

# Michael Wakelam obituary

**Biochemist and director of the Babraham Institute in Cambridge who illuminated the role of fat molecules in signalling between cells.**

**Michael Wakelam secured the support of successive government ministers to develop Babraham Research Campus, now home to 60 small biotech companies.**



As components of the living body go, fats have never had a very good press, compared with others such as sugars, proteins or nucleic acids. They are indelibly associated with diet and obesity, and even those that do an essential job, such as the lipid molecules that make up the protective outer membranes of cells, were once seen as boringly inert. The biochemist Michael Wakelam, who has died aged 64 of complications of a suspected Covid-19 infection, played a key role in revealing them as dynamic participants in the processes that sustain a healthy body.

His approach, characterised by tremendous enthusiasm, a generous spirit and alertness to the potential of new technologies, has transformed our understanding of lipids in health and disease. He and his many collaborators discovered that in cancer, ageing, virus infection or inflammation, the synthesis and breakdown of lipids is fundamentally remodelled, affecting their finely tuned interactions with other cellular components. Members of Wakelam's team at the [Babraham Institute](#) in Cambridge, where he was director and chief executive from 2007, are exploring the potential for the development of new treatments based on his research.

Wakelam picked up on the potential of lipids long before they were fashionable. During the 1970s a group of researchers at [Birmingham University](#), led by the biochemist [Bob Michell](#), had discovered that when hormones stimulated a cell, certain membrane lipids split into smaller molecules that then triggered a cascade of signals inside the cell, telling it to divide, or move, or release further hormones. While biochemists now understand this cell signalling to be fundamental to life, at the time the community greeted the idea with scepticism. Wakelam, however, was convinced and chose to make this the focus of his career.

Realising that the family of lipids he initially worked with was only the tip of the iceberg, he adapted an analytical technique, mass spectrometry, to measure the characteristics of many more lipid molecules. He soon realised that the intriguing abundance and diversity of lipids within a single cell – its “lipidome” – needed to be documented and shared with the wider research community.

With international colleagues, and prompted by the collaborative, comprehensive, data-sharing approach of the [Human Genome Project](#), he helped to drive the creation of an international resource of data and methods for lipid researchers, [Lipid Maps](#), which has unified the field and provided a springboard for new studies. In the words of his former student and colleague Simon Cook, Wakelam “became the go-to guy for collaborators. He was in demand by researchers in cancer, inflammation and ageing – they all beat a path to his door.”

Michael was born in Liverpool, the son of Sheila (nee Moylan) and John Wakelam. John had begun a PhD in biochemistry but left academic life for a business career, and the family moved to Barnes, in south-west London. Following another move to Ashby de la Zouch in Leicestershire, Michael attended Ashby Boys’ grammar school. He graduated from Birmingham University in medical biochemistry in 1977, and stayed on to complete a PhD. Though he was not working on lipids, he was very much aware of the ideas emerging from Michell’s nearby lab. Michell became a lifelong friend and inspiration and Wakelam took the opportunity to join this emerging field.

He went to the University of Konstanz in Germany in 1981 for two years of postdoctoral research with the distinguished biochemist Dirk Pette, who specialised in muscle, studying the role of lipid metabolism in the formation of muscle fibres. A fellowship then took him to [Imperial College London](#), where he began to collaborate with colleagues at the [Institute of Cancer Research](#) on the signalling pathways that trigger the formation of tumours.

In 1985 he moved to a lectureship at [Glasgow University](#), setting up his own laboratory within the molecular pharmacology group. Cook, who joined the lab as a PhD student, remembers it as “an incredibly vibrant place”, where

experiments ran seven days a week and into the evening, after which they all discussed the results in the pub. Michael's excitement was infectious, his experienced postdoctoral team members often helping to manage and direct his "sometimes wilder ideas". Continuing to work on cancer signalling, he also began to use mass spectrometry and to consider the wider lipid universe.

This work came to fruition after he returned to Birmingham University in 1993 as professor of molecular pharmacology at the Institute for Cancer Studies, where he developed the methods that made mass spectrometry the standard tool for lipid analysis, and continued to offer new insights into lipid signalling pathways. An enthusiast for new technology, he pushed for the installation of excellent technical facilities within the Birmingham medical school. His experience and personality recommended him for roles in science leadership: he joined the council of the Medical Research Council, and chaired its Molecular and Cellular Medicine Board (2004-08).

In 2007 he took over as director of the Biotechnology and Biological Sciences Research Council's Babraham Institute in Cambridge, and also became a fellow of Downing College, Cambridge. Despite the grim financial position following the 2008 crash, his drive and persistence secured the support of successive science ministers of both parties (he himself was firmly on the left) to develop the [Babraham Research Campus](#), a bioincubator, currently home to 60 small biotech companies. He also built a world class lipidomics facility, building on the institute's already strong position in cell signalling.

His own lab's research began to address ageing as well as cancer, and also encompassed viral infection, examining how the hepatitis virus and rhinovirus modify the lipidome. He was a well-known figure around the campus, often in the gym or the coffee room, and the bar at 5pm on a Friday – he even cultivated an allotment on the site. He was approachable and supportive to students and colleagues.

Above all, he was a devoted family man. He met his future wife, Jane Fensome, in their first term at university, and they married in 1980. To their great grief, their first child, Ellen, died at birth. He is survived by Jane, and by their two sons, Alex and Patrick.

**• Michael John Owen Wakelam, biochemist, born 15 July 1955; died 31 March 2020**