



**CENTRE OF
EXCELLENCE
ON AGEING**

UNIVERSITY OF SURREY



GIA

Centre of Excellence on Ageing



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Mission

The Centre of Excellence on Ageing (CEA) is a 'real world' research and impact focused centre located at the University of Surrey.

The Centre was established in April 2023 with its partner, the Global Initiative on Ageing Foundation (GIA) under the auspices of the United Nations (UN), making the Centre the first GIA's centre of excellence in the world. The CEA is dedicated to advancing knowledge, applying impact and furthering our understanding of ageing across the whole life course, promoting both the concept and the practice of Healthy Ageing for individuals and societies the world over. Moreover, the Centre will support research applications and policy engagement actions in key areas including health, education, science and mobility. To achieve these goals, the CEA is focused on both multi and interdisciplinary ageing research that brings together experts from various fields; social gerontology, paediatrics, infant and junior education, psychology, economics, social policy, engineering, health and social care, biomedicine, including stem cell and genetic counselling, and others, to promote research, knowledge, and evidence, helping to improve human health and wellbeing throughout the whole of life, including preconception.



According to data from World Population Prospects: the 2019 Revision, by 2050,

1.5 billion (1 in 6) people in the world will be **over 65 (16%)**

(from UN and pewresearch.org)

According to ONS Statista by 2050

24.8% (1 in 4) people living in the UK will be 65 and over, around 18.3 million individuals



As part of the GIA, under the aegis of the UN, the CEA works within a cooperative framework to support both the overall objectives of the GIA Foundation, and the related UN agency UNITAR (United Nations Institute for Training and Research), in addressing the challenges of ageing, before and across life. In doing so, the operation of the CEA is based on five overarching areas with strategic resonance at local, national and international levels:

- Supporting the preparation and ratification of a new UN Convention on the Human Rights of the Older Person;
- Providing advice to both public and private sectors on improving public measures on ageing across the whole life course, based on research-based evidence;
- Strengthening relevant skills and competencies by offering training, particularly to older people, their families, public officials, and other professionals;
- Working with stakeholders to raise awareness of the challenges and opportunities related to ‘whole life course ageing’, including projects focused on improving the quality of life, participation and social inclusion of the elderly;
- The establishment, growth and sustained impact of the CEA ensuring the promotion of research, teaching and capacity building, for and with key stakeholders across all sectors connected with whole life ageing;
- Identifying the positives and privileges associated with whole life ageing across the full spectrum of research, education, partnerships and policy debates.

In this way, the Centre acts as a platform: bringing together specific research groups, existing centres, and plugging into new networks. From the University and our partners, **CEA Fellows** will be recruited based on their interdisciplinary expertise in core areas of whole life course ageing. Through these Fellows, the Centre will be able to extend its collaborations with a wide range of other research institutions, along with industry partners, government agencies, and representative civil society organisations, including older people themselves.

Goal

To make the University of Surrey's Centre of Excellence on Ageing a world-leading centre of excellence in whole life course ageing, with impactful outcomes at local, national and international level by 2025.



Professor Paul Townsend



Professor Amelia Hadfield



Professor Andrew King

Structure

The Centre of Excellence on Ageing (CEU) has established a Founding Director: Professor Paul Townsend (Pro Vice Chancellor & Executive Dean, Faculty of Health and Medical Sciences), and two Co-Directors: Professor Andrew King (Faculty of Arts and Social Sciences, Head of Sociology), and Prof Amelia Hadfield, (Associate Vice-President of External Engagement, and Faculty of Arts and Social Sciences, Head of Politics). A Managing Director will further ensure day to day management of CEA's objectives.

Governance

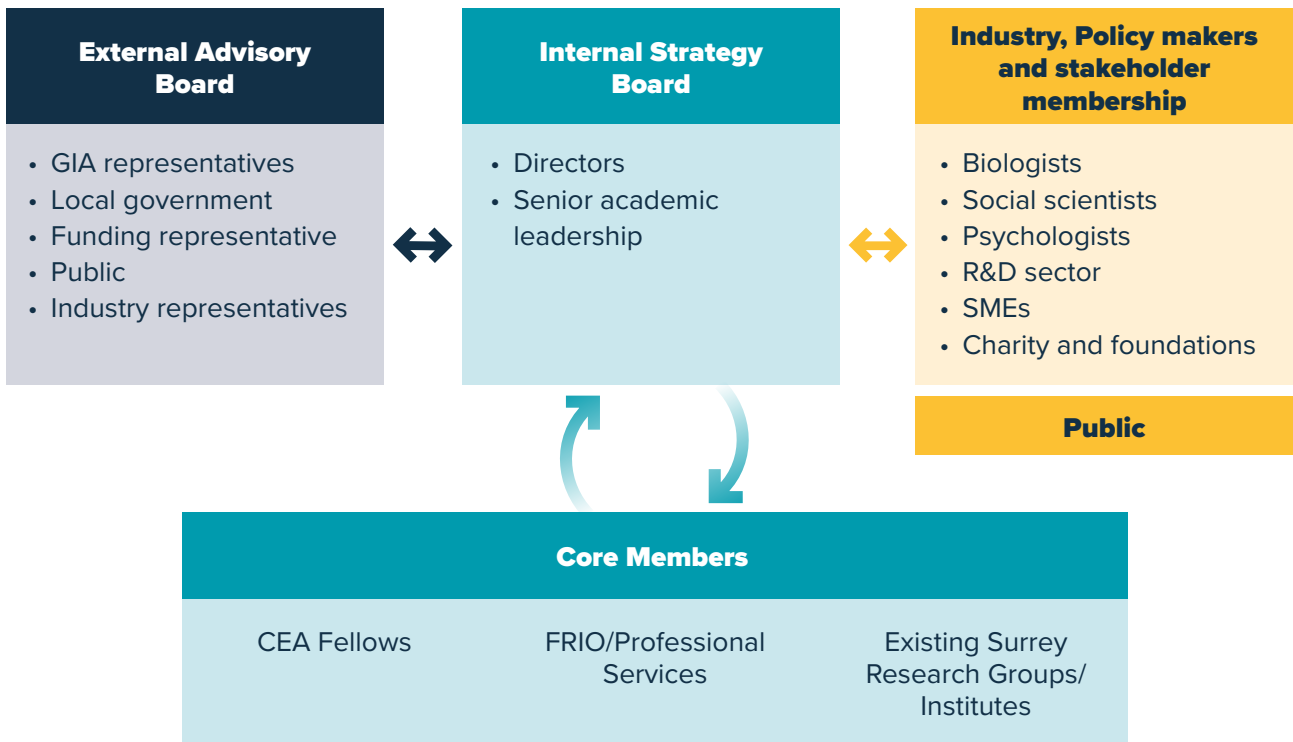
The CEA comprises a two-level structure.

- Internally, the **CEA Internal Strategy Board** is comprised of senior staff across all faculties of the University of Surrey. These include school, department, institute or clinic heads with a specific expertise or interest in healthy ageing, as well as central and faculty professional services staff working to support the overall goals of the CEA. The Internal Strategy Board has three annual meetings and provides oversight of the CEA's governance, its research, teaching, and engagement activities.
- A **CEA External Advisory Board** includes members of key external collaborators/partners, including nominated representatives from the GIA/UN, representatives from funders, local government, public, private and third sector stakeholders and industry. The CEA External Advisory Board meets annually, concomitant with one of the three annual meetings of the CEA's Internal Strategy Board, ensuring a robust and creative leadership structure and focus on key actions.

Interdisciplinary research is key to the development of the CEA. To support its scholarship, as well as provide collaborative and networking opportunities, CEA Directors, in conjunction with the CEA Internal Strategy Board will recruit a critical mass of CEA Fellows from all faculties at the University of Surrey, and from across its collaborative partners. In this way, **CEA Fellows** will form a key part of the research-based objectives and externally impactful outputs of the CEA.

Leveraging Research Networks

Existing research groups or centres based in the three faculties, or across the University can affiliate to the Centre, which acts as a hub for directing research on ageing across the whole life course at Surrey. In addition, and pursuant to the provisions of the partnership contract, the GIA Foundation will invite key representatives of the CEA to attend regular GIA meetings, as relevant for the CEA's establishment and development, to support in its expertise, making contacts and building networks, in alignment with the GIA's own advocacy and action objectives. Reciprocally, the CEA, and the University of Surrey more widely, will invite representatives from the GIA Foundation to attend regular meetings, to enable collaborative relations and impactful outputs between the two founding partners.



Organisational Chart



CEA: Four key themes

Representing the long-standing and more recent research strengths in healthy ageing from across the University of Surrey, as well as the technology and outreach modes by which to apply them to generate impactful outcomes, the CEA is made up of four thematic areas:



The CEA's four thematic areas are expected to develop in both scope and number, as the CEA itself develops. All four themes are interconnected in representing the wealth of research, partnership-based collaboration, funding activities, and outreach that Surrey staff have historically pursued across the spectrum of health ageing. In bringing together concepts of healthy ageing alongside tackling ageing-related inequalities, the CEA makes clear its determination to simultaneously identify the positives of ageing on the one side, while prompting a shift in mindsets regarding entrenched attitudes to ageing on the other. 'Solutions to ageing'

that focus on the longevity divided are therefore represented via Surrey research and work with its collaborative partners into innovative technologies supporting healthy ageing (including generative AI) and outward-facing, impactful engagement with decision-makers in the policy world, and via community engagement. Taken together, the sum total of the CEA's four key themes represents an approach that recognises both the demographics of ageing, and individual longevity, as relevant, societal positives, to be supported through its outputs.

CEA: Three core pillars of activity

In addition to its four key thematic areas, the CEA's practical outputs rest on three core pillars, helping to refine and drive its overall ambition.



Research and Innovation

Routinely promote and apply for local, national and international funds to support research & innovation on healthy ageing

Faculty Research and Innovation Offices (FRIO) horizon scan and disseminating appropriate funding opportunities

UGPN and University of Surrey strategic partners to help foster international collaboration on healthy ageing

PhD accelerator programme to drive ageing across the lifecourse research and innovation

Impact Acceleration Awards to promote impact and engagement activity on healthy ageing



Policy Influence

Communications and Public Affairs team to promote and disseminate CEA activity across available networks

Supporting knowledge exchange activities between industry and academia via designated CEA partners

Deep and sustained engagement with local, national and international government and stakeholders (GIA/UN)

Strategic and sustained use of CEA partners to generate a clear agenda for healthy ageing, enabling CEA to participate in cutting-edge debates and actively influencing policy



Teaching, Training and Capacity Building

Establishment of CEA Fellows will promote cross disciplinary working

Develop an MRes Programme

Doctoral College, HR and Early Career Academy to support delivery of Postgraduate and Early Career Researcher training

Medical School will provide opportunities for training and capacity building

Surrey's existing areas of expertise

The creation of the Centre for Excellence on Ageing builds on a solid track-record of high quality ageing related research and activities at the University of Surrey. As outlined below, the CEA's centre-specific prowess draws upon the in-built expertise built up across all three faculties, with key groups and individuals leading in innovative areas:



The School of Biosciences has been prioritising healthy ageing across the life course since 2016, with the creation of **Lifelong Health** as a new, cross-faculty strategic theme, championed by Professor Deborah Dunn-Walters.



Surrey Sleep Research Centre (NIHR, DRI, UKRI, industry funded) has delivered world-leading, multidisciplinary research for over 20 years. It is directed by Professor Derk-Jan Dijk, Professor of Sleep and Physiology and includes researchers in Psychology (Violante), Centre for Vision, Speech and Signal Processing (Wells), Mathematics (Skeldon) and the Clinical Research Facility (Hassanin). Understanding the function of sleep will contribute to the improvement of wellbeing and health across the whole lifecourse.



'SEISMIC' facility (BBSRC funded) for Spatially rEsolved Single and Sub-cellular oMICs – led by Professor Melanie Bailey, Professor of Analytic Science with Paul Townsend and Antony Whetton includes academics in Chronobiology (Skene), translational biosystems (Whetton), biomedical informatics (Geifman) and immunology, metabolism and early disease detection (Dunn-Walters, Whetton, Cexus, Townsend). This facility will improve the understanding of ageing, cancers and diseases, leading to the development of novel treatments and vaccines.



Centre for Bioanalytical Science (BBSRC, EPSRC, Industry and UoS funded along with an application to the Wolfson Foundation) – Surrey’s new initiative in bringing together intellectual thought leaders in measurement science and a competitive provider of measurement services for internal and external stakeholders. It combines world leading expertise in FEPS (nanomaterials characterisation, imaging, surface analysis, nanomanipulation and ion beams) with FHMS (“omics,” informatics, veterinary science, and biomedicine), along with a variety of industry partners. The centre will allow Surrey to focus and enhance research in areas such as biomarkers, drug discovery and AI to support the understanding of human health.



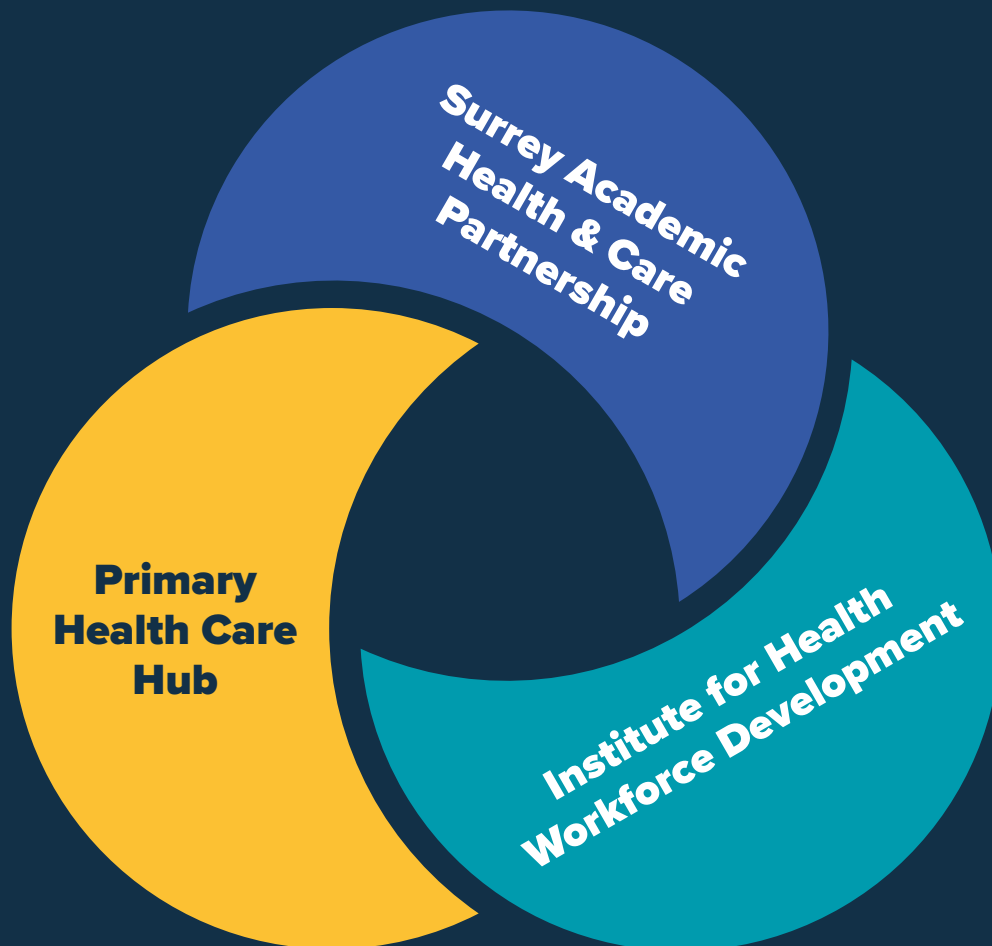
Centre for Research on Ageing and Generations (ESRC, UKRI, Horizon Europe and NIHR funded) co-directed by Professor Andrew King, Professor of Sociology, Dr Vicki Harman, Associate Professor of Sociology, Professor Jo Blandon, Professor of Economics and Dr Xia (Lorna) Wang, Senior Lecturer in Hospitality. This centre brings together social scientific approaches to ageing across the life course, the importance of generations in understanding ageing and translates research into policy and practical solutions.



Centre for Biomedical Engineering (EPSRC, UKRI, UoS) led by Dr Daniel Abasolo, Lecturer in Biomedical Engineering and involves material engineering (Sui/Xu) and mechanical engineering (Hughes/Oldfield). This centre has run its Masters course for over 50 years, making it one of the longest established in the world and educated 100’s of graduates over this time creating the next generation of clinical engineers. The centres research includes using bioinspired materials and biomedical signal processing to understand and improve ageing across the lifecourse issues.

The Centre will also support the three strategic initiatives that are continuing to build Surrey's **One Health, One Medicine** approach:

- **Primary Health Care Hub:** in collaboration with Prof Simon de Lusignan at Woodbridge Hill Surgery and Surrey Heartlands Health and Care Partnership to deliver a new primary care hub that will also enable innovative teaching, learning and research in one health care ecosystem.
- **Surrey Academic Health and Care Partnership:** launched in October 2023 bringing together expertise from Surrey County Council (SCC), Academic Health Science Network and Surrey Heartlands Health and Care Partnership to address healthcare challenges. Supported by a recent NIHR grant between the University and SCC on the wider determinants of health.
- **Institute for Health Workforce Development:** a virtual hub facilitate interdisciplinary collaborations between health professionals, educators, and researchers to create innovative solutions for future healthcare challenges and workforce development.



Delivering growth of ageing research, innovation and impact

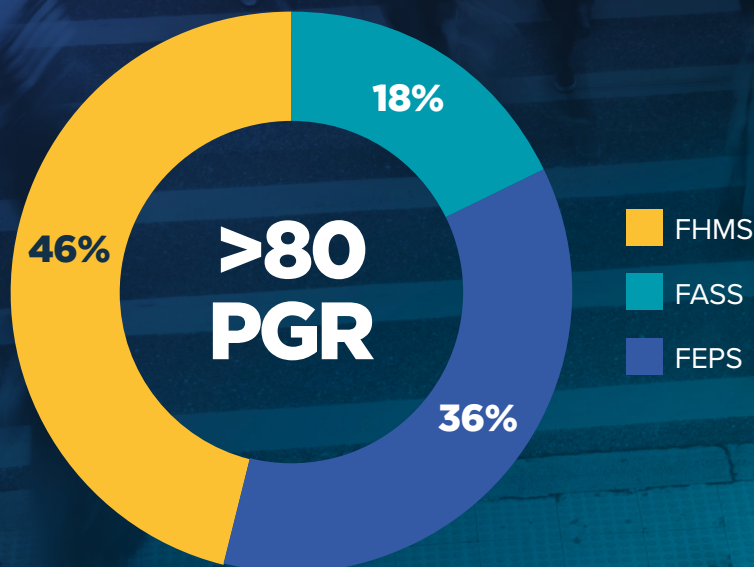
Post Graduate Researchers

Post Graduate Researchers (PGRs) are crucial to the work of the CEA. Across the University of Surrey, there are currently over **80 current Post Graduate Researchers, supervised by more than 50 academics** across all faculties, who are variously working in data science, biomedical science, psychology, technology and society (See Appendix 1). Together, these researchers in conjunction with their supervisors, represent a vital new, inter-disciplinary research community in established and emerging areas of healthy ageing, which in turn will provide the critical mass needed to drive the future of the CEA.

The CEA will also drive and enhance student experience by providing discipline-specific research support in key areas via PGR supervisors, as well as project-based opportunities for student training and/or collaboration. Going forward, the CEA aims to support and facilitate the increase of students studying along the spectrum of healthy ageing disciplines with an aspirational target of 5 students per year by 2027/28, via external grants and sponsorships related to healthy ageing.

One example of achieving this goal is via the recent ESPRC funding for Surrey's Centre for Doctoral Training in AI for Digital Media Inclusion, which will include projects working on AI adaptations to support sight, hearing, age and physical diversity challenges. CEA opportunities to create an MRes programme could enable the delivery of exciting new opportunities for teaching, such as the development of new courses and placements, in addition to providing a pipeline of researchers into ageing across the lifecourse research.

Number of PGR working in Ageing research



CEA Research funding activity: a sustainable base

The CEA will actively foster research in ageing across the whole life course amongst all three of its faculties. The Centre will benefit from consistent and active research applications, and a high hit rate of successful awards, drawn from a base of more than 120 academics working within the area of healthy

ageing across the whole life course. Across this critical mass of ageing-related scholarship, **over 300 proposals** totalling more than £80M have been submitted since 2019 (See Appendix 2). These submissions have been made to a variety of funders including UKRI, NIHR, and notable charities and trusts like Wellcome Trust, Alzheimer's Research, Age UK and British Heart Foundation.



>120

academics
across all faculties
who work in
Ageing research



>300

research proposals
submitted since
2019



More than
£17M

in ageing research
funding has been
awarded to Surrey
since 2019

During this same period more than £17M in successful grants have been funded, with further awards expected to be formally announced across the 2023-2024 period. The CEA's ability to identify, submit and win healthy ageing-specific funds from regional, national and international funders rests primarily on a foundation of actively funded areas of research in healthy ageing, with a solid track record of fundable projects in cutting-edge science. As the CEA consolidates as a unique centre-specific funding entity, it envisages that CEA-specific applications will be undertaken and submitted in a regular fashion, involving both Surrey staff and in collaboration with other academic and networked partners. Aiding CEA's current and future funding goals are the three Faculty Research and Innovation Offices (FRIO). These offices engage in horizon scanning of future opportunities to stimulate activity, promote research funding opportunities, and grow research income in healthy ageing subjects. Additionally, they facilitate strategic

grant applications, targeted fellowship applications and cross community network building. As it develops, the CEA will also support future, larger scale funding opportunities by bringing together expertise and external stakeholders, including facilitating application for substantial funding opportunities, including the MRC Centre of Research Excellence.

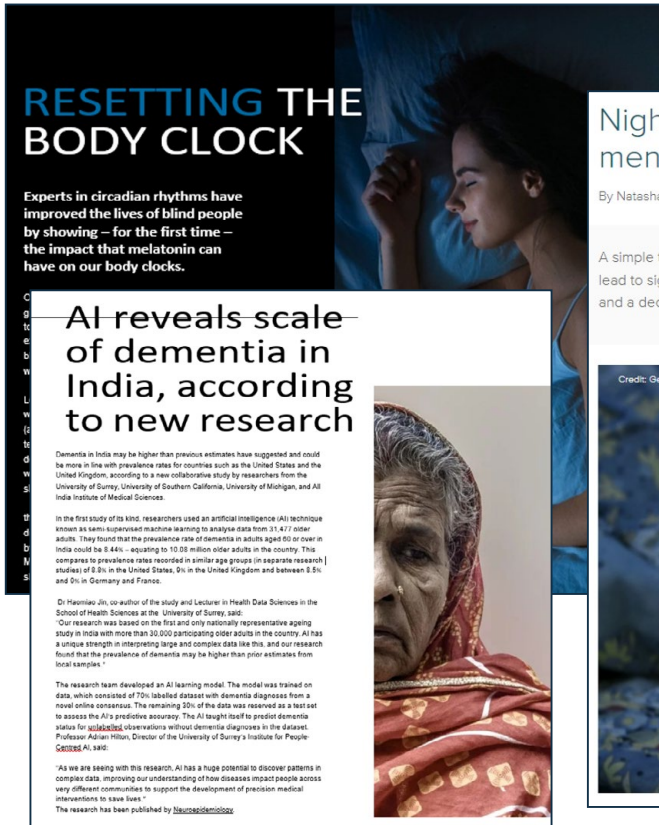
Philanthropic Funding

The University of Surrey's Advancement team have been successful in building links, supporting applications to, and receiving funding from philanthropic sources such as Macular Disease Society (£100K Studentship), the Lorna and Yuti Chernajovsky Biomedical Research Foundation (~£180K), Urology Foundation (£60K), and Degeneration (£50k). The CEA will work closely with External Engagement, and further philanthropy prospects will be identified to enable initial seed funding helping to underwrite the first three years of CEA.

Impact activity

The University Impact Acceleration Awards (IAA) provide highly flexible and internally administrated funding to support knowledge exchange, the acceleration of impact, and to bridge the gap between UKRI (EPSRC, STFC, ESRC, and MRC) funded research to facilitate impact for the benefit of society including translation towards commercialisation. Since 2019, over 20 individual

impact projects have been awarded funding which are ageing related (see Appendix 3). As with a recent call for AI themed applications, future impact funding could be allocated to support ageing across the life course related activities to bolster the impact of the CEA. Furthermore, whole lifecourse ageing research and impact contributes to the University's Research Excellence Framework (REF) submissions.



RESETTING THE BODY CLOCK

Experts in circadian rhythms have improved the lives of blind people by showing – for the first time – the impact that melatonin can have on our body clocks.

AI reveals scale of dementia in India, according to new research

Dementia in India may be higher than previous estimates have suggested and could be more in line with prevalence rates for countries such as the United States and the United Kingdom, according to a new collaborative study by researchers from the University of Surrey, University of Southern California, University of Michigan, and All India Institute of Medical Sciences.

In the first study of its kind, researchers used an artificial intelligence (AI) technique known as semi-supervised machine learning to analyse data from 31,477 older adults. They found that the prevalence rate of dementia in adults aged 60 or over in India could be 8.4% – equating to 10.58 million older adults in the country. This compares to prevalence rates recorded in similar age groups (in separate research studies) of 8.8% in the United States, 9% in the United Kingdom and between 8.5% and 9% in Germany and France.

Dr Huanbao Jin, co-author of the study and Lecturer in Health Data Sciences in the School of Health Sciences at the University of Surrey, said: "Our research was based on the first and only nationally representative ageing study in India with more than 30,000 participating older adults in the country. AI has a unique strength in interpreting large and complex data like this, and our research found that the prevalence of dementia may be higher than prior estimates from local samples."

The research team developed an AI learning model. The model was trained on data which consisted of 70% labelled data with dementia diagnoses from a novel online consensus. The remaining 20% of the data was reserved as a test set to assess the AI's predictive accuracy. The AI taught itself to predict dementia status for unlabelled observations without dementia diagnoses in the dataset. Professor Adrian Hilton, Director of the University of Surrey's Institute for People Centred AI, said: "As we are seeing with this research, AI has a huge potential to discover patterns in complex data, improving our understanding of how diseases impact people across very different communities to support the development of precision medical interventions to save lives."

The research has been published by [Neuroepidemiology](#).

Night owls can 'retrain' their body clocks to improve mental well-being and performance

By Natasha Meredith

A simple tweak to the sleeping patterns of 'night owls' – people with extreme late sleeping and waking habits – could lead to significant improvements in sleep/wake timings, improved performance in the mornings, better eating habits and a decrease in depression and stress.



Credit: Getty Images

NEWS

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Health

Iodine deficiency 'may lower UK children's IQ'

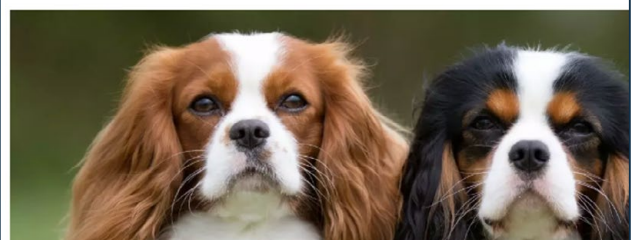
22 May 2013



Professor Margaret Keenan, Professor of Nutritional Medicine

AI could help diagnose dogs suffering from chronic pain and identify facial changes associated with Chiari-like malformation

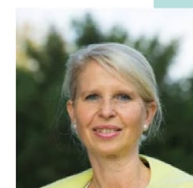
A new artificial intelligence (AI) technique developed by the University of Surrey could eventually help quickly identify Cavalier King Charles Spaniel (CKCS) dogs with a chronic disease that causes crippling pain. The technique identified unique biomarkers which inspired further research into the facial changes in dogs with Chiari-like malformation (CM).



Published: 23 March 2022

FEATURE

REF 2021 case study: How Vitamin D research led to new government guidelines



“What we're trying to do is improve the health of the UK population through ensuring that all population groups, irrespective of their ethnicity, ensure that their Vitamin D levels are sufficient.”

Professor Susan Lanham-New, Head of the Department of Nutritional Sciences

Collaborations and partners facilitated by the CEA

Partners are vital to ensuring the focus, impact and sustainability of the CEA. Partnership is a reciprocal structure allowing both sides to benefit in the endeavour to support and advance the lifelong healthy ageing mandate. They bring a combination of academic intelligence sectoral insight, enhanced stakeholder connections through widened networks, and brand enhancement.

The University has established strategic partners and have collaborations that span healthy and inclusive ageing policy, research, innovation and engagement. Additionally, our partners and collaborators exist at the local, national and international levels and are all function driven. The University of Surrey prides itself in its engagement with the civic agenda of its local and regional area. In connecting with the civil society, local government and commercial groups associated with whole life ageing issues, the CEA is a new addition to the 'civic landscape', enabling the university to ensure healthy ageing research supports the civic needs of its own neighbourhood.

For example, the University of Surrey has cultivated a strategic partnership with Surrey County Council, resulting in the implementation of a **new Civic University Agreement**. This agreement aims to fortify our connections with the local community, fostering positive impacts on health, the economy and sustainability. Furthermore, our civic influence has been consolidated by an NIHR Health Determinants Research Collaboration award between the University and Surrey County Council.

Through its Partners Programme, the **International Longevity Centre** (ILC) is an ideal partner for the CEA, with a shared focus on addressing the challenges and opportunities of ageing across the lifespan, and through the longevity dividend, generational policy and practice, and promoting diversity.

At an international level, the CEA partnership with the GIA will enable Surrey to contribute to UN Convention on the Human Rights of the Older Person.

“

The University of Surrey prides itself in its engagement with the civic agenda of its local and regional area.

”



CEA Collaborative Partners



*The logo of The Surrey Academic Health & Care Partnership is currently not finalised.

CEA delivery

The CEA is undertaking a simultaneous, two-pronged approach, building on the foundations of our insights and expertise, and our networks and collaborations:

1. 'Rolling' shorter term (6-12 month) activity specific such as horizon scanning, proposal development and submissions, including cross-border, international opportunities (e.g CESAER/Horizon Europe). Activities to establish partnerships and collaborations across the four themes, including identifying conferences for CEA members to attend and key networks to join to promote the centre.

Exploring and participation in teaching and capacity building activities, including working with UNITAR colleagues to ensure that both the CEA, develop synchronously along lines that support both the UN's mandate on healthy ageing and sustainability respectively and the University of Surrey's own ambitions in respect of being a globally relevant, research-intensive, community-engaged university.
2. Longer term (1-2 year) initiatives to bridge the gap between research and policy through leveraging connections to create health, social and economic impact at national and international level.

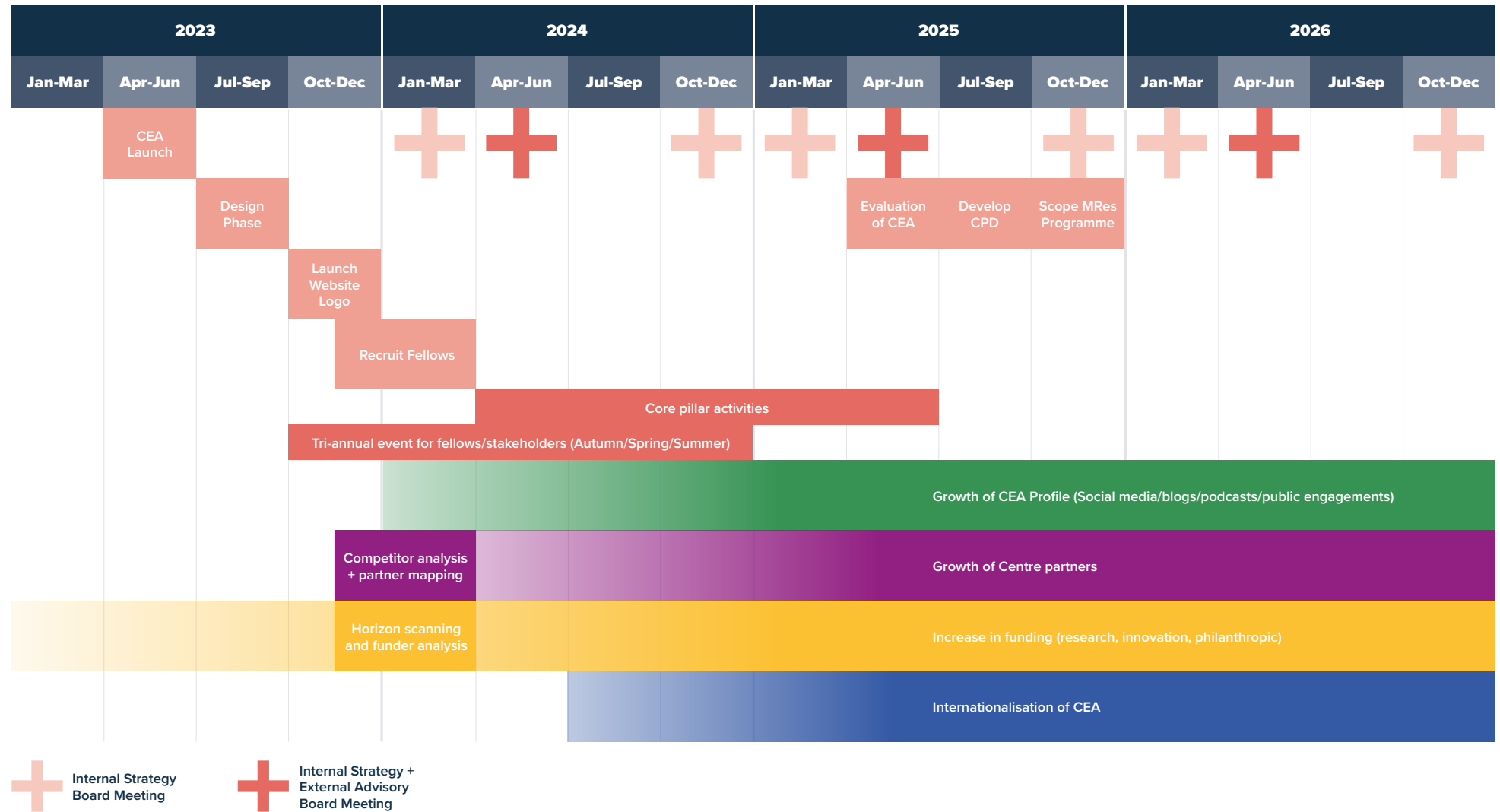
A selection of funding applications under development:

PI	Funder	Scheme/Title	Funding	Status
Frohlich	EPSRC/TBC	Tangible Community Storytelling for Mental Health Recovery	~£1M	In preparation
Frankenberg-Garcia	Wellcome Trust/TBC	Translating Health Science	~£900K	AHRC unfunded bid being re-purposed, in preparation
Dunn-Walters/TBC	MRC	Centres of Research Excellence (CoRE)	Up to £26M	Bid and partners in development, submitting stage one Feb 2024.

A selection of funding applications results pending/recent awarding:

Wang	UKRI	Dementia Network Plus	£100K	Result pending
Jin	ESRC/NSF	Unemployment, underemployment, and family and child health	£405K	Result pending
Tischler	Alzheimer's Society	Doctoral Training Programme	£580K	Result pending
Armes	NIHR	Health Determinants Research Collaborations	£TBC	Award pending
Jaramillo	Wellcome Trust	Multimodal Assessment of REM sleep dynamics	£545K	Awarded Nov 2024
Bartsch	AMS	sleep spindles in ageing	£125K	Result pending
King	NIHR	reducing loneliness and improving social inclusion	£260K	Result pending

Schedule of Activities



Year 1: 2023-2024

Design phase Including:

- Establish Internal Strategy Board
- Establish External Advisory Board
- Creation of logo and website

Recruit first cohort of CEA Fellows

Tri-annual set of events to carry the CEA through 2023-2024:

- Autumn 2023: *'Building our CEA: a Recap of Current Ageing Research, and Engaging with our new Stakeholders'*
- January 2024: *'Building Better: New Visions of Ageing Societies'*
- Summer 2024: *'CEA Year 1: Showcasing Research, Funding, Outreach and Engagement at Local, National and International Forums'*

Horizon scanning and funder analysis:

- Work with FRIOs to identify national and international external funding opportunities
- Seek funding (internal/external) for short-medium term
- Work with External Engagement and the Advancement office to develop relationship with philanthropic funders.
- Create schedule of activities related to the core pillars

Competitor Analysis and partner mapping:

- Identify local government partners, national government partners, private sector stakeholders, industry stakeholders, and potential media contacts
- Brand growth: mapping CEA's key value proposition, its range of 'listening' audiences, its key messages, and its potential outputs. Undertake a CEA SWOT analysis
- Partner growth: working with Partnership Managers perform mapping of potential research partners, teaching partners, and centre-to-centre partners, as well as a competitor analysis.

Year 2: 2024-2025

Commence schedule of activities related to each of the core pillars including:

Research and Innovation

Sandpit events to promote cross faculty collaboration

Ring-fenced internal faculty funding e.g. FHMS FRSF

Development of mid-term funding plan. FRIOs will provide the Board with a set of options

Proactive recruitment of academics via job descriptions with interest in ageing well

Utilise Impact Acceleration Account funding to promote engagement and impact activities

Policy Influencing

Surrey public affairs team to promote CEA activity and agenda

GIA to introduce the CEA to their networks

Work with GIA and UNITAR representatives to support the draft, development and implementation of the propose UN convention of the Human Rights of the Older Person

Insight sessions on translating research into policy with the International Longevity Centre

Teaching, Training and Capacity Building

Call for PGR projects related to ageing, e.g. PsychD projects

Investigate staff/student exchange and mobility

Work with UNITAR colleagues on related healthy ageing centres, world wide

Align capacity building with Surrey Medical School

THE FUTURE OF MEDICINE, TODAY

A new **Medical School**, training clinicians of the future to deliver integrated and technologically-advanced healthcare for patients and communities.



One Health,
One Medicine



Interprofessional
Learning



Digital
Health



Year 2: 2024-2025

Over the course of Year 2, a key goal will be to refine and raise the CEA's profile through enhanced online web presence, aligned messaging with the support of the university Comms/PA team, and curated social media output including 'Surrey Speaks' podcast episodes:

- Paul Townsend and Andy King CEA meets the International Longevity Centre
- Hadfield: CEA, UNITAR and the Global Governance of Ageing
- Victoria Tischler: the role of creativity in lifelong health
- Deborah Dunn-Walters: healthy immunity
- Ines Violante and Valeria Jaramillo: Sleep, brain, memory
- Nophar Geifman: big data and AI
- Lorna Wang: age-inclusive hospitality

Collaborative partner development: following the partner mapping process, the second year of CEA activity is to form strategic partnerships with other key institutions in the UK and overseas. Currently these could include: Newcastle University, University of Stirling, University of Strathclyde, International Longevity Centre. Further development could be facilitated by Surrey hosting the annual British Society of Gerontology Conference in June 2025 which will bring together 400 delegates both from the UK and also internationally.

Year 3: 2025-2026

Following the evaluation of the Year 1/2 activities, the centre will be further developed including its sustainability i.e. longer-term funding such as UKRI centre calls (and others), the development of Continuing Professional Development (CPD) courses, and to scope taught programmes.

The CEA will grow the number of partnerships and will focus on the internationalisation of the centre, including developing strategic partnerships with Goldsen Institute (University

of Washington, US), The Jeremy Collier Foundation, and the UNSW Ageing Futures Institute (University of New South Wales, Australia). The CEA can further make use of our international partnerships via the **UGPN** with Brazil and US, who also have specialisms in healthy ageing to foster cross-funding research and innovation collaboration, furthermore utilising the **UGPN Academy** to facilitate future connections.

Appendix 1

List of current PGR projects and their primary supervisor working on ageing related projects.

Faculty	Department	Supervisor	Students End Date	Thesis title
FHMS	Biosciences	SEIBT Julie	08-Jan-27	Physiological basis linking sleep continuity and age-related cognitive deficits: in vivo manipulation and monitoring of activity of layer 5 neurons in the cortex of mice
FHMS	Biosciences	AHMADI Kourosh	18-Sep-26	New approaches to the management of Pernicious Anaemia: an overlooked lifelong condition
FHMS	Biosciences	RIDDELL Natalie	18-Sep-26	Beta-2-adrenergic regulation of the aged immune system
FHMS	Biosciences	CAMPAGNOLO Paola	18-Sep-26	Creating and using Epicardial Spheroids to Assess the Effects of Cardiac Damage on the Adult Epicardial Microenvironment.
FHMS	Health Sci.	AHANKARI Anand	18-Sep-26	Nutritional economic and environmental impacts on anaemia in Indian children from birth to age 18 years
FHMS	Psychology	SMITH Kimberley	18-Sep-26	Intersectionality between Lifelong Disability & Ethnicity: Understanding the influence of ethnicity on Ageing Well with a Lifelong Disability among Black British Older Adults and their Carers.
FHMS	Biosciences	AHMADI Kourosh	19-Sep-25	The Utility of Genetic Risk Communication in Vitamin B12 Deficiency to Vegan Women of Childbearing Age.
FHMS	Health Sci.	ARMES Jo	19-Sep-25	Reducing digital disadvantage in older people during the COVID-19 pandemic: the role of families/carers at increasing technology acceptance and use
FHMS	Health Sci.	BARLEY Elizabeth	19-Sep-25	The relationship between social support and mental health in school-aged adolescents: The influence of teachers and school nurses
FHMS	Biosciences	NALESSO Giovanna	20-Sep-24	Generation of a novel in vitro system to investigate the effect of ageing on the articular cartilage
FHMS	Health Sci.	NICHOLSON Caroline	05-Nov-24	Developing undergraduate curricula to facilitate nurses ability to support self-management amongst people with long term conditions
FHMS	Health Sci.	JIN Haomiao	08-Jan-27	Developing machine learning models for cognitive decline and dementia from survey response behaviours
FHMS	Biosciences	DIJK Derk-Jan	03-Apr-26	Neuroinflammation sleep and dementia: Strategies to reduce symptoms and disease progression
FHMS	Psychology	SMITH Kimberley	08-Jan-24	The role of depressive symptoms and cardiometabolic risk factors in the prediction of dementia: a cross-country comparison in England
FHMS	Biosciences	AHMADI Kourosh	18-Sep-26	New approaches to the management of Pernicious Anaemia: an overlooked lifelong condition
FHMS	Psychology	SMITH Kimberley	18-Sep-26	Intersectionality between Lifelong Disability & Ethnicity: Understanding the influence of ethnicity on Ageing Well with a Lifelong Disability among Black British Older Adults and their Carers.

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FHMS	Biosciences	ROLLIER Christine	08-Jan-27	Improving the vaccine-induced immune response in elderly
FHMS	Biosciences	BARTLETT David	18-Sep-26	An investigation of the role of energy balance modification on anti-tumour and health responses in older adults with chronic lymphocytic leukaemia (CLL).
FHMS	Biosciences	VAN DER VEEN Daan	03-Apr-26	Effect of indoor light supplementation on rest/activity rhythms and sleep in older adults
FHMS	Health Sci.	ARMES Jo	19-Sep-25	Reducing digital disadvantage in older people during the COVID-19 pandemic: the role of families/carers at increasing technology acceptance and use
FHMS	Vet Med	SMYRNIAS Ioannis	19-Sep-25	Identifying the mechanisms that define the mitochondrial unfolded protein response in the stressed heart
FHMS	Biosciences	LOCKER Nicolas	27-Jul-27	Investigating properties of stress granules and translation in cell models of neurodegeneration
FHMS	Health Sci.	LYON Richard	05-Apr-24	The derivation of a clinical decision rule to support ambulance paramedics in the identification of older adults with a traumatic brain injury following blunt head trauma
FHMS	Psychology	SMITH Kimberley	31-Jan-26	Health and wellbeing in older people living with HIV
FHMS	Biosciences	BARTLETT David	03-Jul-26	Investigating and modifying physiological processes associated with premature frailty in those with Chronic Lymphocytic Leukaemia.
FHMS	Health Sci.	NICHOLSON Caroline	19-Sep-25	The utility of patient-reported outcome measures and patient-reported experience measures in supporting person-centred care for those with advancing frailty.
FHMS	Vet Med	NALESSO Giovanna	19-Sep-25	Role of Calcium Calmodulin Kinase II in the modulation of lipid metabolism and oxidative stress in the articular cartilage and osteoarthritis
FHMS	Biosciences	ROBERTSON Denise	18-Sep-26	Dietary protein the microbiota and gut barrier function: a gatekeeper of metabolic & immune health
FHMS	Biosciences	WHETTON Tony	18-Sep-26	A Plasma Proteomic and Metabolomic Map of Diet and Food Preferences in UK Biobank Volunteers
FHMS	Biosciences	WHETTON Tony	18-Sep-26	Multimodal analysis of plasma metabolomics and plasma proteomic data with respect to chronic diseases in UK Biobank volunteers
FHMS	Biosciences	CEXUS Olivier	18-Sep-26	Develop a protocol to generate immune-sufficient patient tailored liver organoids to study pathogenesis of liver diseases.
FHMS	Biosciences	BARTLETT David	18-Sep-26	An investigation of the role of energy balance modification on anti-tumour and health responses in older adults with chronic lymphocytic leukaemia (CLL).
FHMS	Biosciences	CEXUS Olivier	02-Jan-26	Modelling immuno-metabolic alterations in diseases using single cell and spatial multi'omic technologies
FHMS	Health Sci.	LEMANSKA Agnieszka	02-Jan-26	Data-driven solutions for prostate cancer: Addressing health inequalities using a UK-representative

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FHMS	Biosciences	LANHAM-NEW Susan	19-Sep-25	Elucidating the link between vitamin D and immune health in ethnic groups: mechanistic & population-based studies
FHMS	Biosciences	NALESSO Giovanna	20-Sep-24	Generation of a novel in vitro system to investigate the effect of ageing on the articular cartilage
FHMS	Biosciences	COLLINS Adam	26-Dec-23	Manipulating diet composition and meal planning for metabolic health
FHMS	Biosciences	VAN DER VEEN Daan	18-Nov-25	Co-expression of ultradian and circadian rhythms.
FASS	Music & Med	FROHLICH David	02-Jan-26	The role of augmented paper in health education for ageing
FASS	SBS	FAKHIMI Masoud	02-Jan-26	Simulation for Information Security Management in Healthcare
FASS	SBS	FAKHIMI Masoud	19-Sep-25	Framework for Open Hybrid Simulation and Analytics for Modelling Complex Systems in Health and Social Care
FASS	Lit & Langs	ORASAN Constantin	20-Dec-24	Use of machine translation in healthcare settings: a symptom of a wider problem?
FASS	Sociology	KING Andrew	18-Sep-26	Understanding the life course inequalities of Older Malaysian Trans Women
FASS	Sociology	HODKINSON Paul	28-Mar-24	Forever Young (A study of the ways older people demonstrate their continued interests in rock music)
FASS	Economics	FOUREAUX KOPPENSTEINER Martin	18-Sep-26	The effect of poor health at birth on adolescent crime
FASS	Lit & Langs	MOONEY Stephen	18-Sep-26	Little Thought Way: How Can the Mindfulness Practice of Menopausal Women Martial Artists Transform Creative Practice?
FASS	Hosp & Tour	LIU Daisy	02-Jan-26	When high-tech meets low-touch: Exploring customers experiences with high-tech and low-touch hotels in the post-COVID-19 era
FASS	Lit & Langs	BRAUN Sabine	04-Jul-25	Accessible Audio Cues to aid the understanding of audiovisual narrative
FASS	Hosp & Tour	SCARLES Caroline	21-Nov-24	How can Augmented Reality on mobile devices enhance recreational activities for those with auditory impairments in museums and galleries?
FASS	Music & Med	MASON Russell	05-Apr-24	Manipulation of headphone audio in the presence of environmental noise
FASS	Lit & Langs	BRAUN Sabine	05-Jan-24	Exploring the visual interface in Remote Simultaneous Interpreting
FASS	Lit & Langs	BRAUN Sabine	29-Feb-24	The use of automatic speech recognition in remote simultaneous interpreting
FASS	Sociology	MEADOWS Robert	24-May-25	An intersectional social construction of stress: Women's health

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FEPS	Computer Science	TAMADDONI NEZHAD Alireza	03-Jul-26	Meta-interpretive learning from noisy images: applications in early diagnosis of neurological diseases
FEPS	Chemistry	CARTA Daniela	03-Apr-26	Multifunctional antibacterial phosphate-based glass fibres for wound healing
FEPS	Computer Science	LI Yunpeng	02-Jan-26	Clinician-in-the-loop AI-assisted Dental Disease Detection with Radiography
FEPS	Mathematics	SKELDON Anne	02-Jan-26	Mathematical modelling of sleep and circadian rhythms
FEPS	Chemistry	FELIPE-SOTELO Monica	19-Sep-25	Advancement of laser based atomic spectroscopy techniques for biological sample analysis; from elemental profiling of tissues down to the cell organelle level.
FEPS	Vision Speech and Signal Processing	CARNEIRO Gustavo	19-Sep-25	Standardisation of medical imaging for large scale studies
FEPS	Biomedical Engineering (MES)	LABEED Fatima	19-Sep-25	Dielectrophoresis: The Electrophysiology of Health and Disease (DEFEND)
FEPS	Vision Speech and Signal Processing	WELLS Kevin	04-Jul-25	Artificial Intelligence and its use in radiotherapy planning
FEPS	Vision Speech and Signal Processing	BOWDEN Richard	11-Apr-25	Computer Vision and Deep Learning for Automatic Sign Language Translation
FEPS	Vision Speech and Signal Processing	KOUCHAKI Samaneh	03-Jan-26	Machine analysis of in-home sensor data
FEPS	Biomedical Engineering (MES)	OLDFIELD Matthew	03-Apr-25	Development of Cryogenic Devices for Medical Applications
FEPS	Quantum Biology P	SHKUNOV Maxim	17-Oct-24	Creation of a fully flexible pixilated device sensitized using natural dyes for implantation to restore sight to those suffering retinal degenerative diseases.
FEPS	Computer Science	LI Yunpeng	20-Nov-24	Dental Disease Detection with Crowdsourced Radiograph Annotations
FEPS	Vision Speech and Signal Processing	KOUCHAKI Samaneh	05-Apr-24	Machine learning models to analyse in-home observation

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FEPS	Quantum Biology	HOWLIN Brendan	18-Mar-24	Multi-scale Investigation on UV-induced DNA Damage and Repair
FEPS	Biomedical Engineering (MES)	LABEED Fatima	29-Dec-23	Characterising the Electrophysiological Properties of Cells in Health and Disease
FEPS	Engineering Materials (MES)	SUI Tan	29-Mar-24	Nanostructure survey of natural and biomimetic dental tissues by the 3D SAXS tensor tomography (3D-SASTT)
FEPS	Biomedical Engineering (MES)	SUI Tan	29-Dec-23	Microstructure and Micromechanics of Bioinspired Composites for Next Generation Dental Crowns
FEPS	Vision Speech and Signal Processing	EVANS Philip	22-Dec-22	Validation of Texture Analysis in Medical Imaging
FEPS	Vision Speech and Signal Processing	WELLS Kevin	09-Dec-23	Using Deep Learning on PET-CT Images to Detect

Appendix 2

Ageing related research proposals submitted since 2019.

PI	Dept	Title	Funder
Abasolo	MES	Diagnosis of Alzheimer's Disease from Multimodal signals (DIADEM)	TBC
Abasolo	MES	Optimising wearable technology for fall prediction for the use of older adults – a user-centred approach	EPSRC
Abasolo	MES	A user-centred approach to using wearable technology for the prediction of FALLs in older	Dunhill
Abrams	health	ARC KSS Kent and Medway Dementia Care Coordinators: A realist evaluation of new role implementation in primary care and across care pathways	NIHR
Ahankari	Health	Promoting a healthy transition through the adolescent years in rural India by understanding how improving sanitation impacts on the development of individuals	MRC
Ahankari	Health	Investigation into the shared risk factors and interrelationships between anaemia, impaired growth and cognitive development in adolescent girls living in the Maharashtra state of India: A cross sectional study.	AMS
Ahankari	Health	Investigations into living environment, education progress, health and development of adolescents in urban areas of the Maharashtra state of India: A cross sectional study	Jacobs Fdn
Ahmadi	Biosci	Aligning Public and Planetary Health Through Precision Plant-Based Dietary Solutions across the Life-course	BBSRC
Ahmadi	Biosci	Characterising the aetiology of the causes and consequences of malnutrition across the life-course: Rationalising dietary needs for maternal and infant health	MRC
Allison	Nutri Sci	Physical activity promotion in midlife and older smokers	MRC
Ambasheri	Vet med	Biomarkers and Joint Pain in Military Osteoarthritis Study	Arthritis Res
Archer	Biosci	Circadian regulation of immune function in humans: pathways in ageing	UKRI
Archer	Bio	Strengthening immune responses in the elderly by enhancing circadian rhythm amplitude	BBSRC
Archer	Bio	A longitudinal study of sleep, diurnal rhythms, and health and wellbeing in older adults living at home	Oxford
Armes	Health	Co-designing a health and wellbeing self-report digital tool to improve equality of access and outcomes in people diagnosed with dementia and mild-to-moderate cognitive impairment	NIHR
Armes	Health	ARC KSS MyChoice: An evidence-based resource to help people with dementia	NIHR
Armes	Health	Evaluation of Remote Monitoring for Elderly Older People with Colorectal Cancer	NIHR
Barberis	Bio	Digital and Experimental Synthetic biology Guiding Neurodegeneration treatments.	BBSRC

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Barley	Health	ARC East Midlands Caregiver network support to support caring for people with multiple morbidity in primary care	NIHR
Bartlett	Biosci	Longitudinal evaluation of exercise intervention and accelerated aging in hematopoietic stem cell transplant (HCT)	NIH
Bartlett	Biosci	An investigation of the role of energy balance modification on anti-tumour and health responses in older adults with chronic lymphocytic leukaemia	Worldwide Cancer
Bartsch	Biosci	Non-invasive deep brain stimulation to augment sleep spindles in ageing	AMS
Bartsch	Bio	Frequent phenotyping using wearable technology to discover novel mechanisms in dementia: Sleep, cognitive function and blood biomarkers	AMS
Bauer	Comp Sci	Integrated Computational and Experimental Technologies for High Throughput Osteoarthritis Disease Models	EPSRC
Bauer	Comp Sci	Computational modelling of cryopreservation of biological tissue	EPSRC
Bauer	Comp Sci	Next-generation Cryopreservation for Organ Banking by using HIFU/VFM techniques for Rewarming	EC
Camelliti	Bio	Targeting cell senescence in the degeneration and regeneration of the heart	Wellcome
Campbell	Digital Word	Storytelling games for social connection and reminiscing by older people	UKRI
Carneiro	CVSSP	The Use of Electronic Health and Social Care Records for identifying the risk of dementia and hospital readmission	EPSRC
Chrysanthaki	Health	Exploring the feasibility and acceptability of use of the UK Dementia Driving Decision Aid (DDDA-UK) for supporting driving retirement conversations in primary and community care settings in England and Scotland	Alzheimer's
Chrysanthaki	Health	Implementation and evaluation of the Dementia Driving Decision Aid (DDDA) in the United Kingdom: A hybrid design study	Alzheimer's
Cohen-Kadosh	Psych	The Improve Project: improving ageing markers in the gut microbiome for healthy ageing	Yakult
Coleman	Health	Continuous remote monitoring of fluid intake for elderly care home residents	AMS
Coleman	Sound and Video	Enhancing quality of life with immersive sound environments	EC
Combes	Health	Conversations on living and dying: Facilitating advance care planning with older people living with advancing frailty	NIHR
Corrigan-Kavanagh	Tourism	Exploring the Role of Digital Technologies in Relationship-centred Care to Empower Older Adults with Impaired Mobility	Wellcome
Coutts	CVSSP	Wearable based Automated Tracking of Cardiac Health	BHF
Cox	Health	Exploring the content validity of the EDIS tool within care homes in England and Wales	Abbeyfield
Cox	Health	Residential care-managers' experiences, ethical responses and coping strategies during the COVID-19 pandemic. Comparing experiences in care settings for people with learning disabilities and older people to generate learning and enhance future planning	UKRI
Crean	Chem	Wearable sensors to diagnose wound infection	EPSRC
Cropley	Psych	Exploring the feasibility and Impact of Hybrid Working on NHS Employees Working in Mental Health and Dementia within the Community.	NIHR

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Das	Socio	COVID-19 and maternal perinatal mental health: Understanding impacts and assessing digital support pathways	NIHR
della Monica	Biosci	Mechanisms underlying variation in cognitive function in dementia	Alzheimer's
della Monica	Biosci	Elucidating mechanisms underlying variation in cognitive function in dementia: season, sleep, and the circadian clock as potential modulators of inflammation	UK DRI
Dibb	Psych	The role of incidental chat on wellbeing in older people	Dunhill
Dijk	Biosci	Non-Invasive Brain Stimulation Intervention to Ameliorate Pathnogenic Sleep-Arousal Impairment in Dementia	UKRDRI
Dijk	Biosci	Deep Brain Stimulation for improving vigilance in neurodegeneration and dementia	UK DRI
Dijk	Biosci	Engineering Integrated Dementia cAre (EIDA)	UKDRI
Dijk	Biosci	Sleep in dementia: from mechanism to biomarkers	Alzheimer's
Dijk	Biosci	Characterising the sleep and daytime complaints of patients with lifelong insomnia: A multi-modal neuroimaging perspective	EC
Dijk	Biosci	Translating blood-based biomarkers for Alzheimer's (or neurodegeneration) to clinical practise. Do time-of-day and sleep matter?	UK DRI
Dudem	ATI	2D/3D Woven Triboelectric Textiles for Dementia Patient Monitoring	RAEng
Dunn-Walters	Biosci	Immune resilience metrics for healthy ageing	Welcome Leap
Dunn-Walters	Biosci	Catalyzing collaborative interaction to enhance immunity during ageing	UKRI
Evans	Psych	SLEEP IN EARLY ALZHEIMERS DISEASE	Wellcome
Evans	Psych	can internet use in later life benefit mental health and cognitive function	ESRC
Fay	Language	Dementia and Creative Therapies Network: inclusive online services in the post-pandemic world	AHRC
Feng	Comp Sci	Life quality index from digital footprints	ESRC
Field	Biosci	Do No Harm: a risk prediction tool to support safe, effective prescribing in primary care for older people with diabetes and moderate or severe frailty	NIHR
Frei	Digi Economy	Inclusive Smart Retail Design for Older Customers	MRC
Frohlich	Digi World	Social Immersive Reality for locality-bound older people	EPSRC
Frohlich	Digital	One-to-One: Re-imagining social media systems for isolated older people	ESRC
Gage	Health	Ageing well	UKRI
Gage	Health	Enabling better care for people with young onset dementia - ENABLE-YD	NIHR
Gage	Health	Exploring the case for 'Cradle' technology for people with Dementia	NIHR
Gage	Health	Change in service provision for people with dementia due to C-19	Health Fdn

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Gage	Health	ARC WESSEX Ehealth Support for Young-Onset Dementia: Providing and evaluating an online intervention for regional and national implementation	NIHR
Gage	Health	Co-production and evaluation of an online information and support programme for carers of people with early onset dementia	NIHR
Gage	Health	Interventions to prevent stepwise progression of multi-morbidity associated with brucellosis among nomadic communities in Kajiado County Kenya	NIHR
Gage	Health	Impact of assistive technologies in care homes	NIHR
Gage	Health	Electronic care planning in care homes	NIHR
Gage	Health	Person centred care for residents and staff in care homes	TBC
Gage	Health	Increasing physical activity, health and wellbeing in care home residents - the Active Residents in Care Homes, ARCH, programme.	Charterhouse
Gage	Health	Organising general practice for care homes: A multi-method study	NIHR
Gage	Health	ARC WESSEX Clinical implementation of a risk prediction tool to reduce medication related harm in older people	NIHR
Gage	Health	End of life care for children who died unexpectedly	NIHR
Gage	Health	Clinical validation of PPG (photoplethysmography) technology for REMote MONitoring of Heart FAilure Patients with Wearable Device	EC
Gallagher	Health	Boosting responses to the Corona Crisis of Care. A cross-country study on nurses' ethical challenges in residential care homes for older persons	Volkswagen
Gallagher	Health	Developing and evaluating a nurse-led ethical care intervention for care homes: A feasibility study of an innovative reflective approach using film	Dunhill
Gallagher	Health	Transgenerational Perspectives on Roles, Responsibilities and Care of Older Adults	Wellcome
Gardner	Psych	The Age UK Walking Football Programme: Qualitative Evaluation	Age UK
Gatersleben	Psych	Bringing the Outdoors Indoors to support a sense of connectedness among older people	Dunhill
Gatersleben	Psych	Counting birds and bees: promoting wellbeing of older people through engagement with nature-based	Dunhill
Gilbert	Socio	InSPIRE: Innovating UK clean air policies to prevent cognitive disorders across the life course, particularly for vulnerable urban populations	MRC
Glover	Biosci	Wearable brain imaging for point-of-care stroke diagnosis	Innovate UK
Green	Health	Identifying chatbot readiness for older adults to identify appropriate voluntary and community services	ESRC
Hazell	Psych	Developing a measure of depression for older adults	NIHR
Heiss	Biosci	Development of high-resolution optical imaging techniques for study of cutaneous microvascular ageing	UKRI
Heiss	Biosci	Effect of novel dietary supplement mix on vascular function to slow vascular ageing	Novos

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Heiss	Biosci	CAUSALITY: OptiCAI tomographic stUdy inveStigAting LongITudinal vascular ageing and effect of dietarY flavanols and NOX on endothelial NO and redox homeostasis	BBSRC
Heiss	Biosci	Study to evaluate the performance of optical coherence tomography angiography for non-invasive longitudinal imaging of vascular adaptation: vascular ageing and regeneration	NCRRR
Heiss	Biosci	Evaluation of wearable simple and cheap photoplethymography base device to detect peripheral artery disease and monitor its severity in people with diabetes	Rosetrees
Heiss	Biosci	Continuous monitoring of vascular age by pulse wave velocity using wearable ECG and PPG sensors	UKRI
Hine	Socio	Responsible Machine Learning for Ageing Applications	AHRC
Hine	Socio	Developing consensus guidelines for best practice in remote/virtual ethnographic methods in dementia studies	MRC
Iles	Psych	Efficacy and mechanisms of the video feedback intervention for positive parenting for mothers experiencing moderate to severe perinatal mental illness	NIHR
Jaramillo	Psych	Enhancing REM sleep oscillations to improve cognition in aging and dementia	Wellcome
Jin	Health	Harmonized Diagnostic Assessment of Dementia (DAD) for Longitudinal Aging Surveys in India (LASI)	NIH
Jin	Health	Testing early markers of cognitive decline and dementia derived from survey response behaviours	NIH
Jin	Health	Develop & Implement Technological Infrastructure for Self-Monitoring and Intelligent Delivery of JITAI for Sleep, Emotion and Cognition in Older Adult	UKRI
Jones	Psych	Unblurring the lines between depression and ageing: coproduction and validation of a new measurement of depression for older adults	NIHR
Karl	Tourism	FuTOURes: Explaining, modelling and forecasting elderly people's travel behaviour	ESRC
Kim	Biosci	Molecule and Quantum Sensing for the Physics of Life	EPSRC
King	Socio	re-imagining inclusive ageing for older people belonging to ethnic minority and sexual and gender minority groups	ESRC
King	Socio	Comparing Intersectional Life Course Inequalities amongst LGBTQ People in Five European Counties	Norface
King	Socio	Older LGBTQ+ People and Residential Care	NIHR
Kouchaki	CVSSP	The Use of Electronic Health and Social Care Records for identifying the risk of dementia and hospital readmission	
Kouchaki	CVSSP	In-home health monitoring technologies to monitor cognition in people with dementia	UKDRI
Kouchaki	CVSSP	Speech-based Identification of Cognitive Decline; A New Platform for Predicting MCI to Dementia Progression	NIHR
Kouchaki	CVSSP	A data-driven novelty detection system to identify digital biomarkers linked to dementia-related adverse health conditions	Alzheimer's
Kouchaki	CVSSP	Machine Learning for Predicting the Risk of Adverse Health Conditions in People Living with Dementia	EPSRC
Kouchaki	CVSSP	AI-Guided Trajectory Mapping for Improved Management of Neurodegenerative Diseases	Royal Society

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Kousi	CPE	Addressing barriers in the education of mature students in STEM	RS Chem
Krystallidou	Translation Studies	Dementia got my tongue!" Creating linguistically and culturally inclusive living and caring conditions for people who lost their second language as a result of dementia	Alzheimer's
Lekakou	MES	Wearables with biomarker sensors	MOD
Lemanska	Health	Diabetes and cardiovascular comorbidity affects cancer outcomes and recovery. A cohort study of patient with prostate cancer	NIHR
Li	Tourism	The future(s) of travel and tourism: Explaining, modelling and forecasting elderly people's travel behaviour within and beyond the COVID-19 pandemic	EC
Ling	Hospitality	AI-based Mobile Apps for Lifestyle and Daily-Life Support in Diabetes Management	British Academy
Michael	Biosci	The role of electronic frailty index in improving outcomes for frail cancer sufferers undergoing anti- cancer treatment.	NIHR
Mold	Health	A co-design study to improve Communication and care using a digital App for yOung adults with LeaRNING Disabilities (ACORN) at time of transition to adult services. A preliminary effectiveness study	NIHR
Mulholland	Chem	Towards a Small Molecule Therapy to treat Age Related Macular Degeneration	Royal Society
Nalesso	Vet	Collagen type V as a biomarker of aging in the articular cartilage	UKRI
Nalesso	Vet	Sex-stratified peptide location fingerprinting of ageing articular extracellular matrix	UKRI
Nalesso	Vet med	Inhibition of a novel microRNA to treat osteoarthritis	MRC
Ng-Knight	Psych	Adolescent development in the UK and Japan	ESRC
Nicholson	Health	A systems approach to older adults with multiple long term conditions' home-based care: mapping, scoping, feasibility, and modelling of factors affecting outcomes for unpaid caregiving	NIHR-EPSC
Nicholson	Health	Joining Up Community Care for Older People with Advancing Frailty within Integrated Care Systems: Prototype Testing and Roll-Out for a Practice-Based Toolkit	Marie Curie
Nicholson	Health	Understanding and meeting the end of life needs of hospitalised frail older people: a mixed methods research programme	NIHR
Nicholson	Health	Equipping community services to meet the palliative care needs of older people with frailty approaching the end of life; a mixed methods study	NIHR
Nicolson	Health	Enhancing the quality of living and dying with advancing frailty through integrated care partnerships: Building research capacity and capability	NIHR
Nilforooshan	Psych	Developing a personalised care pathway for people living with dementia using historical healthcare records, clinical notes and in-home monitoring technologies	National Endowment for science
O'Brien	Psych	It has activated my mind, it has given me a purpose, I feel more aware and more alive!": A nature intervention to support health and wellbeing in older people	Dunhill

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O'Connell	Tourism-transport	Inclusive Ageing and Air Travel	ESRC
Parker	Biosci	The role of alternative splicing of TrkB in Alzheimer's disease	Alzheimer's
Parker	Biosci	Navigating older adulthood: Exploring age-related cognitive decline through detection of differences in neural oscillations	UKRI
Penn	Socio	Social connectedness and physical activity in ageing. A complex systems approach to identifying, co-designing and evaluating solutions	ESRC
Prokopenko	Biosci	Investigating the link between Major Depressive disorder and Alzheimer's disease	Wellcome
Prokopenko	Biosci	Dissecting the effects of the lifelong obesity patterns on cardiometabolic disorders	EC
Prokopenko	Biosci	Implementation and Validation of a multi-omics data system containing microbiome, genetics, nutrition, and lifestyle information for type 2 diabetes and related morbidity conditions management improvement within the national health system provider	Innovate
Prokopenko	Biosci	Using big multi-omics data for patient stratification and prevention of diabetes - Colorectal cancer comorbidity	MRC
Raats	Psych	Food and drink-related needs of older people who use community-based social care	NIHR
Raats	Psych	Barriers and enablers to improve food and drink outcomes for older people receiving home care	NIHR
Ramaoli	CPE	Numerical simulation of safe human swallowing with auxiliary foods for the elderly	BBSRC
Ravindran	Biosci	Assessing the Feasibility of Using High Sampling Rate Inertial Measurement Units for Identifying Ballistographic Signatures of Sleep and Vital Signs Monitoring in Older Adults	UK DRI
Ravindran	Biosci	Assessing novel technology to longitudinally monitor obstructive sleep apnea (OSA) and its effect on comorbidities and biomarkers of neurodegeneration	UK DRI
Rayman	Biosci	Multicentre study of Iodine supplementation introduced After Conception: Long-term Effects on child development	Wellcome
Ream	health	Remote Assessment of Symptoms and Signs to improve End-of-life care in home-based cancer patients	EC
Revell	Biosci	Monitoring sleep in older adults	MiiCare
Riddell	Biosci	Beta-adrenergic regulation of T cell ageing	Dunhill
Riddell	Biosci	Targeting gut microbial metabolites to counteract the detrimental metabolic impacts of physical inactivity in older adults	BBSRC
Riddell	Biosci	Impact of weight loss on immune modulation with respect of Covid-19 in obese older adults	UKRI
Riddell	Biosci	Investigating the function of adrenergic signalling in senescence T cell regulation	BBSRC
Robertson	Nutritional	The lifestyle club; a new model of healthcare	Public Health
Ruchaya	Vet	The effect of ageing cardiomyocyte derived exosomes on cardiac progenitor cell activity	Wellcome
Santamaria	Biosci	Identifying proteolytic cleavage of extracellular matrix in retinal degeneration	Moorfields

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Scarles	Tourism	Don't Leave Me Behind: Generating Social Connectedness and Inclusion for Older Adults through Real-time, Interactive Live- and Media-streaming Experiences of Natural and Cultural Heritage	ESRC
Seibt	Biosci	Sleep fragmentation during ageing alter mitochondrial function at synapses	Norn Group
Silva Couto Alves	Biosci	A precision health approach to identify biological processes in adult tissues mediating the genetic associations of early life factors with adult chronic disease	BBSRC
Skeldon	Maths	Sleep patterns as a risk factor and a marker of early mental health problems in adolescents	MRC
Skene	Biosci	A cluster randomised trial of clinically-assisted hydration in patients in the last days of life (CHELsea II study)	NIHR
Smith	Psych	Social prescribing for people ageing with a lifelong physical disability	Dunhill
Smith	Psych	Promoting nature engagement in diverse ageing populations	UKRI
Smith	Psych	Socially inclusive ageing: a lifecourse study of new ageing populations	ESRC
Smith	Psych	Ageing well with a lifelong physical disability	ESRC
Smith	Psych	Ageing well with an intellectual or physical disability: Development of UK-Irish consortium	ESRC
Smith	Psych	Vulnerability, risk and multimorbidity	MRC
Smith	Psych	Wellbeing in musculoskeletal conditions across the lifecourse - the role of social health	Nuffield
Smith	Psych	Life transitions and social connections	Award
Sporea	ATI	Integrated flexible sensor conditioning circuits for high performance wearables	Royal Soc
Stenner	Health	Delegation of insulin administration to non-registered healthcare workers in community nursing teams: an evaluation of care and practice for older people with diabetes.	Dunhill
Sun	ICS	Understanding and Addressing Health and Social Challenges for Ageing in the UK and China	UKRI
Sun	ICS	5G-cloudified Robotic Assistants for Dementia Care	EC
Taylor	Health	reducing variation in early arthritic care	Arthritis Res
Thomopoulos	Tourism	Digital, fast & cost-efficient AI-based assessment of fitness to drive for elderly and neurologically impaired patients using a driving simulator	EC
Thompson	Psych	Understanding Psychological Barriers of Physical Abilities and Physical Activity in Individuals Affected by Stroke	Stroke association
Timotijevic	Psych	Increasing the Nutrient Density of fresh and Processed Foods for an Ageing Population	BBSRC
Timotijevic	Psych	Increasing the Nutrient Density of fresh and Processed Fruit and Vegetables for older adults in the UK	BBSRC
Tischler	Psych	Beyond Culture Box: using creative practice to support people living with dementia, staff, and family supporters	AHRC

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Tischler	Psych	The wellbeing of older women in the workplace: a comparative study in Sweden, Germany, England and The Czech Republic	Swedish Research
Townsend	Biosci	Immuno-metabolism and multi-omics analysis of aging and senescence	Micomass
Treharne	Comp	Phishing – Cyber security outreach for older adults	GCHQ
Tussyadiah	Hospitality	Ageing and Travel Assistance: AI and the challenge of diverse cognitive abilities (ATA.AI)	ESRC
Von Schantz	Biosci	The role of sleep for sustaining health and well-being at different stages in the epidemiological transition	MRC
Wang	Hospitality	A connected life through hospitality	Uni of Stirling
Wesemeyer	Comp Sci	Cyber security outreach for older adults	GCHQ
Whelligan	Chem	Synthesis of Homoisoflavonoids for the Treatment of Macular Degeneration	Royal Society
Winnebeck	Biosci	From Prevention to Treatment: How Biological Rhythms Can Maintain Perinatal Mental Health	Wellcome
Xu	Hospitality	Serving Others, Aging Healthier---The Case of Volunteering in Charity Organisations for Seniors	AHRC
Xu	MES	Development of virtual coach system for elderly people with enhanced quality of life	EC
Zhang	Biosci	Developing an in vitro 3D human immune organoids system to study immune-ageing across the life-course	NCRRR

Appendix 3

Impact projects funded.

IAA Fund	PI	School	Co-I	Project Title
MRC IAA	Jeevaratnam	Veterinary Medicine	Aston	'From data to diagnosis': Identification of patients with paroxysmal atrial fibrillation (PAF) using computational analysis of sinus rhythm electrocardiograms
MRC IAA	Carta	Chemistry & Chemical Engineering	Elliott, Marino-Gutierrez	Phosphate-based glasses fibres for wound healing
MRC IAA	Liu	Chemistry & Chemical Engineering	Chen, La Ragione, Totti	Antibiotic-free formulations comprising of bioactives and antimicrobials for optimised human and animal wound care
MRC IAA	Crean	Chemistry & Chemical Engineering	NA	Personal lithium drug sensor validation
MRC IAA	Beste	Biosciences	NA	Development of lead of compounds against Mycobacterium tuberculosis
MRC IAA	Asim	Biosciences	NA	"Engaging a novel cancer driver for the treatment of end-stage prostate cancer"
MRC IAA	Sumner	Biosciences	Maluquer de Motes	Repurposing CDK inhibitors for novel cancer immunotherapy
ESRC IAA	Dippold	Lit and Languages	Clark	SPRYT - Investigating the effectiveness and acceptance of Automated Intelligence (AI) supported messages in a patient booking system
ESRC IAA	Smith	Psychology	King	Creating kinder communities – Supporting people making the move to a retirement community
ESRC IAA	Buchanan	Finance	Di Domenico	Traffic light labelling for the UK pensions industry
ESRC IAA	Hall	Sociology	King, Kingstone	Intergenerational Exchanges in LGBTQ+ communities
ESRC IAA	Frohlich	Music and Media	NA	Neighbourhood natter: Facilitating local conversations to counter loneliness and social isolation
EPSRC IAA	Frohlich	Music and Media	NA	Sentimental audio memories for dementia care
EPSRC IAA	Stoljan	Electronic engineering	NA	Textile compatible foetal movement sensors
EPSRC IAA	Crean	Chemistry & Chemical Engineering	NA	Wearable sensor

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EPSRC IAA	Li	Computer Sci	Jin	AI-assisted Automatic Dental Disease Detection with Radiography
EPSRC IAA	Sporea	Electronic engineering	NA	CTS High-sensitivity disposable body temperature sensors for wearable monitoring and therapy
EPSRC IAA	Liu	Chemistry & Chemical Engineering	Chen, La Ragione, Totti	A novel nanoemulsion for optimised wound recovery- NOW: a topical antibiotic-free approach
EPSRC IAA	Li	Computer Sci	Jin, Evans, Kouchaki, Feng	Platform development for AI-powered clinician-in-the-loop dental disease detection
EPSRC IAA	Aston	Maths	Heiss	Blood Glucose Estimation from Photoplethysmography Signals to Enable Continuous Blood Glucose Monitoring for Diabetics