

The Russian Primate Research Center – A Survivor

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The Research Institute of Medical Primatology (RIMP), the oldest and once the largest primate research center in the world², originally located in Sukhum³, Abkhazia, has survived many challenges: the repression of its scientists as “intelligensia” during the Stalinist era; the civil war between Abkhazia and Georgia with the center’s rebirth across the border in southern Russia; the hyperinflation of currency and subsequent impoverishment of Russian research institutions under perestroika; and, in recent years, attacks by the media, the ferocity of which can only be compared with the anti-research campaign of the animal rights movement in the U.S. and Western Europe. The media attacks are particularly disturbing, because much of the disinformation has been generated by sensationalist writers posing as principled investigative reporters for respectable publications and television. In the spring of 2008 the stories were picked up by Western newspapers, which disseminated them widely in England and the United States (Stack, 2008; Walker, 2008).

With the democratic changes in Russia, abolishing censorship and lifting secrecy on many archives, the general press has generated a stream of sensationalist claims as to the reasons for creation of the Sukhum primate research center and its operations. The vociferous flow of disinformation has taken two general directions. It is claimed that the center was created to further “rejuvenation” efforts by Dr. S. A. Voronov to prolong the lives of the Bolshevik elite, with reporters naming alleged “needy recipients” of research funds, who had no qualms about spending the money of working people on this “sacrilegious business”. Secondly, it is claimed that the center was established to create a new breed of Soviet worker by creating hybrids of human and great ape species.

It is clear from the events leading up to the establishment of the center in 1927, by the most outstanding medical scientists and biologists in the nation, that neither ob-

jective was the case. The major purpose, as urged by leading scientists, such as Il’ia I. Mechnikov, Russian Nobel laureate and co-director of the Pasteur Institute in Paris, Albert Calmette, physician bacteriologist, developer of many vaccines and discoverer of the mycobacterium on which the antitubercular BCG vaccine was based, and Robert Yerkes, Yale psychologist and pioneer of U.S. primatology, was to meet the growing need of the biomedical sciences for experimental animal models more similar to humans than the frogs, rats, cats and dogs commonly found in early twentieth-century laboratories.

The most disturbing distortion of the center’s history has been the sensational “revelation” in the press and on national television that the center was created for the purpose of crossing humans with apes to breed new races of primate. In the late 1990s, the science fiction writer E. Parnov obtained documents related to the founding of the center, which he claimed were previously classified. These included a “Project Decree of the Scientific Section of the Soviet of the People’s Commissars (USSR government): Petition by the Institute of Experimental Endocrinology”, which he cited often in highly distorted or fictional reports. For example, in an article, “Women for Monkeys” (Parnov, 1998), he reported attempts by Professor Il’ia I. Ivanov, Director of the Physiology Division of the Moscow Institute of Experimental Veterinary Medicine, “to cross humans with apes,” first in Africa and then at the Sukhum primate center. Parnov writes, “Virtually unlimited resources were allotted.”

Parnov artificially knits together his “discovery” with a host of unrelated, often distant events from the same era. These include shocked reference to gonadal transplants from nonhuman primates by S. A. Voronov, who in France conducted extensive but ultimately unsuccessful attempts to restore sexual function to elderly men, a goal reached only recently through pharmacological treatment of erectile dysfunction. Parnov further included the confiscation by Russian secret police of the manuscript of M. Bulgakov’s novel *Heart of a Dog*. In the novel Bulgakov explored the potential consequences of transplanting the pituitary gland of a drunken donor into a stray dog, which becomes more human-like in its mission to clear the city of “vagrant quadrupeds” (cats). (The work is generally considered a biting satire of social climbers and crass opportunists in the early Soviet era.) Excerpts from documents in those “special files”, writes Parnov, “would strike fear into the heart of even the most hardened of brutes.” The goal, he alleges, was “to flout the laws of God and man, to bring forth a breed of ‘Yahoo Sovieticus’, dumb, obedient slaves to perform heavy labor.” All

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2 RIMP celebrated its 80th anniversary in September, 2007, with an international conference in Sochi-Adler, Russia.

3 Referred to by its Georgian name, Sukhumi, during most of the Soviet era, the city has reverted to its earlier name, Sukhum, since Abkhazia claimed independence from Georgia in the early 1990s.

of this was cited as evidence that the center was intended to create hybrids and develop a new breed of worker.

After Parnov's publication of such provocative accounts, a series of similar reports appeared in the press and on television, where the theme of hybridizing species at Sukhum was intertwined with stories of the abominable snowman and other wonders, including aliens from outer space. Not only journalists but also professional scientists, such as A. Potapov of the Russian Military Medical Museum, the medical historian, T. Grekova, and other scholars joined the fray. For several years running, a government channel television series "Rossiya" has shown a production written by O. Shishkin and directed by D. Demin with the title "Red Frankenstein". The sensationalistic title persists to this day even though, within the film itself, the point is made that Ivanov was *not* a Frankenstein. Half-truths are mixed with rumors and outright falsehoods, but with no word about Ivanov's true objectives and scientific activities, his actual role in establishing the center, or the critical scientific questions facing medical primatology during that time.

From the first, these writers proclaimed the "revelation of secrets" and the uncovering of long-standing "mysteries of the KGB" that were based with few exceptions on information readily available in open archives of the Sukhum center, in the Leningrad Archive of the Russian Academy of Sciences, and in the personal archive of Professor Ivanov at the Academy of Sciences' Institute of Natural History and Technology in Moscow. Ivanov's research proposal, his "Report on the Expedition to Africa", his proposal for the creation of a primate center, and other pertinent materials are all available to anyone interested.

Several authors have reported that Stalin was impressed by the prospect of "cross-breeding humans with apes" and of creating a "new breed" of people. We have no intention to issue an apologia for Stalinism or for Stalin's "organs of surveillance", particularly in relation to the scientists and staff of the Sukhum center. They suffered dearly from the political repression of the times. Ivanov himself was ruined. Nestor Lakoba, an outstanding and devoted local patron of the center, died as a result of NKVD (People's Commissariat for Internal Affairs) intrigue. The distinguished Soviet scientist and organizer of research at the center, Academician P. F. Zdrodofsky, was imprisoned, as were the talented director, Pavel V. Lebedinsky, and employees D'iachenko, Bogdanov, and Fel'dman, who built the North Laboratory Building. Another who suffered significant persecution at the hands of "the organs of surveillance" was D. I. Miminoshvili, a former prisoner of war and military hero, who joined the center to lead a world-renowned research effort on social stress and hypertension in primates.

Few are aware that during the repression years these "enemies of the people" completed for publication two volumes of scientific reports on research conducted at the center. By the early 1960s they had accumulated more than 500 finished but unpublished reports for the literature. The decades-long delay in publication deprived other institutions, which were establishing research primate colonies around the world, of valuable knowledge compiled at the Sukhum center. Of course, it also deprived the center of priority in credit for discoveries on the acclimatization and adaptation of primates for laboratory research. By the time its findings were published the center was no longer the sole institution to have addressed such challenges by systematic scientific research.

Attempts by the media to portray as history reports that so cavalierly distort the true origins and accomplishments of this famous center should not go unchallenged. In 1925, when the decision was made to create a primate center, Stalin was still far from ascending to the status of "Great Leader" of the Soviet Union. He was not concerned with nonhuman primates and is quite unlikely to have known of the initiative by N. A. Semashko, then Minister of Public Health, and other Moscow scientists to establish the center. The Politburo itself did not then know who was to emerge as Great Leader; a mortal battle for power was in progress.

In a televised program, Parnov was introduced as an "expert on the history of the Sukhum primate center". He had written, "It is unlikely that anyone would guess what really was being done there during those *long years*" (italics added). The truth is that from its inception and throughout its 80-year history there was *never* an attempt to hybridize apes, much less to cross-breed apes with humans. Professor Ivanov had proposed cross-breeding experiments early on, but his purpose was merely to determine the degree of phylogenetic relationship between apes and humans. There was no absurd thought to create a "new breed of human". In the spring of 1927, before the center was established, he had conducted an experiment in Africa that involved artificial insemination of three chimpanzee females with human sperm. The attempt took place under formidable conditions in Conakry, then part of French Guinea, in West Africa. Two of the animals died on the ship between Dakar and Marseilles. Autopsies of the two, conducted on the ship, and of the third, by a pathologist at a local Sukhum hospital, yielded no evidence of conception. The experiment terminated before the center existed.

The Russian primate center was founded on August 24, 1927, the date that the first animals arrived. Professor Ivanov was never a staff member of the center. In fact he visited there only once for a few days in the early summer of 1928. He was a member of a team sent to inspect the

new facilities. The center had no great apes at the time of his visit.

Later, in October, 1928, the center obtained six chimpanzees (*Pan troglodytes*) and five orangutans (*Pongo pygmaeus*), together with 20 baboons (*Papio hamadryas*). The animals were obtained through the German firm, L. Rueh. They were shipped from Genoa, Italy, with transfer through Batumi, a port city on the Black Sea coast south of Sukhum. The great apes were so ill that some were accepted only on condition that they survive in a healthy state. Several died even before the supplier departed. Only the younger, sexually immature animals survived. The unsuccessful outcome of this delivery led to a long lawsuit with the Rueh firm. The last group of apes received at the center before World War II consisted of five chimpanzees, which arrived in the summer of 1930. They were accompanied by 11 macaques and 16 baboons. During those early years almost no ape survived at the center for more than a year and a half; only one lived longer, an orangutan, which died in 1933. In short, neither Ivanov nor any other investigator ever conducted great ape hybridization experiments at the center.

In a totally unrelated event of 1930, Professor Ivanov was arrested. He was exiled to Kazakhstan and on March 20, 1932, died of "arteriosclerosis". He was cleared of charges posthumously in 1959, six years after the death of Stalin.

In the late 1920s and early 1930s the local, national and international press disseminated information about Ivanov's *proposed* studies. During that time the center received letters from individuals of both sexes volunteering to "give themselves" to the research. And in later years, elderly residents were found who asserted "authoritatively" the existence of certain "fools who slept with the monkeys". But no claim as to specific events or individuals was ever forthcoming. Journalists alluded to one or two employees listed in work schedules as "for special duties" as possibly involved in secret studies. The center was chronically understaffed, however, and those duties no doubt represented a variety of odd jobs and errands essential to normal functioning of the institution.

The primate center at Sukhum was at first a section of the Moscow Institute of Experimental Endocrinology. Its sponsoring institution changed several times between 1927 and 1945, when it came under the jurisdiction of the U.S.S.R. Academy of Medical Sciences. During the "long years" of that stressful period, scientists at the center conducted the first systematic scientific effort by any institution to study the acclimatization and adaptation of nonhuman primates to temperate zone conditions and to apply their findings to the indoor/outdoor housing of large numbers of animals bred for multidisciplinary research. Throughout those and subsequent years the center served as a resource for biomedical research conducted by some

of the most outstanding scientists of the U.S.S.R. as they addressed the country's pressing public health challenges.

Anatoxins to tetanus and diphtheria, which were developed and tested at the center, saved the lives of hundreds of thousands of soldiers during World War II. Center scientists identified the tick carrier of Russian spring-summer encephalitis and tested vaccines against epidemic typhus. Penicillin tested on monkeys at the center in 1943 was immediately put to use at the front. In short, all antibiotics developed in the U.S.S.R. first underwent testing in primates at the center.

After the war, the method of delivering the live Sabin vaccine against poliomyelitis was developed and tested in monkeys at the center. The first mass field trials were conducted in Russia before the vaccine was adopted for use in the U.S. Considerable testing of protective agents against radiation sickness was carried out in primates. Studies of radiation effects at the center contributed to exposure standards set by the United Nations and were cited in U.N. deliberations regarding above-ground testing of nuclear weapons. The first primate models of experimentally induced malignant tumors were developed at the center; osteogenic sarcomas were induced by implantation of radioisotopes by the team of N. N. Petrov, as well as by chemical means, such as methylcholanthrene injection. Later studies produced models of soft tissue malignancies. Viral lymphomas were produced in several laboratory primate species, simultaneously with work by the U.S. scientists W. Winkle and K. Kofford, who showed increased sensitivity of monkeys to tumor viruses. Experiments on cardiorespiratory resuscitation provided the basic research for establishment of a network of treatment centers and mobile emergency care units throughout the U.S.S.R.

The Sukhum center is perhaps best known in the West as the model on which the U.S. National Primate Research Centers program and, indirectly, major primate centers in other countries, were based (Bowden & Smith, 2001). After the death of Stalin, when the Russians sent the first Sputnik into orbit, the U.S. and U.S.S.R. developed an extensive program of cultural, educational, and scientific exchanges. In 1957 Paul D. White, head of the International Association of Cardiologists and President Eisenhower's personal physician, together with James Watt, Director of the National Heart Institute, visited the Sukhum center. (White visited the center a second time in 1961.) Impressed, particularly by the work of D. I. Miminoshvili on the role of social stress in hypertension in baboons, they recommended that the U.S. establish a similar center. Congress extended the concept to encompass seven "regional" centers, which have recently expanded to eight "national" centers in the U.S.

The Russian primate center is further known internationally for its director, Boris A. Lapin, a medical pa-

thologist by training, who, together with L. A. Yakovleva, wrote the first textbook of primate pathology (Lapin & Yakovleva, 1963). That volume, translated into English and German during the early 1960s, was for several decades the most complete and authoritative source of information available to primate pathologists. Academician Lapin is known for original work on the role of oncogenic viruses in the etiology of human lymphomas and related conditions. Under his leadership, the center has been extensively involved as well in studies of primate responses to weightlessness conducted by the Russian space program, most recently in collaboration with NASA.

With the break-up of the Soviet Union and the civil war between Abkhazia and the newly constituted nation of Georgia, the center split into two institutions. One has continued severely curtailed operations in Sukhum where the government of the Republic of Abkhazia has included it in the Abkhazian Academy of Sciences. The other, which became the Research Institute of Medical Primatology (RIMP) in 1992, is located in Sochi-Adler on a site established in 1981 as a satellite breeding facility of the Sukhum center. The RIMP currently maintains colonies of about 4,000 monkeys, largely macaques, baboons, and other Old World species, for breeding and research.

While attacks by the Russian media continue to distress the staff and no doubt tarnish the center's reputation in the eyes of the public, the core primate colonies and research facilities of the Russian center have been reestablished. Foci of renewed research activity have emerged at RIMP in the areas of proteomics, immunology, aging, and infectious disease. But budgetary constraints shared by all institutes of the Russian Academy of Medical Sciences have so far prevented the center from resuming research programs on the scale pursued in earlier decades.

In September, 2007, the center celebrated its eightieth anniversary with an international conference on biomedical primatology⁴. In addition to a large number of par-

⁴ The conference, Fundamental and Applied Problems of Medicine and Biology in Experiments on Nonhuman Primates, Sep-

ticipants from throughout Russia, the meetings were attended by the heads of a number of primate research centers and husbandry programs from Western Europe, the United States, and Asia. All were gratified to see the parent of world primate research institutions resuming its role as a significant contributor to international biomedical research.

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tember 19-22, 2007, at Sochi-Adler, Russia, was jointly sponsored by the Research Institute of Medical Primatology, the Russian Academy of Medical Sciences, and the Institute of Experimental Pathology and Therapy, Abkhazian Academy of Sciences.

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