

**Distinguished Achievement Awards**

**Researchers of the Year 2016**

The criteria against which nominations are judged state that:

“The nominee should be someone whose most recent research has successfully challenged dogma, created a new field of research, elucidated a new paradigm, made a fundamental change in thinking or impacted significantly on society.”

**Professor Richard Marais, Cancer Research UK Manchester Institute - FMHS**

Professor Richard Marais, based in the Cancer Research UK Manchester Institute, is an established international leader in melanoma research who over the last 18 months has made further seminal contributions.

Richard’s recent work has successfully challenged entrenched public health dogma and holds the potential to have substantial impact on society, through educating individuals in the best methods to reduce their lifetime risk of melanoma, and consequently death rates from this common cancer.

In a paper in the journal *Nature* in 2014, he reported that ultraviolet light induces proliferation of *BRAF*-mutant melanocytes, followed by accumulation of mutations in the TP53 tumour suppressor and finally full-fledged melanoma.

Critically, this process was only partially blocked by conventional sunscreens, emphasising that to fully minimise melanoma risk in public health terms, additional measures such as covering up with hats and clothes are necessary, over and above the use of sunblock.

In more recent work published in *Cancer Discovery* (2015), Richard describes his delivery to the clinic of whole exome sequencing of patient melanoma samples, facilitating personalization of therapy.

**Professor Erik Swyngedouw , School of Environment, Education and Development, FHUMS**

Professor Erik Swyngedouw is based in Humanities’ School of Environment, Education and Development.

Erik has significantly advanced the state of scholarship in several major areas of study, namely geographical political economy, with special attention to recent transformations in the capitalist space economy, and political-ecology, with particular emphasis on the governance, politics, and economics of water resources.

His research has had a formative influence in multiple fields of human geography worldwide, with recent clear evidence of a further ‘step change’ in his external profile and impact. He has been awarded 12 visiting professorships within the last five years, including being elected to the highly prestigious Vincent Wright Visiting Professorship at Sciences Politiques, Paris in 2014. A major research monograph, *Liquid Power*, was published with MITPress, the leading academic publisher, early in 2015.

Erik's prodigious research grant and publication output has developed and challenged existing research frontiers in political economy, ecology and urban change. He is amongst the world's most cited human geographer.

In September 2015, Erik was elected as a member of the prestigious 'Academia Europaea'.

#### **Professor Andrew Loudon, Faculty of Life Sciences**

Professor Andrew Loudon is Beyer Professor of Animal Biology in the Faculty of Life Sciences. Andrew has a long record of outstanding achievements in the field of chronobiology - the branch of biology concerned with cyclical physiological phenomena.

His contributions have been unquestionably world leading in his key research interests of basic circadian and seasonal biological cycles and the importance of circadian cycles in regulating inflammation and related disease.

All life on earth is adapted to seasonal changes in external stimuli such as light and temperature that in turn will affect food availability. In the case of mammals these stimuli drive a plethora of behaviours, including metabolism, seasonal reproduction and hibernation. Understanding how these "circannual" cycles are controlled has remained a mystery.

In his paper in the journal *Current Biology* Andrew was able to show where in the brain these changes are co-ordinated and the detailed novel mechanism by which this is achieved. This work has major implications for seasonal breeding animals and food security.

This discovery resulted in wide media interest, numerous press and TV interviews, and was listed by the BBC as one of the discoveries of the year. This past year has also seen him elected to the prestigious Academy of Medical Sciences and he won a Wellcome Trust Investigator Award.

#### **Professor Alice Bows-Larkin, School of Chemistry, FEPS**

Professor Alice Bows-Larkin is Professor of Climate Science and Energy Policy and Director of Tyndall Manchester, one of the largest nodes of the world-renowned Tyndall Centre for Climate Change Research.

Alice has made a distinguished contribution as an expert on the impact of aviation and shipping on climate change, informing and influencing national and international negotiations for a climate change agreement.

Her work was rated as world leading or internationally excellent in two impact cases for the 2014 Research Excellence Framework (REF). Further major impact on society is delivered through public engagement and high profile media, most recently her influential TED Global talk, which had approximately a million views in the first six months.

Alice has also been highly successful in generating grant income, securing £4.5M as principal investigator, including a current £1.4m Engineering and Physical Sciences Research Council consortium grant called STEPPING UP.

She is described as being a multi-disciplinary researcher, who sets agendas, builds teams and inspires and successfully guides early career researchers.