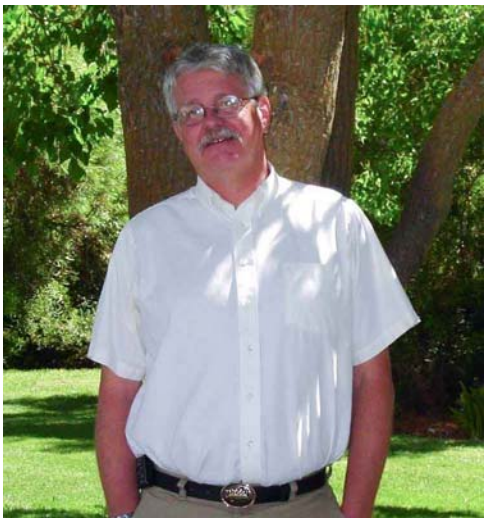
In Memoriam: Nicholas W. Lerche
By Jeff Roberts



Dr. Nicholas W. Lerche died on the morning of March 20, 2012. Nicholas was born December 31, 1949, in Oakland, California to Effie Gay and William Carl Lerche. Nick graduated magna cum laude from San Francisco State University in 1971 with a double major in zoology and anthropology. He obtained a doctorate in veterinary medicine in 1979 with a specialty in zoological medicine from the School of Veterinary Medicine at the University of California—Davis. He then went on to get a masters of preventive veterinary medicine with a specialty in epidemiology. Nick's first position was as a replacement veterinarian at the California National Primate Research Center in the first half of 1980 when Jim Else left the program early to take a position at the Institute of Primate Research in Kenya. Nicholas then joined the CDC as an Epidemic Intelligence Service Officer investigating human disease outbreaks. In 1982 Nick was recruited back to the primate center to use his skills in veterinary medicine and epidemiology to help understand an unusual outbreak of immune deficiency that was occurring in populations of rhesus monkeys housed in outdoor corrals. Before any causative agent was identified, Nick demonstrated through an elegant paper in *Laboratory Animal Science* that this immune deficiency disorder was an infectious agent, spread by direct contact. At the time, Nick didn't realize that this agent, Simian retrovirus, would be the focus of his career for the next three decades. Soon after Nick demonstrated that Simian Acquired Immune Deficiency Syndrome (SAIDS) was an infectious agent, virologists at the primate center isolated a Type D retrovirus. At about the same time, another retrovirus, Simian Immunodeficiency Virus (SIV) was also isolated and went on to become the disease model for studying HIV in humans.

During this time, Nick advanced from being a post graduate epidemiologist to becoming an associate veterinarian and project epidemiologist with the AIDS research group. In addition to his work at the Primate Center, Nick also became involved in field research. Everyone was attempting to isolate new retroviruses in both wild and captive primate populations. Nick traveled to Liberia with Preston Marx and worked on sampling pet primates in various villages throughout the country. He also got a taste of some of the unexpected occurrences that can accompany field research when their Toyota Land Cruiser was requisitioned by young Liberian rebels with machine guns. Nick's bad luck with vehicles continued on a research trip to Indonesia with an interdisciplinary group of scientists studying the biology of the Sulawesi macaque, led by Joe Erwin. Nick's focus was on studying the different variants of SRV found in Sulawesi macaques. His focus was distracted when the car that Nick and Joe were riding in Jakarta was hit by a bus. Nick wound up in a clinic where he had some anxious moments, but fortunately recovered well. He came back from this trip having lost quite a bit of weight. He attributed this to both the accident and the diet in the field that included fried cattle lung and flying fox wing.

Nick's next trip was to Panama with John Anderson, Linda Lowenstine, and Katherine Milton. They traveled to the Barro Colorado Smithsonian Field Research Station to try and determine the causes of increased mortality in wild howler monkeys. The howler monkeys would periodically experience high levels of bot fly infestation that would result in high monkey mortality. This trip had many memorable moments including catching tranquilized howler monkeys in nets as they dropped out of trees and watching the sparkling eyes of caiman surrounding their boat at night. The humidity was so high that they had to put their shoes in a lighted box at night to prevent mold from growing on the canvas. One of Nick's fondest memories of the research station was the vending machines that dispensed ice cold beers.

Nick's travels also included attending international meetings to present his research on nonhuman primate diseases. He traveled to Europe and Asia, talking about simian retroviruses, viral testing, and developing monkeys free of retroviral agents. On a trip to Japan he had the misfortune to arrive in Osaka by plane while his luggage

went to Tokyo. They were having a heat wave with temperatures consistently over 100˚F. Normally one would just go out and buy more clothes but Nick's height in Japan made this somewhat difficult and resulted in several unpleasant days of wearing the same clothes in 100˚F with 85% humidity. He found consolation during a side trip after the meeting which allowed him to watch baby sea turtles hatching on a white sand beach and making their way to the ocean at night. He also had the excitement of following a troop of wild Japanese macaques in the forest. After one particularly long hike up a mountain, the primatologist leading the group assured everyone that there was water at the top of the mountain. Unfortunately, the water was a large pond covered in algae and duckweed. His training in parasitology and infectious disease overcame his thirst and he waited until they came down off the mountain to rehydrate.

Wherever he went, Nick would make friends and find new colleagues. His friendly nature and collegiality would come in handy in many instances. On a trip to China, he was placed in an awkward situation when in the middle of his visit riots erupted after the U.S. accidentally bombed the Chinese embassy in Yugoslavia. There were some uncomfortable moments, but his hosts maintained their hospitality and he was able to enjoy the rest of his trip.

Nick developed most of his foreign contacts through his teaching and mentorship. He taught for years in the UC Davis School of Veterinary Medicine and became a full professor in the Department of Medicine and Epidemiology. He mentored graduate students from around the world and became a valued advisor for them when they returned to their home countries. His commitment went far beyond teaching and reading manuscripts. One time early in his career, he helped one graduate student get his entire family out of their home country which was being torn apart by civil war. He purchased airline tickets at the last minute to fly out the parents and siblings of the graduate student. Barely a few years out of school himself, it took a long time for Nick to pay off his credit card bills from this act of generosity.

Nick was also a consultant to NIH and numerous universities, zoos, and companies around the world. When the primate research community understood the significance of the role that retroviral infections played in both wild and captive primate populations, many places developed assays to test for the virus and antibody. Nick's expertise was his ability to take the results of these tests and fit them together, like pieces in a puzzle, to understand the natural history of the virus and disease. He was a leading figure in the development of macaque specific pathogen-free breeding colonies and along with Julia Hilliard's B Virus Reference Laboratory, his Pathogen Detection Laboratory become one of the NIH reference laboratories. In the 1990s his laboratory went beyond viral diseases and helped develop new methods to detect tuberculosis infections. Nick's contribution to the field of primate medicine was recognized by his peers in 2008 when he received the AALAS Nathan R. Brewer Award. Nick was a generous collaborator. He supplied many colleagues with reagents and advice, and if you were lucky enough to get him on the phone, he was always ready to answer your questions.

His expertise went beyond the management of primate populations to being an expert consultant on issues in organ transplantation and human health. He gave countless lectures at AALAS, AAZV, APV, Simian AIDS meetings, and occasionally over an ice cold liter of Märzen at his favorite local brew house in Davis. This is where Nick co-founded "The Smooth Cortex Society," whose mascot was the squirrel monkey: the primate model for lissencephaly and a testament to the beneficial effects of a cold beverage. It was a good excuse to get together with friends and solve the world's problems. The group motto was "Nullus Rugae, Nullus Molestus Gravis" ("No wrinkles, no worries").

Drinking a cold beer was perhaps the best place to talk science with Nick. Although his work was with primate viruses, his interests were wide ranging and deep. He was an amateur herpetologist, spending many afternoons collecting rattlesnakes for relocation off grateful friends' lawns. He and his wife Jacie built a menagerie of pets, including cats, dogs, cockatiels, cockatoo's and giant tortoises. He loved bonsai and always kept an eye out for bonsai shops when traveling. With his fascination for nature, it isn't surprising that two of his heroes were Charles Darwin and Dr. Ed Ricketts. Like them, Nick was a quiet observer, fascinated with nature and how all things interact. He could talk about how different pathogens would evolve with their hosts and become a window into understanding primate evolution. He would discuss overpopulation in tiger salamanders and how social pressure would alter the genetic expression of offspring and give rise to cannibal morphs, who would then limit the

population. It was impossible to sit and share a beer with Nick and not come away feeling like you'd learned something new and had thoroughly enjoyed the entire process.

The early passing of this wonderful person leaves a hole in the lives of friends and colleagues from around the world. Fortunately, Nick's legacy lives on in many ways. First and foremost are the successful careers of the veterinarians he has trained from around the world including PhD and masters students from the US, Indonesia, Japan, Kenya, Liberia, Brazil, Mexico, Peru, Philippines, China, Chile, Uganda, Iran, and France. The Pathogen Detection Laboratory at the California National Primate Research Center continues its work with his colleagues, JoAnn Yee and others. Many kind thoughts and wishes have been sent and a memorial scholarship has been established in his name at the UC Davis School of Veterinary Medicine. The comment of one former student probably sums it up best. "He was one of the finest people I ever knew."

In addition to his personal and professional achievements, Nick was a loving husband, son, brother, and a friend to all who met him. He is survived by his wife, Jacquelyn Dieter; his sister and her husband, Gretchen and Randy Johnson; and, his nephew and his wife, David and Courtney Johnson.