



25 Universities & Research Labs

1.	Ageing Research at King's	11.	Clinical Ageing Research Unit (CARU)
2.	Aston University Aston Research Centre for Healthy	12.	Glasgow Ageing Research Network
	Ageing (ARCHA)	13.	Institute of Ageing and Chronic Disease Research
3.	Brunei University London Brunei Institute for Ageing	14.	Institute of Healthy Ageing (IHA)
	Studies (BIAS)	15.	Manchester Institute for Collaborative Research on
4.	Positive Ageing Research Institute		Ageing (MICRA)
5.	Lancaster University. Faculty of Health & Medicine	16.	Medawar Centre for Healthy Ageing Research
	Centre for Ageing Research (C4AR)	17.	Oxford Institute of Population Ageing
6.	University of Edinburgh Centre for Cognitive Ageing	18.	Salford Institute for Dementia
	and Cognitive Epidemiology (CCACE)	19.	UK Longevity Explorer (UbbLE)
7.	University of Liverpool Centre for Integrated Research	20.	International Longevity Centre – UK (ILC - UK)
	into Musculoskeletal Ageing (CIMA)	21.	NDORMS (Nuffield Department of Orthopaedics,
8.	Newcastle University Centre for Integrated Systems		Rheumatology and Musculoskeletal Sciences)
	Biology of Ageing and Nutrition (CISBAN)	22.	The Alan Turing Institute
9.	Centre for Research on Ageing (CRA)	23.	Francis Crick Institute
10.	University Surrey Centre for Research on Ageing and	24.	Integrative Genomics of Ageing Group
	Gender (CRAG)	25.	Centre for Social Gerontology - Keele University

Ageing Research at King's





Ageing Research at King's (ARK) is a cross-faculty multidisciplinary consortium of investigators which brings together scholarship and research in ageing in several complementary areas.

ARK represents King's world class excellence for research on the biology of ageing, from the basic mechanisms in biogerontology to clinical translation and the social impact of ageing. The primary purpose of ARK is to enhance multidisciplinary research collaborations within King's to better understand the mechanisms of ageing and improving health-span.

As ageing consists of complex systems at the level of biology, psychology and society, in order to understand the processes of ageing and the nature of old age itself, it is important to bring together learning and research from a number of key disciplines. ARK is uniquely positioned to address the challenges of an ageing world, and to provide answers at multiple levels, from cellular mechanisms to social sciences.

We aim to launch a new programme of events to foster research networking within King's as well as develop interactions with Research Councils, research charities, other academic institutions and industrial partners both in UK and globally, using ageing as a focus for building academic excellence.

Mission: Undisclosed

Web site:	kcl.ac.uk
Based in:	London

Aston University Aston Research Centre for Healthy Ageing (ARCHA)





They take a multidisciplinary approach to successful ageing by asking how technological, therapeutic and psychosocial strategies can be employed to understand and arrest age-related decline.

Their mission is to facilitate research that helps understand, predict and prevent age-related degeneration, they have a specific focus on the eye, the mind, the metabolism and medicines and devices in the context of the psychological, social and policy factors affecting ageing lives.

- Ageing eye. Researchers work within an integrated investigative framework to advance significantly our understanding of the use, preservation and restoration of ocular function in the ageing eye.
- Ageing mind. The aim of this cluster is to understand changes in cognitive function as we age and to use this information to design
 appropriate interventions that facilitate the maintenance of independent and active engagement. Understanding neural health and
 cognitive functioning facilitates the development of biological, technological or psychological tools to maintain cognitive
 performance in older people.
- Ageing metabolism. Using tools from bioscience, psychology, sociology and engineering they seek a better understanding of how
 changes in metabolism are associated with the ageing process and how we can intervene to promote a healthy later life.
- Medicine and devices in Ageing. This cluster aims to focus on the use of medicines and devices in older people. Medicines and
 devices have considerable potential to significantly improve outcomes and quality of life in older people. However, conversely, older
 people are particularly susceptible to the adverse effects of medicine and devices.
- Ageing lives. The ageing process impacts our everyday lives in diverse ways. In this cluster, they examine how different individuals and communities are enabled or deterred from healthy ageing. They consider the delivery and impact of health and care policies, as well as attitudes and beliefs towards issues such as medicines management and keeping active.

Web site:	aston.ac.uk
Based in:	Birmingham

Brunei University London Brunei Institute for Ageing Studies (BIAS)





BIAS was developed as a Collaborative Research Network (CRN) in 2007 as part of a university initiative to encourage cross-disciplinary research activity. BIAS is one of four University CRNs which seek to address a great number of complex challenges of the future.

The networks bring together teams of experts from across the university in order to:

- · Foster interdisciplinary research of the highest quality
- Spearhead new responses to major research questions
- Increase the social, cultural and economic impact of research

Actively pursue partnerships and collaborations with universities, businesses and public sector organisations who share their goals.

The Collaborative Research Network in Ageing was formed in response to challenges raised by a growing population, including concern for how current health and social systems will cope with an increase in the number of people over the age of 60.

BIAS aims to lead in the development and definition of strategic directions for research in the field of gerontology. It seeks to address the information needs of policy makers and the private sector, and to facilitate the transfer of new knowledge for the benefit of the whole population.

Mission: Undisclosed

Web site:	<u>brunel.ac.uk</u>
Based in:	London

Positive Ageing Research Institute





Professor Patricia Schofield, Deputy Dean of Research and Income Generation (Faculty of Health, Social Care & Education), leads PARI as our Director, supported by Deputy Directors Dr Diane Keeble-Ramsay and Dr Leslie Gelling. The institute brings together a multi-disciplinary team from: Health, Social Care & Education; Arts & Humanities; Science & Technology; Business; and Medical Science, representing diverse disciplines. Our common interests in ageing unite us and together with practitioners, local authorities, industry, and voluntary organisations we are developing existing projects and applying for further funding to support our research.

Mission: PARI aims to support positive ageing and address ageing-related issues, including improving quality of life and fostering independent living. With our innovative technology-enabled health solutions we aim to support older people to manage their conditions that may result from the physical and biological processes of ageing. Through these innovations we aim to bring greater sustainability to technology-enabled health services, in order to create business opportunities and economic growth.

Web site:	anglia.ac.uk
Based in:	UK

Lancaster University. Faculty of Health & Medicine Centre for Ageing Research (C4AR)





The Center on Demography and Economics of Aging (CoA), directed by Linda Waite, is one of eight research centers housed within the National Opinion Research Center (NORC) Academic Research Centers at the University of the Chicago. The CoA was established as an Exploratory Center in 1994 with a P-20 grant from the National Institute on Aging (NIA). The CoA aims to: (1) foster an exciting, dynamic intellectual environment for research in the demography and economics of aging; (2) provide research support services; (3) encourage the development of new research projects and research foci in the demography and economics of aging; and (4) support and facilitate the inclusion and analysis of biomeasures of health in new and ongoing projects at the University of Chicago and elsewhere. It provides support for research projects in four key areas: (1) social relationships, living arrangements, and family; (2) the social context of aging; (3) health care research; and (4) biobehavioral pathways. The Center operates using three cores, which facilitate and support an active program of research and training: (A) the Administration and Research Support Core, directed by Linda Waite, which provides general administrative support to Center associates; (B) the Program Development Core, directed by Kathleen Cagney, consisting of a program of small-scale and pilot projects and support for new faculty development in aging; and (C) the External Innovative Network Core, directed by Stacy Tessler Lindau, with a focus on biomarkers in population-based aging research. The Center supports a highly diverse faculty of 47 research affiliates in sociology, economics/business, the Pritzker School of Medicine, the School of Social Service Administration, and the Harris School of Public Policy. The research portfolios of faculty members draw upon expertise in medicine, epidemiology, and the biological and social sciences.

- Neurodegenerative diseases (Alzheimer's Disease, Parkinson's Disease)
- Molecular changes associated with the ageing process
- Design and development of new technologies to support and enhance the health and wellbeing of older people and their caregivers

Web site:	lancaster.ac.uk
Based in:	Lancashire

University of Edinburgh Centre for Cognitive Ageing and Cognitive Epidemiology (CCACE)





The Centre for Cognitive Ageing and Cognitive Epidemiology at the University of Edinburgh (CCACE) focuses on the reciprocal influences of cognition and health across the human life course. The Centre is funded by the Medical Research Council (MRC) and the Biotechnology and biological Sciences Research Council (BBSRC).

Scientific Objectives:

- 1. Maintain, develop and exploit the unique long-term human cohort studies assembled in Scotland as new national resources to explore life course influences on cognitive ageing and pathways whereby cognitive ability in early life affects later health-cognitive epidemiology.
- 2. Advance knowledge by research into biological, neurological, genetic, social, economic, and psychological aspects of cognitive ageing in humans and life course mammalian model systems.
- 3. Develop and evaluate psychological, genetic, other biological, and brain imaging methods to assess, monitor, and prevent or ameliorate decline in mental functions with a view to providing a rational basis for translating this into potential interventions.
- 4. Build upon MSc courses unique to our Centre, exploiting the university's resources in innovative methods such as e-learning, to train an essential and novel kind of researcher capable of accessing the best technologies to maximise opportunities for working in multidisciplinary teams in cognitive aging and cognitive epidemiology across clinical and basic science.

- Cognitive epidemiology
- Cognitive ageing
- Mechanisms of cognitive ageing
- Human and animal brain imaging
- Genetics and statistics of brain ageing

Web site:	ccace.ed.ac.uk
Based in:	Edinburgh

University of Liverpool Centre for Integrated Research into Musculoskeletal Ageing (CIMA)





The MRC-Arthritis Research UK Centre for Integrated research into Musculoskeletal Ageing (CIMA), is a collaboration between researchers and clinicians at the Universities of Liverpool, Sheffield and Newcastle. Established in 2012, CIMA aims to understand why our bone, joints and muscles function less well as we age, and why older people develop clinical diseases of these musculoskeletal tissues, such as arthritis or osteoporosis.

The Centre brings together complementary and specialist expertise in skeletal muscle, bone, cartilage and tendon biology, ageing research, nutrition and exercise interventions, and clinical excellence in musculoskeletal disorders. Through an innovative, comprehensive and sustainable research programme, and through training the next generation of researchers, CIMA is developing an integrative approach to:

- Understand the processes and effects of ageing in tissues of the musculoskeletal system
- Understand how ageing contributes to diseases of the musculoskeletal system
- Understand how these processes may be ameliorated or prevented to help preserve the mobility and independence of older people.

- Skeletal muscle, bone, cartilage and tendon biology
- Ageing research
- Nutrition and exercise interventions
- Clinical excellence in musculoskeletal disorders

Web site:	<u>cimauk.org</u>
Based in:	Liverpool

Newcastle University Centre for Integrated Systems Biology of Ageing and Nutrition (CISBAN)





CISBAN is a multidisciplinary research centre within Newcastle University. It is particularly closely associated with the Institute for Ageing and Health, with which it shares buildings on the Campus for Ageing and Vitality. Its staff members come mainly from the Faculty of Medical Sciences, the School of Computing Science and the School of Mathematics and Statistics.

Their research aims to develop an understanding of the biology of ageing and ageing-related diseases using a systems approach. The way nutrients are used by the body and what nutrients are consumed have been implicated as major influences on longevity.

However, there are multiple causes and mechanisms of ageing. Each mechanism may make only a modest contribution to the whole. By taking a systems-wide approach, CISBAN seeks to capture the whole picture of what drives the ageing process, not simply a limited view of the contributing factors.

In addition to traditional and high throughput laboratory techniques, CISBAN uses a number of modelling and software systems. Very large amounts of data are generated through a range of experimental studies and analysed in silico. This process provides a highly dynamic cycle of interaction between theoretical and experimental activity.

- Cell senescence
- Dietary restriction
- Modelling
- Software development (e.g.: Saint, SyMBA)
- Other projects (e.g.: Oxidative stress and telomerase in stem cells)

Web site:	ncl.ac.uk
Based in:	Newcastle upon Tyne

Centre for Research on Ageing (CRA)





Population ageing brings new challenges for individuals and policymakers alike. Understanding ageing over the life course is at the heart of such challenges.

The Centre for Research on Ageing examines key issues in ageing across the life course. Their members of staff are engaged in high-quality postgraduate teaching in gerontology and cutting-edge research in the field. They offer postgraduate programmes, face-to-face or by distance learning, which equip students with substantive knowledge of policy-relevant issues in gerontology and with quantitative and qualitative research methods training.

Through high quality research, the Centre contributes to a better understanding of the experience of ageing amongst different groups and societies, which will in turn place us in a better strategic position to improve the quality of life of older people.

In addition to research, the Centre contributes to capacity building of future academics and professionals by teaching different postgraduate programmes in Gerontology.

- Ageing in developing and transitional societies
- Diversity in later life and the ageing of ethnic minority communities
- Economic and social resources in old age
- Inequalities in later life, particularly with respect to health and access to health and social care services
- Quality of life
- · Retirement prospects of future generations of elders
- Social networks and informal support
- Developing a range of tools for policy analysis

Web site:	southampton.ac.uk
Based in:	Southampton

University Surrey Centre for Research on Ageing and Gender (CRAG)





The Centre for Research on Ageing and Gender (CRAG) brings together social scientific expertise to conduct policy relevant research on gender and ageing and their intersection with other forms of social division, identity and (in)equality. CRAG focuses specifically on the intersections between gender and ageing, in addition to other aspects of social division, identity and inequality, such sexuality, social class and ethnicity.

The principal aim is to advance understanding of how gender influences the experience of ageing, and how ageing influences gender roles and relationships.

- Undertaking research on gender and ageing. CRAG members have expertise in a range of research methodologies, including qualitative research, evaluation research, and secondary analysis of large national data sets
- Collaborating on interdisciplinary projects with psychologists, nutritionists, economists, biomedical scientists, and health specialists
- Taking an holistic approach, which emphasises the interconnections between health, income and material resources, and social roles
 and relationships, and how these vary according to gender difference and diversity
- Adopting a life course approach, which links socio-economic position, roles and relationships in later life to the earlier biographies
 and intersectionality, which addresses multiple axes of inequality, power and privilege
- Encouraging scientific exchange through honorary visiting research positions for international scholars. In Spring 2015 CRAG was delighted to host Professor Mark Hughes, Southern Cross University, Australia
- Providing opportunities for doctoral research students in a stimulating research environment
- Collaborating with user groups, activists and advocates concerned with the well-being of all older people
- Organising and participating in conferences, seminars and workshops which disseminate research findings to the academic community, professional groups and wider publics
- Developing a media profile for exchange and dissemination of information and research findings.

Web site:	surrey.ac.uk
Based in:	Guildford

Clinical Ageing Research Unit (CARU)





The Clinical Ageing Research Unit (CARU) is a £5.5 million clinical research facility funded by the Wellcome Trust and Wolfson Foundation. They opened in September 2008 and are located on the University's Campus for Ageing and Vitality. Their primary aim is to facilitate the development of early assessment and intervention strategies targeted at age-associated degenerative conditions.

They provide a high quality, patient-friendly environment for phase II-IV clinical studies in the older patient. They employ experienced research nurses with specific training in commonly used, relevant assessment instruments.

Clinical trials are supported by a high quality research infrastructure, embedded within the joint Acute Trust-University research system, with a study coordinator and data manager located on site.

The Newcastle upon Tyne Hospitals NHS Foundation Trust and Newcastle University were jointly awarded the NIHR Newcastle Biomedical Research Centre (BRC) status by the National Institute for Health Research. The NIHR Newcastle Biomedical Research Centre aims to improve the lives of the growing number of older people through translational research into ageing syndromes and long-term conditions. Research themes comprise dementia, liver disease, musculoskeletal Disease, neuromuscular disease, skin and oral disease.

- Dementia and neurodegenerative diseases
- Stroke and cardiovascular ageing
- Musculoskeletal disease
- Visual failure
- Type 2 Diabetes
- Liver disease
- Mitochondrial disease

Web site:	ncl.ac.uk
Based in:	Newcastle upon Tyne

Glasgow Ageing Research Network





Ageing research at the University of Glasgow is varied and cutting edge; scientists from a wide range of disciplines use state-of-the-art approaches to understand the causes and consequences of ageing.

The Glasgow Ageing Research Network brings these diverse approaches together with a group of researchers committed to pursuing inter-disciplinary approaches to ageing research.

Combining our strengths in clinical research, ecology and evolutionary biology, molecular and cellular biology, chemistry, engineering, psychology and social science, the Glasgow Ageing Research Network explores all the facets of ageing, from the mechanisms underlying it to how ageing impacts on the lives of people and animals.

Mission: The Glasgow Ageing Research Network has members from across the Colleges of Medical Veterinary and Life Sciences, Social Sciences, and Science and Engineering of the University of Glasgow. Our activities fall roughly into three themes, Diseases of Ageing, Healthy Ageing Across the Life Course, and Mechanisms, Biomarkers and Comparative Medicine of Ageing. To find out who is working in each of these areas, please explore our member information below.

Web site:	gla.ac.uk
Based in:	Glasgow

Institute of Ageing and Chronic Disease Research





The Institute of Ageing and Chronic Disease is using world-class research to improve the quality of life of millions of people on an international scale. They want to understand the mechanisms of ageing - from the cellular to the musculoskeletal - to find the ways to delay its onset, and to mitigate its effects. Understanding how and why aging happens leads to an understanding of how to intervene.

They are finding new insights into musculoskeletal biology and eye and vision sciences, as well as examining functions like movement, metabolism and sight.

They do that in the laboratory and at the bedside, looking at the impact of lifestyle and patient behaviour, as well bioscience and epidemiology, finding the risk factors which can cause disease, and then finding better prevention measures and methods of care.

They research translates into real benefits for people and animals of all ages - from unique approaches to prevent muscle wasting in intensive care patients, a retina scan to detect cerebral malaria in African children, and exercise and nutritional regimes that can prevent obesity and morbidity. They are also making strides in veterinary medicine, and investigating rare diseases like alkaptonuria, which causes severe early onset osteoarthritis.

And they don't work alone. They have newly-created facilities in the University of Liverpool's William Henry Duncan Building, work closely with other exceptional university teams such as the School of Veterinary Science and its Leahurst animal hospital, and their global partners include the Wellcome Trust, UK Research Councils, NIH (USA), Unilever and GSK.

- Musculoskeletal biology
- Eye and vision sciences
- Obesity and endocrinology

Web site:	<u>liverpool.ac.uk</u>
Based in:	Liverpool

Institute of Healthy Ageing (IHA)





The Institute of Healthy Ageing is an interdisciplinary centre of excellence for research on the biology of ageing and ageing-related diseases. The biological process of ageing contributes to increased risk of a wide range of diseases, from neurodegenerative diseases (e.g. Alzheimer's and Parkinson's disease) and cancer to cardiovascular disease (causing heart attack and stroke) and age-related macular degeneration (causing blindness in the elderly). Their primary purpose is to bring together researchers working on the basic biology of ageing (biogerontology) with those working to understand the causes of ageing-related disease. By merging the two, they aim to develop a new translational biogerontology using the ageing process as a point of intervention to protect against the diseases of old age. Their goal is to improve the health and quality of life for older people.

The work of the Institute of Healthy Ageing is pursuing these ends by:

- Conducting world class research on the biology of ageing and ageing-related disease
- Increasing capacity in research on the biology of ageing by training new researchers and nurturing the work of younger principal investigators
- Teaching about the biology of ageing at undergraduate and postgraduate levels

The problem of ageing is not just an issue of biology, but also of social science, economics and the built environment. A secondary aim of the Institute is to nurture broader collaborations across UCL between researchers working on different aspects of ageing. They aim, through their combined activities, to transform healthcare technology and the social conditions of the elderly to create a future society in which the lives of older people are healthy, meaningful and happy.

- · Genes and mechanisms that determine the rate of ageing
- Insulin/IGF-like signalling pathway, dietary restriction and resistance to stress
- Sex differences in the biology of ageing
- Evolutionary conservation of mechanisms of ageing
- Bioethical implications of ageing research

Web site:	<u>ucl.ac.uk</u>
Based in:	London

Manchester Institute for Collaborative Research on Ageing (MICRA)





MICRA supports a community of over 100 active academics, bringing together international experts and leading researchers working across the field of ageing. Over 60 research projects and programmes span the Faculties of Humanities; Biology, Medicine and Health; and Science and Engineering. Ageing research is a strategic priority for The University of Manchester, as part of its commitment to social, economic and cultural impact. Founded in 2010,

MICRA is recognised as a leading international centre for research on ageing. Its researchers address fundamental research questions about ageing and society through collaborative research, with funders for ageing research including the European Union, UK Research Councils, Government, the Big Lottery, industry, NGOs and the charity sector. Influencing policy, practice and debate. MICRA is situated in the heart of Manchester, the UK's first city to achieve World Health Organization age-friendly status. We engage critically with stakeholders and policy makers at global, national, regional, local and community levels to deliver research with demonstrable policy impact. It aim to embed contributions from older people and stakeholders into all stages of research, ensuring that our work has meaning and direct societal relevance. MICRA is part of the Greater Manchester Ageing Hub, tasked with bringing together plans to support local older people. A range of key policy actors from across Manchester and the UK participate as hub partners.

- Biology of ageing and lifespan
- Engineering, environment and technology
- Frailty, cognition and dementia
- Inequalities, health and well-being
- Later life work, retirement and pensions
- Physical decline and tissue regeneration
- Public policy and care provision
- Social and cultural change and later life

Web site:	micra.manchester.ac.uk
Based in:	Manchester

Medawar Centre for Healthy Ageing Research





The University has a longstanding interest in ageing that began when Peter Medawar was the Mason Professor of Zoology in the late 1940s. Medawar is probably best known for his work on immune tolerance, for which he received a Nobel prize, but he also developed one of the key theories relating to the evolution of ageing - the Mutation Accumulation Theory of Ageing. In the last decade ageing has become a growing research interest at the University. To reflect the importance of ageing research at Birmingham, the University has set up the Centre for Healthy Ageing Research and is making significant new appointments in 2011 at senior level in Stem Cells and Ageing research to support the work of the centre.

We are an ageing population, with current demographic trends indicating that 1 in 5 adults in UK will be aged over 65 by the year 2020.

Whilst this is a cause for celebration, there is also evidence that healthspan (the time spent in good health) is not keeping pace with the increases in average lifespan, with significant consequences for quality of life in old age and for health and social services provision. Thus medical advances have ensured that a greater proportion of the population make it through to the third age of man, but they have made less impact upon the quality of life in old age.

Age is the most important risk factor for many disabling human diseases and on average men will still be unwell for the last 6 years of their lives and women for the last 11 years.

- Aging and the cardiovascular system
- Aging and the immune system
- Aging in nematodes
- Ensuring good health in old age
- Aging brain

Web site:	<u>birmingham.ac.uk</u>
Based in:	Birmingham

Oxford Institute of Population Ageing





The Oxford Institute of Population Ageing was established in 1998. Based on the US Population Center, it was funded by a grant from the National Institute of Health (National Institute on Aging - NIA) to establish the UK's first population centre on the demography and economics of ageing populations. It achieved Institute status in 2001.

Their aim is to undertake research into the implications of population change. They are a multidisciplinary group with demography as our main disciplinary focus, and links into all four University Divisions. Their researchers work in Africa, Latin America, Asia and Europe, and they run the Population Networks AFRAN (Africa) LARNA (Latin America) EAST (Central and Eastern Europe).

Changes in the demographic age structure of populations has become one of the major challenges for the 21st century. Driven predominantly by falling fertility rates across the globe as the Total Fertility Rates of two thirds of the globes countries now reach around or below replacement level, this age compositional shift has huge implications for all aspects of society and economy. Falling mortality rates, especially among the older population has enhanced this age shift, especially in advanced economies. Key questions addressed by the Institute concern the ageing of populations, the potential of the growing labour pool in Emerging Economies, and the progress of the fertility transition in Least Developed Economies. This demographic change affects all regions of the world, from demographic deficits in Europe, demographic dividends in Asia and youth bulges on the Middle East.» - Professor Sarah Harper, Director, Oxford Institute of Population Ageing.

- Understanding demographic change
- Demography and economy
- Demography and society
- Bio-Demography and health
- Demography, science and innovation
- Demography and environment

Web site:	ageing.ox.ac.uk
Based in:	Oxford

Salford Institute for Dementia





They approach is putting the humanity and personhood of the person with dementia at the heart of what they do. The institute is engaged in research, innovation and education in supportive design and care for people living with dementia. The focus of this work is the maintenance of independence and the promotion of integrated support in the communities where people live. At the University of Salford they have made the decision to utilise our resources to benefit those in our society whose lives have been changed by dementia today. In November 2013, they established the Salford Institute for Dementia, building on over three years of successful collaboration across a unique network of academics at the University.

The Institute has at its' heart a spotlight on the humanity and personhood of those living with dementia. Its driving philosophy is to enable people to live positive, fulfilled lives and instil in everyone a confidence that they can make a difference to an individual's experience of dementia. At Salford they are offering a multi-disciplinary lens on this urgent global challenge. As part of their work to become a "dementia friendly" university, over 50 colleagues from across the institution including the School of the Built Environment, the College of Health and Social Sciences and the School of Arts and Media, have created new collaborations to focus our work in this area. This has been supported by their key partners at a local, national and international level, including Alzheimer's UK, Four Seasons Healthcare and the Dementia Action Alliance through the establishment of their own local organisation, the Salford Dementia Action Alliance. Through these relationships and our wider discussions they have discovered that demand for knowledge, networks, expertise and investment in this area is urgently needed and significant.

- Personhood and humanity
- · Purposeful activity for people with dementia
- Design of private and public spaces
- · Experience of black and ethnic minorities
- Experience of people living with dementia in hard to reach communities and individuals

Web site:	salford.ac.uk
Based in:	Salford

UK Longevity Explorer (**UbbLE**)





UbbLE has been developed as a resource for individuals, researchers, doctors and anyone working in public health and policy, and aims to improve understanding of factors that might increase or reduce life expectancy in UK.

UbbLE can be used by:

- Individuals to increase awareness of their health and to provide incentives for lifestyle changes.
- Researchers as a starting point for future research.
- Governmental and health organisations to inform public health advice and social policy.

This research project used data from the UK Biobank: a large-scale national health resource which aims to improve the prevention, diagnosis and treatment of many serious diseases. Between 2006 and 2010, the UK Biobank team collected a large number of measurements (variables) from over half a million UK volunteers aged 40-70. These measurements included taking blood samples, physical and biological measurements from volunteers as well as carrying out detailed questionnaires. We used some of this information to investigate how closely 655 variables taken from the UK Biobank participants were associated with death within five years. This association shows how accurately a variable can predict death within five years. Although this project was based on UK Biobank data, this research was carried out independently.

Mission: Prediction of death, basing on different measurements, like blood samples, physical and biological measurements

Web site:	<u>ubble.co.uk</u>
Based in:	Sweden

International Longevity Centre - UK (ILC - UK)





The International Longevity Centre – UK (ILC-UK) is a futures organisation focussed on some of the biggest challenges facing Government and society in the context of demographic change.

We ask difficult questions and present new solutions to the challenges and opportunities of ageing. We undertake research and policy analysis and create a forum for debate and action.

Our policy remit is broad, and covers everything from pensions and financial planning, to health and social care, housing design, and age discrimination. We work primarily with central government, but also actively build relationships with local government, the private sector and relevant professional and academic associations.

We have strong convening power, having over the past year, organised 30 "sold out" events attracting between 30 and 300 people from Government, industry and public policy. ILC-UK is politically independent and frequently attracts speakers including Ministers and opposition spokespeople to our events.

Mission: The mission is to help societies to address longevity and population ageing in positive and productive ways, typically using a life course approach, highlighting older people's productivity and contributions to family and society as a whole.

Web site:	ilcuk.org.uk
Based in:	London

NDORMS (Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences)





We discover the causes of musculoskeletal and inflammatory conditions to deliver excellent and innovative care that improves people's quality of life.

Our multi-disciplinary research is world-renowned and we contributed significantly to Oxford's top rank in Clinical Medicine in the 2014 Research Excellence Framework results, the official UK-wide assessment of all university research.

The REF welcomed the strong return in orthopaedic sciences, as well as the outstanding reach and significance of the impacts from our research in musculoskeletal and ageing.

We are the largest European academic department in our field and run a globally competitive programme of research and teaching.

Our co-location with NHS services at Oxford's Nuffield Orthopaedic Centre puts the department in an excellent and rare position, where researchers work alongside clinicians. This substantially improves research capability, improving access for researchers to patients, and facilitates the interaction between clinicians and scientists, which is essential for successful translational research.

We have world-class facilities, with purpose-built laboratories and state-of-the-art equipment. Our multidisciplinary research is thriving, supported by large infrastructure grants from the National Institute for Health Research and the Kennedy Trust for Rheumatology Research. In addition, a number of charities make significant contributions, most notably Arthritis Research UK and the Wellcome Trust, as well as collaborations with Industry.

Mission: Our mission is to undertake the highest quality research in musculoskeletal and inflammatory conditions to deliver new treatments, which improve people's lives.

Web site:	ndorms.ox.ac.uk
Based in:	Oxford

The Alan Turing Institute

The Alan Turing Institute



The Alan Turing Institute is the UK's national institute for data science.

The Institute is headquartered at The British Library, at the heart of London's knowledge quarter, and will bring together leaders in advanced mathematics and computing science from the five founding universities and other partners. Its work is expected to encompass a wide range of scientific disciplines and be relevant to a large number of business sectors.

Five founding universities – Cambridge, Edinburgh, Oxford, UCL and Warwick – and the UK Engineering and Physical Sciences Research Council created The Alan Turing Institute in 2015. Six new universities – Leeds, Manchester, Newcastle, Queen Mary University of London, Birmingham and Exeter – are set to join the Institute in 2018.

Our mission is to make great leaps in data science research in order to change the world for the better.

Mission: The Institute's mission is to:

- undertake data science research at the intersection of computer science, mathematics, statistics and systems engineering;
- provide technically informed advice to policy makers on the wider implications of algorithms;
- enable researchers from industry and academia to work together to undertake research with practical applications;
- and act as a magnet for leaders in academia and industry from around the world to engage with the UK in data science and its applications.

Web site:	turing.ac.uk
Based in:	London

Francis Crick Institute





The Francis Crick Institute will be a world-leading centre of biomedical research and innovation in London. It will promote connections between researchers, between disciplines, and between academic institutions, healthcare organisations and businesses.

The Crick's mission is to understand the basic biology underlying human health, driving forward better treatment and prevention of the most significant diseases affecting people today.

Dedicated to research excellence, the institute will have the scale, vision and expertise to tackle the most challenging scientific questions underpinning health and disease.

The Francis Crick Institute is a charity supported by Cancer Research UK, the Medical Research Council, the Wellcome Trust, UCL (University College London), Imperial College London and King's College London. It will be world-class with a strong national role – training scientists and developing ideas for public good.

Mission:

Our work will help to understand why disease develops and to find new ways to diagnose, prevent and treat a range of illnesses – such as: cancer; heart disease; stroke; infections; neurodegenerative diseases.

Web site:	<u>crick.ac.uk</u>
Based in:	London

Integrative Genomics of Ageing Group





Integrative Genomics of Ageing Group aims to help understand the genetic, cellular, and molecular mechanisms of ageing. Although the research integrates different strategies, its focal point is developing and applying experimental and computational methods that help bridge the gap between genotype and phenotype, a major challenge of the post-genome era, and help decipher the human genome and how it regulates ageing and longevity.

In the long term, the group would like their work to contribute to the development of interventions that preserve health and combat disease by manipulating the ageing process. By studying the mechanisms of ageing their work could also have an impact on diseases, like cancer and neurodegenerative diseases, for which age is a major risk factor. No other biomedical field has so much potential to improve human health as research on the basic mechanisms of ageing.

Mission: In addition to conducting innovative research, the group aims to train and inspire students to study the biology of ageing. Therefore, in parallel to HAGR, they maintain the senescence info website, which is an educational resource on the science of ageing. It includes numerous tutorials, essays on the biology of ageing, a list of companies and researchers working on ageing, and other resources related to the study of ageing. In the long term, the group aims to contribute to the development of interventions that preserve health and combat disease by manipulating the ageing process.

Web site:	<u>liv.ac.uk</u>
Based in:	Liverpool

Centre for Social Gerontology-Keele University





Established in 1987, the Centre for Social Gerontology at Keele University has an international reputation for excellence in research and teaching focussing on social – and critical – analyses of ageing and later life.

Drawing on a variety of disciplinary and multi-disciplinary perspectives, our research addresses such themes as: Self and identity in old age; Family practices in later life; Intergenerational relationships; Ageing in different environments; Social exclusion and inclusion; Late life creativity; Health and well-being; The social policy of later life.

The Centre specialises in conducting research that is relevant to public policy concerns. In recent years, substantive projects have explored new housing and care options for older people; the situations of older people living in disadvantaged urban and rural communities; ageing with HIV and other chronic conditions; health promotion initiatives in later life; ageing without children; and older people's participation in creative and cultural activities.

Mission: Our mission is to conduct research that is at the forefront of ageing studies, and to translate our findings into policies and practices that improve the lives of older people. In doing so, we seek to challenge traditional notions of ageing as problematic and burdensome, and to further understanding of the psycho-social and cultural dimensions of ageing.

Web site:	keele.ac.uk
Based in:	Staffordshire