

Diversity in Grant Awarding and Recruitment at Wellcome

Summary Report

May 2017

BRIDGE
group

Registered Charity 1162144

In association with the Centre for Monitoring
and Evaluation at Durham University, and the
Centre for Research on Education and Social
Justice at the University of York

“The acceptance of Wellcome could only be regarded as a public duty – a duty not only to the past, to carry out the wishes of the testator of a philanthropic vision, but also to the future, to the various work with unimagined possibilities which may be started as a result of this inheritance.”

The British Medical Journal on the foundation of Wellcome, 1936

“The founding vision was based on supporting ideas that would change the world, change global health, for the better. If we fish in an ever smaller pool for ideas, our chances of finding the best ones will become increasingly limited. And what is ‘best’, anyway? It’s the right time to challenge. There is a risk that we get left behind in this area and we should feel very uncomfortable about that. It’s not the way we work.”

Wellcome Trust employee, interviewed for this research

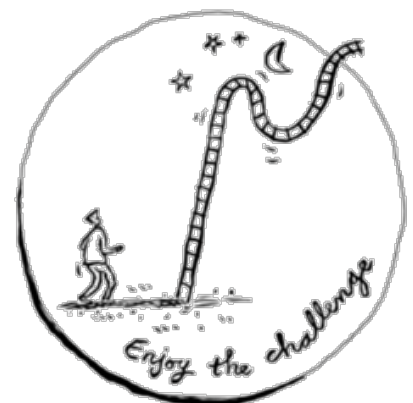
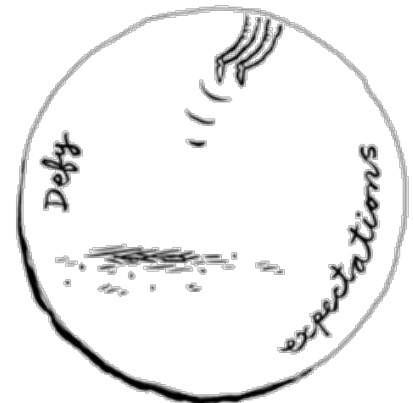
“We are going to have to really examine where great ideas come from. That’s why diversity is one of our first priorities – being open to different perspectives changes us, makes us more creative, more innovative, and helps us to have more impact. I know there are many young researchers prepared to take risks with brilliant ideas and we are prepared to support them, not only for the quality of their ideas but also because they will be the next generation of research leaders.”

Jeremy Farrar, Wellcome Trust Director, 2015

“Put quite simply, diversity invites innovation. At its center is difference, not sameness, which encourages a broad palette of solutions for the complexity of health challenges before us. I believe that we must keep science top of mind as we pursue strategies to increase diversity in science.”

Dr. Hannah A. Valantine, M.D.

NIH Chief Officer for Scientific Workforce Diversity, 2015



Executive Summary

Diversity is at the heart of Wellcome's vision. Science and research expand knowledge by testing and investigating ideas and, with an endowment of around £20 billion, Wellcome is the world's second largest provider of non-governmental funding for scientific research. It exists to improve health for everyone by helping great ideas to thrive, supporting thousands of curious, passionate people all over the world, from discovery to impact.

This requires the constant rejuvenation of the research community, ensuring that all talent is given the potential to participate, enabling assumptions to be challenged by a diverse set of voices. Diversity of thought and participation in the research community are the cornerstones of progress in this endeavour, and the benefits of diversity are clearer now, than ever.

There are two areas where Wellcome has a direct impact on the diversity of the science and research community. First, it supports over 14,000 people in more than 70 countries, intending to spend up to five billion pounds in the next five years to explore ideas in science, population health, medical innovation, the humanities and social sciences and public engagement. Second, Wellcome employs hundreds of people to support its strategic aims.

Wellcome is committed to removing any barriers that prevent the development and progression of the best ideas to support improved health. An increasingly important aspect of this commitment is to ensure that any policies and practices associated with awarding grants, and with appointing people to work for Wellcome, do not inadvertently disadvantage particular groups of people, thereby potentially limiting the flow of the best ideas.

The commissioning of this report is part of that commitment. Wellcome recognises that true diversity is a complex goal that requires proactive engagement if it is to be realised; and there is much good work already in progress. To embed the change desired, it will require dedicated resource, strong and consistent leadership, and the asking – and answering – of challenging questions. All of this plays to Wellcome's inherent strengths and core values. Wellcome is in a strong position to deliver a strategy to access a more diverse range of talent, and to enable progress towards a workforce that is more representative of the communities that it serves.

But this does not go far enough. The challenges to enabling diversity extend far beyond the immediate issues of Wellcome's own grant allocation and employment decisions. The majority of the challenges associated with diversity have their origins early in the system. For example, the uptake of science amongst particular underrepresented groups, and the evidence of declining progression rates into postgraduate study. If Wellcome wants to address the root causes of lack of diversity, it must further extend its attention and resources beyond its own borders.

Wellcome is uniquely placed to galvanise other funders and recruiters to make change across the system. Leading by example, and leveraging its position of influence, Wellcome can enable colleagues

throughout the scientific and research communities to realise the multiple advantages of diversity, and pave the way for increased understanding of the positive impact of a more diverse workforce on organisational and scientific outcomes. The evidence clearly indicates that the only way that Wellcome can truly play a transformative role in increasing diversity in research is by attending to these broader issues. This will not be easy; it will require commitment, focus, and sustained action over many years.

This report, and the research that underpins it, has two main aims. Firstly, it offers an analysis of the conditions for success that will ensure that diversity underpins Wellcome's aims and objectives. These include: ensuring that the vision of diversity is credible, constructive, creative, and true to the values of Wellcome; that responsibility for realising the vision is supported at the highest level and distributed throughout the organisation; and that it is underpinned and supported by a robust evidence-base. Secondly, the full report (which explores the issues outlined herein in much more detail) provides a toolkit for turning Wellcome's vision of diversity into reality, through detailed recommendations for practical actions which can be taken and embedded across, and ultimately beyond, the organisation. These include recommendations relating to: the collection and monitoring of data; recruitment and grant-making practice and processes; and organisational structure. The recommendations have been developed in close liaison with colleagues at Wellcome.

The full report provides a detailed analysis of: the diversity issues which Wellcome faces; the underpinning evidential basis; the wider context within which these issues arise; and a comprehensive set of potential actions. As such, it is a thorough and extensive report, covering a wide range of areas in detail. It is not our intention that all readers of this report will engage with all of the information contained within it. We have designed this summary to offer easy access to key findings and recommendations within each separate section, supported by further detail on the evidence and data analysis for those who wish to dig a little deeper.

Many academics rightly see their community as a major force for diversity and open-mindedness throughout society, and take justifiable pride in its potential to perform this crucial function. There are only a handful of organisations better placed than Wellcome to ensure that this potential is realised to its fullest extent – not just through its global support for the undertaking, publication and translation of robust research, and encouragement of evidence-based debate, but through ensuring that the very make-up and structure of the community itself is truly as diverse as it can be. The prize could be significant.

The data for this study was collected during the period March – May 2016. This summary report is derived from a more extensive report submitted to Wellcome, which includes greater detail about the key findings and associated recommendations.

Scope and Methodology

1. The scope of this research is to:

- use quantitative and qualitative research methods to understand better whether, and how, the recruitment and grant awarding practices of Wellcome might disadvantage candidates with protected (e.g. gender, ethnicity) and relevant non-protected (e.g. socio-economic background) characteristics;
- identify good practice at peer organisations, and more widely, that Wellcome can draw from to promote diversity in the most effective and efficient way;
- consider the way in which Wellcome currently approaches data capture and analysis in this area; and
- provide practicable recommendations, in order that Wellcome can enhance its work in this area and deliver leadership to other organisations.

2. Clarity about scope is especially important in this work, since this research represents only a proportion of the overall work that Wellcome is undertaking in relation to diversity and inclusion. The following points are important to note in relation to the scope of this work:

- The focus of this study is on diversity, as opposed to inclusion amongst employees of Wellcome, and the career progression of grant holder post-award. However, both areas are clearly relevant to the key focus, and we therefore include intermittent evidence and reflections on this where relevant. It is clearly important that Wellcome has a corresponding focus on these areas, despite them being outside of the scope of this piece of work.
- The focus of this study is on *recruitment* and *grant awarding*, which clearly covers only a proportion of Wellcome's wider work. The question of how diversity and inclusion can be promoted in other areas of Wellcome's work, such as public engagement, the accessibility of the Wellcome Collection, and with respect to investments, are all clearly important questions, but outside of the scope of this work.

3. A mixed methods approach has been adopted, comprising the following strands of work.
- **Review of notable practices** being undertaken amongst recruiters and those awarding grants to drive positive changes in relation to diversity. This includes analysis of key professional and academic publications, and informal interviews with key organisations. This strand of work is designed to ensure that our research focus is situated within the context of the wider policy and practice in this area. As a result of the review, we have drawn out key aspects of the evidence base and relevant learning to provide intelligence in this final report.
 - **Desktop research to assess existing policies and practices of Wellcome**, in relation to marketing, assessment, recruitment and grant awarding. This contextualises our quantitative and qualitative analysis, and enables us to deliver an assessment of the metrics currently used by Wellcome to measure diversity. This work has been based on the sharing of key documents from Wellcome, and through ongoing sharing of documentation and discussion during the four-month period of research. Additionally, a literature review has been undertaken to explore the latest evidence on diversity in the academic community and postgraduate pipeline (with particular reference to science).
 - **Quantitative analysis** of Wellcome recruitment and grant awarding data, to interrogate the potential effect that applicants' characteristics have upon success in both areas. This includes a statistical review and further exploration of relevant findings where necessary, and interpretation of findings. There are many limitations to the data, which are outlined in detail. We have provided disaggregated analysis by grant awarding programme, in particular focusing on analysis of the difference in application and success rates by diversity characteristics. Where possible, we have delivered analysis against comparator data. The analytical techniques include binary logistic regression and a series of statistical significance tests.
 - **Qualitative analysis** to provide a richness of data that is hard to obtain through quantitative research alone. Through semi-structured in-depth interviewing and focus-group analysis we have drilled down into the perceptions (of policies to support diversity generally, and views on existing practices at Wellcome) and understanding of key stakeholders to draw out deeper learning. By cross-referencing these data against the quantitative findings, we have established a sharper focus on the differential impact of diversity characteristics.
4. Interview data were collected during the period March – May 2016.

5. All interviewees and focus group participants received a pre-engagement briefing before taking part in their conversation with the researcher. Each interview and focus group was carried out in a private room on site at Wellcome, or via a private phone line, and digitally recorded for transcription purposes. A company specialising in this service transcribed digital audio files verbatim. The data were coded within QSR Nvivo analysis software, identifying key emergent themes. The subsequent qualitative analysis from these in-depth interviews and focus groups has been used to triangulate findings with the quantitative analysis and desk research.

6. The interviewee set, identified through a purposive sample and in close liaison with Wellcome, comprised the following:
 - 21 face to face interviews with Wellcome Trust senior staff and policy area leads
 - A facilitated focus group with representatives from the Graduate Programme
 - Two facilitated focus groups with representatives from Wellcome Trust staff
 - 13 face to face interviews with recently recruited Wellcome Trust staff
 - Four phone interviews with unsuccessful recent staff applicants
 - Three face to face, and seven phone, interviews with successful grant applicants
 - One face to face, and nine phone, interviews with unsuccessful grant applicants

Key Findings

Drivers for Diversity and Strategic Approach

- Progress is already being made in pursuit of greater diversity. Prior to our engagement with Wellcome, and during the time of this research, a number of good practices have already been developed. The challenge now is to build on existing practice and to take much bolder steps in order to deliver meaningful change internally, and to ensure that the key strategic pieces are in place to support their sustainability.
- Drivers for diversity are strongly determined by the operational, organisational and economic context; this is particularly relevant for Wellcome given that it is unlike most other organisations. Diversity within the workforce is a route to improved organisational outcomes, with evident benefits for cost, staffing, creativity and problem solving; this has particular relevance to those organisations funding research.
- Strong leadership is an essential part of ensuring any policies to increase diversity are successful.
- Any opportunity to make informed policy decisions regarding diversity is predicated on the consistent gathering and monitoring of valid and reliable diversity data; an absence of such data limits progress both in terms of monitoring and evidence-based decision making.
- There is a clear need to unpack and explore any and all assumptions regarding what constitutes the 'best ideas' and 'good research', in order to reach agreed and clearly understood definitions that can be equitably applied across Wellcome's work.
- The drivers for Wellcome to invest in this endeavour are now more clearly articulated across the organisation than they have ever been, but this focus is not new. A considerable amount of activity followed from a Wellcome report in 2010, but the reinstated focus on diversity six years later suggests that it did not achieve the step-change it sought.
- Wellcome is in a strong position to deliver a strategy to access a more diverse range of talent, and enable progress towards a workforce that is more representative of the communities that it serves. If Wellcome can lead by example, it is uniquely placed to galvanise other funders and recruiters.

Review of Literature, Sector Data and Peer Practices

- Any assumption that access to postgraduate research is purely meritocratic is false. Data indicate that access to postgraduate research, the gateway to a scientific research careers, is affected by financial considerations, gender, disability, ethnicity and socio-economic status.
- There is a strong association between high performance at undergraduate level and movement onto postgraduate research; concurrently there are known differences in undergraduate degree attainment when considering gender, ethnicity and socio-economic status, all of which adversely affect diversity in science research careers. However, there remain some inequalities in entry to doctoral study across socio-economic status, for instance, among graduates with the same level of attainment.
- Students from disadvantaged backgrounds and minority ethnic groups are underrepresented at high tariff universities at undergraduate level; undergraduate students at high tariff universities are considerably more likely to progress to postgraduate research at high tariff universities; higher tariff universities tend to have the largest research student population.
- Concentration of research studentship funding in higher tariff universities exacerbates the underrepresentation of students from disadvantaged and minority ethnic backgrounds in scientific postgraduate research, and by extension in scientific research careers. However, there is the potential for Wellcome to support much wider promotion of doctoral opportunities, including encouraging institutions running its doctoral programmes to prioritise diversity.
- There are clear, and at times very stark, differences in entry to doctoral study by ethnicity. Attainment levels at first degree explain part of the difference. Increasing the diversity of the scientific, technical, engineering, mathematical and medical (STEMM) doctoral student body will require widening the net for recruitment, since most of the high-achieving STEMM graduates from minority ethnic backgrounds are located outside of Russell Group universities.
- The evidence base on who applies for doctoral study compared to who is successful is slim. Detailed evidence from the US on decision-making by doctoral recruiters suggests diversity considerations often receive lip-service only or emerge only at the point where most underrepresented students have already been excluded.
- Females, and those from minority ethnic backgrounds, are underrepresented in the research workforce. There is a limited amount of data on the socio-economic background of scientists and researchers, but what there is suggests substantial and enduring underrepresentation of those from less advantaged backgrounds. In the case of ethnicity and socio-economic background, there is scant understanding of how underrepresentation comes about (i.e. at what stage of the pipeline).

- The direct evidence base regarding successful practice to address these issues is relatively thin. However, there are diversity initiatives in North America which provide useful examples, including the McNair programme and the Summer Research Opportunities Program¹ SROP in the USA, and Canada First Excellence Research Fund (CFREF) in Canada. Some such initiatives include means-tested and targeted scholarships, on the basis that ‘merit’ scholarships do not increase diversity.
- There is a convergence of interest in diversity issues in the scientific workforce among other HE organisations (e.g. RCUK, HEFCE) which mean that any initiatives by Wellcome in this area should provide a focus to build a coalition for tackling diversity.

Monitoring and Reporting

- Underpinning both the internal and external elements of any strategy for diversity should be a robust data framework, which enables clear judgements to be made on where the actual issues are, and on which interventions are most likely to lead to the most effective and best value for money outcomes in terms of time and resource spent on diversity. Wellcome currently collects limited diversity data, and this does not currently include, for example, sexual orientation or socio-economic background.
- Wellcome already monitors diversity data in some areas. However, practice is uneven, particularly with respect to recruitment data and the funding of grants to early career researchers (where the disbursement of funds is typically outsourced to institutions). Some of these issues are being addressed, for example with the introduction of the new Applicant Tracking System (ATS), but more progress is needed.
- It is not sufficient to introduce a list of exemplar monitoring questions, without giving corresponding attention to the potential levels of disclosure amongst respondents. High response rates to diversity monitoring questions are important. They provide more accurate monitoring of the recruitment and retention of staff and grant applicants, indicate the impact of policies and practices on different groups, and provide a greater depth of understanding of inequality or unfair treatment and areas for action.
- A recurring theme in the literature is the need for greater consistency of monitoring across scientific research funders, and more widely across the sector in relation to academic staff. Whilst it is critical that improved approaches to diversity monitoring inform Wellcome’s work in this space, there is also an important role to play in developing better cross-sector practices.

¹ www.btaa.org/students/srop/introduction

Recruitment of Staff

- The high level of non-disclosed and null data regarding recruited staff hinders efforts to monitor and address concerns regarding diversity; implementation of the IBM Kenexa system offers a clear opportunity to address this, and there is a wider need to ensure integration with Select HR to enable data connectivity.
- The current workforce at Wellcome as of April 2016:
 - is predominantly female (63%);
 - is predominantly white (71% of those employees for whom there are data; there are no data for 30% of employees); and
 - has an average age of 33.
- There are significant variations in diversity between divisions and pay bands in the workforce. Regarding the latter, for example, males are overrepresented at senior levels, and in the lowest band.
- Minority ethnic groups appear to be underrepresented at most levels of Wellcome, and most acutely in senior roles. There is no employee from a minority ethnic group at the highest pay band.
- The devolved model of recruitment, with the balance of control and decision-making resting with hiring managers, rather than in partnership with HR experts, could leave Wellcome open to inconsistent and inequitable practices.
- The graduate and internship programmes do not operate at a scale where they can sufficiently address diversity concerns; the aims and objectives of these programmes need to be clarified in order to address any assumptions that they are a 'solution' which will increase diversity.
- As with all organisations, unconscious bias exists at Wellcome to some extent; efforts to increase awareness, and minimise the impact, of these biases should continue.

Grant Awarding

- The timeframe for the grant awarding data analysed in this report is 2009/10 to 2015/16. Approximately half of applicants identified as male (51%), females account for 37% of all lead applicants, with the remaining 12% being missing data. However, female and male applications are distributed unevenly between funding schemes: a higher proportion of females apply to the Culture and Society division (almost half, compared to around a quarter of males); a higher proportion of males apply to the Science division.

- The proportion of applications from females has increased annually (excluding 2014/15, when there was a small drop), and the success rates of females is below that of males in four of the seven years - most significantly in 2011/12 and in the 2015/16, though the differences in success rates between males and females are small. Analysis by funding scheme reveals larger gaps between the success rates of males and females, for example in Genetic and Molecular Sciences the success rate of males is ten percentage points above that of females.
- Looking at the mean amounts requested by grant applicants, the mean amount requested by males is more than double the mean amount requested by females. This is likely because female applicants are overrepresented in the Culture and Society division, where the available funds are lower, and because men who apply are more likely to be at senior academic grades.
- 58.6% of lead applicants identified as 'white' or 'any other white background'. The next most frequent category is the volume of missing data (27.8%); 13.7% of applicants identified as being 'non-white'. Applicants identifying as 'non-white' have lower success rates (over seven percentage points) than those identifying as 'white' when looking across all grants, but there is a large volume of missing data.
- 2% of applicants indicated a disability, but a large amount (22%) of data is missing in this variable. Despite the small numbers, there are very similar success rates between those indicating a disability, and those who do not, and this is consistent within most segments of the data.
- There are significant interactions between the applicant characteristics, most of which are familiar from the literature.
- Regression analyses show that:
 - 'Title' has a statistically significant effect on funding outcome in both divisions.
 - Within the Science division, 'age' also has a significant effect on funding outcomes (younger applicants have higher odds of success). This is almost certainly because grants for younger applicants are less likely to apply for non-competitive grants.
 - Within the Culture and Society division, ethnicity also has a significant effect on funding outcomes: the odds of 'non-white' applicants receiving funding are 0.68 times those of 'white' applicants. There are a variety of factors at play here, such that this finding requires further investigation, and should not, in itself, be considered an indicator of bias.
- Universities account for 78% of the funded applications; fourteen institutions account for over half of the successful grant bids; and three institutions (Oxford, Cambridge and UCL) received a third of the funding available in the seven-year period.

- There are significant challenges associated with large proportions of NULL data, i.e. it has not been collected, or not been recorded. The proportion of missing data, which has generally declined over the seven years, with a peak in 2014/15, likely a consequence of introducing a new IT system. The high level of non-disclosed and null data about grant applicants hinders efforts to monitor and understand diversity issues.
- In multiple interviews with current grant holders, it was identified that some potential applicants de-select before submitting an initial application, because they do not see themselves as the “right kind of applicant” who would “fit with the Wellcome family”.
- Through the qualitative research several concerns were expressed, from staff, successful grant applicants and unsuccessful grant applicants alike, regarding some of the practices associated with grant award decisions. These were wide-ranging, but were mainly focused on views that a disproportionately high focus is placed on particular measures in selection, that certain behaviours and personality types can be favoured (particularly at the interview stage), and that the constitution of selection committees is not typically representative.
- All interviewees in the ‘grant applicant’ group (whether successful or unsuccessful) made either implicit or explicit reference to the types of behaviour and approach that is favoured in grant application interviews. This was described in different ways by interviewees, but is epitomised by one comment that there is “...a tendency to reward and over-value alpha-male tendencies” in selection.
- A recurring theme in the interviews, and in the wider literature, is the over-simplification of what constitutes ‘best’ research. There is a perception that Wellcome has a restricted view of what constitutes ‘best’, both in terms of research and of researchers, without having actively and thoroughly explored different forms of, and approaches to, excellent research (or at least if this has taken place, there is no articulation of it). This appears to be based on assumptive thinking of key influencers within Wellcome who “...know where the best research is” without necessarily applying the full rigour of Wellcome’s own selection processes.

Diversity in the Pipeline

- The root causes of a lack of diversity are not caused by any one organisation, or institution, and any solution must be correspondingly complex and multi-faceted. Wellcome can either absolve themselves of responsibility for what happens upstream, or they can try to identify ways to help address the barriers that are blocking the flow of talent, well before their own interests are directly at stake. It is not credible to show leadership in terms of diversity, without wading into the murkier waters of what happens upstream.
- Wellcome has a critical leadership decision to make in this arena. The lack of diversity in recruitment and grantee populations stems primarily from structural inequalities that start well

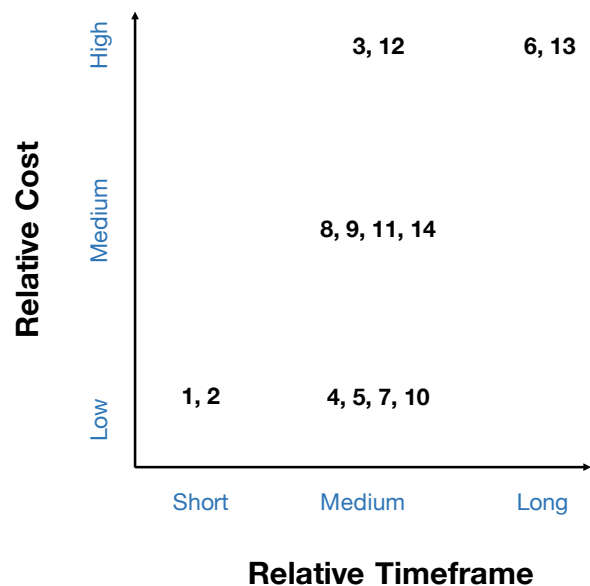
before Wellcome's interactions with those groups. Wellcome is in a particularly strong position to implement a bold outreach strategy, given that it has: minimal regulatory constraints; secure funds; a strong reputation; little negative media pressure; and a clear set of values that commit it towards progress on diversity.

- Building in robust plans for evaluation at the outset will help to maximise the effectiveness of outreach investment, as well as reassuring the research community of the quality of interventions. Experience with previous outreach and diversity initiatives in the UK and internationally suggests that rigorous evaluation is critical to meeting broader aims.

Recommendations

These recommendations are derived from the key findings of our research, the wider literature, and from the evidence base of good practice outlined in the report.

The fourteen key recommendations are outlined here, with relative costs (high, medium, low) and implementation timeframe (short, medium, long) marked. More detail on each, and a wider list of recommendations, begins overleaf.



Recommendation		Relative Cost	Relative Timeframe
1	Publish a five-year diversity and inclusion strategy, and an associated three-year action plan.	L	S
2	Appoint a member from the Board of Governors and from the Executive Board as 'Wellcome Trust Diversity Champions'.	L	S
3	Invest in a permanent and dedicated team to lead on diversity and inclusion.	H	M
4	Introduce best practice approaches to diversity and inclusion metrics (across recruitment and grant awarding), as outlined in the report.	L	M
5	Insist on more robust measures to monitor the diversity characteristics of all Wellcome grant recipients.	L	M
6	Establish a central data repository on scientific funding and the scientific research workforce.	H	L
7	Implement the 'diversity in recruitment toolkit' outlined here as the framework for a more consistent approach to recruiting staff.	L	M
8	Implement best practice processes for all grant selection processes, as outlined in the report.	M	M
9	In line with emerging international practice, introduce a specific expectation that all grant applicants will detail how their organisation's research culture and standards promote diversity and inclusion	M	M
10	Explore ways in which the Wellcome Trust can advocate (and potentially support) the establishment of a Chief Scientific Officer for Workforce Diversity.	L	M
11	Provide leadership on the emerging priority of socio-economic diversity in the scientific research workforce by hosting an inaugural conference on this topic in 2017/18.	M	M
12	Continue to ensure that outcomes associated with diversity are prioritised within the education team, and build on the established work in this area.	H	M
13	Establish a four-year funded UG degree that includes a one-year paid research work placement.	H	L
14	Collaborate with partners across the higher education sector, to develop a PhD Candidate Selection Toolkit .	M	M

Strategic Context

These recommendations provide the base on which all work in this area will prosper.

- A.** Publish a five-year diversity and inclusion strategy, and an associated three-year action plan that address internal development and wider external influence, and balance Wellcome's exceptionalism with collaborative working. The recommendations within this report provide pillars for this plan.
- B.** Appoint a member from the Board of Governors and from the Executive Board as 'Wellcome Trust Diversity Champions', with joint responsibility for providing high-level support for the team developing and implementing the action plan, and to help with impactful communications.
- C.** Establish diversity and inclusion as a standing item at all Board of Governor and Executive Board meetings, to be led by Wellcome Diversity Champions, using a dashboard approach to present relevant metrics.
- D.** Develop a pro-active and coherent communications plan showcasing Wellcome's work to promote diversity. This should be focused both internally (building on the existing programme of events and communications), and externally, championing an honest reflection of current successes, areas of challenge, and planned activity. The external component of the plan should be segmented to account for multiple stakeholders (such as universities, peer funders, and prospective grant applicants), positioning Wellcome as *credible, constructive and creative* in this area. Model, at all levels of senior management, a commitment to diversity and inclusion and articulate the benefits of a more diverse and more inclusive culture at all opportunities when communicating internally. Many staff expressed a concern that issues of diversity and inclusion were being paid lip service rather than being genuinely championed and embedded; to achieve genuine culture change across the organisation, all senior staff need to lead by example.
- E.** Invest in a permanent and dedicated team to lead on diversity and inclusion, equipped with: specific objectives and performance indicators derived from the three-year action plan; senior support from Wellcome Diversity Champions; and a sustained budget.
- F.** Explore ways in which Wellcome can advocate (and potentially support) the establishment of a Chief Scientific Officer for Workforce Diversity. This could be based in the UKRI, capitalising on the increased coherence that this organisation is expected to bring to the funding landscape, and might build on the existing Chief Scientific Officer role. We provide an example of the role in the US context in the report.

Monitoring and Reporting

- G.** Introduce best practice approaches to diversity and inclusion metrics (across recruitment and grant awarding), as outlined in the report. This should be informed by the more detailed recommendations below on monitoring, benchmarking and reporting, to develop the evidence base for action, and to evaluate the effect of activities to promote diversity.
- H.** Undertake a workforce survey, employing the recommended approach to monitoring, in early 2017. These data are important in providing benchmarking and to build an evidence base for action and, whilst work must be undertaken to gain acceptance of the idea of such a survey, any significant delay could affect progress in many other areas.
- I.** Adopt a pro-active and critical approach to establishing connectivity between the newly implemented Applicant Tracker System and Wellcome's HR systems. This will be essential to underpin the new approaches to monitoring, benchmarking and reporting. Build the capacity to analyse by selection-stage into the grants record system and the new ATS, in order that Wellcome can quantitatively investigate any potentially adverse effects on diversity of specific aspects of the selection process in relation to grants and recruitment.
- J.** Insist on more robust measures to monitor the diversity characteristics of all Wellcome grant recipients. This should include PhD funding disbursed via institutions, and account for the wider teams working on grants. We recommend exploring the way in which this might be undertaken via lookup against the HESA dataset, and the ways in which institutions can be encouraged to submit these data, as outlined in the report.
- K.** Establish a central diversity data repository on scientific funding and the scientific research workforce. Through collaboration with other funding bodies and UKRI, this could monitor progress in this area in a way which makes the most effective use of new and existing data. It is widely recognised that the quality, availability and comparability of data sets is restrictive in designing evidence-informed policies to promote diversity; this would build on Wellcome's emerging internal work on this.

Recruitment of Staff

This area is an immediate priority. It is important that Wellcome implements an action plan to promote diversity in the recruitment of its own staff, to ensure credibility when undertaking more ambitious, externally-facing work.

- L.** Implement the 'diversity in recruitment toolkit' outlined in [Appendix A](#) as the framework for a more consistent approach to recruiting staff. The toolkit recognises that flexibility is required because of the wide range of functions at Wellcome, but is designed to ensure that existing instances of good practice become the norm, and that there is quality assurance across the devolved recruitment structure. All hiring staff should be trained to use the toolkit, and it should form the basis of stronger relationships between HR professionals and hiring managers.
- M.** Use innovations developed within the Graduate Programme to build an evidence base for wider change to recruitment practices in Wellcome. Continue to grow and formalise the Graduate Programme, including clarifying and communicating the programme's explicit aims, and adopting the approaches to attraction and selection outlined in the report to increase the proportion of participants from more diverse backgrounds. This includes: clearly linking the graduate programme with the internship programme; the use of role models and data analytics to support and target marketing; the introduction of strengths-based assessment; and the use of contextual information to assess applications.
- N.** Review and clarify Wellcome's approach to working with agents, ensuring agencies understand, and are aligned to, Wellcome's commitment to diversity. Agents should be required, within contractual agreements, to commit to agreed diversity and inclusion principles, and provide relevant monitoring data.
- O.** Review approaches to the promotion of Wellcome Trust vacancies. This should consider: promoting recruitment opportunities through Wellcome's outreach and engagement function; engagement with third party organisations that have a proven track record of engaging under-represented groups; secondment opportunities for staff from key partners or funded health charities; and placing additional requirements on chosen recruitment agencies, as above.
- P.** Although out of scope, the qualitative research undertaken also engendered comments about inclusion and progression within Wellcome. Rather than exclude these points, we include a response to issues raised as areas for further investigation:
- Introduce target zones and metrics for staff progression within Wellcome. This could be embedded within the diversity strategy action plan. Integrate existing and new programmes into overall staff development activity and assess outcomes over time.
 - Undertake an Equality Impact Assessment of the performance management and bonus payment procedures. This would ensure the scheme does not discriminate against any groups.

- Ensure that all staff are aware of the structure, process and aims of the performance management and bonus payment scheme, with managers receiving guidance and/or training on effective and equitable use of the scheme. Work is already underway in this area.
- Develop opportunities for staff to present and progress ideas that are ‘outside of the received norm’; in this way Wellcome can explicitly showcase a commitment to diversity of ideas, and a willingness to embrace and include difference. There will be opportunities for an activity of this nature to encourage cross-team working. One very effective model to consider adapting would be the short presentation networking events run by the Royal Society of Arts (RSA), with the express aim of connecting RSA Fellows from diverse experiential backgrounds to collaborate on whichever project is most attractive to them, irrespective of their ‘job title speciality’.
- Promote a ‘questioning culture’ within Wellcome that values and actively seeks out challenge and critique of ideas, actions and behaviours. By empowering all staff to question colleagues’ existing practices and behaviours constructively, Wellcome will demonstrate and model an open and inclusive approach to work. Coaching methodologies could be incorporated into this work, concurrently reinforcing a foundation for personal and professional staff development. This questioning culture should be accompanied by clear avenues for action, so that concerns that are raised can be implemented, ensuring that the open conversation is also a constructive one.

Grant Awarding

There are two aspects to this area, and the ordering of recommendations reflects this:

- Embedding policies that cut across all grant-awarding processes.
 - Introducing new areas of funding and building on existing areas, to promote greater diversity amongst the research community.
- Q.** Continue to introduce best practice processes for all grant selection processes (noting that these allow flexibility within individual grants), including:
- The setting of explicit and valid selection criteria (including identification and removal of any invalid proxy assessment measures), and clarity about the criteria being assessed at which stage, and by whom.
 - Continuing to safeguard transparency within all processes, including ensuring shortlisting exercises and interviews are documented in a standard and consistent

manner, to show why people were shortlisted or funded, and how (against explicitly identified criteria) they were more suitable for the grant compared to other applicants.

- Using the role of the chair to guide selection processes, including an introductory narrative (adjusted to be appropriate and resonant to the group and the relevant process) that highlights: diversity as a shared, freely chosen value; the key aspects of implicit bias; and clarifying what they (as a panel) have specifically been charged with considering.
 - Continuing to adopt a critical approach to reviewing the role of the interview in the awarding of grants. This should include reference to: cultural approaches to interviewing; selection, size and composition of panels; training of panel members; adherence to guidance during interviews; and weighted value of interviews (i.e. counting for 50% of a combined assessment).
 - Ensuring that, at a minimum, individual selectors are aware about implicit bias and how to interpret information such as university attended, qualifications, international experience, and publication rate, in the context of diversity and the way in which particular groups have unequal access to opportunity.
 - Ensuring that only information directly relevant to the particular criteria being assessed at any given stage are made available to those assessing that given stage.
 - Ensuring a much clearer distinction of roles between those involved in advising on grant applications and those involved in making grant application decisions (within the relevant, specific stages of the application process), in order to avoid conflicts of interest.
- R.** In line with emerging international practice, introduce a specific expectation that all grant applicants will detail how their organisation's research culture and standards promote diversity and inclusion. The level of detail and ambition expected should be proportionate to the size of the grant. We provide examples of good practice within the report, and propose specific areas in which grant applicants should outline their practices.
- S.** Publish a summary of the diversity characteristics of Wellcome peer reviewers and Peer Review College members. In particular, this should: reference gender, ethnicity and disability in the first instance; include disaggregated information by Advisory Committee Group, and have associated communications that encourage peer organisations to do the same.
- T.** Pilot a programme of means tested PhD funding. This should be built on the quantitative evidence base outlined in this report. With reference to international evidence relating to

similar programmes, we recommend that in the first instance it is coordinated centrally through Wellcome (rather than being devolved to individual universities) to ensure it is properly targeted and monitored.

- U.** Develop the 'Equality and Diversity Initiatives' aspect of the Institutional Strategic Support Fund to establish a specific strand to support institutions to design, deliver and evaluate programmes of outreach to encourage the progression of UG students from under-represented backgrounds to PG study. Evaluation is especially important, given the weak evidence base in this area, though much can be learned from the emerging academic literature and established practice in the undergraduate 'widening access' market.

Promoting Diversity in the Pipeline

Wellcome has an important role in tackling the root causes of lack of diversity, through both direct action and leveraging its position to influence stakeholders. The following recommendations therefore include some that Wellcome may lead and others that require Wellcome to support, partner, and add value to work carried out by other organisations.

- V.** Continue to ensure that outcomes associated with diversity are prioritised within the education team, and build on the established work in this area.
- W.** Establish a four-year funded UG degree that includes a one-year paid research work placement, small-scale in the first instance and implemented with up to three partner institutions. The full proposed specification is outlined in the report.
- X.** Collaborate with partners across the higher education sector, including the Equality Challenge Unit, to develop a PhD Candidate Selection Toolkit, to encourage colleagues to consider diversity matters in their selection processes. The 'Diversity in Recruitment' toolkit outlined herein provides a model for this.
- Y.** Provide leadership on the emerging priority of socio-economic diversity in the scientific research workforce by hosting an inaugural conference on this topic in 2017/18. Wellcome could set the following activities as the basis for discussion: commissioned research in the key research areas outlined in this report; the collection and analysis of socio-economic data for Wellcome employees and grant recipients; and engagement with other organisations that have established work in this area.

Concluding Remarks

Diversity and inclusion are areas of increasingly significant strategic focus for employers in the private and public sectors alike. There is an ever-increasing understanding across society of the benefits of diversity and the means to enhance inclusion, and positive steps are being taken both across sectors and by influential individual employers to develop the employment landscape to support diversity and inclusion from pipeline through to progression.

The Bridge Group has now undertaken several pieces of commissioned research in this area; the recommendations emerging, if fully implemented, have the potential to secure significant change in the demographics of some of the most influential employers within the UK workforce. The potential of this collaboration with Wellcome to create lasting and significant change, however, represents a different order of magnitude to that which has gone before.

Wellcome's own internal research capacity, its depth of resource to support diversity and inclusion work, the unique scale of its position as both employer and grant-maker, and its fundamental role in shaping the entire STEM sector not just nationally but globally, from pipeline to professor, combine to suggest that the potential significance of the outcomes of this initiative is unprecedented. The recommendations in this report represent a step-change in Wellcome's recruitment and grant-making practice, and we do not underestimate the scale of the task at hand, the commitment that will need to be dedicated to it, and the time-frame required if it is to succeed.

Informed by our experience of undertaking this work, however, we are confident that we also do not underestimate the will and appetite for development in this area across Wellcome, nor its unique capacity both for risk-taking, and impactful leadership.

This is an unprecedented moment of opportunity not just to move the goalposts on diversity but to change the rules of the game, and unlock the full potential from across communities to allow great ideas to thrive.

This summary report is derived from a more extensive report submitted to Wellcome, which includes greater detail about the key findings and associated recommendations.

Thank you to colleagues at Wellcome for their engagement in this research, and to the wider community of colleagues who took time to speak with us. This research would not have been possible without their participation, insight, and enthusiasm.

The Bridge Group is a charitable policy association researching and promoting diversity. Since its launch in 2011, the Group has established itself as an authoritative, independent voice on how the education and employer sectors can promote diversity.

www.thebridgegroup.org.uk