



# Lichfield Science & Engineering Society

LICHFIELD **GARRICK**  
*Theatre & Studio*

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MD, MA, DPhil

**8:00 pm on Thursday 11<sup>th</sup> February 2016**  
**in the Studio Theatre of the Lichfield Garrick, Castle Dyke, Lichfield**

## **THE BODY CLOCK AND SLEEP - science to medicine**

### **Professor Russel Foster CBE**

Professor of Circadian Neuroscience  
Head of Department of Ophthalmology  
The University of Oxford

Before moving to Oxford in 2012, where he is also a Nicholas Kurti Senior Fellow at Brasenose College, Russel Foster was Chair of Molecular Neuroscience at Imperial College, London. He received his education at the University of Bristol under the supervision of Professor Sir Brian Follett. From 1988–1995 he was a member of the National Science Foundation Center for Biological Rhythms at the University of Virginia, returning in 1995 to establish his group at Imperial College. For his discovery of non-rod, non-cone ocular photoreceptors he has been awarded the Honma prize (Japan), Cogan award (USA), and Zoological Society Scientific & Edrude-Green Medals (UK). He is the co-author of “Rhythms of Life” a popular science book on circadian rhythms.

All life on earth has evolved under a rhythmically changing cycle of light and darkness, and organisms from single-celled bacteria up to man possess an internal representation of time. These 24 hour cycles, termed circadian rhythms, persist in the absence of external cues, and provide a means of anticipating changes in the environment rather than passively responding to them. In mammals, including man, light provides the critical input to the circadian system, synchronising the body clock to prevailing conditions.

Professor Foster’s talk will cover such topics as how circadian rhythms are generated, the diverse functions these rhythms serve, how this system is regulated by light, the role of classical and novel photoreceptors in both visual and circadian light perception, and genetic disorders of these systems. It will include a range of molecular, cellular, anatomical and behavioural aspects, as well as addressing the implications for human performance, productivity and health.

For further information, please see our website at [www.LSES.org.uk](http://www.LSES.org.uk)  
Students and Members Free.

Visitors £5.00. Tickets are not issued in advance, please pay at the door.

Members must sign in. Those signing in before 7:50 pm will have precedence over all visitors.

This lecture is expected to finish by 10.00 pm.