

Alexander Fefer

Showed that adoptive transfer of T cells could eradicate cancer

Alexander Fefer never intended to be a doctor. When, as a senior at Harvard University he finally decided to attend medical school, he planned to become a psychiatrist and not a medical researcher. But a funny thing happened after he started his first year at Stanford University School of Medicine in the autumn of 1959.

"Alex happened to stop in a corridor to watch a faculty member supervise the unloading of cages of mice for his research lab," recalled his wife of 51 years, Thea Fefer. "The professor offered him a job cleaning mouse cages in exchange for an opportunity to hang out in his lab and learn what medical researchers do. Alex accepted and eventually started helping out the lab assistants and eventually got more and more involved in the process."

Foundation of cancer research

In February 1962 the young medical student received his first citation, coauthoring a paper that was lead authored by Gus Nossal, the professor who offered him the opportunity to clean mice cages and who would return to Australia to become a globally renowned immunologist. Less than six years after that first paper and not yet 30 years old, Fefer, now a research fellow at the National Institutes of Health National Cancer Institute (NCI) in Bethesda, Maryland, was coauthoring a series of papers that rattled the foundation of cancer research.

"It's hard to imagine now how crude our knowledge of immunology was in the 1960s," said Philip Greenberg, later a protégé of Fefer at the Fred Hutchinson Cancer Research Center in Seattle, Washington, and now head of immunology at the centre. "Alex's group at the NCI demonstrated for the first time that a host could generate an endogenous T cell response to a developing and growing tumour, induced by injection of an oncogenic retrovirus, that could mediate complete rejection of the growing tumour. And then the group was the first to show that adoptive therapy by transferring tumour reactive T cells could cure a host, a mouse, of a disseminated tumour." The group at NCI consisted of only Fefer, another young researcher, and the head of the laboratory, said Professor Greenberg, who also is professor of medicine and immunology at the University of Washington.

Less than 20 years before those seminal papers were published, young Fefer did not speak English. In 1949 he had arrived in New York City as an 11

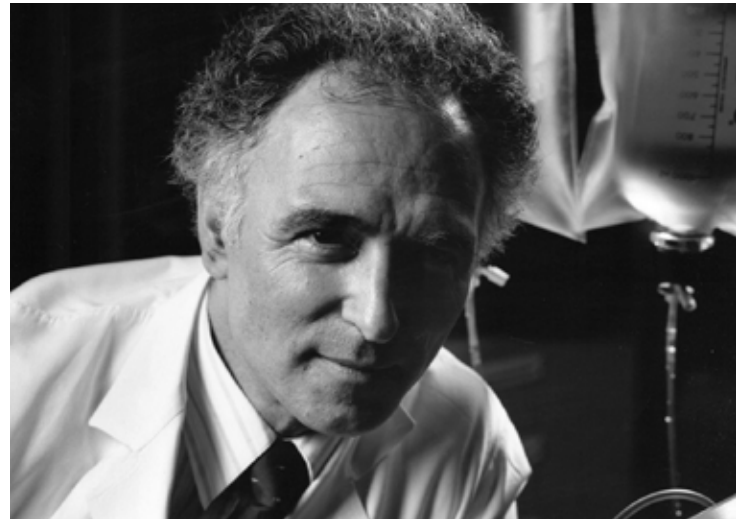
year old Yiddish speaking refugee. He was born on 4 January 1938 in Siberia in the former Soviet Union. "We do not know more specifically where he was born," said Mrs Fefer. After the second world war, Alex, his mother, and his stepfather travelled first to Poland and then to a camp for displaced people in Berlin before passage to New York.

The boy, who mastered the English language and was elected senior class president at Thomas Jefferson High School in Brooklyn, won a full scholarship to Harvard University, graduating in 1959. In 1964, after a short stint the year before as a fellow in tumour biology at the Karolinska Institute in Stockholm, he earned his medical degree from Stanford. He completed his residency in internal medicine at the University of Pittsburgh School of Medicine in Pennsylvania before moving in 1966 to the NCI.

In 1968, Fefer's T cell work caught the attention of E Donnall Thomas, head of oncology at the University of Washington School of Medicine in Seattle, who recruited him for his pioneering oncology and bone marrow transplant research team. Professor Greenberg said that Professor Thomas had a keen eye for talent, recruiting several other brilliant young researchers who in the early 1970s became founding members of the Hutchinson Cancer Research Center while retaining professorships at the University of Washington.

In 1990, Professor Thomas was co-winner of the Nobel prize in medicine for "discoveries concerning organ and cell transplantation in the treatment of human disease." Now 90 years old, Professor Thomas noted that Fefer and colleagues later moved beyond the early mice research and could "demonstrate in human patients the application of the principles that they had formulated in the laboratory."

In the late 1970s and 1980s, Fefer directed the first studies of human transplantation to cure chronic phase chronic myelogenous leukaemia.



"The professor offered him a job cleaning mouse cages in exchange for an opportunity to hang out in his lab and learn what medical researchers do"

Using identical twins, Fefer's studies "did show for the first time that chronic myelogenous leukaemia could be a curable disease," said Professor Greenberg.

Fefer was an avid soccer player, continuing to play several times a week after retiring in 2006 as professor of medicine and medical oncology at the University of Washington. The oldest member of his team, his last football match was the evening of Friday 1 October 2010. He flew the next morning with Professor Greenberg and three other colleagues to Washington, DC, to receive an award from the International Society for Biological Therapy of Cancer, of which he had been a founding member. After a reception Saturday evening before Sunday's awards ceremony, Fefer retired to his hotel room and was found dead the next morning.

A few years ago, Fefer wrote on his high school website, "Due to a great deal of luck, persistence and brilliant colleagues, I have been fortunate in making some contributions, with resultant benefits to patients." In addition to his wife, Fefer leaves two sons.

Ned Stafford

Alexander Fefer, oncologist (b 1938; q 1964, Stanford), died 3 October 2010 from hypertensive and arteriosclerotic cardiovascular disease.

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Ali Bakran



Consultant transplant and vascular surgeon Royal Liverpool University Hospital (b 1949; q Leeds 1973), died on 27 August 2010 in the sea while on holiday.

Ali Bakran came from India to Salford as a small boy. He set up the charity Aequitas to improve access to medical school among people from less advantaged backgrounds, and this was to be his work during retirement. A committed surgical trainer, he published 86 research papers, liaised closely with the biomedical engineering department, and was involved in several research projects related to vascular access. His other major interest was opportunistic viral infections in transplant recipients. He helped to set up and run the European Vascular Access Society, and was founder president of the Vascular Access Society of Great Britain and Ireland in 2009 but did not live to see the inaugural meeting he had organised. He leaves a wife, Diane, and two children.

Ajay Kumar Sharma

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Aleya Banerjee



Former community paediatrician Bolton (b 1936, q Calcutta Medical College, India, 1957; DA), died on 6 October 2010 after abdominal surgery. After qualification and initial jobs in India, Aleya Banerjee came to the United Kingdom in 1960 with her husband for postgraduate study and experience. She held

junior anaesthetic appointments in Northampton and Southampton, and registrar positions in the Isle of Wight and Southend. From 1968 to 1971 she was lecturer in anaesthetics in Kuala Lumpur, where she received a commendation from the King of Malaya for caring for emergency trauma patients during the race riots of 1969. On returning to the United Kingdom, and after a break from medicine to bring up her family, she was for many years a well-respected medical officer in community paediatrics. She leaves a husband, Arup; three sons; and seven grandchildren.

Arpan Banerjee

Anjan Banerjee

Avijit Banerjee

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Duncan Stewart Cameron



Former consultant otolaryngologist head and neck surgeon Newcastle upon Tyne Hospitals NHS Trust (b 1940; q Durham 1964; FRCSEd, FRCS), died from pulmonary embolism on 23 January 2010.

Duncan Stewart Cameron ("Stewart") was scrum half at Northern Football Club. After qualifying, he was assistant lecturer in Glasgow during 1965-8 and clinical tutor in ear, nose, and throat in Edinburgh during 1971-4 before returning to his native Newcastle. Particularly interested in acoustic neuroma, he was clinical director for his department at the Freeman Hospital during 1991-5. For 25 years Stewart was postgraduate examiner for the royal colleges of surgeons in Edinburgh and London, and he was regional surgical adviser for the Royal College of Surgeons of Edinburgh. A keen golfer, Stewart had elective orthopaedic surgery to facilitate his game shortly before he died. He leaves a wife, Gladys, and two sons.

J A Wilson

Cite this as: *BMJ* 2010;341:c6678

Howard Michael Parsons

Former consultant ear, nose, and throat surgeon Croydon Hospital Group (b 1918; q University College Hospital, London, 1942; FRCS), d 21 September 2010.

After fast track training, Howard Michael Parsons ("Michael") was soon recruited into the Long Range Desert Group as medical officer in North Africa and Italy. Demobilised in 1946, he became consultant ear, nose, and throat surgeon to the Lewisham Hospital Group for 16 years and to the Croydon Group for 17 years. An experienced and popular medical manager, he chaired every eligible committee in Croydon, and led the development of the first private hospital in Croydon, becoming its first chairman. He was also a liveryman of the Worshipful Society of Apothecaries. Michael retired in 1983 but continued in private practice until he was 72. He leaves Sarah, his wife of 68 years; two children; and four grandchildren.

Luise Parsons

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Thomas Boyd Stirling



Former general practitioner Aldridge, West Midlands (b 1923; q Birmingham 1946), d 16 August 2010.

After house jobs, Thomas Boyd Stirling ("Boyd") was senior medical officer in troopships in the Royal Army Medical Corps during 1947-9. He returned to join his father, "Dr John," in general practice and was for 43 years a family doctor, "Dr Boyd," in Aldridge. He became senior partner in 1958 and continued practising GP anaesthetics from 1950 to 1963. He encouraged and enabled juniors to develop their

ideas, always ensuring that the strengths of general practice home visits, continuity, and availability were retained. He developed interests in industrial medicine, police work, GP hospital wards, and multidisciplinary input into a visionary new health centre built in 1969. He leaves Marjory, his wife of 59 years; three children; and 10 grandchildren.

Iain Stirling

Alistair Stirling

Fionna Stirling

Denys Wells

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Winston Turner



Former consultant paediatrician Burnley (b 1914; q University College Hospital, London, 1938; MD, FRCP, FRCPCH, DLO), died from prostate cancer on 29 July 2010.

After qualifying with honours, Winston Turner became civilian medical practitioner in the Royal Air Force. He passed Douglas Bader fit to fly after his bilateral amputations and researched altitude flying using his own decompression chamber. In 1953 Winston became the first consultant paediatrician in the Burnley area, working singlehandedly almost until retirement at 65. The children's ward in Burnley General Hospital was named Turner Ward in honour of him and his wife, Helen, a community paediatrician. A keen swimmer, Winston arranged weekly hydrotherapy sessions for disabled children and for 30 years was president of the local branch of Scope. After retirement he worked in occupational health until he was 75. He leaves Helen, three children, and six grandchildren.

Alan Day

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