

Strategic Promotion of Ageing Research Capacity

SPARC is a unique initiative supported by the Engineering and Physical Sciences Research Council and the Biotechnology and Biological Sciences Research Council to encourage the greater involvement of academics and researchers in the many issues faced by an ageing population and encountered by older people in their daily lives. SPARC is directed, managed and informed by the broader community of researchers, practitioners, policy makers and older people for the ultimate benefit of older people, their carers and those who provide services to older people. SPARC pursues three main activities: **Small Awards** to newcomers to ageing research, across all areas of design, engineering and biology and at the interfaces relevant to an ageing population and older people. **Workshops** to bring together all stakeholders interested in improving the quality of life and independence of older people. **Advocacy** of the need for and benefits to individual older people and to society of ageing-related research. SPARC is inclusive and warmly welcomes the involvement of everyone with a relevant interest.

Pump-Priming Awards

EPSRC and BBSRC have provided funding to build national capacity for ageing research through small awards to newcomers, selected through peer-review of short individual applications submitted in response to calls for proposals. The deadlines for the two SPARC award calls were 1st June 2005 and 1st March 2006. These attracted 85 and 100 proposals respectively of which 13 and 21 proposals were funded.

Eligibility for Awards

Over two-thirds of the SPARC awards are to newly and about-to-be appointed academic staff and research fellows who have yet to secure a research council grant as Principal Investigator. The rest are experienced, in some cases very experienced, scientists moving into ageing research.

Basic Support

Awards range from £17,000 to, exceptionally, £60,000 to cover: research staff, consumables, equipment, and travel. Projects run for between 6 and 18 months. Call 1 was administered under pre-FEC guidelines and Call 2 post-FEC. Host institutions, partners and collaborators are contributing significant amounts of advice, time and money to support these newcomers to ageing research. All projects will be completed by the end of 2007 to enable extensive discussion and dissemination of their findings.

Special Support and Benefits

SPARC is supporting award holders in other ways: mentoring, access to a prestigious platform for dissemination, professional editorial assistance, eligibility for international activities, and provision of contacts.

Workshops

SPARC involves all interested stakeholders in design, engineering, physical science, biology and biotechnology ageing-related research (including academic researchers, professionals from health, social services, housing, industry, local and central government, representatives of charities and voluntary bodies, and older and disabled people). It organises research workshops which are accessible to this wide range of stakeholders. These workshops also involve the newcomers supported by SPARC awards as well as experienced researchers funded through other research council and research charity programmes.

Advocacy

SPARC represents the interests of researchers into ageing, and those who can use their findings, to key policy makers and the media, regionally, nationally and internationally. At every opportunity it makes the case that the ageing-related research supported by SPARC, EQUAL and ERA is able to make a major contribution to improving the quality of life of older people.

Background

SPARC has an interdisciplinary user-focus with an engineering, design, and physical science foundation coupled with a determined concern to understand the biology of ageing. It builds on the EPSRC EQUAL Initiative and the BBSRC SAGE and ERA Programmes. These encouraged a strong focus on the needs of older people, a fruitful rapport between researchers and older people, their carers and intermediate organisations. And, they promoted a better understanding of the issues faced by an ageing population and the challenges of growing older. The resulting small and radically new community of ageing researchers has already provided significant contributions to enhancing the lives of older people in the United Kingdom. SPARC is building this national capacity for ageing research and strengthening the links between researchers, practitioners and policy makers to appeal to all of those who are interested in extending the quality of life, health and independence of older people. SPARC is impatient for change. It is injecting vitality and new blood into ageing research. It is challenging conventional wisdom about the place and pace of ageing research. It is making a tangible contribution towards ensuring that older people receive full benefit from the best that research, science and technology can offer. SPARC is a short term initiative to build capacity. It commenced in Spring 2005 and will complete its mission in 2008.

The SPARC Advisory Committee

Mrs Elizabeth Mills, OBE, *Eminence Grise (Chair)*; Dr Lorna Layward, *Research into Ageing/Help the Aged (Deputy Chair)*; Professor Janet Askham, *Picker Institute/Department of Health*; Dr Elizabeth White, *British Association of Occupational Therapists*; Dr Deborah Dunn-Walters, *Kings College London/Guy's Hospital*; Dr Sian Henson, *University College London*; Dr Bernie Conway, *Strathclyde University*; Professor David Kipling, *Cardiff University*; Professor Constantinos Maganaris, *Manchester Metropolitan University*; Professor Kevin Morgan, *Loughborough University*; Professor Marcus Ormerod, *Salford University*; Dr Lesley Heppell, *BBSRC*; Dr Andrew Clark, *EPSRC*.

SPARC Supported Projects

Life in the Home	Design and the home <i>Professor Paul Chamberlain, Sheffield Hallam</i> Integrating the technological and social model of later life in the maintenance and adaptation of private housing <i>Philip Astley, South Bank</i> Multimodal augmented reality to support ageing in place <i>Dr Shaun Lawson, Lincoln</i>
Care Systems	Developing capacity for evaluating proposed policies in the care for older people through computer simulations <i>Dr Christos Vasilakis, Westminster</i>
The Older Worker	Understanding the design of the workplace for the older worker <i>Professor Peter Buckle, Surrey</i> Ageing in construction workers <i>Professor Alistair Gibb, Loughborough</i>
Product Design	The "inclusive engineering" approach: enhanced data gathering for an optimum diameter for ease of opening <i>Dr Alaster Yoxall, Sheffield</i> Designer relevant biomechanical data for packaging <i>Dr Avril Thomson, Strathclyde</i>
Urban Design	Design and community regeneration: investigating personal safety concerns in socio-economically deprived communities <i>Professor Richard Neale, Glamorgan</i>
Interface Design	Improving computer interaction for older users <i>Dr Faustina Hwang, Reading</i> Mathematical modelling of age related differences in web browsing <i>Dr Panayiotis Zaphiris, City</i>
Transport & Driving	Transport and older people: integrating transport planning tools with users needs <i>Dr Gregory Marsden, Leeds & Dr Mima Cattan, Leeds Metropolitan</i> Promoting safe driving behaviour through technology: attitudes of older drivers <i>Dr Charles Musslewhite, West of England</i> Advanced technology desires, needs & requirements of older drivers <i>Mike Bradley, Middlesex</i>
Cognition & Communication	Biomarkers for cognitive ageing in the human brain <i>Professor Zoe Kourtzi, Birmingham</i> Neural underpinnings of word-finding problems across the life span <i>Professor Lorraine Tyler, Cambridge</i> What makes synthetic speech difficult for older people to understand? <i>Dr Maria Klara Wolters, Edinburgh</i>
Vision	Age-related signalling capacities of the human lens <i>Dr Ian Wormstone, East Anglia</i> Age, eye movement and motion perception <i>Dr Tom Freeman, Cardiff</i> The contribution of visuomotor decline to falls in older adults during adaptive locomotion <i>Dr Mark Hollands, Birmingham</i>
Activity	Ageing, exercise and gender <i>Dr Matthew Lancaster, Leeds</i> Optimisation of skeletal muscle responses and quality of life to exercise in people over 60 years old: healthy diet vs dietary supplementation <i>Dr Gladys Onambele-Pearson, Manchester Metropolitan</i> Temperature and velocity interactions in neuromuscular function during locomotion in older people <i>Dr Richard Ferguson, Strathclyde</i>
Oxidative Stress & Ageing	EPR, oxidative stress and ageing <i>Dr Richard Hartley, Glasgow</i> Application of high throughput assays of oxidative stress to studies of the role of common genetic variation in healthy human ageing <i>Professor Paul Winyard, Exeter</i> Lipoprotein oxidation in ageing <i>Dr Sarah Aldred, Birmingham</i>
Fundamental Mechanisms of Normal Ageing	A proteomics approach to understanding age-related changes in neuronal function <i>Dr Katrin Jennert-Burston, Brighton</i> Gene expression profiling to understand stem cell ageing <i>Dr Ilaria Bellantuono, Sheffield</i> Unnatural ageing of killer cells <i>Dr Donald Palmer, RVC</i> The molecular basis of the beneficial effects of calorie restriction on ageing <i>Dr Dianne Ford, Newcastle</i> An investigative approach to define a role for endothelial nitric oxide synthase in the vascular of ageing and consequences for cardiac function <i>Dr Andrew Trafford, Manchester</i>
Chemical Biology of Ageing	Chemical tool for ageing research <i>Dr Mark Bagley, Cardiff</i> Chemical analysis of ageing tissue <i>Dr Elizabeth Ostler, Brighton</i> Evaluating the role of p38 MAP kinase in accelerated ageing <i>Dr Terry Davis, Cardiff</i>

SPARC Workshops and their Hosts

<p>National Workshops</p> <p>Maintaining Independence in Later Life, February 2005, Brunel University</p> <p>Integrating Research on Ageing: bridging the gap between biology, engineering, design and older people, March 2005, Strathclyde University</p> <p>Pharmacology and Ageing, April 2005, RPS, London</p> <p>Living with Stroke, June 2005, Sheffield Hallam University</p> <p>The Business Case for Ageing Research, November 2005, Unilever R&D, Bedford</p> <p>The Biology and Business of Stroke, December 2005, TVLSN</p> <p>Research and Development in Long Term Care, January 2006, CCC, London</p> <p>Design for Older People, February 2006, Bugatti Institute, Coventry University</p> <p>The Chemistry of Ageing, April 2006, RSC, London</p> <p>Research for a Better Age, October 2006, Brighton University</p>	<p>International Workshops</p> <p>Towards the Integrative Biology of Premature Ageing, October 2005, Brighton University</p> <p>Accessibility in Europe – UK/EU Experts, May 2006, *BRE, Watford</p> <p>Transatlantic Collaboration and Young Grant Holders in Ageing, June 2006, American Aging Association, Boston</p> <p>Ageing: Is it all Bad News?, July 2006, European Science Open Forum, Munich, RSC</p> <p>Future Workshop Programme – www.sparc.ac.uk</p> <p>Transport and Older People, October 2006, Leeds University</p> <p>Dementia and Cognitive impairment - new perspectives in research, practice and caring, November 2006, Eli Lilly/TVLSN</p> <p>Special Workshops</p> <p>Award Holders' Workshops, March 2006, January 2007, Reading University,</p> <p>Proposal Writing Workshop, November 2006, Brighton University</p>
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SPARC – Key Contacts - www.sparc.ac.uk

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