



## Oleg Georgievich Gazenko

Doyen of space medicine

Gazenko's studies showed the feasibility of space flight and secured the health of cosmonauts. He was a director of the Institute for Medico-Biological Problems dealing with research in air and space physiology, with special reference to the biological effects of gravitation.

After qualification and service as head of a military hospital of the air army during the second world war, Gazenko specialised in aviation medicine at the chair of physiology of the Kirov Military Medical Academy in Leningrad. He studied problems of high altitude physiology and the effects of hypoxia on higher nervous activity. In 1947 he was appointed to the Institute for Aviation Medicine of the Ministry of Defence of the Union of Soviet Socialist Republics (USSR), where he progressed from researcher to deputy head of the institute responsible for research.

He was involved in studies of pilots in unfavourable climates—beyond the Arctic Circle and in deserts. From 1956 he switched to research in space biomedicine linked to *sputniki*—artificial satellites put into outer space, the first being launched on 4

October 1957. It took just a month to launch the second sputnik with a dog on board.

All experimental animals were stray dogs captured on Moscow streets by special teams, mongrels being considered to be the most suitable candidates for space experimentation because they had had to fight for survival since birth. Given that dogs' portraits might appear on the front pages of newspapers, they also had to be beautiful, slim, and look intelligent. One of the experimental dogs, Zhul'ka (which was successfully sent into space three times), lived at Gazenko's home for 12 years, and her stuffed body is now displayed at the Institute for Medico-Biological Problems. Altogether, 48 dogs were sent to space before Gagarin's flight. Twenty of them died.

Gazenko was also directly involved in training the first human cosmonauts, including Yuri Gagarin. They say Gagarin remarked after his return from space: "I am still unaware who I am—the first man or the last dog."

In 1969 Gazenko was appointed a director of the Institute for Medico-Biological Problems by a special decree of the Central Committee of the Communist Party of the USSR and Council of Ministers of the USSR. He occupied this position for nearly two decades (till 1988). His research of that period was focused on basic problems of space biomedicine.

From 1978 Gazenko developed a system of measuring the physiological and psychological health of crews during prolonged space flights and after returning to earth. This system was not superseded until recently. He said: "There are few positive emotions in space. Not physical but psychological stress is the most difficult thing to cope with for cosmonauts. We should help the crew to overcome this problem." He supplied spacecrafts with a small amount of cognac (7.5 g a day for each person).

A full member of the Russian Academy of Sciences from 1976, he retired in 1988 with the rank of lieutenant general of the medical service. He was a laureate of the state prize of the USSR and a government prize of the Russian Federation, an honorary member of the Tsiolkovsky Russian Academy for Cosmonautics, and doctor *honoris causa* of the Russian Military Medical Academy.

Gazenko was also recognised interna-

tionally. He was a member of the International Academy for Astronautics, the American Association for Air and Space Medicine, and the American and Polish Physiological Societies, and doctor *honoris causa* of Wrights University (USA) and the Polish Military Medical Academy. He was awarded the highest Soviet orders, including the order of Lenin, as well as numerous international orders and prizes. During 1989-91 he was a deputy of the Soviet parliament, where he joined the committee on science and education.

His major publications include *Animals in Space* (1960), *Life and Space* (1961), *Space Cardiology* (1967), and *Humanity and Space* (1987). He initiated a multivolume series *Problems of Space Biology* (more than 80 volumes have been published in this series since 1963) and a scientific journal *Space Biology and Medicine*, launched in 1969. He also initiated and coedited three volumes of a joint Russian-American publication *Fundamentals of Space Biology and Medicine* (1975). He instigated a series of investigations at biosputniks "Kosmos," which involved scientists from many countries, and organised international symposiums "Man in Space." He was a president of the Pavlov All-Union (now Russian) Physiological Society from 1987 until his death, and a chairman of the scientific council of the Russian Academy of Sciences on space biology and medicine. During his last years he became fascinated with a project involving surface modelling of a manned spaceflight to Mars in which six people will live 520 days in four hermetic modules, nicknamed barrels. There was a call for volunteers aged 25 to 50. When asked about the optimal age of volunteers, he replied: "Gaius Julius Caesar selected 40 year old warriors for his march to Gallia. These are mature people with life experience and devoid of youthful adventurousness."

He leaves a wife, Olga Alexeevna Tolmachevskaya, and two children.

**Alexandr Grigoriev**

**Mikhail Ugrumov**

**Boleslav Lichterman**

Oleg Georgievich Gazenko, air and space physiologist, former director of Institute for Medico-Biological Problems, Moscow (b 1918; q Moscow 1941; MD, PhD), d 17 November 2007.

**OBITUARIES continue on p 395**

**Vera Archer Giles  
(née Wallace)**



Former general practitioner Rainhill, Merseyside (b 1914, q Royal College of Surgeons 1938), died from cerebrovascular disease on 1 October 2007.

Vera Archer Giles joined Dr Hall's Rainhill practice in 1943, taking it over in 1953 as senior partner until she was forced to retire in 1991 because of government regulations. She continued doing locum work until she was 87, stopping only then because she had a below the knee amputation followed by a hip fracture. She was among the oldest working general practitioners in England. Despite working full time, doing family planning clinics, and losing her husband, Alex, when she was 52, she brought up three daughters and was president of St Helens Medical Society. Predeceased by her eldest daughter in 1997, she leaves two daughters and five grandchildren.

**George McKenna**

**Keith Edmund Edwin Hubble**



Former general practitioner Southampton (b 1931, q Guy's Hospital, London, 1960; DA), died from cancer of the pancreas on 16 November 2007.

National Service took Keith Edmund Edwin Hubble to Suez as a

radiographer with the Royal Army Medical Corps. In 1962 he entered general practice in Southampton, later joining the staff of Moorgreen Hospital as a hospital practitioner, where he helped to manage the lists for electroconvulsive therapy. Later he contributed his anaesthetic skills to the local Priory Hospital, where he was also a trustee and referee. He retired from general practice in 1995 and was appointed to the independent monitoring board of the Gosport centre for asylum seekers. He leaves a wife, Marian; two sons; and three grandchildren.

**Philip Carter**

**Gordon John Ker**



Former general practitioner Glasgow (b 1921; q Glasgow 1944; MRCP), died from metastatic prostate cancer on 25 August 2007.

Gordon John Ker was a general practitioner for 45 years. A fellow of the BMA, he served on many committees and executive committees, including the Scottish General Medical Services Committee and the local medical committee (1964-80).

He also worked in accident and emergency at the Victoria Infirmary, was a doctor for Marks and Spencer for 29 years, and helped to set up the Emergency Treatment Service. For over 25 years he was prominent in the British Society of Medical and Dental Hypnosis (BSMDH), of which he was a founder fellow and president, and the BSMDH (Scotland), of which he was honorary treasurer and the first fellow. He leaves five children and five grandchildren.

**Alison Ker**

**Kevin McCarthy**



Former chair department of medical microbiology, Liverpool (b 1921; q Liverpool 1944; MD, FRCPath), died from pneumonia on 24 August 2007. Kevin McCarthy spent almost his entire career in Liverpool as, successively, assistant lecturer, lecturer, and senior lecturer in bacteriology until, when Allan Downie retired in 1966, he was appointed to the chair of what then became the Department of Medical Microbiology. He retired in 1986 but continued laboratory work for 10 years as a research fellow, particularly on the growth of breast tumour cells in vitro. In his early career he worked on smallpox. After a year's fellowship in Boston in 1954-5, he worked on new developments in cell culture techniques for measles virus. Then, with Carl Taylor-Robinson, he was the first outside the United States to isolate rubella virus. He leaves a wife, Mary, and five children.

**Judith Stephenson**

**James Harper Milligan**

Former general practitioner Southend on Sea (b 1913; q Edinburgh 1937), d 7 December 2007.

In the second world war James Harper Milligan ("Jim") served with the Royal Army Medical Corps in the East African Rifles. He subsequently became a general practitioner in Southend on Sea, the practice eventually becoming Queensway Medical Centre. He retired in 1982. His retirement was marred by the early death of his wife, Sadie, whom he married in 1942. Keen on golf and bridge, he lived independently until he was 92. He leaves three children and six grandchildren.

**Don Milligan**

**John Matheson Ritchie**

Former consultant in obstetrics and gynaecology Kettering General Hospital (b 1928; q Middlesex Hospital, London, 1952; FRCOG), died from pneumonia and respiratory failure on 12 September 2007. After national service, John Matheson Ritchie trained at King's College Hospital under Sir John Peel and at the Groote Schuur Hospital in Cape Town. He was appointed consultant in Kettering in 1967. Such was his reputation that when he became general manager of the hospital he was able to make difficult and unpopular decisions and yet retain the support and regard of his colleagues. The fourth generation of his family to practise medicine, John played a major part in local medical affairs and was an officer of Kettering Medical Society for over 30 years. He leaves a wife, Pat, and two children.

**Tony Graham**

**Margaret Shinton**



Former clinical assistant in diabetic medicine Coventry and Warwickshire Hospital, Coventry (b 1926; q Leeds 1950), died from pancreatic cancer on 16 September 2007.

After junior hospital posts at St James's Hospital, Leeds, and Pontefract General Hospital, Margaret Shinton moved to the Children's Hospital and then Queen Elizabeth Hospital, Birmingham, where she met her husband. When her family was young, she worked as a clinical assistant to the West Midland Blood Transfusion Service. From 1972 until her retirement in 1991 she was clinical assistant in diabetic medicine in Coventry. She was also an active member of the Samaritans and the local Anglican church. She leaves a husband, Keith; two sons; and five grandchildren.

**Keith Shinton, Roger Shinton**