

<b>Institution:</b> Middlesex University
<b>Unit of Assessment:</b> UoA4: Psychology, Psychiatry and Neuroscience
<p><b>1. Unit context and structure, research and impact strategy</b></p> <p><i>1.1 Context</i></p> <p>Staff submitted to this unit are based in the Psychology Department within the Faculty of Science and Technology at Middlesex University. The Department transferred to this faculty in 2014 (from the School of Health and Education) as part of a strategy to build research capacity, particularly in lab-based research, and forge new collaborations. Within the Faculty of Science and Technology, collaborations with Computing, Engineering, Natural and Sports Sciences are flourishing, as are established collaborations with Business, Healthcare and Social Sciences. The interdisciplinary nature of our research means that, of the 35 Category A eligible staff in the department, five are being submitted to other units of assessment (e.g., UoA20 Social Work and Social Policy), but form an essential aspect of our environment. Thirty staff (28.9FTE) are being submitted to UoA4. A further three permanent staff members on professional practice contracts do not have significant responsibility for research and hence have not been submitted.</p> <p>Our mission is to build upon and evolve our vibrant and sustainable research culture, which is both inclusive and collaborative, with explicit opportunities for development. Since REF2014 we have strengthened our research leadership, invested in staff, research infrastructures and facilities, significantly increasing our research capacity. We have almost doubled our research income in this round, and substantially increased the quality and quantity of our outputs. Junior researchers appointed in the last cycle (<b>Jones, Oskis, Reynolds, Russell, Slabu, Ward</b>) have developed into established, highly productive scholars who have attracted substantial funding, built a repertoire of high-quality publications, sustainable partnerships and impact-generating activities, and a new cohort of Early Career Researchers (ECRs; <b>Anderson, Kljakovic, Spencer, Younis, Yu</b>) appointed between 2017-2019 are developing their research profiles with support from senior staff.</p> <p>Our research strategy (Section 1.2) is driven by a Research Leadership Team (RLT; <b>Jones, Reynolds, Ward</b>) that forms a part of the Departmental Leadership Team (DLT), chaired by the Head of Department (<b>Westley</b>). Also sitting on DLT are the Research Degrees Coordinator (<b>Payne</b>) and the Chairs of the Research Ethics Committee (REC; <b>Brunswick, Alexis-Garsee</b>). Staff and PGR student research activities are centred around the following groupings: <a href="#">Applied Health Psychology</a> (Chair: <b>Van den Akker</b>); <a href="#">Community and Clinical Psychology</a> (Chair: <b>Bifulco</b>); <a href="#">Cognitive Psychology and Neuroscience</a> (Chair: <b>Brunswick</b>); <a href="#">Developmental Psychology</a> (Chairs: <b>Franco, Reynolds</b>); and <a href="#">Sports Psychology in Action</a> (Chair: <b>Duffy</b>). The groups serve a variety of functions and enjoy considerable overlap in membership, leading to strong collaboration across the unit and faculty. Some collaborate closely on projects, knowledge exchange and impact activities, produce publications and external funding bids, while others serve as discussion forums and platforms for sharing ideas. Groups also collaborate on consultancy, training, mentoring and peer support.</p> <p>Within the research groups there are also a number of smaller lab groupings: <a href="#">Jones &amp; Silas Lab</a> (Chairs: <b>Jones, Silas</b>) that focuses on cognitive neuroscience, the <a href="#">Music Cognition and Communication Lab</a> (Chair: <b>Franco</b>), and the <a href="#">Behavioural Science Lab</a> (Chair: <b>Dickins</b>). All emerged post REF2014 and demonstrate our thriving and evolving environment. Labs emerged in response to key questions initially aired within research groups but differ to research groups in that they pursue specific projects and adopt particular methodologies and techniques. The department also hosts CATS (<a href="#">Centre for Abuse and Trauma Studies</a>; Director: <b>Bifulco</b>), a joint Centre with the Social Work and Social Policy unit, where forensic and applied health psychology intersect to research the perspectives of victims and perpetrators of abuse.</p> <p><i>1.2 Research and impact strategy</i></p>

Our strategic aims include:

1. Extend and sustain our strong research base, conducting research that adheres to the highest standards of ethical practice and scientific integrity.
2. Enhance the quality and impact of published research.
3. Increase research funding to build capacity.
4. Encourage and support research-led impact initiatives.
5. Build collaborations with other areas within the university, other HEIs, business, public and third sector organisations.
6. Provide high quality training and mentorship of PGR students.

Progress is periodically monitored, informed by income and student data, and regular research plans completed by academic staff. We have met our aims in the current period and are well positioned to build on our successes in the next. Evidence for our successes can be seen in the growth of our research outputs (>56% larger submission than in REF2014, with high-quality publications in leading international journals as detailed throughout), the substantial contribution to knowledge, and impact beyond academia. Our external grant capture has almost doubled (£790k in REF2014 to £1.437m in the current round), and we have made significant investments in infrastructure and facilities (Section 3), particularly to support new research in cognitive neuroscience. Further, we have seen a sharp increase in research proposals submitted to the REC for ethical approval (744 approved applications with a 4-day average turnaround since 2016 when we moved to an online system), and incidence of pre-registered studies (protocols published on the OSF; Registered Reports in journals) (Section 1.4), demonstrating growth in our research base and our high standards of scientific integrity.

To illustrate some examples of our successes in this round, research led by **Colucci** (Community and Clinical Psychology) has contributed to improving the human rights of people with severe mental illness, raising awareness and understanding of mental health, and reducing self-harm and suicide. This is being pursued through several large funded projects funded (e.g., ESRC/GCRF, £237, PI **Colucci** [ES/S00114X/1]), involving key international collaborations and partnerships (Section 4). The research has led to high-quality outputs (e.g., *Transcultural Psychiatry*), and various seminars, webinars, and conferences (e.g., Mental Health Academy Suicide Prevention Conference, 2020). Research within CATS (**Bifulco, Oskis, Nunn, Barry**), with funding from a range of sources (e.g., ESRC, £385k, PI **Bifulco** [ES/K00638X/1]), has shown that 1 in 5 children experience neglect, physical, sexual or psychological abuse, and is associated with psychological disorder in adolescence and adulthood. The research has generated causal models and assessment tools (e.g., Computerised Life Events Assessment Record), and CATS provides bespoke training for its tools, which are now used in international research and applied work for child protection, adoption, fostering and residential care. This involves collaboration with Middlesex Social Work and Social Policy unit, and external specialist teams in the UK, Northern Ireland, Sweden, Canada, and Australia. The work has had an impact on practitioner training and led to agency change (e.g., in Action for Children, St Michael's Fellowship, Isle of Man Safeguarding board).

New cognitive neuroscience research by **Jones, Silas** and **Ward** (Jones & Silas Lab) has provided insight into how rhythm improves memory and the neural mechanisms using EEG, as well as age-related changes in explicit and implicit memory, with £132k funding from a range of sources (Bial Foundation: £41k, PI **Ward** [111/18]; £38k, PI **Jones** [150/16]; Experimental Psychology Society: £5k, PI **Ward**; Leverhulme Trust: £48k, PI **Ward** [RF-2020-149]). The lab has completed two competitive research residencies at the Science Museum, London, involving collaborations with UCL, University of Plymouth, and University California San Francisco, which enabled them to conduct and showcase largescale projects. The first [residency](#) investigated attention to the body and interoceptive awareness, leading to the development of new interoceptive awareness scales (MAIA-2 and MAIA-youth), and the second [residency](#) mapped changes in explicit and implicit memory over the lifespan, sampling >1000 participants aged 12 to 85+ years. Their research has led to several high-quality publications (e.g., *Psychological Science*; *NeuroImage*), and recognition awards (e.g., EUCAS Presidential Award).

These examples showcase our wide collaborations within academia, public and third sector organisations, and our research-led impact. Our approach to impact is integrated into our strategy through the RLT and Impact Lead (**Oskis**), who support staff in knowledge exchange and impact-generation activities, including:

- Participating in and hosting user events (conferences, seminars, workshops), promoting user dialogue.
- Participating in user steering groups/advisory panels and routinely implementing these within our own research.
- Running specialist training/CPD events targeted at users and making research findings available in a user-friendly form.
- Active engagement in communities of practice networks.

Our activities have been instrumental in the development of the Impact Case Studies (ICSs) for this round: (1) Preventing railway suicide; (2) Psychosocial impacts of reproductive health and wellbeing; (3) An evidence-based approach to policy and practice in intelligence analysis. The first ICS, based on research led by **Marzano** with funding from the Samaritans (£248k; PI **Marzano**), has directly contributed to decreasing suicides on the London Underground through practice change, staff training, and an award-winning public awareness campaign (Small Talk Saves Lives). Reverberating impacts are being observed in Germany and the Netherlands, and Marzano has received several recognition awards. The second ICS is based on research led by **van den Akker** on the impact of fertility treatment on mental health, employment, personal relationships, and legal, ethical, and human rights issues. With funding from the British Academy (£9.5k, PI **van den Akker** [SG132634]) and Society for Reproductive and Infant Psychology (£15.5k, PI **van den Akker**), the research has informed national and international policy and practice including The Nuffield, HFEA and European Council, impacting on removing donor anonymity and reducing maternal/infant morbidity and mortality. The third ICS, based on research led by **Dhami**, with funding from HM Government (£264k, PI **Dhami**), has resulted in evidence-based changes to policy and practice within national and international intelligence organisations. Impacts include new training for intelligence analysts, revised policy for communicating uncertainty in intelligence products, and infrastructure for an evidence-based approach. Intelligence organisations in the US and NATO have also directly benefitted.

In relation to the final strategic aim, we are proud of our high-quality PGR student training and supervision. Our approach is characterized by close collaboration with and integration of students within the unit, and in response to reduced availability of PhD studentships we have actively grown our provision in other ways. For example, within the Jones & Silas and Behavioural Science Labs, specialised MSc by Research pathways have been developed (2017), bringing new students into the culture of the unit. The first graduates of these pathways have secured PhD positions at Middlesex and elsewhere (e.g., University of Essex). We have also hosted year-long graduate internships (University of Lyon, 2018; University of Hertfordshire, 2020), directly contributing to collaborative supervision and network-building. This round has seen 154 doctoral completions, reflecting 8 PhD's and 146 professional doctorates (DCPsych; DPsych) run jointly between Middlesex and Metanoia Institute and New School for Psychotherapy (Section 2.3).

### *1.3 Sustainability and growth*

Under the leadership of our new Vice-Chancellor, Middlesex is currently formulating its ambitious research strategy to 2031 (involving several staff from our unit). Key areas in which the University intends to become world-leading are diversity and inclusion, social justice, innovation, health, sustainability and prosperity – all areas in which the unit is already active and excellently positioned to develop further. In the next cycle, we aim to build on our recent achievements in relation to our strategic aims to ensure steady growth. Our strong research base and growing capacity, together with our robust research leadership and vibrant culture, puts us in a solid position to enhance our research and impact further.

Our strategy for the next five years is to focus our energies both on established areas (e.g., health and wellbeing) and continue to develop newer areas that are flourishing (e.g., cognitive neuroscience). This will be achieved through sustaining our strong leadership, recruitment and

retention of high-quality staff in key areas, and investment in infrastructure to facilitate new interdisciplinary collaborations. This will in turn facilitate our aim to further increase our external research income. Our emphasis on equality, diversity, and inclusion, and tailored staff development and mentoring will continue to support staff to achieve promotion. Strong recruitment and close collaboration with PGR students will also remain a key focus, facilitated by our increased supervisory capacity and range of new offerings. Further, we have a strong established basis for delivering impact and aim to strengthen our existing relationships with policy and practice stakeholders and develop new ones, extending our reach and impact. We also aim to increase our responsive research, another area where we are well-positioned. A recent example relates to the Covid-19 pandemic, where staff quickly realized they could make a useful contribution and cohered under a Covid-19 Research Forum (Chair: **Dickins**). There are now at least nine active projects, three of which have applied for external funding, and outputs are starting to be published (*Frontiers in Psychology*; *Learning and Motivation*).

#### 1.4. Open Science and research integrity

Throughout this cycle, engagement with Open Science, including Open Access publishing and data management, has increased within our unit. We have encouraged and supported initiatives related to this, including ORCID registration (with all submitted staff registered), and pre-registrations of research protocols (e.g., on the OSF). Several studies have been formally accepted as Registered Reports (e.g., *Cortex*; *Quarterly Journal of Experimental Psychology*). Open Science has also been integrated within PGR training. MSc by Research students in Cognitive Neuroscience are required to register their projects on the OSF, and we offer a taught module on Open Science on several PG programmes. Staff are aware of the importance of making research openly available and publishing via Green Open Access routes. Gold Open Access publishing is encouraged where funds allow. The RLT work closely with the Research and Knowledge Transfer Office to help with Open Access publishing and ensure REF compliance.

The University has a well-established and comprehensive Code of Practice for Research, enshrining the highest standards of conduct and integrity. Its principles are based on the Research Councils' Statement on Safeguarding Good Scientific Practice (2000) and the Concordat to Support Research Integrity (2012). The REC ensures that high ethical standards are upheld through rigorous approval processes. The REC is chaired by two Associate Professors (**Brunswick, Alexis-Garsee**) and supported by all unit staff as trained reviewers. All staff and student research, including those conducted as assignments within taught undergraduate and postgraduate programmes, must obtain ethical approval before work commences. Applications are evaluated by at least one reviewer, two for those deemed high risk, and those requiring revision receive feedback to develop the applicants' understanding of ethical practice. Several staff conduct research involving children and vulnerable groups such as individuals with dementia (**Franco, Reynolds, Brunswick, Ward**), which in some cases has required additional NHS approval.

## 2. People

### 2.1 Staffing strategy

Key objectives of the unit staffing strategy since 2012 have been to improve the balance of our staff profile, develop junior researchers, reinforce our research groupings, and lay foundations for new areas. These have been pursued through a combination of external recruitment, including a major recruitment drive early in the period, and a strong emphasis on staff development. Our inclusive approach enhances individual and collective research capacities, attracts and retains research leaders and junior staff with high potential, and promotes equality and diversity.

Investment in new professorial appointments in the previous cycle was designed to bring expertise in health psychology (**Nouwen** [retired 2020], **van den Akker**), behavioural and evolutionary science (**Dickins**), cognitive and decision psychology (**Dhami**), and health and social care (**Bifulco**). This was complimented by several Lecturer appointments in the last round, bringing

expertise in experimental/cognitive psychology and cognitive neuroscience (**Jones, Silas, Ward**), developmental (**Reynolds**), social (**Slabu**), evolutionary (**Russell**) psychology, and psychophysiology (**Oskis**). This has been instrumental in the development and delivery of new research groups (e.g., Cognitive Psychology and Neuroscience; Jones & Silas Lab), projects and impacts, and all have been promoted to Senior Lecturer in this round. This activity has guided investment in junior staff in the current period. Four Lecturer (**Anderson, Spencer, Younis, Yu**) and two Senior Lecturer (**Kljakovic, Colucci** [promoted to Associate Professor in 2019]) appointments were made between 2017-19 to develop strengths in clinical psychology and mental health. Activity in these areas is flourishing and has led to new projects, PGR students, growth in outputs, and external grant capture.

The healthy proportion of researchers in early phases of their career alongside senior researchers is a core strategic aim to ensure a sustainable research base. Our investment in people in the early part of the REF cycle evidences our drive towards our strategic aims and our forward-thinking focus.

## *2.2. Staff Development*

The unit has a structured and inclusive approach to supporting staff, with an ethos of collaboration and development. The effectiveness of our staff development is reflected in the strong advancement of staff through promotion. Since 2014 three staff have been promoted from Senior Lecturer to Associate Professor (**Marzano, Alexis-Garsee, Colucci**), and seven from Lecturer to Senior Lecturer (**Jones, Silas, Ward, Reynolds, Russell, Slabu, Oskis**). This includes seven women, one from a BAME background, and five non-UK born individuals.

### *2.2.1 Induction and mentoring*

All new staff have an induction to the University and complete training on health and safety and EDI awareness. They also have meetings with the Head of Department (HoD) and an assigned mentor. Mentoring is designed to assist new staff in adjusting to the university and their role during the first year of appointment. Mentoring meetings often take place on a more frequent basis during the probation period. The choice of mentor is based on the appointment level and research interests. Senior staff (Professor/Associate Professor) act as mentors to junior researchers, to guide and introduce them to their established networks. New staff are also inducted to research group/s, initiated through introductions by the HoD/mentor. There is also a University-wide mentoring scheme available to all staff, through which senior, experienced researchers provide guidance to less experienced academics on activities such as grant writing and building collaborative partnerships.

### *2.2.2 Research plans and appraisals*

The RLT take an active approach to creating a cohesive research environment. They regularly meet all staff individually to discuss research goals and needs. Staff are asked to complete research plan documents where they report on activities, goals, and required support, for discussion with RLT, who monitor needs and implement tailored support (Section 2.2.3). Staff also undergo an annual appraisal where activities in each work area are formally explored and objectives set. The research plans do not form a specific requirement for appraisal but feed directly into and assist this process. Individuals are offered specific development opportunities to meet any needs identified, with an emphasis on support.

### *2.2.3 Support and training*

To foster an environment that enhances individual and collective research capacities, we ensure careful management of workloads that includes dedicated time for research. Staff receive one clear day a week or blocks of time for research, depending on their teaching and preferences. On top of this staff are also entitled to book 20 days of study leave per year. To support the career development of junior staff, they are given a more generous research allowance through a reduced teaching load in their first year. One of the ways that we have been able to carefully manage workloads is through the creation of a junior Graduate Academic Assistant (GAA) post to support

staff with laboratory/seminar teaching and provide support with assignments. GAAs are usually registered for research degrees.

The unit actively invests in staff development, and in this round has funded three staff (**Jones, Silas, Ward**) to complete 'Emerging Leader Training' offered by the University's Organisational and Staff Development Unit, and three to complete the Advance HE Aurora leadership development initiative for women (**Marzano, Slabu, Ward**). To support other training and development needs the department has a continuing professional development (CPD) budget. Staff and PGR students can apply for funds annually to enable them to attend external training on specific techniques/methodologies, and national and international conferences. Additional funding for training and conferences is available through the Faculty. This has benefitted individual staff as well as the wider department. For example, a PGCert in Ecological Survey Techniques at Oxford University (**Dickins**) enabled several active projects and led to the development of a new MSc by Research in Evolutionary Behavioural Science, and training in specialist counselling skills (**Barry**) has kickstarted new impact-generating activities.

The above is complemented by a range of other support, including research group meetings, research club, and a research seminar series. Research club is an informal regular session organised by RLT that serves a range of functions from open research discussions, journal club, to workshops on specific topics (e.g., Open Science, JASP). The research seminar series is a regular external speaker slot (1 per month), and all staff and PGR students are encouraged to invite speakers. A highlight of our calendar is our Annual Research Showcase (December), in which staff and PGR students present research in a conference format. This also facilitates discussion, and other members of the Faculty are invited to promote networking and collaboration. These activities contribute to our thriving culture, and we also produce a quarterly newsletter to showcase and recognise staff research achievements.

Staff also benefit from the University's research development programme, which provides training on writing for publication, doctoral supervision, preparing funding applications, managing research and knowledge transfer projects, and impact beyond academia. Staff new to PGR student supervision undergo compulsory supervisor training, and we involve these individuals in supervisory panels under guidance from experienced supervisors.

### *2.3 PGR students*

PGR students are integral to our research community and we ensure that they are fully integrated into the unit's culture. We have attempted to grow our provision by developing new MSc by Research routes (2017), which have seen excellent recruitment and progression to PhD in recent years. The current cycle has seen 154 doctoral completions, including 8 PhDs, with the large remainder coming from longstanding collaborations with Metanoia Institute and New School for Psychotherapy on training routes for Counselling Psychologists & Psychotherapists. Doctorates in Counselling Psychology & Psychotherapy (DCPsych) run jointly by Middlesex in collaboration with clinical training partners are accredited by the British Psychological Society, Health and Care Professions Council and UK Council for Psychotherapy. In addition, a post qualification Doctorate in Psychotherapy by Professional Studies (DPsych), run jointly with Metanoia Institute, allows experienced clinical professionals to undertake research directly relevant to their clinical practice, making an innovative contribution to their field. These programmes culminate in a major research project examinable through viva at level 8 in accordance with the University's Research Degree's regulations. Staff (**Westley, Younis, Yu**) directly contribute to the research component of these joint programmes through input and feedback on student proposals, and collaboration on these pathways has stimulated broader research collaboration between the unit and our training provider partners, including joint supervision of PhD students between Middlesex staff (**Barry, Payne, Westley**) and Metanoia Institute staff.

#### *2.3.1 Recruitment, supervision, and progression*

Students apply via the Research Degrees Admissions (RDA) team, and applications come to the department Research Degrees Coordinator (RDC; **Payne**) for departmental-level review, interviews, and offers. Once a student accepts a place, they are inducted by the RDC and supervisory team. The RDC is responsible for overseeing the quality of the student experience and monitoring supervision and progress. Supervisory teams consist of a Director of Studies (DoS) for both MSc by Research and MPhil/PhD routes, and the latter also requires a second supervisor. The RDA team advises students on milestones of registration, which takes place after ~6 months, and transfer, which takes place after ~18 months (full-time students). These panel-based assessments, involving an internal examiner and independent chair, assess progression, provide feedback, and ensure that the student is ready to enter the next stage. They also enable a formal channel for students to discuss any additional requirements. Doctoral students are initially registered for MPhil and transferred to PhD following successful completion of the transfer. Thesis submission is expected within 3-4 years (full-time), and students are examined by viva with an internal and external examiner in the presence of an independent chair.

### *2.3.2 Facilities, training and support*

PGR students have dedicated space to pursue their work, including access to computer facilities and specialist equipment. Supervisory teams are tasked with ensuring that students have sufficient resource. There is a generous equipment budget within the Faculty and this permits a flexible policy for purchasing that works in tandem with general infrastructure bidding. To this end the department has a wide array of equipment and facilities (Section 3). During the Covid-19 pandemic the unit specifically supported PGR students to move their research online where necessary, investing in appropriate software and support packages to enable this (e.g., Gorilla).

PGR students have access to research methods training throughout the academic year, and other development opportunities include an annual Researcher Development programme of nearly 30 workshops, including employability skills, dealing with the media, academic writing, and accessing and disseminating research. In addition, the unit organizes bespoke training in a range of areas, including neuroscience techniques (EEG, tACS), observational methods for fieldwork, programming and statistical software, and Open Science. For additional training needs, PGR students can apply for CPD funding in the same way as staff (Section 2.2.3), and these funds also allow students to attend national and international conferences.

PGR students, including those on joint programmes (DCPsych; DPsych), are encouraged to participate in the unit's research culture, including attending regular activities (research club, research seminars, research group meetings). They are also supported to gain experience in publishing research and presenting at conferences through participating in the University's annual Research Student Summer Conference (June) and our unit's Annual Research Showcase (December). These opportunities provide a useful rehearsal and feedback exercise. Abstracts go through formal review, and students receive feedback on their posters/talks. Our students have achieved numerous successes in this round, including presentations at international conferences and high-quality publications (e.g., *Psychological Science*; *Psychoneuroendocrinology*; *Journal of Experimental Child Psychology*; *Epidemiology and Psychiatric Sciences*).

### *2.4 Equality and Diversity*

Equality, diversity and inclusion (EDI) are core Middlesex values. Middlesex is proud to be one of the most diverse universities in the UK with around five times the average number of Black Asian and Minority Ethnic (BAME) students and around three times the average number of BAME staff. In our unit 23% of submitted staff are from a BAME background, and 44% are non-British born. We also have a very balanced spread of ages within the unit (5 staff aged 31-35 years, 5 aged 36-40, 5 aged 41-45, 5 aged 46-50, 3 aged 51-55, 2 aged 56-60, 5 aged 61-65), and 59% (19) of staff in our unit are female (9 at Professor/Associate Professor level; 10 at Lecturer/Senior Lecturer level). EDI is not only embedded within our core values but also underpins our major research themes addressing inequality and social justice (**Colucci, Younis, Bifulco**).

We have robust arrangements for ensuring both awareness of EDI and equality of opportunity. All staff complete EDI training, with mandatory additional training on unconscious bias for those involved in staff/PGR student interviews. Along with the provision of opportunities for junior researchers (Section 2.2), study leave, maternity and paternity leave, flexible working to accommodate family, health or other circumstances, and a commitment to reintegrating staff on their return to work, are all supported by policies. Between 2014-20, 5 staff in the unit have been on parental leave, and family-friendly policies are reflected in work plans, ensuring that scheduling accommodates family responsibilities. There is a range of support for staff who work part-time (2 staff), staff with disabilities (2 staff), and those returning from periods of ill-health or managing long-term illness. Workload allocation is tailored towards individual circumstances, with reduced teaching and admin to moderate the impact of family responsibilities, disability or ill-health and create time for research. The unit also actively invests in the development of its female researchers, with three completing the Aurora leadership development initiative for women in the last 5 years. All have been promoted to Senior Lecturer/Associate Professor in this round.

The unit also provides support for mental health and psychological wellbeing, with activities led by its own staff (**Bifulco, Westley**). This is complemented by our departmental Mental Health Awareness week, with sessions designed to provide practical tools. Further, the Faculty and University provide sessions to promote wellbeing, including breathing and relaxation, mindfulness, and meditation exercises.

The selection of outputs for our REF2021 submission was conducted by a UoA Working Group composed of five members (three female; two non-white British), two at professorial level, three mid-career researcher, and one ECR. All undertook specific training in EDI and unconscious bias. The selection of outputs was fully transparent: Staff were asked to nominate their top-5 publications based on REF quality criteria. These were double rated internally prior to a sample being sent to two external reviewers. The selection process then followed: (1) Inclusion of all staff's first (best) nominated output; (2) Inclusion of other highest-ranking outputs (up to a maximum of 5 per individual) based on the average internal and external rating and working group discussion.

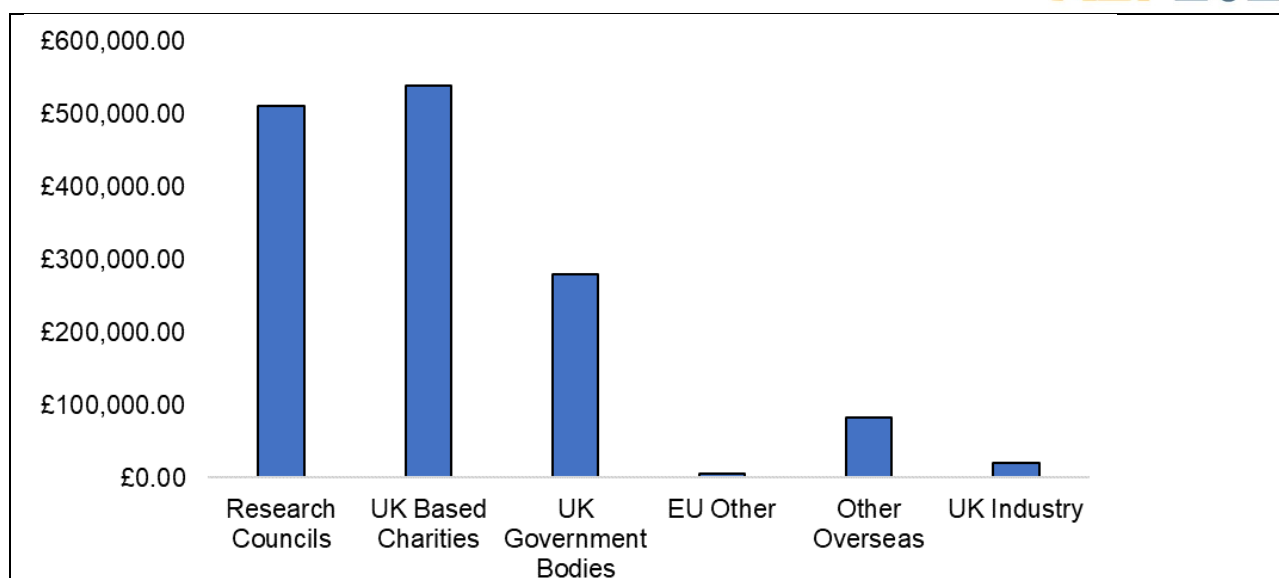
### **3. Income, infrastructure and facilities**

#### *3.1 Income*

In this cycle our unit has secured £1,437,311 in external funding, which marks a significant increase from the previous cycle (£790k in REF2014). 95% of our income came from UKRI Research Councils, UK Charities and UK Government bodies (including local authorities and health authorities), and most of the remainder came from other UK industries and overseas funders, with less than 1% from EU sources (Figure 1). Thus, BREXIT is not regarded as a significant threat to our research activities. This significant increase in income from the last round evidences the successful growth of our research base, which we aim to expand further in the next round.

Our strategy has been to target a range of funders, to cover diverse interests from theoretical to applied research. Bidding activities are overseen by RLT, who track application plans and provide support (e.g., reviewing proposals, ethical scrutiny). The Research and Knowledge Transfer Office (RKTO) assists in identifying funding opportunities and provides a range of support to researchers (Section 3.2). Applications are reviewed internally before being signed off by the Faculty Academic Dean for submission, providing important quality control and feedback opportunities.





**Figure 1:** Total income during this REF cycle from each funding source.

In this cycle we have seen several large successful bids, leading to the production of many high-quality outputs and impacts, and we have also been invited to collaborate on large grants led by other universities. For example, **Colucci** (PI) received funding from the ESRC/GCRF (£237k; [ES/S00114X/1]) to pursue her research on human rights and mental illness, and has been an invited Co-I on several related projects (AHRC/GCRF [AH/V013548/1]; MRC [MR/R022461/1; MR/R003386/1; EP/T023813/1] led by researchers at King's College London, University of Leeds, University of Liverpool, De Montfort University, and University of Manchester. **Bifulco** (PI) has captured funding from the ESRC (£385k; [ES/K00638X/1]), St Christopher's Fellowship (£154k), and a range of other industry and UK charities, including Action for Children, and Youth Minds Ltd (£99k) for CATS's work on child abuse and attachment, which has had an impact on the formal assessment of children in care using tools developed through the research (Section 4).

Other grants include £248k from the Samaritan's to **Marzano** (PI) to fund her research on suicide prevention, and £264k from the UK Government to **Dhami** (PI) for her research on judgement and decision-making relevant to intelligence analysis. **Marzano's** work has led to publications in *The Lancet Psychiatry*, *British Journal of Psychiatry* and *BMJ Open*, and is associated with significant impacts driven through award-winning public awareness campaigns to prevent suicides on the railways (featured in our ICS on railway suicides). **Dhami's** projects have had a substantial impact on policy and practice within national and international intelligence organisations (featured in our ICS on intelligence analysis).

**Franco** (PI) secured £300k from the Dunhill Medical Trust [RPGF2006\241] in 2020 for an interdisciplinary project examining the effect of music therapy on cognition and wellbeing in care home residents with dementia involving collaborations with the Universities of Padua and Brussels. Related to this, **Ward** (PI) secured £48k from the Leverhulme Trust in 2020 [RF-2020-149], and £41k from the Bial Foundation in 2018 [111/18] for her research on memory and cognitive aging, involving collaborations with **Jones** and **Silas**, which has led to the acceptance of formal registered reports in *Cortex* and *Quarterly Journal of Experimental Psychology*. **Jones** (PI) also received £38k from the Bial Foundation [150/16] for cognitive neuroscience research in the Jones & Silas Lab, leading to a further registered report in *Cortex*.

### 3.2 Infrastructure and facilities

The unit is well served in relation to infrastructure and facilities. Research infrastructure at the University level is provided through the RKTO. Led by the University Director of Research and Director of Knowledge Exchange, the RKTO provides resources and support for staff in relation to research funding, delivering impact, managing research projects, knowledge transfer activities, and support for PGR students.

We have four dedicated research laboratories and a suite of testing cubicles equipped with computers in the state-of-the-art Hatchcroft Building. The Cognitive Neuroscience suite, established in 2015, received a £120,000 equipment and facilities upgrade in January 2020. It contains both lab-based EEG (128-electrode BioSemi, 64 electrode ActiChamp, R-Nets Brain Products) and wireless EEG systems (BioRadio and Brain Products LiveAmp), as well as electrical (tDCS/tACS, NeuroConn) and magnetic brain stimulation (TMS, MagStim). The suite houses sound attenuated booths dedicated to cognitive neuroscience research, each with a Chronos (Psychology software tools) device to link stimulus/TES presentation, EEG stimulation and responses with sub-millisecond accuracy. Our specialist research licenses such as Brain Vision Analyzer 2/Recorder, BESA, Soterix Medical, facilitate state-of-the-art data collection, modelling, and analysis. This investment has directly benefitted research within the Jones & Silas Lab, and forms an integral feature of our unit's forward-looking strategy (Section 1). The equipment has enabled research that has led to two grants totalling £79k from the Bial Foundation, and high-impact publications (e.g., *NeuroImage*, *Journal of Cognitive Neuroscience*). It has also allowed the Jones & Silas lab to offer third-party training workshops (with attendees from UCL, Birkbek, and University of Bedfordshire), returning benefits to the unit and other HEI's. With income from EEG workshops the Jones & Silas lab was able to fund a group of PGR students to attend the British Association of Cognitive Neuroscience Conference (2019).

Our Psychophysiology lab houses substantial peripheral electrophysiological equipment, including 7 BIOPAC four-channel peripheral physiological monitoring systems, providing a joint research and teaching space, and 7 PowerLab data acquisition hardware (AD Instruments). There are also 7 portable PowerLab acquisition devices for off-site research testing. Six separate stations with screens, couches, PCs and flat screen TV systems offer single participant or group testing, with a seventh acting as a master control system. The BabyLab occupies a specialist space with a participant observation/testing area and adjacent control room with a one-way mirror and sound attenuated chamber with recording equipment. It is also equipped with three Tobii Eye Trackers and baby R-Net caps for recording EEG. Finally, the Behavioural Science Lab is equipped for fieldwork in remote places including specialist recording and software licenses (e.g., Observer XT, Raven pro).

We also make use of a range of shared laboratory space and equipment. This has significantly improved since REF2014 as a result of the move to the Faculty of Science and Technology in 2014. A team of technical staff operate across the faculty to facilitate the use of equipment, and in the current period the Faculty has made significant research-related capital expenditure investment (e.g., laptops for PhD students, the London Sport Institute (LSI) psychophysiology equipment, digital media upgrade, desktop refresh, 3D printing suite). The Sports Psychology in Action group (Chair: **Duffy**) conducts much of their research at the LSI, whose laboratories contain fitness and exercise equipment, bone density measuring equipment, force plates, and 3D motion capture systems (Qualisys, CODA). The LSI have a presence at Saracens Rugby Club in Allianz Park, where facilities include labs dedicated to human biomechanical assessment, physiology, and performance technology analysis, including high performance labs, sports rehabilitation facilities, testing facilities and a strength training area. The Faculty of Arts and Creative Industries includes a green screen video studio and rackmounted VICON 3D motion capture system equipped with 20 motion capture cameras, which has been integral to the research of **Colucci** and colleagues. We also have access to human computer interaction laboratories in the Interaction Design Centre, and facilities for blood and salivary analysis in the Biomedical Sciences area. The latter has been used extensively by **Nouwen** and colleagues in the Applied Health Psychology group, including PGR students, leading to publications in, for example, *Diabetes Research and Clinical Practice*.

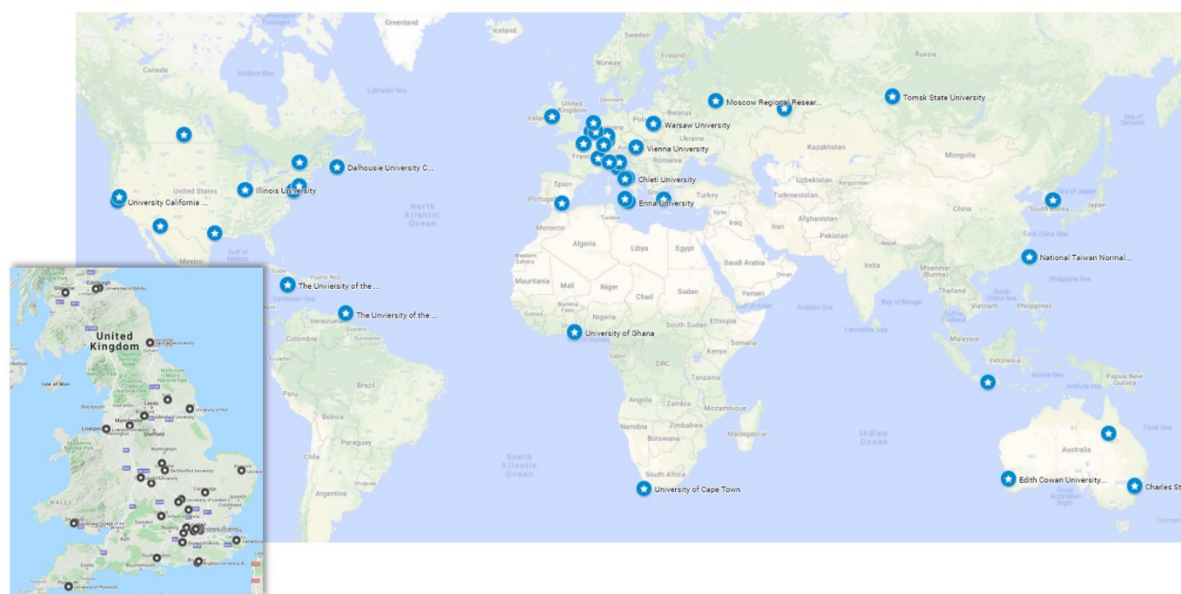
In addition to access to specialist facilities and equipment, all staff have daily accommodation and appropriate computer and IT facilities. Facilities for research meetings, symposia and conferences are available across the campus, including in the new Ritterman Building (completed 2017) that is specifically designed for interdisciplinary work. The department maintains subscriptions to research acquisition and management software, including Qualtrics, Gorilla, SONA, and we have

site licenses for E-Prime and Matlab. A well-stocked University library (Sheppard Library) includes over 150,000 titles, representing a significant increase since 2014 as result of investment in library resources. Librarians provide expert support and training on citation searching and RefWorks for staff and PGR students, and information and support around the REF, Open Access publishing, and data management. The Library's Research Support Services Team manages the Figshare Data Repository and the Eprints Research Repository, which houses many thousands of outputs and supports discovery of research by Middlesex and Middlesex-affiliated authors.

#### 4. Collaboration and contribution to the research base, economy and society

##### 4.1 Collaboration

Research in our unit is characterised by successful collaboration leading to important contributions, and there is generous support for collaborations, networks, and partnerships. As well as our many well-established cross-departmental and cross-faculty collaborations (Section 1), staff have more than 80 separate collaborations with other universities, of which a third are internationally placed in Europe, USA, South East Asia and Australia (Figure 2). As a result, over 86% of our REF2021 outputs include collaborations with other institutions, with 44% representing international collaborations. Examples include: UK institutions: UCL, King's College London, Imperial, Royal Holloway, Universities of Oxford, Cambridge, Edinburgh, York; International institutions: Universities of California San Francisco, Cape Town, Illinois, Pennsylvania, Athens, Paris, Brussels, Padua, Max Plank Institute.



**Figure 2.** Unit research collaborations with UK and international institutions.

We also have many collaborations outside of academia, including with charities (e.g., St Christopher's Fellowship; Isle of Man Safeguarding; Action for Children [**Bifulco, Nunn, Barry, Oskis**]; Fertility Network UK; Working Families [**Payne, van den Akker**]; National Appropriate Adults Network [**Dhami**]; Greenwich Leisure Limited and Barnet Council [**Alexis-Garsee, Payne, Slabu**]; Foundation for Advancing Wellness; Instruction and Talents Philippines [**Colucci**]), health, education and welfare organisations (e.g., Guys and St. Thomas Foundation Trust; London North West University Healthcare NHS Trust [**Yu**]; University of the Third Age; Methodist Homes Association [**Franco, Ward**]; Nuffield; Human Fertilization and Embryo Authority [**van den Akker**]; Samaritans [**Marzano**]; London Science Museum [**Jones, Silas, Ward**]; Fika [**Alexis-Garsee, Payne**]; Komunitas Peduli Skizofrenia Indonesia-KPSI; Mindfreedom Ghana; Pakistan Institute of Living and Learning [**Colucci**]), arts and film organizations (e.g., Nabuke Foundation Ghana; Ben Pinter Tenan Indonesia [**Colucci**]), professional bodies (e.g., Network Rail; Transport for London [**Marzano**]; Saracens Foundation; London Borough of Haringey [**Duffy**]), law enforcement and criminal justice agencies (e.g., Metropolitan Police; Sentencing Council for England and Wales [**Dhami**]; British Transport Police [**Marzano**]), Government (e.g., HM Government [**Dhami**];

European Council [**van den Akker**] and international security (e.g., UK Ministry of Defence; Netherlands Defence Academy; NATO; Defence Research and Development Canada; US Federal Bureau of Investigations [**Dhami**]).

The breadth and importance of our collaborative relationships can be seen in the following examples. Research by **Colucci**, pursued through several large collaborative UKRI grants (Section 3) has been made possible through established networks and partnerships in low-and middle-income countries, including in Ghana, India, Pakistan, and Indonesia. This includes research collaborations with King's College London, De Montfort University, Universities of Leeds, Liverpool, and Manchester, as well as the University of Ghana and Gadjah Mada University (Indonesia), mental health service providers (Mindfreedom Ghana; Komunitas Peduli Skizofrenia Indonesia), and arts/community organizations (Nabuke Foundation Ghana; Ben Pinter Tenan Indonesia). The research has contributed to improving mental health care and reducing human rights abuses of people with severe mental illness in these countries, and has led to several collaborative seminars and webinars, conferences (Mental Health Academy Suicide Prevention conference, 2020), and research film screenings (Breaking the Chains: Anto's story, 2020). **Colucci** Chairs the International Association for Suicide Prevention Special Interest Group on Culture and Suicidal Behaviour, and co-Chairs the World Association of Cultural Psychiatry SIG on Arts, Mental Health & Human Rights. She has involved Middlesex colleagues and PGR students as well as international collaborators and stakeholders. The unit has directly supported her work through a significantly reduced teaching load.

Research led by **Franco** (Music Cognition and Communication Lab) related to development, health and wellbeing has also seen flourishing successes linked to interdisciplinary collaborations. This includes the development of a novel questionnaire (music@home), now adapted to different languages, showing associations between informal musical experience and linguistic ability in 3-4-year-olds. The research, involving collaborations with Universities of Milan, Chieti and Montreal revealed the relationship between home musicality and early language, leading to outputs in *PlosOne*, *Journal of Experimental Child Psychology*, and *Journal of Child Language*. **Franco** has also driven interdisciplinary collaborations with UCL (anthropology) and Montreal (phonetics) to investigate infant-directed speech and song in three hunter-gathering cultures (BaYaka Pygmies, Maniq, Batek), leading to a workshop (Musilanguage in the cradle of cultures) with Kyoto University. Her research also shows cognitive benefits of mood-matching music in children, adults and older adults, and ongoing work using eye-tracking and preferential listening is investigating infant speech perception in musical contexts (funded by The British Academy), involving collaborations with Universities of Dresden, L'Aquila, and Brussels. **Franco** also leads a large interdisciplinary project on the benefit of music therapy on cognitive ageing (funded by Dunhill Medical Trust, £300k [RPGF2006\241]), involving collaborations within Middlesex (**Ward**; Design Engineering), external institutions (Universities of Padua, Paris, Brussels), and other organisations (Methodist Homes Association). Further, **Franco** and **Brunswick's** work investigating reading and rhythmic abilities in expertise groups (dancers, musicians) involves collaborations with the Royal Ballet and Studio Wayne McGregor. **Franco** has also organised several symposia at international conferences (Sheffield International Conference on Music and Emotion, 2015; Geneva International Conference on the Multimodal Experience of Music, 2015; European Congress of Psychology, 2015; Prague World Health Association on Infant Mental Health, 2016), and her research on musical experiences and language development has featured at the Cambridge Science Festival (2016) and the Rhodes Centre (2018). The unit has directly supported this research through two funded PhDs.

**Nouwen's** (Applied Health Research Group) research on the psychosocial and mental health impacts of diabetes, involving collaborations with Bashkir State University of Medicine, Ufa, Russia and the Moscow Regional Research and Clinical Institute, has directly supported clinicians with diabetes diagnosis, treatment, and complications. Several third-party courses have been arranged, engaging diabetologists, consultants, and diabetes paramedical staff. **Nouwen** is also co-investigator of the collaborative International Prevalence and Treatment of Diabetes and Depression study, carried out across 14 countries, which has produced several key publications (e.g., *Diabetes Medicine*; *General Psychiatry*; *Epidemiology and Psychiatric Sciences*). Further,

**Dhami's** research on judgement and decision-making, which has directly benefited legal and security organisations, continues to generate new collaborative relationships. She co-founded two international research networks (Law, Society and Psychological Science group, 2018; Empirical Research on Sentencing group, 2019), which have seen active participation by the Sentencing Council's for England and Wales, and Scotland. In 2014 she was nominated by the MoD Science & Technology Laboratory as the UK representative on a NATO panel examining the assessment and communication of risk and uncertainty in decision-making. In 2018 she also began a multi-study collaboration with the Netherlands Defence Academy.

Many of our collaborations are longstanding and comprise large-scale networks, but staff are also supported to build new relationships. Funds to facilitate research meetings, pilot studies for collaborative funding applications, and knowledge exchange and impact activities involving partners, have directly benefited several staff (including ECRs) in the current round. For example, **Spencer** visited Alaska (2019) to facilitate collaborative grant preparation, and **Jones** visited Dalhousie University Canada (2015) to set up a new collaborative project. Many others (e.g., **Franco, van den Akker, Ward**) have also benefited from this type of support. Further, several staff have been awarded funding through our generous impact budget to pursue engagement and impact-generation activities with collaborative partners. For example, the Creative Minds conference (**Westley, LeBoutillier**, 2018) brought together ~80 Psychologists and Creative Artists at Middlesex.

#### *4.2 Contribution and impact*

The unit has sustained its strong emphasis on research-led impact. Our activities demonstrate close collaboration with practice and policy stakeholders, leading to wide economic and societal contributions. This can be seen in the above examples and our ICSs. To highlight further examples, CATS (Chair: **Bifulco**) conducts research on abuse and trauma-related topics in children, adolescents, and adults and provides bespoke training for the use of their assessment tools, which are now used in international research and in applied work for child protection, adoption, fostering and residential care to fulfil NICE guidelines and UK government indicators. Through partnership with children's services, it has monitored implementation of the tools, and impact can be observed in practitioner training, evaluation, and agency change. Practitioner training runs several times a year at Middlesex, commissioned by specialist teams across the UK and Northern Ireland, and internationally (Sweden since 2014; Australia since 2016; Canada since 2018). This has served to roll out evidence-based assessment, with over 2000 professionals trained during this cycle. The use of the tools is now standard practice in St Christopher's Fellowship in England and the Isle of Man, to monitor attachment and symptom change in children and adolescents involved in social pedagogic interventions. CATS's training for care, which aids implementation, evaluation and reporting, has also been extended to Action for Children, who have completed two initial projects in Scotland and England for fostering services. Further, St Michael's Fellowship has commissioned training and is using the tools throughout its London services for assessment and court reporting to determine child placement. The Isle of Man Safeguarding Board commissioned training to improve child protection, education and family support services and are evaluating implementation. All agencies have reported a culture change by integrating attachment approaches in their mission statements, and the changes have reflected positively in OFSTED reports for children in care.

Research on self-harm and suicide prevention (**Marzano**) has also seen flourishing impacts. Knowledge exchange activities, including a CPD module on suicides in prison for the Royal College of Psychiatrists, training for police officers, and National Crime Agency guidance, have had a direct impact in forensic settings, and Marzano has been invited to contribute to the Harris Review (an Independent Review of Self-Inflicted Deaths in Custody in 18-24 year-olds, 2014-15), Public Health England standards on mental health, suicide and self-harm in women's prisons (2017), Westminster Hall Debate on Mental Health in Prisons (2018), and the Slovenian Ministry of Justice (2016). This work has influenced national and international media guidelines to promote responsible reporting of suicide (including WHO guidance for media professionals) via collaborations with Oxford University, Samaritans, and the Suicide and the Media Taskforce of the

International Association for Suicide Prevention, and is shaping discussions around the reporting of suicides during the Covid-19 pandemic (*The Lancet Psychiatry*, 2021). Marzano is also actively involved in a number of initiatives, including an NHS-funded taskforce to monitor suicides in London, the Barnet Council Suicide Prevention Group, and 'Suicide Safer Universities' activities. She regularly provides expert advice to academic, industry, charity and health partners (e.g., as Chair of the Samaritans' Research Ethics Committee, founding member of the European Centre for the Study of Ethics, Law, and Governance in Health Information Technology, and NIHR Steering Group member for a large prison-based trial). In 2014 Marzano set up the Insight group, an interdisciplinary collaboration between Middlesex, the University of Bristol and King's College London, and a range of public outputs followed (e.g., digital self-harm monitoring system featured on BBC news and radio; several invited talks and panel discussions aimed at academics, practitioners, NHS Clinical Commissioners, and the public). **Marzano** has also been invited to collaborate on the evaluation of a web-based tool to support treatment decision-making in Psychiatry, the NHS England Advisory Group on Digital Mental Health (2016), and has advised Samaritans on the development of online self-help and mobile apps for self-harm.

#### 4.3 Sustaining the discipline

As well as our extensive collaboration and contribution to the research base, economy, and society, we have contributed significantly to the academic community. Since 2014 many staff have acted (or currently act) as editorial board members (e.g., *Diabetic Medicine*; *Health Psychology*; Special Issue of *Diabetic Medicine* [**Nouwen**]; *Judgment and Decision Making*; *Policy Insights from Behavioral and Brain Sciences*; *Journal of Empirical Legal Studies* [**Dhami**]; *Arts & Health: An International Journal for Research, Policy and Practice* [**Colucci**]; Special issues of *Frontiers in Psychology* [**Jones, Ward, Dhami, Franco**]; *Evidence-Based Mental Health: Digital Mental Health* [**Marzano**]; *Music & Science*; Special issue of *Children* [**Franco**]; *Caribbean Journal of Psychology* [**Alexis-Garsee**]), and staff regularly review scholarly journal articles, including prestigious titles such as *PNAS*, *Journal of Memory and Language*; *Nature Scientific Reports*; *Development and Psychopathology*; *European Journal of Pain*; *Quarterly Journal of Experimental Psychology*; *Journal of Alzheimer's Disease*. Staff also regularly contribute to reviewing grant applications, including for UKRI funders (e.g., MRC; ESRC) in this round.

Many staff hold positions in professional and learned societies. Examples include: **van den Akker** is a Committee member for the Society for Infant & Reproductive Psychology, a member of PROGAR, and sits on the HFEA eSET taskforce advisory group. **Nouwen** was Chair of the PSAD Psychosocial Aspects of Diabetes Study Group of the European Association for the Study of Diabetes, a founding member and Chair of the European Depression in Diabetes research consortium, and a member of the Diabetes UK research committee. **Payne** is member of the All Party Parliamentary group on Women and Work, the European Academy of Occupational Health Psychology, Work and Family Researchers Network, BPS Work-life Balance Working Group, and Families and Work Network. **Colucci** is Chair of the International Association for Suicide Prevention SIG, and the World Association of Cultural Psychiatry. **Brunswick** is a Fellow of the Royal Society of Arts. **Dickins** is a Fellow and Council member of the Galton Institute. **Alexis-Garsee** is a member of the European Health Psychology Society. **Dhami** is a member of the Society for Judgement and Decision Making. **Franco** is a member of the British Psychological Society, the Society for Education, Music, & Psychology Research, and the Advancement of Interdisciplinary Research in Singing. **Ward** is a Fellow of the Leverhulme Trust, member of the Experimental Psychology Society, and member of the European Cognitive Aging Society. **Marzano** is a member of the All Party Parliamentary Group on Suicide and Self-harm Prevention, the British Isles Suicide Research Network, the Ministry of Justice's Safer Custody Group, and the Offender Health Research Network.

During this round many staff have acted as external PGR student examiners (National: Universities of Leicester; East Anglia; Surrey; St George's London; UCL; Institute of Education; International: Universities of Padua; Lyon; Universite Paris Descartes; Sapienza Universita di Roma; L'Aquila; Illinois; Tilburg; Romania), and advisors at other HEIs (e.g., REF external; Quality Assurance Review [**Dickins, Alexis-Garsee**]). We have also seen broad representation as invited

keynote/symposia speakers in the UK and internationally (e.g., International Diabetes Federation Congress [South Korea, 2019], Congress of the Romanian Society of Diabetes, Nutrition and Metabolic Diseases [2017; 2018], Young Endocrinologists and Scientists meeting [Moscow, 2016], **Nouwen**; East Asian Association of Psychology and Law [South Korea, 2016]; International Conference on Judgement and Decision Making in Social Work [Germany, 2016], **Dhami**; International Association for Suicide Prevention conference; Global Mental Health World Health Summit; Centre for Public Mental Health Conference, Indonesia, **Colucci**; Society for Music Perception Conference [2019], Symposium on Movement, Musical Rhythm and Language, Neurology Institute [Milan, 2018], International Association for the Study of Child Language Biennial Congress [Amsterdam, 2014], **Franco**).

Staff have received various recognition awards in this period. **Marzano** received the 'Nation's Lifesaver' (Universities UK) and 'Lifesaver Award' (Transport for London) (2019) for her work preventing suicides on the railways. **Dhami** received the 2020 NATO Science and Technology Organization's SAS Panel Excellence Award for her contribution to assessment of risk and uncertainty in decision-making. **Colucci** has received recognition for her international work on human rights (Rotary International Award, 2017) and suicide prevention in Low-and-Middle income countries (Andrej Marusic Award, International Association for Suicide Prevention 2015; Velma Stanley Award for Suicide First Aid Guidelines for Sri Lanka, 2015). **Ward** received the European Cognitive Aging Society Presidential Award (2018) for her research hosted at the Science Museum mapping memory changes over the lifespan. **Younis** recently received the Mildred Baxter New Writer Prize award for his article on Islamophobia in the NHS (2020).

To conclude, the distinctive and growing contribution of our research provides powerful evidence of the vitality and sustainability of our research environment. We have made strong progress in all areas related to our strategic aims since REF2014, maintaining our clear upward trajectory. The substantive investments in staff and facilities across this REF period and our clear plans for ongoing development will enable us to build substantially on these achievements in the future.