WILEY

| EDITORIAL

Equitable Research Funding: Strategies, Challenges and the Role of Funding Agencies

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ABSTRACT

Ensuring equitable access to research funding is crucial for fostering diversity, innovation and excellence in science. Despite progress, significant disparities remain, with underrepresented researchers—including women, racial and ethnic minorities, LGBTQIA+ individuals and those with disabilities—continuing to receive disproportionately less funding. These disparities not only hinder individual careers but also limit the breadth of perspectives that drive scientific discovery. Through discussions with major funding agencies, including the Dana Foundation, European Research Council (ERC) and ERA-NET NEURON, we examine how equity, diversity and inclusion (EDI) are integrated into research funding allocation. We focus on three key areas: (1) How EDI is defined and prioritised (2) metrics for assessing and tracking progress and (3) strategies for mitigating bias in selection procedures. While agencies have implemented initiatives such as demographic data transparency, targeted funding mechanisms and bias-awareness training, systemic challenges remain. Variability in data collection practices, barriers in peer review processes and limitations of interventions like double-blind reviews highlight the need for ongoing reform. As EDI policies face growing political scrutiny and active efforts to dismantle existing frameworks, reinforcing and expanding strategies to ensure equitable funding distribution has never been more critical. The scientific community must continue advocating for evidence-based approaches that improve transparency, accountability and fairness in research funding. Without sustained commitment, the progress made over the past decades is at risk of being reversed, undermining the diversity of thought and innovation essential to scientific advancement.

1 | Introduction

The allocation of research funds is a complex and multifaceted process, with practices varying widely across funding agencies. While many organisations have introduced equity, diversity and inclusion (EDI) criteria to promote fairness in funding decisions, persistent gaps remain. Moreover, definitions of diversity and underrepresentation differ based on grant types, geographic regions and career stages, adding further complexity. With EDI policies under rising political scrutiny, active efforts to dismantle established frameworks and increasing public scepticism, there is an urgent need to

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adopt a scientific, evidence-based approach to counteract criticism and guarantee the fair and effective allocation of research funding. Without rigorous evaluation and transparent decision-making, funding inequities risk becoming entrenched, limiting the diversity of thought essential for innovation. Understanding how funding agencies integrate EDI into their processes and identifying strategies that work is therefore critical to safeguarding fairness, accountability and scientific excellence.

Recognising these disparities, the ALBA Network sought to gain a deeper understanding of how leading funding agencies approach EDI in research grant allocation. Through in-depth conversations with a select group of responsive agencies, we explored their perspectives and strategies for addressing ongoing hurdles in achieving equitable distribution of research funds. This article delves into the approaches employed by three European governmental agencies and a US-based foundation. We reached out to a series of organisations, and these funders kindly provided feedback and clarifications on their policies and practices.

- The European Research Council (ERC), the primary European funding organisation for investigator-driven frontier research across all fields, including life sciences, is part of the European Union's Horizon Europe research and innovation programme.

- ERA-NET NEURON, which coordinates and optimises research efforts in the field of mental, neurological and sensory disorders across Europe. It operates under the ERA-NET scheme of the European Commission and aims to enhance the coordination of national and regional research programmes.

- The European Union (EU) Joint Programme Neurodegenerative Disease Research (JPND), the largest global research initiative focused on neurodegenerative diseases, specifically Alzheimer's disease. It is funded by Member States, associated member states, third countries and the European Union's Horizon 2020 research and innovation programme.

- The Dana Foundation, a US-based philanthropic organisation that fosters interdisciplinary neuroscience initiatives through grants and public outreach, supports transformative ideas at the intersection of education, law, policy and public engagement to promote the advancement and societal integration of neuroscience.

Drawing on their insights, the article aims to provide a comprehensive overview of their diverse perspectives and current efforts towards enhancing EDI in allocating funding for scientific research.

2 | Approach

In the context of research funding, EDI strives to advance three key aspirations aimed at fostering a more robust research ecosystem: (1) Everyone has a fair and equal chance to compete for funding based on the merit of their research proposal and responsible research assessment. (2) The allocation of research funding should reflect a diverse range of research proposals, reflecting the diversity of the populations they serve. (3) By fostering diverse perspectives and approaches, research becomes more innovative and relevant to a wider segment of society. Our interviews focus on three pivotal dimensions: (1) definitions and importance given to EDI in research funding, (2) metrics for assessing and measuring progress in EDI and (3) selection procedures and strategies for mitigating bias. We summarise how leading organisations define and prioritise diversity, delving into the comprehensiveness and sophistication of their approaches to promote EDI measures. We explore the usage of metrics to foster fairness and inclusion to probe the scope and impact of EDI initiatives. Additionally, we investigate how organisations handle their selection processes, focusing on structural integrity, transparency and efficacy in curbing biases. Our overall assessment offers insights into the key open challenges in promoting EDI, how different organisations aim to tackle the issue, and which aspects they consider key priorities from their unique perspectives.

3 | Definitions and Importance Given to EDI in Research Funding

In recent years, the principles of EDI have gained significant traction within the scientific community, compelling funding agencies and institutions to prioritise these fundamental values. However, these efforts largely focus on gender diversity without adopting an intersectional approach and often overlook the wider structures of inequality and gendered power relations in academia (Steinþórsdóttir et al. 2021). Despite strides in recognising EDI's importance, substantial gaps persist in funding. Research consistently shows that underrepresented researchers, including women, people of colour, LGBTQIA+ individuals and disabled individuals, receive significantly less grant funding throughout the broader funding landscape (Tabak and Collins 2011; Van Der Lee and Ellemers 2015; Choudhury and Aggarwal 2020; Swenor et al. 2020; Taffe and Gilpin 2021; Chen et al. 2022; Cruz-Castro et al. 2023; Schmaling and Gallo 2023). This underscores the critical need for a transparent and evidence-based evaluation process to assess the effectiveness of policies and action plans designed to advance equity in the distribution of research funding.

To fully grasp the scope of ongoing challenges, it is crucial to first recognise the multitude, complexity and intersectional inequalities that underrepresented groups face within the research landscape. Women, people of colour and individuals with disabilities are just a few examples of marginalised communities that continue to face significant obstacles in the current system. Researchers and professors from indigenous, black and other racially and ethnically marginalised groups remain underrepresented and underfunded across many research institutions (Allen et al. 2000; Hoppe et al. 2019; Gibney 2022, 2024; Kozlowski et al. 2022; Nguyen et al. 2023; Paliwal 2023). In countries where caste systems are a prominent basis for social stratification—such as in South Asia—scholars from underprivileged caste backgrounds face similar structural barriers to representation and funding. Both groups are often disproportionately burdened with additional service

responsibilities related to diversity and inclusion efforts, which can detract from their academic productivity and career advancement (Trejo 2020; Odedina and Stern 2021). One critical aspect of the research funding process where disparities persist is in grant allocations. Particularly, underrepresented groups continue to face significant challenges that negatively impact their long-term career prospects. These disparities not only hinder individual progress but also hamper the scientific community's ability to benefit from diverse perspectives, insights and expertise. Thus, addressing these inequities in grant funding allocation is an urgent priority.

4 | Metrics for Assessing and Measuring Progress in EDI

Metrics play a pivotal role in tracking progress towards achieving EDI objectives in research and funding processes. While metrics are not necessarily easy to define, establishing measurable indicators is critical to track the effectiveness of initiatives to enhance equity and diversity. These metrics should be transparent and comprehensive, encompassing various dimensions such as representation, career progression, compensation and funding allocations. Transparent and robust metrics will allow the scientific community to identify persisting gaps, measure ongoing changes and hold funding agencies and institutions accountable for their commitment to EDI. By embracing such metrics to monitor and track progress, we can ensure that research funding processes steadily become more equitable, diverse and inclusive, leading to a more vibrant and impactful scientific community.

The most recommended approach for transparency involves collecting and publicising demographic data on applicants and grantees by gender, race, ethnicity, sexual orientation, socioeconomic status, disability status and location from organisations that allocate grants for neuroscience research (Choudhury and Aggarwal 2020; Llorens et al. 2021; Franko et al. 2022). Some funding agencies set and publish targets or quotas for grant applicants, success rates and amounts awarded (Schrouff et al. 2019). It is also important to explore metrics beyond basic demographics and beyond representation. These include metrics that track the diversity of research topics funded, the diversity of research teams funded, the career progression of researchers from underrepresented groups who receive funding, the effectiveness of interventions (e.g., mentoring and targeted funding initiatives) implemented and the impact of research funded.

There is a lack of global standardisation in how data is collected and categorised. This makes comparisons between funding agencies in different countries challenging. While the United States has nationally defined demographic subcategories from the US Census and a less restrictive approach to data collection, the EU General Data Protection Regulation (GDPR) sets high standards for consent, and certain countries have strict privacy laws that prohibit collecting data on protected characteristics like race or ethnicity. Moreover, placing additional data collection burdens on researchers can discourage them from applying for grants. Finding the right balance is challenging—collecting meaningful data in a cost-effective and culturally sensitive way to track EDI progress while respecting privacy rights and avoiding unnecessary administrative burdens on researchers.

5 | Selection Procedures and Strategies for Mitigating Bias

The selection process and evaluation of research grant proposals are pivotal in ensuring the fair distribution of research funding. Traditionally, these processes have relied on peer review, merit-based assessments and predefined criteria. Bias in grant proposal review processes, often stemming from perceptions of researchers' capability, the perceived worthiness of research topics for funding and biases against minority-serving institutions in the United States, disproportionately impacts minority scientists, leading to career shifts or exits from academia (Ginther et al. 2011; Hoppe et al. 2019; Lauer and Roychowdhury 2021). A few tested and recommended actions implemented by various funding agencies to mitigate gender bias include setting and publishing targets for grant applicants, success rates and award amounts, creating funding mechanisms based solely on the merit of scientific proposals, raising awareness of potential gender bias among review committees through bias training and making demographic information of former grantees publicly accessible (Llorens et al. 2021). Second-level reviews offer a crucial opportunity for funders to address biases and prioritise research benefiting underserved communities, contributing to the diversification of the biomedical workforce (Odedina and Stern 2021). While these methods have been and continue to be effective in many cases, they have limitations, including the potential for reviewer bias.

In recent years, there has been a growing push for approaches that aim at minimising biases in both the selection and evaluation process. One such approach is the adoption of double-blind reviews, wherein the identities of both the applicant and the reviewers are concealed from each other. This aims to reduce bias and promote objectivity in the evaluation process, ultimately striving for a more equitable allocation of research grants. However, implementing double-blind reviews can pose challenges and require careful planning. As a result, this approach is still used sparingly within the research grant evaluation landscape. Blinding reviewers to applicant identity is also seen to have a minimal impact on reducing bias, in part because such review is rarely truly blind—reviewers can frequently infer the applicant's identity. This underscores the need for further evaluation of peer review models to mitigate the influence of applicant identity (Nakamura et al. 2021; Taffe and Gilpin 2021; Hultgren et al. 2024). Another intriguing development is the consideration of randomisation in grant proposal review. This method involves assigning proposals randomly to reviewers, aiming to minimise potential bias and subjectivity. While randomisation has its advantages, such as reducing reviewer bias, it may also raise concerns about the quality and expertise of reviewers for specific proposals. To strike a balance between tradition and innovation, some organisations are exploring the possibility of combining both standard and recent approaches in their grant proposal evaluation processes. This hybrid approach aims to harness the benefits of established practices while also incorporating elements like double-blind reviews and randomisation to enhance fairness, equity and the overall quality of final decisions about grant allocations. Unconscious bias training provides an alternative method for tackling biases, yet its effectiveness in mitigating biases in the reviewing process presents a mixed picture, indicating the need for further investigation and improvement (Bezrukova et al. 2016) Table 1.

TABLE 1 | Summary of existing methods to reduce bias and improve equity in grant proposal review.

Method	Description	Objective	Caveats and unintended consequences
Double-blind review	Both applicant and reviewer identities are concealed.	Reduce bias based on identity, institutional affiliation or reputation.	True anonymity is often difficult; reviewers may infer applicant identity based on topic, style or citations.
Unconscious bias training	Training reviewers to recognise and mitigate implicit biases.	Raise awareness of unconscious bias to improve fairness in evaluations.	Mixed evidence on effectiveness; often short-term impact with limited behaviour change.
Second-level review	A secondary panel re-evaluates proposals with equity and diversity priorities in mind.	Address potential biases in first-round reviews and prioritise underserved topics or applicants.	May be resource-intensive; effectiveness depends on transparency and review criteria.
Publishing demographic data	Public release of success rates and funding data by gender, race/ethnicity, etc.	Promote accountability and highlight disparities to drive change.	Risk of privacy concerns; may provoke resistance if not paired with clear action plans.
Target setting	Establishing and publishing equity-focused targets (e.g., gender parity in success rates).	Create measurable goals to promote equitable funding outcomes.	May be perceived as quotas; risk of tokenism if not implemented thoughtfully.
Merit-based proposal review only	Evaluate proposals solely on scientific merit, not applicant background.	Focus on the quality of research ideas to reduce identity-based bias.	May ignore structural inequities; can unintentionally favour well-resourced applicants.
Randomised reviewer assignment	Assign reviewers randomly rather than matching by expertise or interest.	Reduce bias from reviewer–applicant familiarity or favouritism.	May compromise review quality if reviewers lack domain expertise.
Hybrid models	Combining traditional review methods with innovative strategies like blinding or randomisation.	Balance fairness, rigour and feasibility in the evaluation process.	Complexity in implementation; may require cultural change and staff training.

6 | Approaches by Funding Organisations

6.1 | European Research Council (ERC)

In the pursuit of scientific excellence, the ERC has firmly established itself as a champion of pioneering innovative research across various disciplines. While its primary focus is on empowering principal investigators (PIs) to drive groundbreaking projects, the ERC also recognises the importance of promoting EDI initiatives within its funding programmes. One of the pillars of the ERC's transparency initiatives is its systematic collection, analysis and annual publication of demographic data for all its funding schemes. This practice allows for a comprehensive overview of the composition of ERC grant recipients, shedding light on areas where diversity may need further attention.

The ERC acknowledges that the definition of underrepresented groups is not universal, and representation may vary from year

to year in the open funding calls. The ERC does not explicitly articulate its overarching EDI strategy or how it intends to address diversity and representation issues. Diversity within ERC panels is primarily assessed in terms of scientific expertise and seniority. The ERC limits the number of panel members from the same demographic, including country, institution, gender and previous grantees. Additionally, panel members are subject to term limits to ensure a fresh influx of perspectives. The ERC has also established a Task Force on Research Assessment, tasked with examining strategies to reduce bias and increase diversity within its programmes in response to concerns within the research community regarding assessment methods. While the core principle of prioritising scientific excellence remains intact, there will be adjustments in assessing researchers to offer a more comprehensive perspective of their careers and contributions. These changes aim to ensure fairness for early career researchers, those in less prominent fields and individuals from lesser-known institutions. Overall, the shift emphasises the substance of research over sheer quantity, and incorporating narratives into researchers' track records provides a holistic view of a researcher's work, acknowledging the limitations of traditional metrics. The ERC's Scientific Council closely monitors the outcomes of changes and will continue further refinements based on stakeholder feedback.

ERC conducts interviews for all its grant schemes except the Proof-of-Concept programme. During these interviews, the focus is primarily on scientific facts, leaving little room for subjective assessments. However, the ERC acknowledges that bias based on physical characteristics or body language may not be eliminated. To mitigate unconscious bias, ERC panels are required to attend awareness sessions on unconscious bias and watch videos on recruitment bias in research institutes. These initiatives aim to sensitise panel members to potential sources of bias and ensure fair evaluation processes. Candidates who undergo ERC evaluations receive written comments from individual reviewers, providing valuable insights into the assessment process. Moreover, candidates receive an evaluation summary report from the panel, enhancing transparency and accountability. The ERC also actively collects and publishes demographic data (country, institution, gender and grantees), implements measures to address potential biases and continues exploring avenues for improvement. The ERC has indicated that certain measures should be ruled out, such as double-blind reviews, random selection or the introduction of quotas, but it remains committed to addressing potential biases in its selection processes.

6.2 | ERA-NET Neuron

Collaboration has long been the cornerstone of groundbreaking scientific discoveries, and ERA-NET NEURON is at the forefront of promoting cross-border cooperation in neuroscientific research. Rather than merely focusing on representation, they have embarked on a mission to foster inclusivity and eliminate biases within their programmes. ERA-NET NEURON has adopted a unique approach to enhance the involvement of underrepresented research communities. The 'widening concept', implemented from 2014 to 2019, is a key feature of the Joint Transnational Calls for Proposals (JTCs). Under this concept, PIs from underrepresented countries, referred to as 'widening countries', are invited to join the consortium at three distinct stages of the call procedure: preproposal, full proposal and postevaluation. This approach actively encourages participation from regions that may be limited in their ability to participate in collaborative neuroscientific projects.

Ensuring equitable funding decisions is a paramount objective for ERA-NET NEURON. To prevent biases, especially regarding gender and age, the organisation conducted comprehensive statistical analyses on proposals and funded projects from 2013 to 2019. These analyses have revealed that their funding decisions overall are characterised by fairness and a lack of significant disparities related to gender or seniority in the field. These findings indicate that progress is being made in the right direction. ERA-NET NEURON's commitment to diversity extends to research fields and career stages. In addition, they employ an online partnering tool that facilitates collaborations among researchers with varying backgrounds and career trajectories. By enabling connections and partnerships through this tool, they aim to promote a more vibrant and diverse research community that transcends traditional boundaries.

ERA-NET NEURON believes in transparency as a fundamental principle. Therefore, they disseminate key information through various channels, including social media and newsletters. Additionally, ERA-NET NEURON takes transparency to the next level by publishing its selection procedures and results on its website. This includes gender distribution statistics and the names of reviewers, enhancing accountability and trust in the selection process. In the pursuit of fairness, ERA-NET NEURON's review process is characterised by detailed feedback provided to candidates on all aspects of the review process. While the organisation does not conduct interviews or subscribe to random selection or double-blind reviews, it is actively encouraging reviewers to undergo diversity training, including tools like the Harvard implicit association test, to further enhance its processes and reduce biases.

6.3 | Joint Programme Neurodegenerative Disease Research (JPND)

JPND has emerged as a key player, offering a unique 'virtual cross-border' opportunity for EU countries to amplify their research efforts to increase coordinated investment in neurodegenerative disease research. In JPND, each country has the same influence ('one country one vote') whatever her size or her level of economic development offering small and underresourced EU countries the opportunity to amplify their research efforts. JPND operates on a funding model known as the 'virtual common pot'. This model pools together the budgetary commitments of all participating countries, totalling 30. Individual commitments are determined based on each country's economic capacity. Among other tasks and actions, JPND prepares and organises relevant call topics guided by JPND's Strategic Research and Innovation Strategy and launches and evaluates calls for research projects. Once a project proposal, typically involving a consortium of 3–6 countries, is accepted, each participating country is responsible for financing its own team. No public money is exchanged across borders. Researchers are funded exclusively by their respective national funding organisations, emphasising competition

and research excellence as the driving forces behind project selection. JPND aims to support small countries that may not have a strong tradition of high-level research. This initiative provides an opportunity for nations like for instance Hungary, Croatia, Slovakia and Slovenia to elevate their research capabilities and contribute to the broader European research landscape. Moreover, JPND's inclusive approach extends beyond the EU, with non-EU countries like Canada, Australia and Switzerland participating. JPND maintains a commitment to transparency, with metrics being made available upon request. While published metrics primarily pertain to research topics, efforts are made to monitor gender representation, including the number of women at the level of PIs. The focus, however, is primarily on increasing geographic representation among participating countries.

JPND employs a two-stage submission process. The first stage involves a call for letters of intent, during which groups capable of submitting full proposals are selected. Subsequently, a call for full proposals is issued, and the list of letters of intent is made public. Countries, in particular small and under-resourced ones, can express their interest and seek approval from the project's PI to join at this stage. These countries may even participate after the full proposal stage by funding students, postdocs or researchers. Project selection is based on the merit of the proposal only. Additionally, JPND evaluates patient and public involvement in the research at the full proposal stage via peer review panel evaluation. JPND maintains transparency throughout its selection process. For example, if the number of fundable proposals exceeds the available budget, JPND utilises the ERA-NET co-fund mechanism, involving funding from the European Commission, to address potential shortfalls. Country ministries may also be approached to augment the budget. Although JPND has a commendable approach to research collaboration, it is considering implementing diversity training or implicit bias training for reviewers to further enhance this aspect.

6.4 | Dana Foundation

The Dana Foundation is a private philanthropic organisation founded in 1950 with an initial focus on education at colleges and universities, along with health research. In the 1990s, the foundation turned its focus to supporting neuroscience research and brain science education to promote a greater understanding of the brain and its functions. In 2019, the Dana Foundation refined its focus further, from brain research and public education to the intersection of neuroscience and society, publicly launching this new direction in 2022. Their newly dedicated area of interest exemplifies their commitment to exploring the intersections between neuroscience and the challenges and opportunities facing society. This shift underscores their dedication to diversity, open inquiry and collaborative and multidisciplinary research approaches to address the broader societal implications of neuroscience. In line with this, the Dana Foundation strategically invests funds to reshape how neuroscience is conducted and taught, aligning it with societal goals and human values while also considering the broader societal impact. Their work is organised around programmatic pillars of education, training and public engagement on neuroscience and society issues.

The Dana Foundation acknowledges the complexity of defining 'underrepresented' and recognises that diversity encompasses various aspects beyond race and ethnicity. They underscore the need for nuanced and honest engagement with diversity and the importance of diversity in leadership positions. Dana aims to include diverse perspectives in neuroscience and emphasises the importance of making neuroscience more accessible, societally minded, informed by everyone and relevant to people's everyday lives. To operationalise its commitment to diversity, the Dana Foundation has incorporated key values of diversity, empathy, trust and collaboration into all phases of its grant-making process, from programme development to evaluation.

In recent decades, a significant portion of the Dana Foundation's grant-making was managed by an external advisor and consultant rather than the foundation's own staff. However, following the refinement of the foundation's mission 3 years ago, the organisation has worked to bring grant-making in-house and developed new grant-making strategies that align with its updated mission. This has allowed the foundation to explore different approaches to complement more traditional approaches to standard peer review, such as using a lottery to decide between equally meritorious applications for small professional development awards. They emphasise experimentation, learning and iteration in their grant-making, grounded in evidence and data. In addition, the Dana Foundation has taken steps to ensure inclusivity, such as issuing open calls for proposals rather than relying on invited-only processes. While their grant-making is focused domestically, they are refining their international strategy to consider how a modest-sized foundation can support international endeavours in meaningful ways. The Dana Foundation currently provides international funding for neuroscience and society through partnerships with FENS and the International Brain Research Organization (IBRO) in the form of Brain Awareness Week grants. One lesson recently learned is that providing limited time for applicants to submit proposals is disproportionately problematic for those applicants lacking university-backed resources such as a sponsored research projects office or dedicated development staff. Another challenge relates to collecting demographic data for EDI goals, as they cannot require applicants to disclose this information Table 2.

7 | Discussion

Challenges such as gender bias, the underrepresentation of minority groups and geographic disparities are not confined to individual funding agencies but reflect broader societal and political dynamics. In Europe, EU-funded initiatives such as JPND, ERA-NET NEURON and ERC play key roles in addressing these disparities, but their impact remains limited without strong national commitments to strengthening scientific infrastructure, increasing research investments and fostering an inclusive research culture. The European Union must continue to integrate and support underrepresented regions, including widening countries, to ensure a balanced research landscape.

However, ongoing political efforts to systematically dismantle EDI policies in research funding pose a significant threat to these advancements. In the United States, recent legislative and executive actions have sought to reduce or even eliminate

TABLE 2 | Overview of inclusion and evaluation practices across selected research funders.

Organisation	Broadening inclusion and scope	Metrics, monitoring and transparency	Selection procedures
European Research Council (ERC)	• Acknowledges dynamic nature of underrepresented groups • Focus on diversity in ERC panels in terms of scientific expertise and seniority. • Term limits on panel members from same demographic.	• Systematic collection, analysis and publication of demographic data • Acknowledges limitations of traditional metrics. Task Force on Research Assessment to address diversity concerns and more holistic evaluation of researcher's work	• Selection procedure publicly available. • Interviews as part of most grant schemes • Awareness sessions on unconscious bias for panel members • Written comments from reviewers and evaluation summary reports • No double-blind reviews, random selection or quotas
ERA-NET NEURON	• 'Widening concept' to encourage participation from underrepresented EU countries • Research field and career stage diversity in collaborations promoted through online partnering tool	• Tracks age and gender differences in proposals and funded projects	• Transparent selection procedures and results published online • No interviews, random selection or double-blind reviews • Detailed feedback given to candidates • Considering diversity training (e.g., implicit association test)
Joint Programme Neurodegenerative Disease Research (JPND)	• Aims to support small and under-resourced EU countries • Inclusive and equitable approach (non-EU participation and 'virtual common pot' funding model)	• Metrics primarily focused on research topics. • Transparent about metrics (upon request) • Internally monitors gender representation (principal investigators) • Focus however on increasing geographic representation	• Two-stage submission process and entry point for participants (letters of intent, full proposals) • Merit-based selection with focus on research excellence and competence • Standard peer review, no interview of PIs. • No diversity or implicit bias training for reviewers • Only call results are made public, not evaluations.

(Continues)

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TABLE 2 | (Continued)

Organisation	Broadening inclusion and scope	Metrics, monitoring and transparency	Selection procedures
Dana Foundation	• Aims to make neuroscience more accessible to and informed by specialist and nonspecialist audiences (neuroscience for all) • Acknowledges challenges in defining 'underrepresented'. Does thinking broadly about diversity undermine the needed emphasis on racial and ethnic diversity? • Emphasises diversity in leadership to navigate tough questions and define priorities	• Funding is primarily domestic (US); international strategy is in development • Funding opportunities are disseminated to a curated list of underrepresented minority (URM)-serving institutions in the United States • Data collection challenges due to optional disclosure of demographic data	• Emphasise experimentation, learning and iteration in their grant-making strategies and processes • Expanded beyond invitation-only application model to emphasise open calls for proposals • Testing review and selection approaches that complement standard peer review • Feedback given to less competitive, mission- and programme-aligned applicants

funding for EDI-focused research projects and grants, reflecting a broader political push to reverse policies aimed at fostering inclusivity in scientific inquiry. Such actions not only risk exacerbating existing disparities but also undermine the evidence-based rationale for equitable funding distribution. The erosion of EDI policies could have far-reaching consequences, limiting access to research opportunities, undermining international collaboration, narrowing the diversity of thought in scientific endeavours and reducing the societal impact of research.

Continued support for EDI in research funding must be grounded in rigorous, evidence-based approaches to counteract political opposition and ensure sustained progress. Transparent data collection, standardised metrics and systematic evaluation of existing policies are crucial to demonstrating the effectiveness and necessity of these initiatives. Without sustained commitment and a data-driven justification of inclusive funding practices, the progress made over the past decades is at risk of being reversed, hindering both scientific innovation and equitable participation in research. Sustained global engagement with diverse funding bodies is crucial to ensuring that EDI strategies remain inclusive, internationally relevant and resilient to political shifts. This includes engaging with major funders in high-income countries, such as the United States—given its significant influence on global research priorities—as well as strengthening partnerships with agencies in low- and middle-income countries (LMIC), where efforts to build research capacity and equitable collaboration are needed.

Growing awareness among major research funders of their role in perpetuating systemic biases has triggered a conscious shift toward promoting EDI in research funding over the last decades (Bailey et al. 2021; Richardson et al. 2021; Wild 2022). This acknowledgement marks a critical step toward addressing and rectifying persistent inequities within the scientific community. Many funding agencies have already implemented EDI-focused measures, showing notable progress and positive impacts (Charlesworth and Banaji 2019; Choudhury and Aggarwal 2020; Hunt et al. 2022). Recognising the value of diverse perspectives, funders are increasingly integrating EDI principles into their grant-making processes.

Several initiatives illustrate this shift. For instance, the Wellcome Trust has created the Equitable Funding Practice Library, a curated resource of methods, models and practices used by funders to address systemic inequities (Wellcome Trust 2022). Wellcome has also established an LMIC Advisory Group to help shape its funding policies and recently launched a new funding scheme to support scientists of Black, Bangladeshi and Pakistani heritage in the UK (Wellcome 2024). The Australian National Health and Medical Research Council (NHMRC) has introduced measures to enhance gender equity in its Investigator Grants, including a policy that guarantees 50% of all Leadership and Emerging Leadership fellowships are awarded to women or non-binary applicants—a firm quota that sets a strong precedent for other funding agencies (Measures Introduced by the Australian National Health and Medical Research Council [NHMRC] 2022). Harvard University's FD&D Research Enabling Grant supports researchers navigating work/life challenges, ensuring continued academic productivity despite personal circumstances (Harvard University n.d.). The National Institutes of Health (NIH) established Diversity Supplements to existing grants, aiming to improve workforce diversity by providing funding opportunities

for individuals from underrepresented backgrounds. Clear evidence shows that these supplements have led to increased research productivity, higher publication and award rates, career advancement for underrepresented scientists and institutional gains through additional funding and salary support for trainees (Hill et al. 2021; Gholami et al. 2025). Despite these benefits, the programme has historically been underutilised, and comprehensive long-term outcome data remain limited. As of early 2025, there are indications that the programme may have been discontinued or suspended due to recent policy changes—a concerning development given its demonstrable value in fostering diversity in biomedical research. The Health Research Alliance, which works with funders and those working in research policy, recommends tailored strategies for inclusive grant-making to better support diverse applicants (Franko et al. 2022). More recently, the Swiss National Science Foundation (SNSF) published a detailed assessment of gender dynamics in academia, examining the outcomes of multiple targeted initiatives to promote women's participation and advancement at both the national and regional levels in Switzerland (Joyce et al. 2024).

Efforts to integrate EDI into funding structures and grant-making processes are beginning to show tangible results. Reports from the ERC reveal encouraging progress, with an increased share of women grantees and success rates now comparable to those of men. Application rates across grant categories have also improved, with 2023 figures showing that women submitted 40% of Starting Grant, 36% of Consolidator Grant and 25% of Advanced Grant proposals, which is the highest participation in the Advanced Grant category to date. However, the consistently lower number of applications from women across all schemes, and the decline in participation with career progression, highlight ongoing challenges in retaining women applicants. Early signs of progress are also evident in the Wellcome Trust's 2023/2024 Accelerator Awards, which specifically targeted underrepresented groups and resulted in increased funding for women, disabled researchers and individuals from black, Asian, mixed and other ethnic minority backgrounds compared to the 2022/2023 cycle. Similarly, UK Research and Innovation (UKRI)'s 2020/2021 data point to improvements in closing ethnicity-based award gaps. For example, the UK Medical Research Council (MRC) reported a 24% award rate for white applicants and 21% for Asian applicants over 5 years, reflecting a narrowing of earlier disparities.

Despite these positive steps, significant challenges remain, and in some instances, progress is at risk of being reversed. Recent political efforts targeting NIH funding for EDI-focused initiatives exemplify this threat, jeopardizing gains made in fostering diversity and inclusion in research. One key issue is the lack of clear benchmarks for assessing diversity and inclusion in grant allocation. Are funded projects actually increasing participation from underrepresented groups? Are research teams becoming more diverse? A lack of controls makes it difficult to hold funders accountable for achieving their stated diversity goals. However, it is not the only issue. Reviewers and decision-makers might have unconscious biases that disadvantage proposals from diverse researchers. Currently, reports on disparities in research funding across resource-constrained countries focus primarily on women's underrepresentation, neglecting other factors that influence career trajectories (Jackson et al. 2022). Gender disparity, for instance, becomes more pronounced at senior academic levels, illustrated by the 'scissor-shaped' curve, where women are underrepresented at more advanced career stages, such as faculty and tenured positions. Funding agencies have the power to either perpetuate or mitigate this pattern through their policies, priorities and support mechanisms for women at early career stages (Llorens et al. 2021; Joyce et al. 2024). Another challenge is the lack of standardised definitions for diversity and underrepresentation to provide clarity and consistency across agencies and grant programmes. Invisible forms of underrepresentation, such as disabilities or the impact of parental leave, are often overlooked. Access to high-quality, comparable demographic data from applicants and grantees provided by funding agencies is also limited, which hampers the ability to track progress effectively.

To address these challenges, several concrete solutions can be proposed. Developing and sharing key universal standardised metrics for tracking EDI progress would facilitate meaningful comparisons and benchmarking between agencies. Such metrics must account for local contexts, including factors like national funding levels, the critical mass of scientists, language barriers and technological and knowledge divides. Diversifying review panels and implementing bias-mitigation training can help promote fairness in grant assessments. Adopting double-blind peer reviews and randomisation measures can further reduce bias in the evaluation process. Alternative models such as partially randomised funding allocations, where proposals that meet a predefined quality threshold enter a lottery, can also enhance fairness and transparency (Fang and Casadevall 2016). Random allocation within a pool of high-quality proposals may help mitigate systemic biases, reduce the administrative burden on reviewers and increase diversity in funded research by supporting innovative, high-risk projects that might otherwise be overlooked. Some countries have begun implementing lottery-based approaches to research funding, with New Zealand leading the way through its Health Research Council's Explorer Grant scheme (Liu et al. 2020). The SNSF uses a transparent lottery as a tiebreaker for equally ranked proposals (Severin et al. 2020; Singh Chawla 2021), while the Austrian Science Fund (FWF) has similarly adopted randomisation to ensure fairness and reduce evaluator bias when decisions are otherwise too close to call. These models have attracted international attention as potential methods to enhance equity and reduce bias once proposals meet a defined quality threshold.

However, procedural reforms alone are not sufficient to achieve meaningful EDI outcomes. Establishing support systems, such as mentorship programmes, grant-writing workshops and webinars for underrepresented groups, would help level the playing field for demystifying and navigating the application process. Shifting the focus from short-term outputs to long-term outcomes, such as diversifying the research workforce and expanding research topics, is essential. Funding agencies should conduct rigorous evaluations of their EDI initiatives to ensure they are achieving their intended goals. While private foundations benefit from their flexibility to tailor initiatives to specific groups or causes, public funding sources, constrained by national priorities and regulations, may find it advantageous to establish common definitions and standards to enhance their capacity to effectively address their EDI goals.

Acknowledging that underrepresentation extends beyond numerical scarcity to the nuanced experiences of marginalised groups is crucial. The ALBA Network, for instance, offers a more inclusive definition of underrepresentation that considers regional specificities and systemic barriers often overlooked in guidelines issued by renowned funding agencies. These include challenges faced by non-native English speakers, first-generation scientists, individuals with limited travel privileges or those displaced by forced migration (https://www.alba.network/mission). ALBA also offers guidance for reviewers serving on its award selection committees to mitigate bias by considering unconventional career trajectories, evaluating intersectional factors contributing to disadvantage, contextualising achievements, recognising language proficiency challenges and acknowledging global variations in academic formats and timelines.

One significant barrier to promoting EDI in research funding is the reluctance of funding agencies to share their strategies, approaches and data, often due to concerns about backlash. To counter this, we advocate for collaborative approaches to funding data sharing, from the local to the global level. By maintaining long-term data collection and analysis, we can facilitate tracking and benchmarking and empower individual institutions to set and achieve their own EDI goals. The Research on Research Institute's Funder Data Platform (FDP) is a valuable tool in this regard, offering a secure and flexible infrastructure for funders to share and analyse data collaboratively.

In summary, while funding agencies have taken positive steps toward promoting EDI in research funding allocation, there is still a need for standardisation, rigorous evaluation and greater transparency to ensure these efforts are truly effective and inclusive. Agencies should continue refining their approaches to create a more equitable and diverse research landscape. Though challenges persist, clear progress is evident as organisations actively explore innovative approaches to enhance fairness and equity. Each has its unique strategies for doing so, such as Dana's shift towards Neuroscience and Society, JPND's focus on geographic underrepresentation, ERA-NET NEURON's 'widening concept' and ERC's transparency initiatives. The commitment of all these agencies offers hope for a more inclusive future where research funding benefits from a broader range of perspectives and talents.

Persistent issues such as gender bias, limited inclusion of minority groups and uneven geographic representation reflect broader societal and political challenges that individual organisations alone cannot fully resolve. Broader, coordinated efforts are essential. While EU-funded initiatives such as JPND, ERA-NET NEURON and ERC play key roles, their impact will remain limited without active participation from national governments and strong support from the EU. To achieve meaningful progress, individual countries must strengthen their scientific infrastructure, increase research investments and cultivate a culture that prioritises research relevance. These actions should be accompanied by a strong EU commitment to integrate and support underrepresented regions, also known as widening countries, to ensure a more inclusive and balanced research landscape.

It is important to note that the perspectives presented here are largely Eurocentric, with feedback obtained from organisations based in the EU and United States. We reached out specifically to funders (charitable foundations and national agencies) within these regions. However, some did not respond, and others expressed concerns about potential repercussions, which limited their participation; one organisation in fact withdrew its participation from this initiative altogether, requesting that their contribution be removed from the manuscript. We recognise the limitations of this approach and emphasise the importance of future engagement with funding organisations in regions beyond Europe and the United States to ensure a more comprehensive understanding of international diversity challenges.

Author Contributions

Sarah Ruediger: conceptualization, data curation, project administration, writing – original draft, writing – review and editing. **Laurence Ris:** conceptualization, data curation, project administration, writing – review and editing. **Keerthana Iyer:** conceptualization, data curation, project administration, writing – original draft, writing – review and editing.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data presented in this manuscript were gathered from one-on-one interviews with representatives of major funding bodies. These interviews have been compiled to provide a comprehensive overview of their strategies, challenges and approaches to equitable research funding. No experimental data were generated or analysed in this study.

Peer Review

The peer review history for this article is available at https://www.webofscience.com/api/gateway/wos/peer-review/10.1111/ejn.70160.

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