Leslie Collier

Developed a freeze dried vaccine that helped eradicate smallpox

When Leslie Collier joined the Lister Institute laboratories in 1948, at the age of 27, smallpox was a huge cause of deaths, with an estimated 50 million cases a year worldwide, about a quarter of whom would die, according to the World Health Organization. A vaccine had been developed but unless it was refrigerated it deteriorated quickly.

“To maintain its potency, the vaccine was packed in an insulated wooden box containing a can of frozen water, and sent by post to destinations in the UK, or by air to other countries,” Professor Collier recalled in 1998 in Interdisciplinary Science Reviews (1998;23:340-7).

Unmelted ice

“On arrival, the presence of any unmelted ice indicated the temperature had not risen above 0°C during transit.” In somewhat modest surroundings in Elstree, Hertfordshire, “I was given a laboratory, a junior technician (a young lady straight from school with no laboratory experience) and a little hut that housed an experimental freeze drier,” he wrote.

Collier, who has died aged 90, began the work that produced a freeze dried smallpox vaccine that gave 100% successful vaccinations after storage at 45°C for two years. This made mass vaccination in tropical countries possible and led in 1977 to the eradication of smallpox.

“Having a highly effective vaccine that could readily be carried into the field, that required only a single dose to protect, and was virtually indestructible permitted vaccination teams to work in the most inhospitable areas. Leslie Collier made this possible,” said Donald Henderson, director of WHO’s global smallpox eradication program who led in 1977 to the eradication of smallpox.

The apparatus needed for sealing large numbers of ampoules was made from a children’s construction set. “It was characteristic of the somewhat Heath Robinson approach used at the time,” Collier observed.

After qualifying at University College Hospital, London, wartime service with the Royal Army Medical Corps, and working as a pathologist at St Helier Hospital, Carshalton, Collier spent the 30 years until 1978 at the Lister Institute, where his posts included head of virology, deputy director, and director of the vaccines and sera laboratories.

In his book The Lister Institute of Preventive Medicine. A Concise History published in 2000 Collier paid tribute to its policy of making its results and production methods freely available, as was the case with the thermostable vaccine.

“Patenting the process—or indeed any other method developed at the Lister—was never even considered,” he wrote. “In a perfect world, this policy would have been admirable; but with hindsight, the potentially large revenues from patents might have contributed significantly to solving the financial problems that were ultimately to result in the closure of the Institute’s laboratories.”

Collier’s work on trachoma at the Lister also led to advances in treatment. He was honorary director of the Medical Research Council’s trachoma unit from 1957 until 1973. He was awarded a gold medal by the Ligue contre le Trachome in 1959. In 1978 he was appointed professor of virology at the London hospital.

Suky Tomlins worked as a technician at the Lister after she left school in 1962 and kept in touch with Collier until his death. She said, “I was struck by the respect everyone showed each other and the lack of hierarchy. Leslie was a great teacher and always approachable. Years later I rang him up when I was worried about having my children vaccinated and he was very helpful.”

Classic textbook

In later years much of Collier’s time was spent writing and editing. The fourth edition of Human Virolology, written with John Oxford and Paul Kellam, was published the month before he died. He also edited the classic textbook, Topley and Wilson’s Microbiology and Microbial Infections.

John Oxford, professor of virology at Bart’s and the London hospitals, knew Collier for 20 years and cannot remember his ever mentioning his smallpox work. “He was a reserved, and modest academic always absorbed by the matter in hand, He cared nothing for honours or recognition,” he said.

Collier leaves his wife, Adeline, a documentary film maker whom he married in 1942. Their son, David, died in 2002.

Joanna Lyall

Leslie Harold Collier, virologist (b 1921; q 1943 University College Hospital, London), died on 14 March 2011 from old age.
Obituaries

Paul Gerard Bateson

General and vascular surgeon
Altnagelvin Area Hospital, Londonderry (b 1947; q Queen’s University, Belfast, 1971; FRCS), d 24 May 2010.

While an undergraduate, Paul Gerard Bateson won his Blue in rowing and became Irish champion. Appointed consultant at Altnagelvin in 1981, he was clinical director for surgery for 10 years, opening a dedicated day case unit, setting up nurse led claudication clinics, and performing the first laparoscopic cholecystectomy in Northern Ireland. Popular with patients and staff, he practised surgery during a traumatic time in Northern Ireland’s history and treated many of the victims, some of whom remained in lifelong contact. He also enjoyed medicolegal work and was a General Medical Council assessor, having a strong sense of fair play and openness. He leaves a wife, Deirdre, and baby daughter, born after his death, and seven children from a previous marriage.

Deirdre Bateson (née Campbell)
Zola Mzimba

Cite this as: BMJ 2011;342:d3055

Brian O’Carroll

Former general practitioner Redruth, Cornwall (b 1917; q St Bartholomew’s Hospital, London, 1943), died from urosepsis and heart failure on 12 May 2010.

Brian O’Carroll won a surgery prize as a student, and after qualification served in the Royal Army Medical Corps as a major in Normandy, West Africa, and Italy. After demobilisation in 1947, he continued to train as a surgeon until becoming a partner in Redruth in 1952. He strongly supported the Redruth GP obstetric unit, and was also interested in rehabilitation, being medical officer to Remploy in Pool for 25 years. As senior partner, he introduced the development of training in the practice. He built a house on Elba that he continued to enjoy until his death. Predeceased by his first wife, Mildred, in 1971, and by his second wife, Clare, in 2008, he leaves two children and five grandchildren.

Tim O’Carroll, James O’Carroll

Cite this as: BMJ 2011;342:d3057

Dennis Michael O’Donoghue

Former consultant anaesthetist
University College Hospital and Royal National Orthopaedic Hospital, London (b 1920; q Otago, New Zealand, 1946; DA, FRCA), d 17 October 2010.

Dennis Michael O’Donoghue (“Don”) initially trained in anaesthesia in Christchurch, New Zealand, but completed training at University College Hospital (UCH), London. He was appointed consultant anaesthetist to the Royal National Orthopaedic Hospital in 1953 and later to UCH. Don was a fine teacher of practical anaesthetics, passing on his skills and knowledge to generations of trainees. His upbringing in New Zealand gave him a refreshing directness and fearlessness in the many committees on which he served so well. His tenacity and determination were key factors in building up a renowned department. Don retired in 1985, taking up the study of history—a lifelong interest. Predeceased by a daughter, he leaves a wife, Ruth; two children; and two grandchildren.

Anthony Dyson
Sarah Reid

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Hughie Webb

Professor emeritus of neurovirology
St Thomas’ Hospital, London (b 1927; q Oxford/St Thomas’, London, 1951; DM, FRCP, FRCPath), d 8 November 2010. At Oxford, Hughie Webb gained four blues, in cricket, golf, rackets, and squash, and scored 145 not out in cricket against Cambridge. After qualifying, he did his national service in the Royal Army Medical Corps in Singapore, becoming interested in viruses affecting the central nervous system (CNS). After an appointment at the Rockefeller Virus Research Institute in Poona, he returned to St Thomas’ Hospital as registrar, then consultant to the Department of Neurology. He set up and ran an internationally renowned research unit into viruses affecting the CNS and their involvement in multiple sclerosis. In 1988 he became professor of neurovirology, and in 1990 was made doctor of science by London University. He leaves Jean, his wife of 60 years; two children; and five grandchildren.

John Webb, A Khalili

Cite this as: BMJ 2011;342:d2843

Nigel Charles Ronald Wyman Reid

Former consultant gastroenterologist
Hastings (b 1929; q Cambridge/St Thomas’ Hospital, London, 1950; MA, MD, FRCP), died from urosepsis and heart failure on 24 November 2010.

Nigel Charles Ronald Wyman Reid did house jobs in his native Liverpool, later worked in Ireland, and also did research at Johns Hopkins Hospital, Baltimore. He was appointed consultant physician with an interest in gastroenterology in Hastings in 1969, where he introduced modern medicine and developed the gastroenterology services, including endoscopy. He was also the clinical tutor. An excellent athlete in his youth, he represented Ireland at the high jump. In retirement he remained a dedicated golfer and was president of the Scottish Medical Golfing Society. He had a fine bass voice and sang in several choirs up to his final illness. Predeceased by a son, he leaves a wife, Jan; a daughter; and two grandchildren.

Anthony Dyson
Sarah Reid

Cite this as: BMJ 2011;342:d3059

Ian Colin Stuart Normand

Emeritus professor of child health
Southampton University (b 1928; q Oxford/St Mary’s Hospital, London, 1952; MA, DM, FRCP, FRCPCH (Hon)), d 19 January 2011.

Appointed founding professor of child health at Southampton in 1971, Ian Colin Stuart Normand (“Colin”) enthusiastically developed the new curriculum and established a harmonious department. An approachable man of immense knowledge and integrity tempered by sound judgment, he was a sought after member of numerous august committees and was dean of the faculty of medicine during 1990–3. He was also an outstanding clinician and notable sportsman, particularly in skiing. Before Southampton he had a distinguished career at University College Hospital, where his research interest in fetal lung physiology began. With his wife, Jean Smellie, he did valuable work in paediatric nephrology. He leaves Jean, three children, and seven surviving grandchildren.

Chris Rolles
Toni Rolles

Cite this as: BMJ 2011;342:d3056

Rod Armstrong

Cite this as: BMJ 2011;342:d3058