OBITUARY

BRIAN H. KAY
1944–2017

Prof. Brian H. Kay had a long and productive career at the Queensland Institute of Medical Research (more recently known as QIMR Berghofer) in Brisbane, Australia. He started there in 1963 as a 19-year-old cadet, completing a B.Sc. (Hons) degree part-time (1970) and a Ph.D. (1978) at the University of Queensland. He headed the Entomology Laboratory (later called Mosquito Control Laboratory) from 1970, and in his later years he became part of the Institute’s senior executive team. He retired in 2014 after 51 years at the same Institute.

He began in the entomology laboratory under Harry Standfast, learning his entomology field craft with Harry and Alan Dyce from Commonwealth Scientific and Industrial Research Organisation (CSIRO), and his virus training with Ralph Doherty’s arbovirology team. The early years of Brian’s research career were spent primarily investigating local arboviruses. This involved field investigations into ecology and laboratory studies on vector competence for viruses such as Murray Valley encephalitis, Ross River, and others. Brian continued working with these and other arboviruses, including dengue viruses, throughout his long career. Much of what we now understand about the role of mosquito vectors and vertebrate hosts for these viruses that affect human health in Australia, particularly in Queensland, we owe to the groundbreaking work of Brian and his students. However, beyond his virus work, Brian was interested in mosquito control, and this led to long-term relationships with local governments in Southeast Queensland and their control programs against the salt-marsh mosquito, *Aedes vigilax* (Skuse). He first had involvement with improving pesticide applications, including early trials of aerial application of larvicides on the Gold Coast in the 1970s. Later he worked with Pat Dale and others from the 1980s to develop the environmentally acceptable practice of runnelling, a network of shallow spoon-shaped drains on salt marshes to enable fish access and water egress without damaging the marsh, leading to reductions in pest mosquito populations.

When dengue resumed almost annual activity in Queensland in the 1990s, Brian undertook projects, with students and associates, on developing strategies for improved surveillance and control of *Ae. aegypti* (L.). He focused on identifying key places and habitats, particularly subterranean sites, and how best to manage them through source reduction or biological control. This led to what he considered his most important work, using copepods (*Mesocyclops*) to prey on dengue mosquito larvae in container habitats, a methodology started in French Polynesia in the 1980s with scientists from Institut Pasteur, but brought to Queensland and extended to places in