

Institution: Queen Margaret University, Edinburgh

Unit of Assessment: UoA 3 Allied Health Professions, Dentistry, Nursing and Pharmacy

1. Unit context and structure, research and impact strategy

The University's Research Centres, Health and Rehabilitation Sciences (CHEARR) and Person-centred Practice (CPcPR) form the strategic focus of this submission, operating within the university's overarching Research and Knowledge Exchange (KE) Strategy. Our growing success is built on the research programmes and activities of staff working in the areas of Rehabilitation Sciences, Nutrition/Dietetics, and Person-centred Practice across the whole health continuum. These research foci enable an integrated approach to research across the two Research Centres through an overarching focus on 'Person-centred Health and Wellbeing'. This integrated approach is further enhanced by the multi-disciplinary make-up of the Centres, which serve as research hubs for staff in the subject areas of Physiotherapy, Podiatry, Occupational Therapy, Art Therapies, Dietetics, Nutrition, Biological Sciences and Nursing, but with collaborations across other subject areas in the arts and humanities. The approach to selection of outputs for submission in this REF, was guided by the "REF 2021 Code of Practice: Criteria for Output Selection and Attribution in REF 2021", but also included consideration of the multiprofessional and interdisciplinary nature of the research context and the need to reflect this in our submission, as shown in Figure 1.

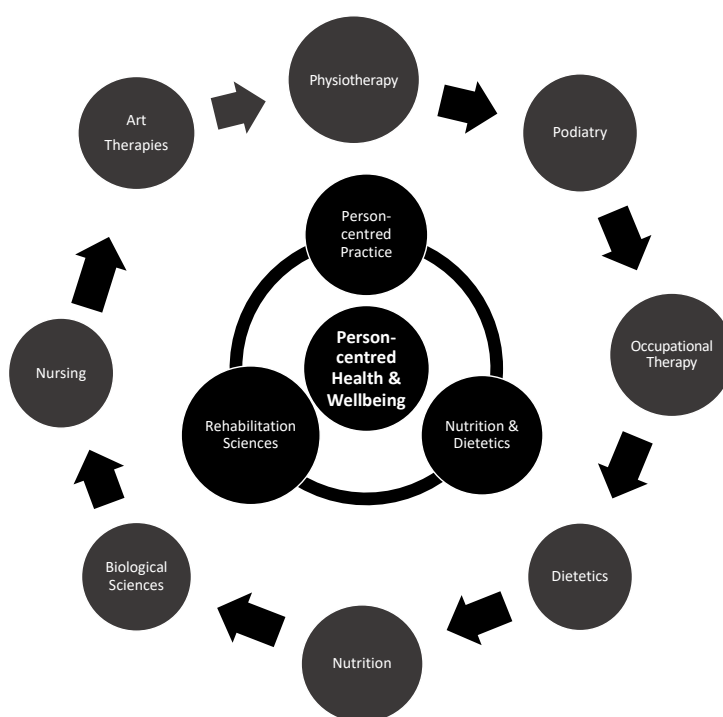


Figure 1: Organisation of UoA across research themes and subject areas

The overarching objectives for the research centres are derived from the university's Strategic Plan for Research and KE with a focus on the following objectives:

1. Operationalize the institution's research and KE strategy, ensuring the highest quality of research activity, in line with QMU's commitment to the Concordat to Support Research Integrity.
2. Support researchers in designing and operationalising research activity that achieves the highest impact.
3. Provide an infrastructure for monitoring and investing in pathways to impact, so that the best case studies can be selected for REF 2021.

4. Implement approved Key Performance Indicators (KPIs) as agreed through the institution's annual review of research centres.
5. Implement the 2014-2020 Action Plans for the 2008 Concordat for Research Careers and collaborate on the development and implementation of the Action Plan for the new 2019 Concordat for Researcher Development (2020-2022).
6. Actively promote good practice in embedding equality and diversity in research careers.
7. Support researchers in securing funding for research in the context of Brexit, UKRI and ODA funding.
8. Ensure full compliance with Open Access and Open Research strategies for REF 2021 in line with our commitment to the Concordat for Open Research Data.
9. Enhance public engagement in research and contribute to the public sector through the Concordat for Public Engagement.
10. Develop enhanced capacity for research excellence with specific early career and contract researcher initiatives.
11. Operationalize the QMU Entrepreneurship Action Plan and Framework.

Whilst each research centre operates within this framework, each has its own objectives and operational plan. CHEARR is based on the research programmes of staff working in the Rehabilitation Sciences (RS), Clinical Nutrition and Biological Sciences (CNBS) fields of study. Research focusses on strategies to enhance rehabilitation, health and functional activity. In Rehabilitation Sciences research, many of these strategies centre around development, implementation and evaluation of physical therapies and physical activity & exercise that are individualised to persons and targeted populations. Examples of such work can be seen in research by Andreopoulou, Baer, Bulley, Gleeson, Kennedy, Koufaki, Mercer, Williams and van der Linden. The focus of CNBS is on nutritional, dietary and health outcome surveillance and the role of "functional foods" and other dietary interventions as a means of health improvement and disease risk reduction in healthy and vulnerable populations as highlighted through Fyfe and Lonchamp's research. While each theme provides a distinct content focus within the submission there are common philosophical and methodological approaches to their research. Both groups conduct applied and translational research that addresses real-life issues affecting the health status and quality of life of people (patients), the professional practice of clinicians, the development of healthcare policy, as well as advancing methodological developments. In this UoA, Bulley, Carin-Levy, Kelly, Koufaki, Salisbury, Santos, van der Linden and Waterfield undertake research reflecting these themes.

The CPcPR has four sub-themes, that are consistent with the overarching theme of 'person-centred health and wellbeing' of all persons. Output selection reflects these four themes as well as representing the diversity of person-centred theory and practice across all aspects of healthcare. Theme 1 - Experiences of person-centredness by patients, families and staff focuses on direct care and caring experiences, as reflected in the research of Dickson, Haraldsdottir, McCormack and Smith; Theme 2 - Person-centred interventions focuses on a variety of interventions that enable more person-centred practices to be realised, such as those developed by McCormack, Tsiris, Maclean, Banks and Smith; Theme 3 - Person-centred cultures emphasises the need for team and organisational cultures to focus on developing person-centred characteristics, so as to support person-centred practices as reflected in the work of Bulley, Dewing and Dickson; and Theme 4 - Person-centred curricula highlights the need for the education of all healthcare practitioners in person-centred principles and processes, as developed by Pentland, Dickson and Dewing. This overall programme of work emphasises the doing of research that 'humanises healthcare' by keeping the person at the centre of care, as well as promoting new methodologies for person-centred research and that influence international developments in this field. Person-centred practice research is naturally diverse in nature because of the breadth of potential methodologies and research foci. The CPcPR has particularly focused on advancing person-centred methodologies and engaging in interdisciplinary collaborative research across the four themes. This interdisciplinary focus has resulted in collaborative research across all fields of healthcare (for example the development of person-centredness in palliative and end of life care (Dickson), use of eHealth and mHealth interventions among younger adults (Santos) and the development of person-centred practices in care homes (McCormack). Engaging in such

interdisciplinary research has nurtured collaborations between health and social care researchers, multidisciplinary healthcare providers, health and social care service users, creative and artistic practitioners, as well as 3rd sector partners. Ultimately, this interdisciplinary approach to person-centred practice research enhances people's experiences of care and wellbeing, and makes a difference to people's lives locally, nationally, and internationally.

An additional interdisciplinary commitment has been that of connecting researchers across research centres, as well as ensuring and facilitating cross-centre collaborations wherever possible. Examples of such collaborations include joint seminar programmes between the Centres, joint research proposals (e.g. supporting carers of persons living with Multiple sclerosis), collaborative writing projects (e.g. physiotherapy students' project on person-centredness) and doctoral supervision and teaching shared between centres. This collaborative approach is important because person-centred practice focuses on maximising the potential of individuals, communities and populations to flourish as persons and so connects directly with interventions that serve to increase human function, capacity and quality of life. Person-centred practice research in the CPcPR has focused on concept and theory development as a priority, as the field of person-centred practice (research) remains underdeveloped and contested. Because of this focus, researchers in the centre have been uniquely positioned to engage in theory testing and implementation in a variety of healthcare contexts through engaged research strategies that maximise participation of all stakeholders, as well as testing specific person-centred interventions among targeted patient populations (e.g. persons living with dementia, carers of persons living with multiple sclerosis and the rehabilitation of persons post-stroke). However, this is not enough to sustain person-centred cultures in practice and there is a need to build capacity among future healthcare practitioners. Thus, developing and evaluating person-centred curricula has been a particular focus. Developments in advanced practice curricula that focus on rehabilitation practice is an example of the influence of this research on practice across professional groups. The UoA has a specific KPI focusing on supporting researchers to increase partnerships with external stakeholders for collaborative research, developing new insights into research problems and early product development (e.g. CSO funded research into social isolation following a diagnosis of Covid-19 and its impact on wellbeing; 3rd sector-funded research into social leadership by persons living with dementia). This approach serves to complement and enhance traditional routes for exploitation of high value opportunities for externally funded research.

Supporting researchers to collaborate through the utilisation of key institutional developments has been one of the UoAs KPIs. Exploiting two strategic developments has been key to this – the university's new Intellectual Property (IP) policy and the open access policy. Queen Margaret University introduced a new IP Policy based on the principle of "Easy IP". The aim of Easy IP is to maximise collaborative partnerships and ultimately, the transfer of university knowledge for public benefit. Aligning much more closely with our institutional vision and commitment to impact and translational research, this provides a new IP exploitation framework to maximise user engagement with our research. As Open Research Data and Open Access publishing become firmly integrated into the research environment, we support our researchers in the provision of research support from our library and information services, and provide training and infrastructure to ensure that we fully embrace the Open Access agenda. QMU has signed up to the UK Office for Research Integrity (UKRIO). With these policies in place we are working collaboratively to respond to the new Concordat to Support Research Integrity. In the UoA we are prioritising new KPIs to enhance our position in responding to each of the Concordat's five commitments. We have prioritised the following actions:

- Reviewing ethical review processes prior to submission of proposals to the university's ethics committee.
- Training all researchers about research integrity through a series of seminars, focused conversations, and dissemination of institutional guidance.
- Training in research supervision (using UKCGE standards), research ethics processes and procedures and best practice in publishing research.
- Ensuring all researchers are aware of the university's procedures for managing research misconduct.

- Including the review of actions as a part of the annual review of research centres.

Researchers in this UoA are committed to ensuring that the research undertaken makes an impact at micro, meso and macro levels. Our focus on impact is informed by the university's Research Impact Strategy which aims to maximise the reach and significance of our research through external networks, meaningful engagements and stimulating innovation in knowledge exchange. Multiple aspects of our research and scholarship are drawn on and implemented in different services, healthcare organisations and universities around the world. Our impact plan captures a range of evidence across different international contexts to show the longer-term effects of our research and scholarship. We are highly committed to knowledge exchange and the active development and use of models of 'implementation science'. We continue to build on this expertise and formalise it wherever possible through multiple sources of partnership funding. For example, Maclean has successfully received funding from the Elizabeth Casson Trust to undertake a partnership knowledge translation project with the University of Dundee and NHS Tayside, connected to drinking alcohol in later life. Koufaki led the scientific development and funding, and co-led the organisation and delivery of an externally funded knowledge transfer project and Continuous Medical Education (CME) accredited training day for health care practitioners with an interest in promoting and implementing physical activity plans in the care of people with chronic kidney disease (funded by the European Renal Association-European Dialysis and Transplantation Association ERA-EDTA Education section), supported by the University of York and York Hospital and endorsed by ERA-EDTA, British Renal Society and European Association of Rehabilitation in Chronic Kidney Disease-EURORECKD).

Exploiting institutional strategies such as the Intellectual Property (IP) policy and the open access policy has enabled a start-up company arising from our research - 'Health Design Collective' - a Community Interest Company that aims to transform product design in health care through collaboration with end-users to co-design fit-for-purpose, accessible, attractive, affordable health care products to improve the quality of life of people with health conditions. A patent for a secured prototype is currently pending, with the company achieving significant success in a range of high-profile commercialisation competitions including Converge Challenge 2018.

We expect our impact to feature in improved care/learning and work environments, more effective team working, enhanced patient experience and workplace culture advances, as well as the development and application of government and other stakeholder policy. This strategic focus is translated into practice by researchers in the UoA through the areas of research prioritised (i.e., applied research), the methodologies (i.e., intervention testing across the continuum of initiation to application using participatory methodologies) and strategy alignment (e.g., RaceRunning classification research in collaboration with the International Paralympic Committee for RaceRunning to feature at future Paralympic games). Every researcher in the UoA is required to have an 'impact-focused objective' as a component of their research objectives and personal action plan that is supported and monitored through the university's 'Performance Enhancement Review (PER)' process. Additionally, helping to maximise impact is supported by the university's research infrastructure, whereby the UoA investment funding is supported in its impact development activities, including the development of Impact Case Studies. Within the UoA, areas of 'impact strength' are identified across the research centres. Lead researchers of these areas are asked to develop abstracts of the potential impact of their research at micro, meso or macro levels. The strength of evidence in line with the UoA's approach to impact is used as a basis for considering case studies for ongoing support and development. Those areas where there is strong underpinning evidence, interdisciplinary collaboration is evident, there is significant reach of the potential impact and where real change in policy or practice could be demonstrated, are chosen for development and ongoing support. This approach is reflected in the two final selected impact case studies, which profile the extensive and systematic approaches adopted to translate knowledge to action – RaceRunning and Person-centred Practice.

2. People

There are 25 staff (19.7 fte) submitted in this REF assessment, with 48% in the age range of 25-54 and 52% aged 55-64. The UoA is committed to succession planning, so although one or two

senior staff may retire in the next 5-10 years there are candidates among the existing staff to assume leadership roles. The gender balance of staff is biased in favour of women (68:32%), reflecting the demographic of the nursing and AHP workforce. All staff have a PhD and are currently involved in supervision of PhD students. Some have undertaken post-doctoral studies (e.g. Koufaki, Maclean, Pentland).

Capacity and capability building for the longer term within this UoA is an important focus of our work as we continue to nurture academics and scholars who are committed to research in our respective Centres. In line with this commitment, we support researchers in exploring and preparing for a diversity of careers. We have developed a mentorship scheme for new researchers, we ensure that career development is explicit in PER objectives, we encourage internal and external committee/working group membership, we facilitate international collaborations and networks and ensure that all leadership opportunities are maximised. An example of this commitment from the CPcPR is The International Community of Practice (ICoP) with members from across Europe, North America and Australia.

Research career development is promoted and continuously reviewed through the University's PER process which is operationalised in partnership between Heads of Divisions and Research Centre Directors. Combined with strategies for collaboration, researcher development allows us to increase scale in areas of strength. Early Career Researchers in post-doctoral or early academic roles are supported in the development of research independence and we pro-actively support mid-career and high performing researchers to come to the forefront of their discipline or area of professional practice. These strategies and investments have enabled early/mid-career researchers to advance to research leadership roles. Notable successes in this regard include Smith who developed through an early research career route through to leading the team working on the [Lydia Osteoporosis Project](#) for the past 7 years. The Lydia Osteoporosis Project is a research, education implementation and dissemination project with frontline healthcare staff and people with osteoporosis. The overall aims of which are to raise awareness of osteoporosis and the increased risk of fracture amongst frontline healthcare staff caring for people with the condition. The team focuses on investigating the implications of osteoporosis for moving and handling activities with older people in acute care and on promoting person-centred safe and effective practice. A further example is that of Van der Linden who has grown research into 'RaceRunning' from masters-level research into a highly impactful international programme of work.

Our established support mechanisms, facilitate researchers in exploring and preparing for a diversity of careers. We do this by using mentors and careers professionals, training, and secondment. We recognise and actively encourage the movement of researchers to and from careers out with academia, recognising that this is one of the most impactful pathways of knowledge exchange. Our on campus Scottish Enterprise Business Gateway service provides bespoke support for researchers in enterprise creation and collaboration with industry. Maximising the use of shared campus space, for the past 3 years, the CPcPR has hosted Scotland's first Virtual Reality social enterprise, [Viarama](#) and the health promotion social enterprise [Lead a Bright Future](#). This has led to several research and KE collaborations. We continue to explore ways to make our campus more open and accessible and increase the flow of people between QMU and government/industry/third sector and vice versa to promote action research. However, we recognise the need to enhance support for institutional level research mentoring as we continue to develop a supportive, fair and inclusive research culture, particularly for Early Career Researchers. We are investing in several new mentoring initiatives to better align expectations, promote professional and career development, address equity and inclusion, foster research independence, and cultivate ethical behaviours and integrity. For example, in 2020, external funding was secured to support a pilot inter-institutional research mentoring programme in response to Covid-19, recognising that post-doctoral early career researchers are particularly vulnerable to the impact of Covid-19 given security of tenure and unprecedented uncertainties in the research environment and culture. In collaboration with Edinburgh Napier University, the scheme will support the long-term career, professional development and wellbeing needs of researchers. This includes peer to peer mentoring. We aim to build on such initiatives and build a future strategy for research mentoring. We have been accepted as a partner in the

'Teaching, Research & Academic Mentoring Scheme' (TRAMS) led by the Universities of St Andrews and Dundee and in partnership with Abertay University, Glasgow School of Art, the James Hutton Institute, and Trinity College Dublin (School of Medicine).

Our commitment to researcher development promotes parity of esteem in research and KE to achieve maximum impact. This is evidenced by QMU being in the first cohort of 7 UK HEIs to secure and retain the 10 Year HR Excellence Award for the Concordat for Research Careers. Our Principal publicly declared QMU's commitment to the new Researcher Development Concordat in October 2019, our enthusiasm and support reflected in our position as one of the first 10 UK institutions to sign up. We recognise that the last few years have seen fundamental change in the research landscape as funding and policy increasingly straddle the domains of research, innovation, skills and place. In recent months, our researchers have also had to demonstrate unprecedented resilience in response to Covid-19. The new Concordat for Researcher Development Action Plan 2020-22 reaffirms our commitment to supporting the 2019 Researcher Development Concordat, underpinned by core centralised research support and provision continuing to be a key driver over the next period of the Concordat, defined by our collaborative approach, nationally and regionally with external partners. Central to this activity is an ethos of co-creation and, importantly, shared ownership between the institution and its research community. In QMU the Vitae Researcher Development Framework (RDF) is the widely endorsed framework underpinning professional development for researchers at all levels including doctoral students. Using the RDF supports researcher development and fulfils many of the requirements set out by funders and governments for the support of researchers and research careers.

As a signatory to the Concordat for Researcher Development we are committed to ensuring researchers have access to 10 days professional development (pro rata). At the time of this submission, the university is launching new policies and processes to implement this and monitor uptake and access. In addition, plans are underway to launch an Early Career Researcher Engagement Academy in partnership with external collaborators. This will target key funding and career development opportunities, building on partnerships with other HEIs and external stakeholders. Examples of existing training and development opportunities include partnership with local NHS Health Boards in co-funding doctoral candidates doing research that will be impactful on services delivered locally – for example in the CPcPR a jointly funded PhD between the Centre and NHS Lothian focusing on the person-centred discharge of older people from hospital. Other examples include the development of a new partnership with a neighbouring university in developing a collaborative programme of doctoral research in line with our respective areas of strength. Innovations in research training and development for clinically-based nurses and AHPs include an MSc degree in Clinical Research (targeted specifically at colleagues working in clinical practice), the validation of the first 100% work-based learning Professional Doctorate in the UK, and partner-membership (2014-2019) in the Clinical Academic Research Collaboration (CARC) scheme with local NHS Trusts (funded by NHS Lothian, all Edinburgh Universities and NHS Education Scotland). These are tangible examples of our systematic approach to recruiting, retaining and training future nursing and AHP researchers.

As doctoral candidates at QMU, support and training are collaborative endeavours between the Graduate School and QMU Research Centres. Candidates are hosted by a Research Centre as 'Affiliate Members', which creates a sense of belonging and access to the wider research community. Centres organise supervision of candidates according to the Graduate School regulations. Various training opportunities are offered by both CHEARR and CPcPR, including, research seminars, tutorials, group supervision and communities of practice. These activities complement those provided by the Graduate School, which assumes overall responsibility for support and quality of training and supervision. The Graduate School offers opportunities for all candidates to apply for training and development funds to support specific non-core training or skills development. It provides an annual 2-day training and development programme for supervisors. This is supplemented by update sessions on a wide range of topics and facilitated 'communicative spaces' where supervisors can share concerns and issues and engage in constructive dialogue with other supervisors. We are working with the UKCGE Good Supervisory Framework which is being implemented in our Research Centres and across the university. QMU

belongs to the two Scottish Graduate Schools (Social Sciences and Arts and Humanities), which provide external training and learning opportunities for candidates and supervisors. This core post-graduate research training is augmented as necessary through access to specialist research methodology training (examples include workshops on statistical analysis, designing clinical trials and complex interventions; Instrument development, and approaches to systematic reviews and metasyntheses) delivered by specialist external centres including clinically-oriented research training events hosted by the Edinburgh Wellcome Trust Clinical Research Facility. The Graduate School is governed by the Graduate School Academic Board (GSAB) which reports to the Research Strategy Committee and on to Senate. The Doctoral Candidate Association (DCA) has two seats on GSAB. It plays a major role in creating a healthy research culture within the University. Supervisors submit logs after each supervisory meeting which they can use to raise concerns or request support or advice. The logs are followed up in monthly Graduate School meetings. UoA3 has a Doctoral Research Coordinator (DRCs) who is an experienced supervisor with protected time to dedicate to the role. Their role is to support supervisors and candidates with immediate queries or concerns. QMU, uniquely, offers a 60 credit (SCQF level 12) Doctoral Certificate in Researcher Enhancement and Development (READ) as part of all Doctoral programmes. READ is based on evidencing achievements in the Vitae RDF. The programme enables the integration and synthesis of theory with practice, to enable the development of transferable research skills, to ensure the rigour of academic thinking and to promote the achievement of personal and professional goals.

In 2020, QMU was 1 of only 22 UK HEIs to participate in the first pilot UK biennial CEDARS Survey (The Culture, Employment and Development in Academic Research Survey). This survey gathers anonymous data about working conditions, research culture, career aspirations and career development opportunities for research staff and research leaders in HEIs across the UK. A total of 79 QMU participants responded to CEDARS, a response rate of 31%. This reflects a significant improvement to average participation rates in previous national benchmarking exercises – the Careers in Research Online Survey (CROS) (7%) and the Principal Investigators and Research Leaders Survey (PIRLS) (17%). The new questions in CEDARS provided opportunities for researchers to share their experiences of research culture and the associated responsibilities of those who manage researchers. Over the census period, CEDARS has allowed us to measure the success of our researcher experience strategy interventions and undertake an institutional research culture health check in response to the 'Wellcome Research Culture Report'. We have hosted Wellcome Café Culture events using the Wellcome Trust toolkit to promote discussion with peers on research culture. An Access-QMU process is in place for Principal Investigators (PI) and Research Managers to maintain continuity of access for out of contract researchers with a new Legacy Researchers Policy/Procedure being developed to offer further enhancements to support long term collaboration with all of our researchers. In addition, the university has launched a 'QMU Strategic Projects List' to support bridging and translational skills for contract research staff who are out of contract or bridging with plans to review and enhance our talent register. This includes a range of short-term institutional projects for Research Assistants in support of our strategic research activities.

The research culture of the UoA is underpinned by a commitment to the promotion of researcher mental health and wellbeing, through for example, the effective management of workloads and people, and effective policies and practice for tackling discrimination, bullying and harassment, including providing appropriate support for those reporting issues. Researchers from the UoA have participated in the institutional 'Staff Wellbeing Working Group' and three annual workshops on Mental Health First Aid. Several collaborative researcher wellbeing workshops have taken place including those with the University of Dundee, Edinburgh Napier University, Heriot Watt University, the University of Glasgow and the University of Edinburgh. These have included 'Academic Writing' and 'Reducing Anxiety and Wellbeing in Academic Research'.

Our commitment to a learning culture for all researchers is evidenced in our successful grant applications to a variety of funding agencies with all UoA members being supported, facilitated and enabled to submit research funding applications to funders relevant to their field/area of expertise. We have supported UoA members as co-applicants in partnership with health service

and 3rd sector colleagues (e.g. Banks partnership with COPE Scotland; Williams partnership with the UK Lipodema charity; Mercer and Gleeson's partnership with The Hibernian Football club; van der Linden's partnership with the Cerebral palsy International Sports and Recreation Association (CPISRA); McCormack's partnership with The Life Changes Trust; Bulley's engagement with The UK MS Society, The Chartered Society of Physiotherapy and the College of Radiographers; as well as Pentland and Maclean's association with the Royal College of Occupational Therapists Strategic Research Group).

Although QMU annually provides funding for at least one PhD studentship award per Research Centre, we have through consistent development and improvement, moved to a position where the majority of our registered PhD candidates are funded through external sources. We believe that this indicates a growing reputation for both the quality of our research activity and our research degree training that is increasingly attractive to external funders and self-funding PhD candidates. Most of these students are wholly or partially externally funded through research awards or via government or institutional awards from countries as diverse as Bahrain, Greece, Italy, Malaysia, Oman, Pakistan, Saudi Arabia, Switzerland, Malta, Australia and Canada. The appointment of McCormack in 2014 and Dewing in 2015 has been a catalyst for a rapid increase in the critical mass of externally-funded international/EU PhD candidates registering to work within our research programmes. McCormack's leadership, as an internationally recognised leader in person-centred practice and research has also created a pathway for career progression through the consolidation and widening of our collaboration with global partners and the establishment of Queen Margaret University as a recognised leader in the field, through the recruitment of other leading academics in the field (Dewing; Kelly).

Research and career development networking of our research students is also supported by the Santander Research Foundation, which annually provides travel and mobility awards to selected PhD candidates to support the presentation of their doctoral research at international conferences. A further example is the Doctoral Student International Community of Practice in the CPcPR (SiCoP) – a peer organised learning and development community by doctoral candidates from across the world who are undertaking person-centred research.

3. Income, infrastructure and facilities

We have been successful in securing competitively awarded research funding from, for example, the Scottish Chief Scientist Office (CSO), the NIHR Health Technology Assessment (HTA) Research programme, The NIHR HS&DR Research Programme, the MS Society and a variety of other 3rd sector research funders. While much of this research activity is on-going, approximately 72% of all submitted research outputs are associated with, and underpinned by, the acquisition of external funding. Our strategy for securing and building a portfolio of externally funded research awards is based on the development of research proposals that have high levels of impact and relevance to patients, practitioners and policy makers in healthcare. In this regard, all staff receive Research Centre-specific mentoring and peer support during the processes of research project development, from ideas generation to submission of the funding application. Research Centre Directors and Senior academics further quality assure this process by ensuring that all potential final draft funding proposals are of the highest quality and are strategically aligned with the aims and research strengths of the Centre. Prior to submission for external funding, all proposals go through a 3-stage university-wide peer-review, quality, finance and governance approval process. As a result, we have developed the capability to successfully respond to both investigator-led (e.g., Bulley's funding from the MS Society; Koufaki's funding from the British Renal Society & British Kidney patient Association; and Mercer's funding from the NIHR/MS Society) and responsive funding calls (e.g., Bulley's funding from the Scottish Chief Scientist's Office Covid-19 funding programme; and McCormack's funding from the Life Changes Trust 'Leadership in Dementia' funding call).

Funding for our research activity has been obtained via a range of sources including the National Institute of Health Research (NIHR), Chief Scientist's Office (CSO), Scottish Government, NHS Health Scotland, Edinburgh & Lothians Health Foundation, Local Public Sector (including NHS Trusts), The European Union (ERASMUS +) Action Medical Research, Research Councils, and

a wide range of health and care-oriented charity funders (e.g. Association for Chartered Physiotherapists in Neurology, Coeliac UK, British Kidney Patients Association, British Renal Society, Multiple Sclerosis Society, Alzheimer's UK, Alzheimer's Scotland, The Life Changes Trust, The COPE Foundation and The Batten Disease Family Association). In addition, we have received several industry-funded research awards (e.g. Lonchamp, van der Linden, DePuy Ltd) and private donations (e.g., research into the antimicrobial activity of honey; and The Lydia Osteoporosis Project). Overall, this approach has been successful with staff associated with our Research Themes securing funding of £2.2 million during the census period. This equates to £12,500 per capita per annum for those staff entered in this submission. Whilst this income reflects an improvement on our REF 2014 performance and is one element underpinning the sustainability of our research environment, we are also aware that this level of income is lower than the national average reported by UoA3 members in REF 2014. The institutional strategic infrastructure is focused on building success in research grant acquisition. However, over the period of the REF, institutional factors have impacted on our potential success, including institutional change and restructuring, heavy teaching loads prior to the establishment of Significant Responsibility for Research (SRR) status of academic staff and a focus on publishing completed research to enhance overall impact. As research leaders, we are committed to addressing these challenges through infrastructure developments already highlighted in this UoA environment statement, including our explicit commitment to furthering collaborations, the development of Early Career Researchers (ECRs), enhanced strategic mentorship programmes, new external partnerships and prioritising research success in the recruitment of new academic staff. As a Post-92 university, our journey towards research excellence is ongoing and as a UoA we are committed to providing the research culture that will enable all researchers to maximise their potential and be the best that they can be.

Arising from research in Dietetics, Nutrition and Biological Sciences, the University's Scottish Centre for Food Development and Innovation (SCFDI) works with the Scottish Food and Drink sector to access the global market for healthy and functional food and innovation. 'Health' is the main reason for particular food choice in 1 of 4 meal occasions, accounting for £11.4bn to the U.K food industry. The emphasis is on "market ready" research that can be easily adopted by industry and support new product development. Our researchers work with SMEs to maximise the opportunity in naturally healthy food and drink products, develop leading edge functional foods and reformulate existing products (i.e. reducing sugar in response to Sugar Tax). Developing the domestic healthy eating market comes with some major public health challenges but also some massive opportunities to work with industry to expand, create and add value from new or reformulated products. SCFDI has an established position in reinforcing the reputation of the food and drink sector in Scotland, recognising that working with industry has more immediate impact and is more cost effective than clinical solutions. Industry KE funding has been secured from sources such as Campden BRI, Tesco and other major UK retailers, Diageo/Johnny Walker, Scottish Food and Drink Federation, the Start Up Drinks Lab and ready meal manufacturers such as Malcolm Allan, Bells, Scottish Shellfish. We are increasing collaboration with SCFDI through integration of wider research expertise in Rehabilitation Sciences to support the development, application and evaluation of functional food for gerontology and sport and exercise nutrition target groups and associated markets. Longer term we will explore linkage with other Edinburgh and South East Scotland City Region Hubs to harness the potential of translational medicine in Scotland in supporting the diversification of the food and drink industry towards preventative, therapeutic and rehabilitative applications of Scotland's expertise in genomics of disease, biomarkers and bioinformatics.

The work of SCFDI is an example of the university's commitment to supporting researchers in responding to a rapidly changing external context with increased emphasis on innovation and entrepreneurial initiatives, delivered through new and more strategic structures that prioritise collaboration and leverage of external funding. Infrastructure support includes the Research Grants and Contracts Unit (RGCU) which provides dedicated pre and post award support for grant submission and securing external funding; The Research and Knowledge Exchange Development Unit (RKEDU) which provides support on institutional research policy and strategy; public and civic engagement; researcher development; research governance and ethics; major

strategic research projects and external collaborations; and innovation including entrepreneurship; A Research Support Librarian who provides support for Open Access (OA) publishing, research metrics and research data management (RDM); Research Laboratories and Technical Services provide support for the operation, administration and maintenance of all the laboratories and specialist accommodation; The Marketing and Communication Office provide multichannel marketing support for research including press coverage and media training. Given the changing research environment caused by the Covid-19 pandemic, the university has additionally implemented systems and processes to enable rapid response to new responsive funding calls, including a rapid review process of ethics applications to the university ethics committee, a condensed timeline for internal peer-review of proposals and seed-funding of research that can lead to significant collaborative research proposal development.

We support staff in maintaining the highest possible standards of good practice and research integrity to underpin our commitment to the NHS Framework for Research Governance, and the implementation of the Concordat for Researcher Integrity. All researchers receive annual Research Ethics and Governance training, in partnership with NHS Lothian, and researchers are also offered collaborative training via the Edinburgh based Wellcome Trust Clinical Research Facility. QMU has well-established regulations, procedures and guidelines for research ethics. The university Research Ethics Panel is responsible for scrutiny of internal non-clinical applications for ethical approval for all research projects. The Panel monitors ethical standards in research and advises on the related ethical principles, regulations and procedures. In 2019 QMU became a member of the UK Office for Research Integrity (UKRIO) and in May 2020 delivered a QMU/UKRIO Research Integrity training workshop in support of the Concordat to Support Research Integrity. UKRIO training and awareness materials are actively promoted throughout the campus and on our web and intranet sites. UKRIO monthly training webinars are promoted to all staff, research managers, professional services and research students. The university is also a member of the Scottish Research Integrity Network (SRIN) led by the University of Dundee and University of Edinburgh and members of the UoA regularly attend sector events and contribute to discussion and debate. In partnership with the University of Dundee, all researchers benefit from access to collaborative Research Integrity training modules. Supporting and strengthening understanding of the application of research integrity issues is a key objective in our 2020-2022 Concordat for Researcher Development Action Plan. In addition, new QMU whistleblowing procedures were launched in 2020 and an annual statement on progress in implementing the Concordat for Research Integrity is provided to University Court and published on our website every Autumn.

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

Our strategic collaborations have facilitated involvement in a range of European and international Higher Education Institutes - examples of which include, The University of Lund, Sweden; The University of Thessaly, Greece; Universidad Cardenal Herrera, Valencia; The University of South Eastern Norway; Maribor University, Slovenia; Trinity College Dublin; Sun Yat-sen University, China; The University of Hong Kong; Penn State University, USA; Dalhousie University, Canada and Deakin University, Australia. Collaborations also include a range of health providers nationally and internationally – examples of which include, Scottish Health Boards; Marie Curie Care, St Columba's Hospice Care Edinburgh; The University Children's Hospital Zurich, Switzerland; The University Hospitals Basel, Switzerland; IWK (women and Children's hospital) Halifax, Canada; The Health Service Executive, Republic of Ireland; New South Wales Health Department, Australia; Solothurn Hospital Switzerland; and Lower Austria Municipal Health Department, Austria.

Two specific examples of collaborative research through these strategic alliances are – 1) RaceRunning and 2) Person-centred Practice Research. **RaceRunning:** Starting with the first ever CHEARR funded RaceRunning seminar held at QMU in 2018, collaborations now include those with researchers at University of Gloucestershire, Brunel University London and The University of Edinburgh which has led to a successful joint application to Action Medical Research UK nationally. Internationally, RaceRunning researchers collaborate both with academics (Karolinska Institute, Sweden; Vrije Universiteit, The Netherlands) and other organisations such as

CPISRA (Cerebral Palsy International Society for Sport and Recreation), Para Sport Denmark, RaceRunning Portugal, and the International Paralympic Committee). This growing collaboration has led to ERAMUS+ funding and support for the inclusion of RaceRunning as an event at future Paralympic games as detailed in one of our impact case studies submitted in this REF. **Person-centred Practice Research:** Global partnerships for person-centred practice research have been enabled through a range of strategic collaborations that have focused on ensuring 'the person' is at the centre of all research undertaken – both in terms of the focus of the research and research designs. Through a strategic approach to the four CPcPR research themes, QMU researchers have established collaborations with researchers in >27 countries worldwide (e.g. Canada, USA, Australia, New Zealand, Malaysia, China, New Zealand and 13 European Countries). This collaboration has been consolidated through the Person-centred Practice International Community of Practice (PcP-ICoP). The PcP-ICoP is an international research community of practice/research, that is hosted by the CPcPR at QMU. The ICoP has a wide-ranging research agenda focusing on advancing knowledge, skills and expertise in person-centred practice, practice development and research (with a particular focus on practitioner research). An example of the success of this collaboration is the award in 2019 of an Erasmus+ grant to develop and evaluate the first pan-European curriculum for the future education of healthcare workers in person-centred healthcare. Category C staff member (Baldie) contributes extensively to this programme of work and her contribution resulted in the award of a 3-year Fellowship by the CSO to enable the advancement of her programme of person-centred practice research she leads in NHS Tayside (a CPcPR clinical partner and ICoP member).

As indexed in the Web of Science, Staff in the UoA have published approximately 280 peer-reviewed papers, in addition to 170 peer-reviewed conference papers and poster presentations communicated to international nursing, AHP and medical conferences. Contributions to the wider academic debate of nursing and AHP-related research, in the form of invited keynote presentations (n = 85) and invited conference presentations (n = 91) have also been made. These contributions have been made at prestigious events such as, the 8th Protein Summit, Rotterdam 2015, the DOF International Symposium (Delivery of Functionality in Complex Food Systems), Porto 2019, The Royal College of Nursing International research Conference, Sigma Global European Research Conference, the International Conference on Spirituality and Music Education, the European Music Therapy Conference, the Royal College of Occupational Therapists' Annual Conference and Exhibition, the meeting of the International Paralympic Committee, the International Association of Gerontology and Geriatrics – European Region (IAGG-ER), the International Society for Quality in Healthcare annual conference, the Pharmacy Research UK Annual Conference, the European Society for Person-centred healthcare Annual Conference, the European Association of Urological Nurses, and the Joint conference of British Renal Society and Renal Association.

In terms of wider contributions to the field, our staff are represented on several editorial boards (e.g ; Mercer: BMC Nephrology, Sports Medicine and Doping Studies; van der Linden: Prosthetics and Orthotics International; Santos: The Foot; McCormack: International Journal of Older People Nursing, The Journal of Clinical Nursing; Kelly: Ageing and Society; Dewing: Nursing Philosophy and The international Practice Development Journal; Tsiris: Journal of Music Therapy) and six Fellowships have been awarded during the census period (Fellowship of the Royal College of Occupational Therapists, Forsyth; Fellowship of the British Association of Sport and Exercise Sciences, Mercer & Gleeson; Fellowship of The American Academy of Nursing, McCormack; Fellowship of the Royal College of Surgeons in Ireland, McCormack; Fellow of the Royal College of Nursing, McCormack). Other accolades include Dewing's (2020) award for excellence in research by Sigma Europe) and McCormack (2014 Sigma Global International Nurse Researcher Hall of Fame).

Substantive academic contributions include membership of grant review panels including, the Multiple Sclerosis Society, UK (van der Linden); Clinical Study Group on Exercise and Lifestyle in CKD (co-chair, Koufaki), European Association of Rehabilitation in Chronic Kidney Disease (Koufaki); Royal College of Occupational Therapy Specialist Section on Older People (Maclean).

British Renal Society Renal Rehabilitation guidelines working group (Mercer); and Cancer Research UK Early Diagnosis Panel (Chair, McCormack). Staff also regularly support scholarly quality assurance within the fields of study through participation as (1) peer reviewers for grant awarding bodies (e.g. Medical Research Council (Bulley, McCormack), Action Medical Research (van der Linden), British Renal Society (Mercer, Koufaki), The Carnegie Trust (Dewing, Maclean), Chief Scientist Office (van der Linden, Mercer, McCormack, Dewing), EPSRC (Mercer), Alzheimer's Society (Kelly). European Alzheimer's Society (Dewing), Kidney Research UK (Mercer, Koufaki), MS Society (van der Linden, Mercer, Bulley), National Institute for Health Research (Carin-Levy, Haraldsdottir, Mercer, Koufaki, Santos, McCormack), Australian MS Society (van der Linden), Swiss Research Foundation, (van der Linden), Trasher Research Funds, Chartered Society of Physiotherapists/Physiotherapy Research Foundation (Mercer, Bulley); British Heart Foundation (Koufaki); Poland's National Centre of Sciences (Fyfe); and, the Singaporean Agency for Science, Technology & Research (Lonchamp).

All submitted staff act as peer reviewers for academic journals, provide external peer reviewers for academic (Professorial) promotions, and act as external examiners for doctoral degrees.

QMU is committed to the Concordat for Engaging the Public with Research and was delighted to become an early signatory to the National Co-ordinating Centre for Public Engagement (NCCPE) Manifesto for Public Engagement. Engagement has always been an integral part of our mission. Becoming a signatory to the NCCPE Manifesto provided the opportunity to re-state this commitment, exploring how these principles could become embedded within our research culture, incorporating the perspectives of stakeholders, user communities and members of the public. After 10 years of collaboration with the other Edinburgh Universities, the Beltane Public Engagement Partnership continues to thrive following the signing by the four partners of a new Manifesto in October 2018. We have delivered numerous successful collaborative researcher events including Explorathon, Bright Club, Cabaret of Dangerous Ideas and the hugely successful Beltane Gathering in June of each academic year. The Gathering brings researchers from the partner institutions into multidisciplinary groups, focusing on collaboration in public engagement around the Grand Challenges.

We are active members of the new Scottish Parliament Academic Network (SPAN). The network builds on an existing collaboration set up in 2014 between the Scottish Parliament Information Centre (SPICE), Scotland's Futures Forum, Beltane and the Scottish Universities Insight Unit to encourage collaboration and knowledge exchange between the Scottish Parliament and the academic community. The Beltane allows partner universities to share good practice, build on reciprocal researcher training arrangements and supports interdisciplinary pathways to impact. Through the collaboration we have agreed to negotiate collectively on future engagement with the Edinburgh Science Festival and other high value/cost public engagement initiatives and seek out further strengths of collaboration through economies of scale. We will be more pro-active in seeking collaborative external funds such as UKRI Enhancing Place-based Partnerships in Public Engagement. Priority will be given to investment in the Beltane web presence and infrastructure as we seek to raise the profile of the collaboration, building on the increasing policy priority of regional cohesion through our Edinburgh and South East Scotland City Region Deal.

In summary, the constant development of the research context and infrastructure at Queen Margaret University is enabling the ongoing development of an increasingly effective community of researchers. Members of the UoA recognise the need for continuous investment in supporting, mentoring and enabling the wellbeing of new and early career researchers so that they can maximise their potential for success. We are conscious of the need to grow our research base and further capitalize on funding opportunities that will result in even more significant impacts of our research. Our integrated approach to person-centred health and well-being research provides a strategic focus that is contemporary, but which can also be relevant in a post-Covid research context.