





## Member News

Felix Franks Biotechnology Medal

*Water: A Comprehensive Treatise*

## Forthcoming Events

Forthcoming events being organised by the Biotechnology Group in 2019/21 are:

RSC Chemistry Centre, Burlington House,  
London, 9 December 2019

### *Formulation and Analysis for Biotherapeutics*

*Protein Misfolding*, RSC Chemistry Centre, Burlington House,  
London, April 2020 (tbc)

& , RSC Chemistry  
Centre, Burlington House, London, Dec 2020 (tbc)

RSC  
Chemistry Centre, Burlington House, London, 15 December 2020

*Bioengineering of polymers for archaeological conservation*, RSC  
Chemistry Centre, Burlington House, London, September 2021 (tbc)

## Recent Events & Proceedings

The following conferences/courses were organised recently by the Biotechnology Group. Reports are available for many of them on the [\\_\\_\\_\\_\\_](#) website.

University of Nottingham (with  
BioUpdate) 27/28 May 2017 and 24/25 Mar 2018

RSC Chemistry  
Centre, Burlington House, London, UK, 11 September 2017

RSC  
Chemistry Centre, Burlington House, London, UK, 19 December 2017

RSC Chemistry  
Centre, Burlington House, London, UK, 10 December 2018

RSC Chemistry Centre,  
Burlington House, London, UK, 17 December 2018

## Obituary

Professor Robert 'Bob'  
Thomas

Member Biotechnology Group,  
1987/2010 (Treasurer  
1995/2004)

21 February 1927 - 8 May  
2018

Bob Thomas founded and became Director of the Biotechnology Unit at the University of Surrey soon after joining as Research Professor of Chemistry. This made it natural for Bob to join the Biotechnology Group, a new RSC Interest Group which started up in 1987. He became a member of the inaugural Committee and subsequently was to serve as its Treasurer for 10 years, 1995/2004. He chaired the organising committee for the first 3-Day conference that the Group had ever run and this was on the theme of natural products at the University of Sussex in 1996. He followed this up with two more on the same theme at St Andrews in 1999 and at Magdalen College, Oxford in 2009.

Bob Thomas was born in Edinburgh on 21 February 1927. He was educated at Emmanuel Boys School, London, and then at the University of London in a Special Two-Year Degree in Chemistry. At age 20 he began his PhD studies in 1947 at the London School of Hygiene and Tropical Medicine (LSHTM) under the supervision of Professor Harold Raistrick working on metabolites of the mould, *Alternaria tenuis*. He isolated alternariol and its methyl ether, two new crystalline compounds and elucidated their structures.

In January 1952 he married Joan Barron and they set sail for Melbourne where Bob took up an appointment in the CSIRO's Protein Chemistry Laboratory to study the degradation of cellulose by fungal enzymes. Soon after arriving, he attended a lecture by Arthur Birch in which he presented his proposal that many natural products are biosynthesised from linear chains of two-carbon units derived from acetate (polyketides). Bob recognised during the lecture that alternariol could be formed from seven acetate units (a heptaketide) and after the lecture he discussed its structure with Birch, who asked for a copy of his thesis. This meeting sparked a lifelong interest in biosynthesis, especially in polyketides.

appointments were: 1959/63 Squibb Institute for Medical Research, New Jersey; 1963/68 Senior Lecturer, Imperial College; 1969/86 Research Professor of Chemistry, University of Surrey; 1987 Honorary Professorship at the University of Sussex.

*Independent Research and Publication* - Over the years Bob contributed immensely to biosynthetic theory and his speculative ideas were later proved by experiment. The indole alkaloids are a large class of natural products (which includes strychnine) and speculation on their biosynthetic origin had led to many hypotheses. However, it was Bob's suggestion in 1961 that a cyclopentanoid monoterpene was involved in their biosynthesis that led to the final correct biosynthesis being proved experimentally.

His longstanding interest in polyketides also led him to be the first to suggest that tetracyclic aromatic polyketides may be formed by two possible types of folding, one of which occurs in streptomyces and the other in fungi. These S- and F-foldings can be identified by feeding studies with [1,2-<sup>13</sup>C]-acetate. His recognition of the subtle difference in the two phyla has permitted some reassignments of natural product structures and no example has yet been found that contradicts the 'Thomas Rule'.

He published over 60 research papers, completing his last work in his 91st year in collaboration with a German group. This was published posthumously. He wrote several reviews and co-edited three multi-author books from the three natural product meetings he organised.

*Business Interests* - In 1983, while Director of the Biotechnology Unit at the University of Surrey, he started up a new company, Biotics. With the aid of a grant from the European Commission, he set up a laboratory facility in the School of Chemistry at the University of Sussex to isolate new compounds from plants from all over the world. Once a standardised protocol for the extraction of plant material had been accomplished, he set up a series of individual companies in developing countries in Africa, Asia and South America to duplicate what was being done at Sussex, with the important aim that each country would directly benefit from any discoveries made. By the mid-1990s extraction facilities had been established in Costa Rica, Ghana and Indonesia and more than 5,000 samples had been screened.

*Outside Interests* - Bob learned to fly in the University of London Air Squadron in 1947 and joined the RAF Volunteer Reserve. Flying was to be a lifelong interest and he even piloted a light aircraft when he was 89! He was an excellent squash and tennis player, enjoying games with colleagues at the Sussex campus until well into his seventies.

*Friends and Family* - Bob Thomas had many chemistry friends from all over the world, partly from the overseas jobs he had held as well as his own travels to give lectures at international conferences. His wife, Joan (née Barron) died in 2011 but he is survived by his three children Russell, Julie and Jacki, seven grandchildren and one great grandchild.

(This is an abbreviated version of an obituary that has been posted on the RSC website:

[www.rsc.org/Membership/AboutRscMembership/Obituaries/](http://www.rsc.org/Membership/AboutRscMembership/Obituaries/))



Committee