

2002 Nello Pace Award

Inessa B. Kozlovskaya

The Nello Pace Award was established in 1997 by the Galileo Foundation and the International Society for Gravitational Physiology to recognize individuals for performance of outstanding research in, and service to, the field of Gravitational Physiology. In seeking nominations for this award, many outstanding scientists who have demonstrated these characteristics were identified. The winner of the 2002 Nello Pace Award is Professor Inessa B. Kozlovskaya. Dr. Kozlovskaya has achieved outstanding successes in solving fundamental and applied medical issues in the field of space exploration, has made important contributions to the development of gravitational physiology. Dr. Kozlovskaya is also a gifted mentor of many successful scientists.

Inessa Kozlovskaya began her scientific career in the Student Scientific Society of the 1st Moscow Medical School where she received her M.D. in 1951. She was an Assistant Professor in the Department of Physiology, 1st Moscow Medical School 1954 – 1959, and received her Ph.D. in physiology from the 1st Moscow Medical School in 1955. In 1959 she became a Senior Research Scientist at the Institute of Higher Nervous Activity of the Academy of Sciences of the USSR, where she studied the afferent functions in the control of movements. From 1966 – 1971 she was a Senior Guest Investigator at the Department of Behavioral Physiology of the Rockefeller University, New York, and the Department of Physiology, the New York Medical College, where she worked with N. Miller and V. Brooks. After returning to Moscow in 1972 she became a Senior Research Scientist at the Department of Motor Control of the Institute of Problems of Information Transmission of the Academy of Sciences of the USSR, where much of her work turned to studies of cerebellar physiology and its clinical applications. In 1976 Dr. Kozlovskaya received a Doctor of Sciences degree in Motor Control from the Institute of Higher Nervous Activity, Moscow, USSR. In 1977 she was recruited by Dr. O. Gazenko, Director of the Institute for Biomedical Problems, to become the Head of the Department of Sensory-Motor Physiology and Countermeasures of the Institute for Biomedical Problems, Ministry of Health, Russian Federation, where she remains today. In 1988 she was promoted to Professor in Aerospace Medicine.

Over the course of her career, her studies of behavioral and neurophysiological effects of deafferentation have become widely recognized by the international scientific community. During her tenure at IBMP she has become a driving force in the development of the field of gravitational physiology. Among her accomplishments are the recognition of the role of support afferentation in the organization of posture and other motor and muscular gravity-dependent responses, the phenomenon of the vestibular inhibition and sensory canalization in weightlessness and many other observations which extended our knowledge of the gravity mechanisms involved in sensorimotor function.

In addition to her own research accomplishments, Dr. Kozlovskaya and her team also pioneered several methodologies in the field of gravitational physiology, including the use of Rhesus monkeys, both inflight on Russian biosatellites and in ground-based studies, and the “dry” immersion simulation model for the sensorimotor studies. Access to these capabilities has been actively shared with her colleagues around the world.

Her studies have not only contributed to basic science of motor control, but also to the development of the unique Russian countermeasure system for long-duration space missions. This system has maintained health and fitness of many MIR and ISS crewmembers. Moreover,

some of the remarkable spin-offs of Dr. Kozlovskaya's research activities include the use of the space countermeasure technologies for the treatment and rehabilitation of patients with neurological disorders.

Dr. Kozlovskaya was a founding member of the ISGP and has remained one of the Society's most active members. She is a corresponding member of the Russian Academy of Sciences. She was elected to the International Academy of Astronautics, from which she received the IAA Life Sciences Award, and is currently a member of the IAA Board of Trustees. She is a member of several editorial boards, and a founding editor of the *Journal of Gravitational Physiology*. She is a member of several scientific societies. She has also been recognized as an Honorable Researcher of the Russian Federation. In addition to her scientific accomplishments, she displays dynamic energy, enthusiasm and the spirit of friendship and mutual cooperation.

Dr. Kozlovskaya was a close friend and colleague of Dr. Nello Pace. The scientific community shares a great sense of appreciation and pride occasioned by Dr. Inessa B. Kozlovskaya being chosen to receive the Nello Pace Award.