In memoriam –
Bernard Alfred Fry, BA, PhD (6 July 1926 – 24 October 2018)

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Bernard Fry was born in Portsmouth and graduated from The Queen’s College, Cambridge with a first class degree in Natural Sciences in 1947, and a PhD degree (supervised by Sidney R. Elsden) in 1950. At that time Professor Hans Krebs (later Sir Hans) was Head of the Biochemistry Department at the University of Sheffield, and helped establish a Sub-Department of Microbiology within the Bacteriology Department, with Elsden as the Senior Lecturer-in-Charge and Bernard as a Lecturer. The independent Department of Microbiology was formally established in 1952 (only the second such Department after the University of Reading), and the Agricultural Research Council (ARC) added a Unit of Microbiology with Elsden as its Honorary Director and three additional members of ARC staff. Sir Hans Krebs was later involved in establishing the West Riding Chair of Microbiology for Sidney Elsden (1959–65) with funds from the West Riding County Council.

In its first 13 years (1952–65) and despite being very poorly housed, the Department taught a third of the Biochemistry degree course and ran a successful one-year MSc course in Microbiology. The Sheffield Department also achieved international recognition for research in bacterial metabolism, on a par with Oxford and Cambridge, where the respective leaders, Donald Woods and Ernest Gale, were, like Elsden, protégés of the legendary Marjory Stephenson (one of the first two women, with Kathleen Lonsdale) to be elected to the Royal Society and who served as President of the Society of General Microbiology immediately after Alexander Fleming in 1947–49. Bernard Fry was a key contributor to Sheffield’s prestigious reputation. By 1955 he had already published two books on bacterial metabolism [1, 2]. The first, co-authored with John Peel, was a series of 13 articles by invited authors on specific aspects of autotrophic microorganisms to be discussed at the Fourth Symposium of the Society for General Microbiology (1954). The second was a Methuen Monograph entitled ‘The Nitrogen Metabolism of Micro-organisms’ based on lectures given to MSc students. Bernard was a long-time Member of the Society of General Microbiology (now the Microbiology Society), and served on the Editorial Board of The Journal of General Microbiology (now Microbiology) for a total of 15 years (1956 to 1971).

Bernard’s research moved with the times from metabolism to molecular biology, and he spent a year (1956–57) at the Pasteur Institute, Paris, working on bacteriophage lambda with the François Jacob, André Lwoff and Jacques Monod group, who were later awarded a Nobel Prize for discoveries concerning the genetic control of enzyme and virus synthesis [3]. This collaboration led to a publication on the metabolic activities of Escherichia coli during lysogeny [4] with François Gros [5]. Bernard also spent six months in the USA in 1967, following an invitation from Professor Robert (Bob) Hungate (Chair of the Bacteriology Department at the University of California Davis, USA) to give a series of lectures to students.

Bernard supervised some very successful research students including two who were destined to become Professors in Nottingham (Will Waites) and the Université of Paris-Sud (Barry Holland), and another (Ann Paterson), who wrote to his wife Doris recently saying ‘I absorbed some of Bernard’s huge knowledge of lambda, which was becoming an important player in gene expression and gene cloning, and this got me a Lectureship at Aberdeen University’. Bernard’s research involved bacteriocins and the bacteriophages of E. coli and Staphylococcus aureus. It seems amazing that 100 years after their discovery such phages might have a therapeutic role in helping to combat antibiotic-resistant pathogens [6]. Bernard served Sheffield University in many other ways. He was the Warden a Student Hall of Residence and Secretary of the Senior Common Room Club (known to some as ‘Bernard’s Café’). He was Sub-Dean of Science for many years, and towards the end of his career he served as Acting Head of Microbiology for several years.

In 1965–66 Bernard (the resident Senior Lecturer), was joined by Rod Quayle (the new West Riding Professor) and Margaret Attwood, John Guest and Peter White (Lecturers), to restart the Sheffield Department of Microbiology, when all of the original staff, except Bernard, had departed to the Food Research Institute in Norwich or to...
the USA. In addition to courses in Biochemistry a new Dual Honours Degree course in Microbiology and Genetics was started, and then in 1975, after Milton Wainwright was appointed Lecturer, a Single Honours Degree in Microbiology and further Dual Degree courses were initiated. The Department of Microbiology was a happy one and, with relatively few teaching staff, had to be efficient. Furthermore, it achieved the highest rating (3*) in the first National Research Assessment Exercise, prior to its assimilation into the Department of Molecular Biology and Biotechnology in 1989.

Bernard published in a variety of scientific journals, from his first paper on toxoplasmosis in 1954 [7] to his last on the effect of ribonucleic acids on lambda infectivity in 1968 [8]. More than one third were single author papers, and he did not always add his name to his own student’s publications (increasingly rare today).

Legions of students must be grateful for Bernard’s top quality, dedicated tuition, his lectures being delivered with precision and total clarity. In one of life’s strange coincidences, John Duncan, a colleague of Norman Fry at Public Health England, Colindale, who had been taught by Bernard in Sheffield, revealed that the students’ nickname for Dr Fry was ‘Smiler’. This really does capture Bernard’s essence; his knowing smile is indeed legendary. He was always very generous with his time. He could be relied on to give very sound advice on academic matters and when colleagues unloaded their frustrations on him, e.g., if promised laboratories were allocated elsewhere, or if prevented from embarking on genetic manipulation by an ‘over-cautious’ administration, Bernard could calm them down and with a smile, suggest a longer-term approach.

Bernard was a very wise and generous man, an excellent colleague, and is now greatly missed by all who were fortunate enough to know him.

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Conflicts of interest
JRG is a former colleague of Bernard Fry. NKF is Bernard Fry’s son and Co-Editor-in-Chief of the Journal of Medical Microbiology. The authors declare no other conflicts of interest.

References