Obituary

Peter R. Scudder, M. Phil., Ph.D., 1948–1994
By Gary S. Jacob

Peter did his early schooling at Queen Elizabeth College, University of London, obtaining a B.Sc. with joint honours in Biochemistry and Chemistry in 1970. Following this period, he worked at the Whittington Hospital in the department of diagnostic services where he was responsible for trace metal analyses utilizing atomic absorption spectroscopy. It was during this time that Peter had his first taste of biochemical research, leading to his decision to register for the degree of M. Phil. in 1974. While continuing his responsibilities for trace analysis, he spent the next few years researching the role of copper metabolism in rheumatoid arthritis, developing an assay for erythrocyte superoxide dismutase and exploring the relationship of this enzyme to erythrocyte copper levels in normal subjects and patients with rheumatoid arthritis.

After obtaining his M. Phil. from the University of London in 1976, Peter took a research position at Southampton General Hospital under the supervision of Dr Eric Chantler. His first work in the area of carbohydrate biochemistry began with a study of the effect of glycosylation on the ability of the cervical mucus to act as a barrier to penetration by sperm. With the transfer of this project to the University Hospital of South Manchester in 1977, Peter extended this work to include the characterization of several sialyl- and fucosyltransferases of the cervical epithelium involved in the biosynthesis of cervical mucin. He demonstrated that these enzyme activities correlated with levels of glycoprotein-associated fucose and sialic acid, and exhibited a cyclic variation throughout the menstrual cycle. This work was the basis for his award of a Ph.D. from the University of Manchester.

In 1980, Peter joined Dr Ten Feizi's Applied Immunochemistry Group at the Clinical Research Centre in Harrow. This began a highly productive period in Peter's career, with the publication of over 15 papers in refereed journals, as an increasingly recognized member of this highly productive research team. Peter specialized in the isolation of glycosidases and their use as adjunct reagents for structural analysis of carbohydrates, and in the development of monoclonal anti-carbohydrate antibodies to monitor cell-surface carbohydrates during cellular growth and differentiation.

A particularly noteworthy study was Peter's characterization of an endo-β-galactosidase from Bacteroides fragilis which was shown to have a unique substrate specificity compared with other endo-β-galactosidases. This enzyme was invaluable for the structural characterization of a number of biologically important cell surface glycoproteins and was used to establish the functional significance of lactosaminoglycans in compaction of the mouse embryo, and to characterize the receptor for Mycoplasma pneumoniae. During a short sabbatical stint in the laboratory of Dr Bruce Macher, University of California, San Francisco, Peter also purified and structurally characterized a family of gangliosides present on human leukocytes and myeloid leukaemia cells which express a specific and unique carbohydrate epitope, termed VIM-2, on their surface. One of
methods for the gram-scale synthesis of sLe* derivatives. The expected the best of himself in not only his scientific work, but, setting up his experiments and carrying them out. And he was in fact, in everything he did. He took great care and pride in and when he talked, people invariably paid close attention. He who listened closely and attentively to what people had to say, patience in all the years I knew him. He was the type of person respected other people's feelings and opinions and was slow to conducted his life in a manner that befits the most pious of men. He was a deeply religious person in the conventional sense, he con-}


currently underway at Searle. Peter unfortunately had to enter the hospital two days later on Tuesday, July 5 but not without providing Pat with specific results and details from the Sunday experiments which she duly relayed to me from his hospital bed. He returned home later that week to be with his family.

Peter conducted his life with great dignity and grace—continuing to function to the very end as both scientist, husband and father. All of us who had the privilege of knowing Peter will miss him deeply.

When Peter was diagnosed as having malignant melanoma in the summer of 1992, he took this heartbreaking news in his stride and did the best he could with the time he had remaining. Those of us aware of his serious medical condition could not help but admire his remarkable personal courage throughout this period. Indeed, his struggle with this terrible disease showed what an outstanding character he had. He actively continued his research for almost two years after the initial diagnosis, continuing to maintain a highly focused and professional approach to his work. His commitment was never so evident as when he had Pat take him into the laboratory on Sunday, July 3 of this year. At that stage he was clearly quite ill and yet was bound and determined to finish an important set of experiments he was conducting at that time. The results were important to a drug discovery project currently underway at Searle. Peter conducted his life with great dignity and grace—

I was privileged to know Peter Scudder. Although he was not a deeply religious person in the conventional sense, he conducted his life in a manner that befits the most pious of men. He had a deep and engrained sense of right and wrong. He respected other people's feelings and opinions and was slow to show anger. In fact, I cannot ever remember Peter losing his patience in all the years I knew him. He was the type of person who listened closely and attentively to what people had to say, and when he talked, people invariably paid close attention. He expected the best of himself in not only his scientific work, but, in fact, in everything he did. He took great care and pride in setting up his experiments and carrying them out. And he was a thoughtful and patient supervisor and teacher, as well. He was clearly a proponent of the old adage that actions speak louder than words, and was the archetype of the strong and silent individual—much like the character Rick portrayed by the great Humphrey Bogart in the movie Casablanca, a movie which Peter loved dearly. One of the things I admired most about Peter was the balance he brought to his life. In addition to his great devotion to his family and his work, he was an avid cyclist and squash player. And I think it was clear that besides loving the physical exercise, he also used these activities to constantly test his stamina and mental toughness.

Upon joining Monsanto Corporate Research in the summer of 1990 and moving to St Louis, Peter began working on a project aimed at the discovery of anti-inflammatory drugs which block the recruitment of white blood cells to sites of inflammation. Peter's skill in carbohydrate and glycolipid biochemistry immediately enabled the research team in St Louis to develop assays based on the use of an immobilized glycolipid containing the sLe* motif and which was synthesized enzymati-}


components of his research was the development of high-efficiency, enzymatic methods for the gram-scale synthesis of sLe* derivatives. The synthesis of these materials was a major accomplishment and required the isolation and characterization of both native and recombinant fucosyltransferases and a parasitic trans-sialidase enzyme.

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