Institution: Queen Margaret University
Unit of Assessment: UoA 3 Allied Health Professions, Dentistry, Nursing and Pharmacy
a. Overview

The University's strategic flagship area of Health and Rehabilitation provides the overarching context for this submission, which is built on the research programmes and activities of staff working in the areas of Rehabilitation Sciences and Nutrition and Metabolism in Health and Disease (NMHD). Both research themes are multi-disciplinary and serve as research hubs for staff in Physiotherapy, Podiatry, Occupational Therapy (Rehabilitation Sciences) and Dietetics, Nutrition, Biological Sciences and, occasionally, nursing (NMHD) subject areas. Rehabilitation Sciences has two sub-themes, Orthopaedic and Musculoskeletal Rehabilitation and Physical Activity and Exercise Rehabilitation and research activity is largely focused on the design and evaluation of outcome assessment approaches and therapeutic strategies (including exercise rehabilitation, assistive technology, surgical and pharmacological interventions) within healthcare practice. The focus of the NMHD group 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. 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 and the development of healthcare policy. It should be noted that these distinct groups were subsumed within a much larger Allied Health Sciences (UoA12) submission in RAE 2008, membership of which has now partially been relocated within UoA4 Psychology, Psychiatry and Neuroscience and UoA 24 Anthropology and Development Studies. As a result, this submission constitutes a new REF grouping.

b. Research Strategy

The strategic aims underpinning this submission reflect an evolving research culture focused upon the continued growth of collaborations, reputation, income and, ultimately, high quality outputs. These aspirations are inter-dependent with our planned aims of increasing the critical mass of active researchers, enhanced support of junior and developing research colleagues and the strategic management of our research portfolio. Implementing a refreshed set of post-RAE 2008 objectives for the 2008-2013 census period we sought to: (1) identify and support a critical mass of research active staff; (2) maintain research degree student enrolments and graduations per annum while increasing the proportion of externally-funded PhD students; (3) secure research funding for significant programmes of research that link researchers within the group; (4) establish new and strengthen existing collaborations with world-class international research institutions; (5) establish new and strengthen existing research collaborations with key clinical and health-related industrial partners whose ongoing research capability and capacity development we can support; (6) consolidate research activity in the areas of Orthopaedic and Musculoskeletal Rehabilitation and NMHD; (7) establish Physical Activity and Exercise Rehabilitation research within the university's flagship area of Health and Rehabilitation; (8) enhance the impact of our research by strengthening our links with all key stakeholders (clinical partners and patient-public research advisory groups) which are engaged in healthcare service evaluation, re-design and policy processes.

Progress against Objectives 1 and 2 are mainly addressed in the "People" section of this document. In 2009, the University and the School of Health Sciences entered a period of managed transition involving the structural realignment of research activity into Research Theme units including NMHD and Rehabilitation Sciences. Mercer, appointed in 2005, as research professor in the School of Health Sciences, was installed as Research Theme Lead for Rehabilitation Sciences in 2011 and initiated a further re-focusing of the activity of this group of researchers. Two focused sub-themes of research activity, Physical Activity and Exercise Rehabilitation (PAER) and Orthopaedic and Musculoskeletal Rehabilitation (OMR) were created to signal both a new and distinctive research direction (PAER) and the consolidation of existing research strength (OMR) while retaining a potential for subsequent research integration. These areas were selected to reflect the research strengths of existing staff but also to foster niche-distinctiveness in research

that would facilitate a response to national priority health-related funding streams.

A substantial body of our research activity addresses and informs the measurement, surveillance and monitoring of healthcare and/or physical performance outcomes in diverse paediatric and adult sub-populations. Paediatric-focused research includes work assessing the physical activity patterns of healthy pre-school age children (Hislop, 2008, 2012), the diagnosis and incidence of childhood coeliac disease (Bannerman et al, 2012, 2013), outcomes in childhood cancer patients (Mckenzie) and the exploration of gait kinematics, proprioception and muscle strength deficits in children with joint hypermobility syndrome (Macmillan et al, 2008, 2011). In establishing new clinical-academic collaborations involving externally-funded PhD studentships, the research of Bannerman and Mackenzie goes some way towards meeting objectives 2 and 5.

Our healthcare-focused measurement research with adults has investigated the characterisation and incidence of post-stroke delirium (Carin-Levy, 2012), the assessment of dietary and fluid intakes of elderly care home residents requiring a texture-modified diet (Bannerman 2011) and the attitudes and behaviours of alcohol misusers, people at risk of alcohol misuse and related healthcare professionals (Gill, 2010, 2011). The research by Bannerman has contributed to the development of dietetic healthcare policy and practice and is a key component of one of our impact case studies. Gill's interdisciplinary research on alcohol pricing and misuse has also contributed to the development of government policy and public engagement debates and is sustained by the acquisition of significant funding streams from NHS Health Scotland, the Alcohol Education & Research Council and the Chief Scientist's Office. The success of this alcohol behaviour surveillance and interventional research activity contributes to the achievement of objectives 3 and 5. Research into the clinimetric utility of neuromuscular and musculoskeletal assessment practices supports the achievement of objectives 2, 4 and 6 through the collaboration with Merletti (Laboratory for engineering of the neuromuscular system, Politecnico di Torino) and the externally-funded PhD studentship of Barbero (Switzerland). In this regard, Macmillan (2011 and 2013) explored the use of surface EMG for the reliable identification of myofascial trigger points and innervation zone locations and Gleeson (2009, 2011, and 2013) investigated the reproducibility of volitional and magnetically–evoked indices of neuromuscular performance as well as the influence of factors potentially affecting neuromuscular and sensorimotor performance.

In 2011, as part of a British Renal Society-UK Renal Association response to a National Institute for Health Research (NIHR) commissioned research funding call to augment the evidence base for exercise rehabilitation as an adjunct therapy for people with chronic kidney disease, Rehabilitation Sciences staff (Mercer, Koufaki) were invited to participate in a research programme consortium planning group entitled PEDAL (PrEscription of intraDiALytic exercise). This programme of research was successfully funded in 2013 (2013-2017, total funding £2.1m, QMU share £316K) via the NIHR Health Technology Assessment programme. The PEDAL research consortium, constituted to explore the clinical and cost effectiveness of intradialytic exercise as a means to improve quality of life for people with chronic kidney disease, is led jointly by Iain Macdougall (Professor of Clinical Nephrology, King's College Hospital and King's College University) and Mercer (QMU). This reflects both the shared creation of this research programme and also the multi-disciplinary nature of the group (nephrologists, allied health professionals, exercise and rehabilitation scientists). This programme of work has established a new collaboration with the department of Academic Nephrology at King's College Hospital/University, a world-class international research institution. The consortium has also facilitated a wider network of additional collaborative opportunities involving other world-class research intensive institutions including Glasgow University and the Universities of Oxford, Leicester and Nottingham as well as extending the reach of our patient and public involvement collaborations. The PEDAL research programme will make a major contribution to the establishment of PAER research within the Rehabilitation Sciences research theme and, thus, support the achievement of objective 7. Although this programme of research has not yet fully commenced, initial research evaluation (Greenwood, Koufaki, Mercer et al, 2012) and evidence synthesis (Koufaki, Mercer et al, 2013) work had been conducted in preparation for the (successful) funding bid. This funded programme of PAER research will continue to underpin research objectives 3,4,5,7 and 8. Similarly focused but smaller-scale PAER research led by van der Linden, in collaboration with local clinicians, has been funded by national and international charities (Multiple Sclerosis Society of the UK and La Fondation Motrice, France) to design and evaluate the impact of pragmatic, community-based exercise rehabilitation interventions on the functional capacity and quality of life of people with Multiple

Sclerosis (van der Linden, Mercer et al 2013) and Cerebral Palsy respectively. In addition, highly-cited (>160 citations) research by Hislop (2008), exploring the objective measurement of physical activity behaviour in pre-school age children, informed the research design and subsequent acquisition of competitively-awarded NHS Health Scotland and Centre for Integrated Healthcare Research/CSO funding (Mercer and others, ~£200K) to evaluate the effectiveness of a parent-led, pre-school, physical activity promotion programme.

More conventional Health Technology Assessments constitute an essential component of our research activity with high-quality, double and single-blinded randomised controlled studies undertaken to evaluate firstly the effectiveness of different designs of total knee replacement prostheses on recovery and outcomes post-surgery (van der Linden, 2008, 2013) and secondly the role of corticosteroid (Methylprednisolone) injections in the treatment of Morton's neuroma and resulting functional outcome(Thomson et al 2012). The research by van der Linden and Thomson emanates from established long-term clinical-academic partnerships with NHS Lothian Orthopaedic, Arthroplasty and Podiatry services, underpinned by industry (Zimmer and then DePuy Ltd, van der Linden) and CSO (Thomson) funding respectively. In the context of our OMR research, the clinically-embedded nature of this work further advances objectives 3, 5 and 6. Our clinical partnerships are enhanced through participation in the Clinical Academic Research Collaboration (CARC) scheme for local AHPs, which is specifically designed to customise research training for clinicians alongside their clinical responsibilities. Currently, QMU and NHS Lothian jointly fund two part-time PhD studentships, supervised by NMHD staff, focusing on the development and evaluation of a self-managed approach to weight management interventions.

Other evaluations of therapeutic, or potentially therapeutic, interventions have been undertaken to examine (1) the effects of transcutaneous electrical nerve stimulation (TENS) on the modification of lower limb ischaemic pain (Mercer, 2012); (2) the acute effects of functional electrical stimulation therapy on gait kinematics and walking performance of people with multiple sclerosis who present with foot drop (Mercer, van der Linden); (3) the androgenic properties of liquorice as a "functional food" (Al-Dujaili et al, 2011); and (4) the impact of energy density and texture of a meal on food, energy intake, satiation, satiety, appetite and palatability responses in healthy adults (Bannerman, 2013). These smaller-scale, externally-funded, research evaluations also facilitate the achievement of objectives 2, 3, 5 and 6.

Building on the successes of research completed and currently underway the major aims for the next five years are to further develop new and existing research capacities through a collaborative and focused approach to the generation of world-class research and to enhance the contribution of the Research Themes to their internal and external communities through high-quality research-based knowledge transfer and, where appropriate, commercialisation of research. Key objectives for the next five year period will attempt to (1) increase, via targeted recruitment and career development support, the critical mass of staff producing internationally-excellent research outputs; (2) establish greater integration of research activities between our strategic research themes; (3) establish additional and further strengthen existing collaborations with world-class international research institutions; (4) maintain and acquire new research funding for significant programs of research that links the Rehabilitation Sciences and NMHD groups; (5) maintain the emphasis toward externally-funded research degree student enrolment; (6) enhance the impact of our research by engaging in policy processes in which our research can contribute.

c. People, including:

I. Staffing strategy and staff development

There are 10 staff (8.2FTE) submitted in this REF assessment, with an evenly-spread age profile. Although one or two senior staff may retire in the next 10-15 years there are candidates among the existing staff to assume their leadership roles. The gender balance of staff is slightly biased in favour of women (6 of 10), reflecting the demographic of the AHP workforce. The majority of staff have a PhD (8 of 10) and are currently involved in supervision of PhD students. Some have undertaken post-doctoral studies (e.g. Bannerman, Gill, van der Linden).

Research career development is monitored through the annual Performance Enhancement Review (PER) process. To support research career development we have a research mentoring scheme that supports an 'apprenticeship' style of working in which early career researchers are "paired" with experienced academics. Our Career Development Strategy, for researchers at all stages of their professional development supports more established academic staff to develop

and/or increase research productivity (e.g. Bannerman, Hislop, McMillan). It has also supported the progressive and successful development of early/mid-career research staff to research leadership roles. Notable successes in this regard include Gill, who was recently awarded a Readership for her leadership of the Alcohol research programme, and van der Linden, who has had a transitional role across two (RAE 2008 to REF 2014) census periods from Research Associate, via Research Fellowship, to a Senior Research Fellowship position. The appointment of Gleeson in 2009 has been a catalyst for a rapid increase in the critical mass of externally-funded international/EU PhD candidates registering to work within our OMR research programme. Gleeson's leadership, as Professor of Rehabilitation Sciences, has also created a pathway for OMR career progression through the consolidation and widening of our collaboration with local orthopaedic surgery research groups at the Royal Infirmary of Edinburgh (resulting in the development of a 2-year joint-funded Research Fellowship Position to support orthopaedic and orthopaedic rehabilitation research to commence in November 2013; Dr Claire Minshull appointed).

We offer excellent support for our research staff, which is reflected in the following: in 2010, we achieved the HR Excellence in Research award from the European Commission for good practice in our support for training and development of researchers and the promotion of mobility in research careers; in 2012, we were one of only ten universities in the UK to have their two-year reviews and future plans approved; in 2013, we received an Athena SWAN Bronze Award for our commitment to assisting the recruitment and retention of women in science and we are *en route* to receive an Athena SWAN Silver award for our successful work with AHP-related staff. We have embedded practices in relation to the Fixed Term Employees (Prevention of Less Favourable Treatment) Regulations (2002) and the Joint Negotiating Committee for Higher Education Staff (JNCHES) guidance on the use of fixed-term contracts. We are also fully supportive of the Researcher CONCORDAT agenda (with detailed plans in place, via the Researcher Development Framework, to meet CONCORDAT objectives, including Contract Research Staff representation in the membership of the university's Research Strategy Committee).

Aside from the more informal "training and development" experiences afforded to local clinicians, through our many on-going research collaborations and participation in our research seminar series, we support a variety of research career development access points to AHP colleagues. We fully subscribe to training opportunities that will enhance their development as clinician scientists. Examples of this include partnership in the local Consort Education scholarship scheme that provides financial support for postgraduate training of AHPs, our provision of a new research-oriented MSc degree in Clinical Research (targeted specifically at colleagues working in clinical practice), our provision of a programme of training leading to a Professional Doctorate, and partner-membership in the Clinical Academic Research Collaboration (CARC) scheme with the local NHS Trust (funded by NHS Lothian, all Edinburgh Universities and NHS Education Scotland; as described in section b, above). The latter is a key element in these activities and, along with our new MSc in Clinical Research, will underpin the "research career escalator" for AHPs. To this end, our successful grant applications to the MS Society, Edinburgh and Lothian Health Foundation and La Fondation Motrice all included, as co-applicants, local physiotherapists from clinical services specialising in neuro-populations (CP, MS). These collaborations have now been extended to include clinical partners located in the Anne Rowling Regenerative Neurology Clinic at the University and Royal Infirmary of Edinburgh.

c. II. Research students

Although QMU regularly provides annual support for one PhD studentship award per Research Theme we have targeted a reduced dependence on university funding to underpin our PhD research. This is positively reflected in the current census period by our move to a position whereby the majority (74%) of our 35 registered PhD scholars are now 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 students. The majority of these students are wholly or partially externally funded through research awards (e.g. Multiple Sclerosis Society of the UK, NHS Trusts, British Kidney Patients Association,) or via government or institutional awards from countries as diverse as Bahrain, Greece, Italy, Malaysia, Oman, Pakistan, Saudi Arabia and Switzerland. The remainder of these students are QMU bursary and staff PhD students. The quality of PhD students attracted is reflected in the recent award to Greenwood, by competition, of a full-time National Institute of

Health Research (NIHR) doctoral training fellowship [unfortunately a condition of the award specified that the student must transfer her original QMU part-time registration to an English University, with Mercer continuing as external supervisor to the student, and is now registered at King's College University, London]. 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 (including Rehabilitation Sciences and NMHD) students to support the presentation of their doctoral research at international conferences.

We also offer a professional doctorate programme which has been successful in bringing allied health professionals to doctoral-level study. In addition, we have recently validated a new entry-level, research-focused MSc in Clinical Research (postgraduate degree programme) that combines research methods training, research governance and research dissemination modules with the opportunity for clinical researchers to conduct a project within their clinical practice. All doctoral students can access researcher training courses/modules hosted by the Centre for Academic Practice. This core post-graduate research training is augmented as necessary through access to specialist research methodology training (e.g. cardiovascular ultrasound, EMG) delivered by specialist external centres including clinically-oriented research training events hosted by the Edinburgh Wellcome Trust Clinical Research Facility. Academic staff, post-doctoral researchers, and students also have regular opportunities to share ideas and best practice through the School of Health Sciences and a Research Theme-specific research seminar series. Lastly, the QMU Doctoral Student Conference makes a lively contribution to the annual research calendar; this is organised by the Doctoral Students Association and promotes sharing of good practice between students.

d. Income, infrastructure and facilities

We have been successful in securing competitively-awarded research funding from, for example, the CSO and the NIHR Health Technology Research programme. While much of this research activity is on-going, approximately 50% (15/29) 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 within healthcare environments. In this regard, all staff receive Research Theme-specific mentoring and peer support during the processes of research question generation and any subsequent funding application. Research Theme leads further quality assure this process by ensuring that all potential final draft funding bids are of the highest quality and are strategically aligned with the aims and research strengths of the Theme. As a result we have developed a capability to successfully respond to both investigator-led (e.g. Gill, Thomson, CSO) and responsive funding calls (e.g. Mercer, NIHR; van der Linden, MS Society). 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, Local Public Sector (including local NHS Trusts), Alcohol Education and Research Council, and a wide range of medically-oriented charity funders (e.g. Coeliac UK, British Kidney Patients Association, La Fondation Motrice [Cerebral Palsy], Multiple Sclerosis Society of the UK). In addition, we have received several industry-funded research awards (e.g. Al-Dujaili, PomeGreat; van der Linden, DePuy Ltd). Overall, this approach has been relatively successful with staff associated with our Research Themes securing funding of £5.67m during the census period. This equates to ~£110k *per capita per annum* for those staff entered into this submission. This significantly improves (both in gross and *per capita* income) on our RAE 2008 performance and is one element underpinning the sustainability of our research environment. The University has more recently invested in the sustainability of the research environment in the Rehabilitation Sciences and NMHD Research Themes through the 2012/13 funding of strategic development posts, including, a 0.4FTE Senior Research Fellow (NMHD), 2 x 0.5FTE Post-Doctoral Research Fellows (Rehabilitation Sciences), a Research Assistant (NMHD) and a Research Administrator (NMHD). These posts will support the enhanced delivery of the research objectives (as specified in section b, above) set for the next census period.

Additional strategic investment in both Rehabilitation Sciences and NMHD research laboratory infra-structures has further enhanced our capability and capacity to engage in research that is highly relevant to our external communities (clinical and industrial). Building on an

established portfolio of "functional food" and nutraceutical-related research collaboration with industry, our new NMHD research laboratories will position us more prominently as "critical research friends" to the burgeoning Scottish Food and Drink Industry sector. Notable Rehabilitation Sciences successes arising from this investment approach, that will also impact upon the sustainability of our research activity, include the installation and equipping of Gleeson's Neuromuscular and Sensori-motor Function Research Lab (with portable assessment unit capability) and the development of a comprehensive cardiorespiratory assessment and cardiovascular imaging suite. A range of additional NHS clinical facilities are available for use by the research group due to the established links with clinical collaborators and organisations. We have been able to augment these clinical research environments through the introduction of a range of portable assessment suites (cardiorespiratory, cardiovascular and neuro-musculoskeletal). This new capability has facilitated further research collaboration across multiple clinical sites in the UK (for instance, Raigmore Hospital, Inverness; Monklands Hospital, Airdrie; Ninewells Hospital, Dundee; Glasgow Royal and Western Infirmaries; and University of Glasgow/British Heart Foundation Research Unit; King's College Hospital, London; Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust, Oswestry) and in Europe (Universidad Cardenal Herrera, Valencia).

An important legacy of the CIHR (a key element of RAE 2008 submission) was the enhanced administration and efficient support of research activities through the development of the AHP Research Support Hub. This provides access to (1) specialist *Biostatistical and Health Economics support* to underpin the development of high quality research proposals, (2) an *Allied Health Research Support Librarian* able to provide tailored training programmes to support researchers in the use of various information retrieval resources and systematic review search strategies, (3) *The Research and Knowledge Exchange Unit (RKEU)* to support the management and implementation of university-wide research-led strategic initiatives as well as the facilitation of a dedicated pre-award funding application support service and (4) *The Centre for Academic Practice,* which delivers the QMU Research Skills Training (RST) Programme. Linked to this is a programme of QMU Research Ethics and Governance Training which is organised in partnership with external NHS R & D partners.

e. Collaboration and contribution to the discipline or research base

A key driver of our clinically-oriented research is our ambition to employ collaborative consortia to develop, implement and evaluate outcome evaluation frameworks and interventions that acknowledge the importance of patient-led self-monitoring and self-management of long-term health conditions in diverse populations (e.g. frail elderly, orthopaedic, neurological, cardio-metabolic conditions). Our strategic collaboration with clinicians at King's College Hospital and University (Departments of Renal Medicine, Transplantation and Immunology) has also facilitated involvement in two European, SME-linked, research consortia investigating lifestyle-directed cardiovascular risk reduction for people with CKD and supporting the mobility of researchers involved in renal rehabilitation (Mercer). European partners in these research projects include the Universities of Lund, Thessaly and Berlin. Additional partnerships have been established with the School of Health Sciences, Universidad Cardenal Herrera, Valencia (Mercer; Exercise and Frailty in chronic kidney disease) and the Paediatric Rehabilitation Research Group, University Children's Hospital Zurich (van der Linden; Exercise interventions and Selective Voluntary Motor Control in children with cerebral palsy). Both collaborations have already been consolidated by the acquisition of external funding support for jointly-supervised PhD students. Researchers have also been involved as either participants (Mercer, Physical activity interventions for people with multiple sclerosis) or leads (van der Linden, AFO tuning for children with cerebral palsy) in unsuccessful NIHR Applied Research and NIHR-EME Programme research consortia funding bids respectively. Nonetheless, our participation has further developed research links with members (Oxford Brookes University, University of Birmingham, Cardiff University) of these consortia with future funding applications in train. NMHD Researchers have also developed new funding targets in conjunction with both long-standing (Rowett Institute, Aberdeen University; the Centres for Cardiovascular and Reproductive Biology, Queens Medical Research Institute, Edinburgh University) and newly-established research collaborations (Robert Gordon University, Aberdeen; Royal Hospital for Sick Children, Edinburgh). The multi-disciplinary expertise of the NMHD alcohol research team has

further facilitated its interaction with a wide-variety of Allied Health Professionals and access to a range of particularly-vulnerable populations pertinent to the use/abuse of alcohol.

Research theme staff published approximately 200 peer-reviewed papers and research-oriented book chapters in the census period including: Gleeson's (2012) invited co-authorship of a British Association of Sport and Exercise Sciences Expert Statement on measurement of muscle strength with isokinetic dynamometry**;** Hislop's (2008) evidence synthesis with new data on physical activity assessment of pre-school children [>160 citations]; van der Linden's (2012) invited research editorial on FES use in children with CP). In addition, >350 peer-reviewed conference papers/posters were communicated to international AHP and medical conferences (e.g. World Congress of Physical Therapy, World Federation of Occupational Therapists, International Allied Health Professions Conference, British Association for Surgery of the Knee). Contributions to the wider academic debate of AHP-related research, often in the form of invited and/or keynote presentations (>20), have also been made to meetings of the British Renal Society/Renal Association, European Academy of Childhood Disability and the Royal College of Psychiatrists, European Care Pathways Conference, European Dialysis and Transplantation Association, European Society for Motion Analysis in Adults and Children, and the World Congress of Nephrology.

In terms of wider contributions to the field, our staff are represented on several editorial boards (e,g Gill, Alcohol and Alcoholism; Gleeson, Journal of Sports Sciences; Mercer, BMC Nephrology; Sports Medicine and Doping Studies; van der Linden, Gait & Posture) and three Fellowships have been awarded during the census period (Fellowship of the College of Occupational Therapists, Forsyth; Fellowship of the British Association of Sport and Exercise Sciences, Mercer & Gleeson). Other substantive academic contributions include membership of or appointments to: Lothian NMAHP Addictions Research Cluster (Gill); Scottish Government Alcohol Strategy Group (Gill); Community Food and Health Scotland committee (Bannerman); grant review panel of the Multiple Sclerosis Society, UK (van der Linden); academic board of European Society for Motion Analysis in Adults and Children (van der Linden); British Renal Society Renal Rehabilitation guidelines working group (Mercer); Scottish Rehabilitation Research Network management group (Mercer); vice chair of European Association of Rehabilitation in Chronic Kidney Disease (2009-2012, Mercer); membership of National play@home steering/research advisory group.

Staff also regularly support scholarly quality assurance within the fields of study through participation as (1) peer reviewers for grant awarding bodies *(*e.g. Action Medical Research (van der Linden), British Renal Society (Mercer), Chief Scientist Office (van der Linden, Mercer), EPSRC (Mercer), Kidney Research UK (Mercer), MS Society (van der Linden, Mercer), National Institute for Health Research (Mercer), South-African Action Medical Research (van der Linden), Trasher Research Funds, Chartered Society of Physiotherapists/Physiotherapy Research Foundation (Mercer)); (2) peer reviewers for academic journals (all submitted staff); (3) external peer reviewers for academic (Professorial) promotions (Mercer x 5; Gleeson x 2); and (4) as external examiners for PhD degrees (Mercer x 5; Gleeson x 7).

As an early signatory to the Concordat for Engaging the Public with Research (an initiative developed by the UK's research funding bodies), we are embedded in partnerships and initiatives, including the Edinburgh Beltane Public Engagement Network to promote research to non-academic audiences (e.g. via Patient-Public Involvement groups and conferences; Bright Clubs; Edinburgh International Science Festival; Scottish Government's Science on the menu initiative; National Science Centre – Dynamic Earth). Our Researcher in Residence Scheme has provided an opportunity for PhD students and early-career researchers to work with Primary schools in East Lothian and Edinburgh. The scheme has allowed researchers to work in schools and engage young people with their research. This has also served to raise aspirations among the next generation of researchers while strengthening QMU's visibility and profile in the local community.