on the Austrian side and in the partner country. This results in joint transnational research work which allows all research partners to benefit from each other's complementary expertise. Taking a bottom-up approach, the FWF aims to issue calls which are as broad and thematically open as possible, giving a majority of the Austrian research community the opportunity to participate. The FWF's support of networking activities creates additional opportunities in this area.

Given the FWF's limited administrative resources and its ongoing efforts to ensure the efficient use of funds, two considerations are especially important in the FWF's selection of partner organizations: On the one hand, the FWF adheres to a demand-based policy for which the extent of existing joint research activities is a key criterion. On the other hand, the FWF also pursues a supply-oriented policy and provides the Austrian scientific community

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<sup>7</sup> ESPRIT program (<https://www.fwf.ac.at/en/research-funding/fwf-programmes/esprit-programme>), Schrödinger program (<https://www.fwf.ac.at/en/research-funding/fwf-programmes/schroedinger-programme>), doctoral programs (<https://www.fwf.ac.at/en/research-funding/fwf-programmes/docfunds>, <https://www.fwf.ac.at/de/forschungsfoerderung/fwf-programme/docfundsconnect>)

<sup>8</sup> An initiative launched by Science Europe.

<sup>9</sup> See <https://www.fwf.ac.at/en/research-funding/fwf-programmes/international-programmes/joint-projects>

with opportunities to cooperate with countries where the level of research cooperation with Austria is still relatively low despite the partner countries' high research potential, and where coordination at the funding agency level supports the development of cooperation relationships due to the specific administrative conditions for research funding. In this way, the FWF provides the Austrian scientific community with opportunities to benefit from emerging research capacities.

In addition to the European Research Area, in particular the large countries with strong research bases as well as Austria's neighboring countries (with which Austria has traditionally maintained close research ties), the FWF's efforts mainly focus on (North) America and Asia.

## Multinational networks

Multinational networks (e.g. ERA-Nets<sup>10</sup> or European Partnerships<sup>11</sup>) can provide fresh impetus in specific subject areas and help researchers achieve critical mass at the European and global levels. In this context, the FWF focuses on activities which create direct added value for the Austrian scientific community, such as the establishment of long-term transnational research programs. In this context, it is also necessary to consider aspects of the FWF's organizational development with regard to opportunities for mutual exchange with partner organizations. By participating in these initiatives, the FWF enables the Austrian scientific community to bundle and integrate research activities at the project and program levels. The criteria for FWF involvement are the relevance of each initiative to the Austrian scientific community, the extent to which relevant partner countries are involved, and compatibility with the FWF's quality standards.

## Optimized procedures

Efficient and transparent procedures are very important to the FWF, especially in its international activities. With regard to the procedures used and the funding of national involvement in international research programs, the FWF supports the subsidiarity principle in order to ensure sustainable cooperation at the funding agency level. This also applies to funding models for transnational projects, where the added value of cross-border funding is weighed in connection with the sustainability of cooperation models. The objectives are to make administrative procedures as compatible with national procedures as possible, to minimize organizational effort, to keep procedures as simple as possible, and to avoid redundant efforts. Especially with regard to review and decision procedures, this requires the development of innovative solutions in close cooperation with international partner

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<sup>10</sup> ERA-Net Scheme of the European Commission for the coordination of national research funding activities.

<sup>11</sup> A common initiative of the European Commission and private/public partners for the development and implementation of a research and innovation program.

organizations (e.g. the lead agency procedure<sup>12</sup>). In this context, the FWF has been involved in developments which now serve as models at the European level (e.g. the Weave initiative).<sup>13</sup>

## **The FWF's activities as a stakeholder in international science and research policy**

The increasing globalization of the science and research system means that many issues can only be resolved effectively at the international (including the European) level, and that research policy has concrete effects on national science and research systems. The related international discourse on science and research policy involves participants from a wide variety of fields, including national ministries and funding agencies, research institutions and research bodies, and supranational stakeholders such as the European Commission and the umbrella alliances of national organizations. Among these institutions, the FWF sees itself as a representative of the interests of Austrian research and aims to advance the development opportunities and international integration of the Austrian research community in general, without subject-specific or regional focuses.

In this context, the FWF supports the activities of Science Europe<sup>14</sup> in order to maintain a structured exchange with relevant international stakeholders. Further aims in this regard are the representation of the policy approach of national research funding agencies at the European level as well as the development of joint measures.

At the national level, the FWF is committed to working with policymakers and stakeholders to realize Austria's international positioning within the federal government's RTI strategy in order to develop a coordinated international science and research policy.

### **European Research Area**

The FWF generally welcomes activities designed to integrate national initiatives in the European context as long as tangible added value is created and a balance is maintained between cooperation and competition at the European level; this also applies to research policy approaches and funding and support measures. Diversity is one of Europe's greatest strengths, and thanks to their detailed knowledge of national systems, national organizations can respond to new challenges in a rapid, innovative, and targeted manner. These capacities should be strengthened through coordinated measures at the European level.

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<sup>12</sup> An initiative of the DFG, FWF, and SNSF.

<sup>13</sup> All Weave proposals are reviewed following the lead agency procedure. See also <http://www.weave-research.net>

<sup>14</sup> See <http://www.scienceeurope.org>

The FWF supports initiatives to promote basic research at the European level, in particular the activities of the European Research Council. The FWF fosters this development as part of its activities at the national and European level. Its program portfolio is designed to complement these European initiatives and maximize their benefits for the Austrian research community. In addition, the FWF also supports the initiatives of the European Commission to co-fund national funding programs as well as the joint funding activities of national organizations.<sup>15</sup>

## International standards as guidelines for FWF procedures

The FWF funds internationally competitive research in Austria, which requires the application of international best practices at all levels. Internationalization is therefore part of the FWF's day-to-day practice with regard to procedures and operational processes.

## International review of project applications

In its funding activities, the FWF is committed to the highest international standards. In order to fulfil these standards, the FWF only requests peer reviews from reviewers based outside of Austria whose expertise best covers the requirements of each application in terms of disciplines, methods, and paradigms. This practice is a prerequisite for ensuring that the projects funded by the FWF are competitive at the international level, thus making a substantial contribution to quality assurance in the Austrian science and research system.<sup>16</sup> As a result, FWF-funded projects receive substantially more citations than the Austrian average in each discipline.<sup>17</sup>

## International evaluation of funding programs

In order to verify the effectiveness and impact of its funding measures, the FWF's funding instruments are evaluated on a regular basis.<sup>18</sup> In these evaluations, the FWF relies exclusively on expert evaluators with international experience. The results of these program evaluations are utilized in the ongoing development of funding instruments and ensure the programs' compliance with international standards as a key prerequisite for the international competitiveness of FWF-funded research.

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<sup>15</sup> ERA-NETs and European Partnerships of the European Commission.

<sup>16</sup> This is evident in the FWF's track record of successful Austrian ERC grant applicants.

<sup>17</sup> See <http://dx.doi.org/10.5281/zenodo.16456>

<sup>18</sup> See <http://www.fwf.ac.at/en/about-the-fwf/publications/>

## Integrity and ethical issues in research

Ethical issues and matters of research integrity are a hotly debated topic all over the world. In international comparisons, national science and research systems are often assessed in terms of how they deal with cases of potential scientific misconduct and with ethical issues. In this regard, as an initiator and founding member of the Austrian Agency for Research Integrity,<sup>19</sup> the FWF has established a clear framework based on international standards.

## Open access

Ensuring open access to the results of publicly funded academic research can be regarded as one of the main challenges in the global science and research system; this challenge can only be surmounted by means of an internationally coordinated procedure. As a signatory to the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, the FWF is committed to supporting and promoting sustained open access to scholarly publications and research data. To this end, the FWF requires all project leaders and staff members to make their publications freely available through open access media on the internet.

## Human resources

As the FWF funds the salaries of more than 4.800 positions<sup>20</sup> in science and research, the organization also takes responsibility for the development of human resources in its area of activity. On the basis of international best practices, the FWF has also developed a set of standards for gender equality.<sup>21</sup>

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<sup>19</sup> <http://www.oeawi.at>

<sup>20</sup> in 2022, see FWF-Dashboard <https://dashboard.fwf.ac.at/>

<sup>21</sup> <https://www.fwf.ac.at/en/about-the-fwf/gender-issues/strategy-gender-equality-diversity>