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## MRI scan pioneer awarded MRC Millennium Medal

30 November 2009

Sir Peter Mansfield, who played an instrumental role in the development of magnetic resonance imaging (MRI), is to be presented with the MRC (Medical Research Council's) Millennium Medal at an awards ceremony at the Trent Building, University of Nottingham on Monday, 30 November 2009.

The MRC Millennium Medal recognises an MRC funded scientist for outstanding research which has made a major contribution towards the health and wealth of our society.

Sir Peter, along with Paul Lauterbur, harnessed nuclear magnetic resonance (NMR) to visualise the internal structure of complex objects. In 1976 they produced the first human NMR image, a finger complete with bone, bone-marrow, nerves and arteries. Since then, MRI has developed rapidly and its continuing progress has been one of the most important breakthroughs in medical science.

Sir Peter's invention of an extremely fast scanning MRI technique, known as echo-planar imaging (EPI), underpins the most sophisticated MRI applications in clinical use today. EPI is the key to functional MRI (fMRI), which is used to study dynamic processes in living organisms. Before EPI, fMRI was slow and hard to use clinically. EPI speeded up image acquisition and therefore underpins all modern fMRI applications.

MRI and fMRI have revolutionised neuroscience and physiology research by opening windows on the working brain and body. MRI provides detailed images of anatomical structure and can detect cancer and signs of damage in the body's bones, tissues and organs. fMRI allows doctors to study brain activity during development, following injury and in brain disorders. It has also been used to investigate how the brain's neural networks develop during infancy, and to look for subtle abnormalities in brain activity in patients with disorders including attention deficit hyperactivity disorder, schizophrenia and Alzheimer's disease.


MRC Chief Executive Sir Leszek Borysiewicz commenting on the award said:

*"MRI has revolutionised medical diagnostics and research, enabling exact and non-invasive imaging of human internal organs. This prestigious award recognises and celebrates Sir Peter's achievements in the development of MRI, which today is a multibillion dollar industry. All major hospitals are equipped with MRI whole body scanners, with an estimated 10,000 systems in use worldwide."*

Sir Peter Mansfield, Emeritus Professor of Physics at the University of Nottingham, on learning of the award, said:

*"It was with great pride that my family and I learnt of this immense honour which the MRC wishes to bestow on me. However it must be said that without the then Vice Chancellor, Sir Colin Campbell's encouragement, little would have resulted and we would not have been able to obtain crucial funding from the MRC, as well as my MRC Professorial Fellowship. Our achievements in designing and developing the MRI scanner gave us all a sense of satisfaction in the knowledge that we were able to help many sufferers of a range of illnesses. In those early days, of course, MRI was used to image all parts of the body;*

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*these days, especially at Nottingham, MRI has evolved to study the brain and brain function under the leadership of Professor Peter Morris."*

Sir Peter Mansfield, won the 2003 Nobel Prize for Physiology or Medicine for the development of magnetic resonance imaging (MRI), along with American chemist Paul Lauterbur.

Previous winners of the MRC Millennium Medal, which was inaugurated in 2000, have included Cesar Milstein, for his pioneering work on monoclonal antibodies and Tom Meade, who was awarded the medal in 2002 for his contribution to UK health, particularly in the treatment and prevention of cardiovascular disease.

Ends

Notes to editors:

For further information, please contact the MRC Press Office on 0207 670 5302 or [press.office@headoffice.mrc.ac.uk](mailto:press.office@headoffice.mrc.ac.uk)

To arrange an interview with Sir Peter Mansfield, please contact: Lindsay Brooke, Media Relations Manager, The University of Nottingham on +44 (0)115 951 5751, [lindsay.brooke@nottingham.ac.uk](mailto:lindsay.brooke@nottingham.ac.uk) 