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POLICY STATEMENT

The *Laboratory Primate Newsletter* provides a central source of information about nonhuman primates and related matters to scientists who use these animals in their research and those whose work supports such research. The *Newsletter* (1) provides information on care and breeding of nonhuman primates for laboratory research, (2) disseminates general information and news about the world of primate research (such as announcements of meetings, research projects, sources of information, nomenclature changes), (3) helps meet the special research needs of individual investigators by publishing requests for research material or for information related to specific research problems, and (4) serves the cause of conservation of nonhuman primates by publishing information on that topic. As a rule, research articles or summaries accepted for the *Newsletter* have some practical implications or provide general information likely to be of interest to investigators in a variety of areas of primate research. However, special consideration will be given to articles containing data on primates not conveniently publishable elsewhere. General descriptions of current research projects on primates will also be welcome.

The *Newsletter* appears quarterly and is intended primarily for persons doing research with nonhuman primates. Back issues may be purchased for \$10.00 each. We are no longer printing paper issues, except those we will send to subscribers who have paid in advance. We will not accept future subscriptions, unless subscribers are willing to pay \$80/year within the U.S.; \$100/year outside the U.S. (Please make checks payable to the Psychology Department, Brown University.) Readers with access to electronic mail may receive the nongraphic contents of each issue by sending the message **subscribe LPN-L your-own-name** to listserv@listserv.brown.edu (Send the message **subscribe LPN-PEF** to receive PDF files by e-mail; or the message **subscribe LPN-WARN** to receive a notice when a new issue is put on the Website.) Current and back issues of the *Newsletter* are available on the World Wide Web at <http://www.brown.edu/primate>. Persons who have absolutely no access to the Web, or to the electronic mailing, may ask to have paper copies sent to them.

The publication lag is typically no longer than the three months between issues and can be as short as a few weeks. The deadline for inclusion of a note or article in any given issue of the *Newsletter* has in practice been somewhat flexible, but is technically the tenth of December, March, June, or September, depending on which issue is scheduled to appear next. Reprints will not be supplied under any circumstances, but authors may reproduce their own articles in any quantity.

PREPARATION OF ARTICLES FOR THE NEWSLETTER. – Articles, notes, and announcements may be submitted by mail, e-mail, or computer disk, but a printed copy of manuscripts of any length or complexity should *also* be sent by regular mail. Articles in the References section should be referred to in the text by author(s) and date of publication, e.g., Smith (1960) or (Smith & Jones, 1962). Names of journals should be spelled out completely in the References section. Technical names of monkeys should be indicated at least once in each note and article. In general, to avoid inconsistencies within the *Newsletter*, the scientific names used will be those in *Mammal Species of The World: A Taxonomic and Geographic Reference*, 2nd Ed. D. E. Wilson & D. M. Reeder (Eds.). Washington, DC: Smithsonian Institution Press, 1993. For an introduction to and review of primate nomenclature see the chapter by Maryeva Terry in A. M. Schrier (Ed.), *Behavioral Primatology: Advances in Research and Theory* (Vol. 1). Hillsdale, NJ: Lawrence Erlbaum Associates, 1977.

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Cover photograph of a bonobo (*Pan paniscus*) family at the Jacksonville, Florida, Zoo, by Marian Brickner.
See an article by the photographer on page 12 in the first issue of this volume.

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Promoting Positive Interactions Between Chimpanzees (*Pan troglodytes*) and Caregivers

Mary Lee Jensvold

Chimpanzee and Human Communication Institute

In human interactions, partners often mirror each other's behaviors (Condon & Ogston, 1967; Kendon, 1970; Schefflen, 1973). If one partner crosses her legs, the other may do so as well. If one partner scratches his head, the other may also do so. Studies show that when the partners match each other's behavior, the interaction is perceived by outside observers as more positive (Navarre & Emihovich, 1978; Navarre, 1982). Individuals report that when a partner matches their behavior, they like that person more (Dabbs, 1969). This can have tremendous impact in the areas of student-teacher relationships (LaFrance, 1979), and client-therapist relationships. Therapists and teachers can increase rapport by mirroring behaviors.

Through a generous grant from the Animal Welfare Institute Refinement Award, we are testing our contention that when caregivers use chimpanzee behaviors, more positive interactions result. In the experiment caregivers use chimpanzee behaviors in some interactions, and in other interactions they only use human behaviors. For example, in the Chimpanzee Behavior Condition, caregivers show playfaces and use chimpanzee laughter in a game of chase. In the Human Behavior Condition, they smile and laugh as they would when interacting with a human. Graduate student Jackie Smith collected data at the Chimpanzee and Human Communication Institute (CHCI) as part of her master's thesis. I collected data at The Zoo Northwest Florida this past summer.

CHCI Observations

At CHCI all caregivers learn to identify chimpanzee behaviors and their contextual meanings. During husbandry activities caregivers use these behaviors in interactions. For example when caregivers first see the chimpanzees each day, they present a pronated wrist, breathy pants, and head nods – all friendly chimpanzee greetings. When caregivers play with the chimpanzees, they present playfaces, chimpanzee laughter, and playkicks and playslaps on the wall or floor. When the chimpanzees display

aggressive behaviors, caregivers use submissive chimpanzee behaviors such as crouching low and averting their eyes. The idea is that by using these behaviors we are improving the quality of the chimpanzees' lives by promoting positive relationships.

There is some data to support this contention. In the late 1990s at CHCI, Crickette Sanz and I examined interactions between the chimpanzees and human visitors during Chimposiums (one-hour educational workshops in which the visitors learn about chimpanzees and the history of the project, and have the opportunity to observe the chimpanzees). Before the observation phase, visitors learn "chimpanzee etiquette". They learn to make a "playface", exposing the lower teeth, which is analogous to a chimpanzee's smile. They are discouraged from showing the top teeth in a grin, which is a facial expression indicating high arousal to a chimpanzee. The visitors crouch when they enter the observation area, which makes them appear small and submissive to the chimpanzees. They are taught to nod their heads, which is an affiliative chimpanzee behavior, and they learn a few signs.

In our experiment, for some Chimposiums we eliminated this training. That meant, during the observation time, visitors didn't know the etiquette. We called these groups Naïve Visitors. In other Chimposiums, visitors received normal training. We called these groups Educated Visitors. We recorded the chimpanzees' behaviors during each type of Chimposium. We found that the chimpanzees were more territorial, exhibiting more aggressive and highly aroused behaviors, in the presence of the Naïve Visitors as compared to the Educated Visitors (and to a control period with no visitors) (Sanz & Jensvold, 1997).

The Zoo Northwest Florida

The Zoo Northwest Florida is located in Gulf Breeze. It is home to a variety of animals, including three chimpanzees, four gorillas, and three orangutans. I sent inquiries to numerous zoos to conduct this project and The Zoo responded with open arms and enthusiasm.

It was ironic that I would end up at The Zoo doing this particular project. About 13 years ago, my husband Steve and I visited The Zoo and we encountered the chimpanzees. We stood with the crowd observing the young chimpanzees. When the crowd dissipated I gave a head nod to the chimpanzees. Their eyes lit up – someone out there spoke chimpanzee! This turned into a long game of chase. For me, that was one of the defining moments of the power of using chimpanzee behaviors. Now those

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A version of this paper appeared as "Why I do what I do: Data collection at The Zoo Northwest Florida", *Friends of Washoe*, 2006, 28[1], 1-5.

little chimps have grown up into three boys, Mr. Zoo-good, Patrick, and Zachary. They are half brothers all in their teens. That combination spells non-stop play.

The chimpanzees share their building (called the Gorilla House) with four gorillas, Rwanda, Hussani, Muweli, and Babooka. Rwanda and Hussani are together, and Muweli and Babooka are together. The “bedrooms” are where the chimpanzees and gorillas stay at night. During the day they go onto one-acre islands. Since there are three groups (one chimp group and two gorilla groups) and just two islands, one group stays in the bedrooms each day. The three groups have visual, but never physical, access to each other. While I was excited to spend time around the chimpanzees, I was also looking forward to spending time around the other apes, which would be a new experience for me.



Figure 1: A chimpanzee (center) enjoys climbing high in a treetop on this island.

The zoo staff is tremendously busy. Only one caregiver is assigned to the apes each day. She or he is responsible for cleaning the Orangutan House and the Gorilla House. I was eager to do what I could to help them. Each morning I met the caregiver who was working that day, usually at the Orangutan House. I helped clean the orangutan outside area and then we made our way to the Gorilla House.

I had never spent time in a multi-species facility, so it was a new experience to wander by hoofed stock and ostriches on the way to the Gorilla House. The Zoo is a

dynamic place – many days brought something unexpected. One day new alligators arrived and the entire staff helped move them into their new quarters. Another day all staff helped to move kangaroo crates from one place to another. I’d never been around kangaroo crates – they’re big! I was happy to help physically with the kangaroo move, but I was content just to watch the alligator event.

Once I figured out the daily routine I began my data collection in the Gorilla House.

At CHCI the roles of the researcher and caregiver blend seamlessly. Much of the data collection occurs during regular husbandry tasks. For example, a caregiver while cleaning may see a chimpanzee signing to another; that is recorded in a log. Much of the research, especially the sign language research, requires that the experimenter have a good relationship with the chimpanzees, and this relationship develops during daily activities, such as cleaning and serving meals. We do not coerce the chimpanzees’ participation in experiments. The trick for the experimenter is to make the activity interesting and blend it in with usual activities. If the chimpanzees are interacting and signing with caregiver friends throughout the day, the caregiver can easily insert a systematic manipulation into the interaction without creating any artificiality. This also keeps the researcher humble. Following this principle, I cleaned the ape enclosures daily with The Zoo caregivers. This helped me become a natural part of the day, rather than “The Experimenter”. This worked well – it provided me with opportunities to observe the chimpanzees and the gorillas while I worked and gave me opportunities to interact with them.

Getting to know the chimpanzees was easy. I walked in, gave a low breathy pant, a bent wrist, and head nods – the ingredients for instant friendship. Things were even easier since the chimpanzee group was three boys who liked to play. It was like instant chocolate pudding. Just add breathy pants and head nods and it’s pure pleasure. Things went so well that after a few days I decided that I, as well as the regular zoo caregivers, would be a participant in the study. So each morning the regular caregiver first interacted with the chimpanzees, and then I did.

Getting to know the gorillas was the challenge. Gorillas are very different from chimpanzees. Chimpanzees live in communities with fluid parties, which may be spread out over large distances within the community boundaries. Their communications, both vocal and non-vocal, are explicit. Most of the vocalizations are loud and carry over long distances, reaching all in the community. Their nonvocal behaviors are easy to read: when chimpanzees are aggressive they stand up with arms akimbo and swagger or charge. Greetings involve reaches and touches and relatively loud barks. Gorillas, on the other hand, live in groups the members of which are nearly al-

ways in physical and visual proximity. Thus their vocalizations are quieter and their behaviors are less apparent than those of chimpanzees. A gorilla threat is a sideways quadrupedal standing posture; it's a good way to show someone how big you are but it has no movement. Their hair is piloerect (standing up) and they compress their lips together. A threatening gorilla will not meet the gaze of the target of his aggression. In other words, gorillas won't look at you if you look at them.

While the chimps were instant friends, the gorillas weren't. They postured at me a lot and often banged when I walked by. I realized I had to take this slowly and couldn't directly address them. I felt a bit frustrated since I didn't know how to respond in a friendly way. I relied on what I did know. I could recognize aggressive behaviors and I knew how to respond submissively: get low and don't stare. I used my chimpanzee instincts. Sometimes I simply sat by their massive posturing hulks and intensely examined my fingernails while Bronx cheering. Grooming is fascinating to chimpanzees, and it is fascinating to gorillas as well. While focusing on my nails, I could use my peripheral vision to monitor the gorillas. I could see the inside of their lips, no more compressed faces, and they looked directly at me. If I then looked up, they immediately looked away and regained the tense faces. It was amazing how rigid they were about this, especially during the first week.

One of the caregivers tried to warm up my relationship with the gorillas by having me offer a piece of frozen celery to each gorilla. Only Babooka took a piece from me. I've never believed in buying friendship anyway. Time and patience are the routes to friendships.

Day after day I cleaned. The gorillas, who were outside, would sit and watch me through a slit in the door. If I was focused on my cleaning and not looking at them, they watched me intently. Sometimes I quietly sat where they could see me and intensely groomed my fingernails with Bronx cheers. That was fascinating to them. They were also quite interested in my activities with the chimpanzees. These included lively games of chase, tickling, laughter, and a lot of fun.

In the mornings after we cleaned several rooms, the apes inside moved into the clean area. One day Babooka moved into three adjacent clean rooms. As I was cleaning other rooms I heard him banging around more than usual. He was running the length of the three rooms, which also was unusual. The gorilla display is a short charge that ends in a bang. What Babooka was doing involved a lot more running around. I stopped cleaning to watch him.

Facial expressions are shared by all of the apes. I've described playfaces and aggressive faces. Grooming involves fine movements of the mouth such as lipsmacks and Bronx cheers. Faces are my meter on reading emo-

tions in apes. On Babooka's face at this moment of his crashing and banging, I saw a flash of white: his teeth. I realized he had a huge playface and I was witnessing a gorilla playing. I gave some chimpanzee laughter and a playface and he crashed around some more. He swung on the swing and beat his chest, donning his huge playface. I chimp-laughed at his antics, which served to egg him on. He somersaulted and pirouetted around while I chased him. He laughed. He banged on a drum and I drummed back, again and again. It was fun and fascinating. I was seeing play behaviors that chimpanzees use blended with gorilla behaviors such as chest beating. It was as if he were saying "Hey, you've been playing with those chimps, but what about us gorillas!" Needless to say Babooka and I were pretty good friends after this. He shared his morning crackers with me and we visited each day. This also paved the way for the other gorillas to mellow out a bit. No one interacted with me to the level that Babooka did, but some of them shared food and all became more relaxed in my presence.

One fun way of offering drinks to apes is with juice buckets placed outside the enclosure. The ape has a clear plastic tube and can put it into the bucket and suck out the drink. We often do this at CHCI, and other places do it, too. I introduced the idea at The Zoo and it was received with great enthusiasm – and much shopping. We first tried the buckets with Babooka and Muweli. We introduced the concept by filling the tube from the bucket and draining the liquid right into the gorillas' mouths. Then we created a siphon, Babooka sucked and sucked and sucked and sucked. I thought he was going to explode so eventually the caregiver, Allison, extracted the tube from his mouth. Then she put the end of the tube back in his mouth, but he couldn't get the tube refilled by sucking, as he didn't quite get the sucking concept. So he pulled the whole tube into the enclosure. Next he tried to put the end of the tube back out through the fencing and into the bucket. In his attempts to get a 1/2-inch thick tube through a 2-inch-wide space in the fencing he tried pushing it through sideways, bending it, stuffing it – he tried everything in the book to get to get it through, except the correct solution.

As he worked on this I excitedly explained to Allison, "This is excellent enrichment. It creates a wonderful opportunity to solve a problem. It creates a challenging task that will occupy him. Look at how focused he is!"

"He's getting frustrated," Allison replied. She was right: his hair grew piloerect and finally he dropped the tube, charged and banged into the fence and the whole enrichment! Muweli didn't have any better luck.

The next day we gave the same opportunity to the chimpanzees. They were happily sipping Koolaid in a cool 10 seconds. The chimpanzees use the buckets daily now.

So what about my experiment? I am now in the process of coding the videotapes, but my subjective impression is that the experiment had a huge impact on the daily lives of the chimpanzees, and probably the gorillas too. Initially the caregivers were tentative using the chimpanzee behaviors but they were hooked by the end of the first Chimpanzee Behavior session. After that they dreaded the Human Behavior days. They reported that they didn't know what to do on Human days, despite the fact that they had been using only human behaviors in their interactions for years! The chimpanzees were very responsive to the caregivers' use of chimpanzee behaviors. It seemed like they interacted more, wore more and bigger playfaces, and produced more and louder laughter. Certainly the interactions were longer. Even so the chimpanzees must have thought we were awfully moody: some days we behaved like chimpanzees and on other days we didn't. On one of my Human Behavior days, Zack jumped over to me with a huge playface and laughter. Because of the experimental condition I greeted him with speech and a smile. Zack's demeanor instantly changed: the laughter stopped, and the playface dropped. These are our anecdotal reports – the systematic analysis of the interactions will be what tells us whether the interactions were different.

The days flew by as fast as the sweat poured out of me in the hot Florida summer. Soon all of the data were collected and it was time to go. Fortunately, before I left I had the opportunity to meet The Zoo docents who are a very active part of The Zoo. I gave a presentation of my study and the reasons for it to the docents and The Zoo staff. Everyone was very excited to learn about the project. It helped the caregivers have a greater understanding of their role and interactions at The Zoo. Additionally the docents will teach zoo visitors about chimpanzee behaviors and there will be new signage that explains the behaviors the visitors may see. The enthusiasm and energy in the zoo staff and docents was brilliant.

Captivity is not a good place for anyone to live. In human cultures captivity is what we use to punish people. By acknowledging the reality of captivity, we can make strides to improve its condition. One avenue is to pro-

mote a positive social environment, including the relationship between chimpanzees and their caregivers.

Even since I left and the experiment ended I am told that the chimpanzees seem more relaxed and more cooperative with the caregivers, perhaps a result of more positive interactions. In the end, experimental evidence of ways to improve caregiving practices will affect the lives of many individuals who dwell in captivity. It can show us practices that will mitigate the negative aspects of captivity and can move us toward dealing with the dilemma of putting innocent sentient beings behind bars.

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Jaw Measurements on Sedated Monkeys

William L. Hylander, Professor Emeritus at Duke University, would like to take some noninvasive measurements of the jaws of sedated monkeys. Below is a list of the monkeys of interest. If you are planning to sedate any of these monkeys for another purpose, Dr. Hylander asks that you let him know so that he can come and take the measurements.

The animals of interest are *Theropithecus gelada*, *Erythrocebus patas*, *Macaca sylvanus*, *M. sinica*, *M. radiata*, *M. thibetana*, *M. cyclopis*, *M. arctoides*, *M. nigra*, *M. tonkeana*, *M. maurus*, and *M. silenus*. Contact Dr. Hylander at the Dept of Biological Anthropology & Anatomy, Box 3170 DUMC, Duke University, Durham, NC 27710 [919-684-5782; fax: 919-684-8034; e-mail: hylan001@mc.duke.edu].

Positions Available

Veterinarian – Bethesda, Maryland

The National Institutes of Health (NIH), the world's largest medical research facility, has a challenging position now available in the Division of Veterinary Resources (DVR), Veterinary Medicine Branch (VMB). Working as a Facility Veterinarian for the NIH requires expertise in laboratory animal medicine and a working knowledge of regulatory requirements for the care and use of animals in research. You will be responsible for provision of clinical care, direction of technical staff, protocol review, and facility operation; and must have a strong working knowledge of laboratory animal medicine as well as the ability to work with a wide spectrum of individuals in a number of capacities. You will have attending veterinarian responsibilities for an average census of 650 primates, and oversight of veterinary staff. Practical experience with primate medicine is essential.

Qualifications for the position include a Doctor of Veterinary Medicine (DVM) or equivalent degree, obtained at a school or college of veterinary medicine accredited by the American Veterinary Medical Association Council on Education (AVMA). Candidates must have successfully completed National Veterinary Board certification, be licensed to practice veterinary medicine in at least one state, and have one year of progressively responsible professional veterinary experience. Graduates of veterinary schools not AVMA-accredited must have Education Commission for Foreign Veterinary Graduates certification.

Salary ranges from \$73,000 – \$159,000, and a full package of Civil Service benefits is available, including retirement, health and life insurance, long-term care insurance, leave, and savings plan (401k equivalent). Appointment will be made at a salary level commensurate with the qualifications and experience of the candidate. Appointments to this position will be made as Staff Scientist under the federal government's "Title 42 excepted appointing" authority.

Interested candidates should submit a current CV, bibliography, and the names and addresses of three references. Applications must be received by December 30, 2006, sent to: Jessica Akers, NIH/OD/Office of Human Resources, 2115 E. Jefferson Dr., Rm 2D229, MSC 8502, Bethesda, MD 20892-8502 [e-mail: akersj@mail.nih.gov]. The Department of Health and Human Services/NIH is an Equal Opportunity Employer. This position is posted at

<jobsearch.usajobs.opm.gov/getjob.asp?JobID=49464762>.

Animal Behavior Manager – Maryland

An animal behavior manager is sought to be responsible for the oversight of the behavior and enrichment pro-

gram for the Division of Veterinary Resources at the NIH on both the Bethesda and Poolesville, Maryland, campuses. This person will be responsible for supervising behavior technicians; will spearhead oversight of the non-human primate (NHP) behavior, socialization, and enrichment programs; and will provide supervisory oversight for other species such as canines, felines, and swine in and around NIH.

Qualifications include a BS in biological sciences (minimum), general understanding of animal behavior, two years' experience in a captive animal setting (such as a biomedical laboratory or general animal facility – not a clinical veterinary hospital), one year's supervisory experience, six months' hands-on NHP experience in a captive setting, good written and oral communication skills, and the ability to work independently. Teaching skills would be a plus.

Contact Toni Howard, 9000 Rockville Pike, Bldg 14A, Bethesda, MD 20892 [301-402-6677; fax: 301-402-0054; e-mail: howardto@mail.nih.gov].

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Clinical Veterinarian – Tulane

The Tulane National Primate Research Center (TNPRC) has experienced extensive growth of its veterinary resources and research programs and is seeking applications for the position of clinical veterinarian within the Division of Veterinary Medicine to help meet the needs of this expansion.

The TNPRC is one of eight National Primate Research Centers in the U.S. The TNPRC is an AAALAC International-accredited facility housing approximately 5,000 nonhuman primates (NHP) of nine different species. TNPRC's research program is focused on infectious disease research with a concentration on the study of AIDS. Other areas of research involve gene therapy, reproductive biology, biodefense, NHP behavior and clinical NHP medicine and surgery.

Responsibilities of the newly created position include general medical and surgical care of breeding colony and research animals, provision of research support, and training of investigators, laboratory animal medicine residents, veterinary students and technicians. The successful candidate will be provided opportunities to participate in the conduct of independent or collaborative clinical research directed toward nonhuman primate medicine and surgery.

The candidate must hold a DVM/VMD degree from an AVMA-accredited college of veterinary medicine and be licensed to practice veterinary medicine in one of the 50 states. ACLAM board certification or eligibility is desirable. The candidate should have excellent verbal and written communication skills and the ability to interact positively with others.

Interested persons should submit a letter of interest, CV, and a list of three references to: Rudolf P. Bohm, Jr., DVM, Chair, Div. of Vet. Med., TNPRC, 18703 Three Rivers Rd, Covington, LA 70433. For more information call 985-871-6266 or e-mail <bohm@tulane.edu>.

Tulane University is an Affirmative Action and Equal Opportunity Educator and Employer. Women and individuals from underrepresented minorities are strongly encouraged to apply. This position will remain open until a qualified candidate is selected.

Primate Environmental Enrichment Specialist

The TNPRC is also seeking a Primate Environmental Enrichment Specialist. This person will perform a variety of tasks related to the behavioral management program for group-housed nonhuman primates, as directed by the Breeding Colony Manager, in cooperation with the Enrichment Program Coordinator and Breeding Colony Veterinarian. S/he will manage the behavioral assessment activities of group-housed primates; assist with social management of new and existing social groupings; maintain documentation of dominance hierarchies and group dynamics; assist with the evaluation of enrichment devices and other enrichment strategies currently in use; train animals to perform specific tasks as requested; and generate progress reports.

Qualifications: BS degree with a background in behavioral sciences and two years' experience in laboratory animal care, or four years' experience in laboratory animal care plus certification as an AALAS-LAT, or six years' experience in laboratory animal care; PLUS the ability to follow oral and written instructions and the ability to lift items weighing up to 43 lbs.

This is a permanent, full-time position; salary is commensurate with experience. For more information contact Nadia Slisarenko, TNPRC, 18703 Three Rivers Rd, Covington LA 70433 [985-871-6369; fax: 985-871-6328; e-mail: nslisare@tulane.edu].

Lab Animal Clinical Veterinarian – North Carolina

Wake Forest University's Animal Resources Program is seeking a clinical veterinarian to provide medical care to animals, including primates, rodents, and a variety of other species used in teaching and in a research-intensive setting. The candidate will join a team of veterinary faculty and staff responsible for the provision of animal care that ensures compliance with regulatory and accreditation requirements. Additional responsibilities will include

supervision of three to four animal health technicians, consultation with research faculty and staff on issues pertaining to animal care and use, training of personnel, and participation in IACUC activities. Wake Forest University, founded in 1834 and located in Winston-Salem, is a private, co-educational AAALAC-accredited university consisting of six schools, including Wake Forest University School of Medicine (WFUSM). Areas of research emphasis include cardiovascular disease, neuroscience, cancer biology, substance abuse, women's health, diabetes, infectious diseases, and aging.

Minimum acceptable qualifications include a degree in veterinary medicine from an AVMA-accredited school, state licensure to practice veterinary medicine in the United States, and one year of veterinary practice experience. The applicant should possess excellent communication skills (written and verbal) and a service-oriented attitude. Additional desirable qualifications are training and/or experience in laboratory animal medicine, surgical experience, and supervisory skills. For consideration, please submit a letter of intent, CV, and three references to: Paul Sikoski, DVM, Instructor, Pathology/Comparative Medicine, and Assistant Director, Animal Resources Program, Wake Forest University School of Medicine, Medical Center Blvd., Winston-Salem, NC 27157-1047 [fax: 336-713/1177, e-mail: psikoski@wfubmc.edu].

Senior Research Veterinary Tech. – Irvine, California

Allergan, Inc., has a position open in its Department of Laboratory Animal Sciences. This person will perform standard veterinary technical support for the departmental program of veterinary care. This will include monitoring the health and welfare of all research animals; providing necessary treatment, preventative maintenance, care, and enrichment; record-keeping; and participation in the rodent health surveillance program.

Requirements include a BS or BA and four years' specific veterinary technical experience; or Animal Health Technician (AHT) and eight years' veterinary technical experience. Certification by AALAS at the LATG level is desirable. Nonhuman primate experience is essential; Good Laboratory Practices experience is desirable. This position requires excellent interpersonal and communication skills for interaction with multiple levels of personnel; the ability to work with minimal supervision; and general familiarity with standard office computer software.

For detailed information, or to apply, contact Eric Nelson, Director, LAS, Allergan, Inc., Irvine CA 92612 [714 246-2606; e-mail: Nelson_Eric@Allergan.com].

Psychology Faculty – New York City

Two tenure track positions are open at the Psychology Department, Hunter College, City University

of New York, for Fall, 2007. A PhD and an active program of research are required, as well as potential for, or history of, external funding. Special attention will be given to candidates whose experience involves urban, ethnically diverse populations and who are sensitive to the cultural dimensions of people's experience. Responsibilities include teaching and supervising graduate and undergraduate research. See <maxweber.hunter.cuny.edu/psych>.

One position is for a Neuroethologist/Neurophysiologist with emphasis on analyses of neural mechanisms underlying behavior. Experience in conservation to participate in a thriving Master's program in Animal Behavior and Conservation is desirable. This will be as an Assistant or Associate Professor.

The second position will be determined less by topic area and more by the quality of the candidate. Areas of interest include animal behavior and conservation; animal and human interaction; social cognition; and community,

developmental, or clinical psychology. We are particularly interested in a person who will be actively involved in a thriving Master's Program in Animal Behavior and Conservation. This position will be as an Assistant or Associate Professor, but exceptional candidates can be considered at the Full Professor level.

Salary will be commensurate with experience and determined by the CUNY salary structure. To apply, submit a letter describing research and teaching interests, a CV, and two to three representative publications to Gordon A. Barr, Dept of Psychology, Hunter College, 695 Park Ave, New York, NY 10021. Candidates should provide the names and addresses for three individuals who can be contacted for recommendations. Review of applications will begin immediately and will continue until the positions are filled. Hunter College is an equal opportunity/affirmative action/ADA/IRCA employer. Women and members of underrepresented minorities are particularly encouraged to apply.

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Summer Apprentice Program – Washington State

The Chimpanzee and Human Communication Institute (CHCI) is taking applications for its 10-week Summer Apprentice Program, which will be June 17 to August 25, 2007. Graduates, undergraduates, and postgraduates from various academic backgrounds (e.g. anthropology, biology, psychology, linguistics, philosophy, etc.) and all nationalities are encouraged to apply. This program is open to students and postgraduates from all universities.

The research at CHCI involves a group of four chimpanzees who use the signs of American Sign Language (ASL). Three of the four, Washoe, Tatu, and Dar, were part of the cross-fostering research that began with Drs. R. A. & B. T. Gardner. Each chimpanzee was raised in an enriched environment in which his or her human family members used only ASL, much like the environment in which a deaf human child grows up. The fourth chimpanzee, Loulis, was adopted by Washoe in 1978 and learned his signs from chimpanzees. Currently, the chimpanzees reside at the CHCI on the campus of Central Washington University (CWU) in Ellensburg, Washington, in a large state-of-the-art facility.

Apprentices are at the Institute daily – cleaning enclosures, preparing meals and enrichment, making observations of the chimpanzees, and participating in one or more

research projects. The first week is intensive training in laboratory jobs and chimpanzee behaviors. The philosophy of CHCI is that the needs of the chimpanzees come first. Apprentices are trained in humane care and research techniques. After several weeks each apprentice becomes more autonomous and has responsibilities in research and husbandry.

The program fee is \$1800, which does not include housing and transportation. Inexpensive housing is available on campus. There is a non-refundable \$25 application processing fee. A course in ASL is highly recommended but not required. For more information on the program and the application please see our Web page, <www.cwu.edu/~cwuchci/apprentice.html>, or contact Dr. Mary Lee Jensvold, CHCI, Central Washington Univ., Ellensburg, WA 98926 [e-mail: *maryleejensvold@hotmail.com*]. The deadline to apply is March 16, 2007.

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Address Change

American Federation for Aging Research, 55 West 39th St, 16th Floor, New York, NY 10018.

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Grants Available

New Standard Receipt Dates for NIH/AHRQ/NIOSH

The National Institutes of Health (NIH) <www.nih.gov>, the Agency for Healthcare Research and Quality (AHRQ) <www.ahrq.gov>, and the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention (NIOSH/CDC) <www.cdc.gov/niosh/oep> have announced a change in standard receipt dates for grant applications submitted to NIH, AHRQ and NIOSH. The new receipt dates will be effective as of January, 2007, and will apply to both paper and electronic applications. They are available at <grants.nih.gov/grants/guide/notice-files/NOT-OD-07-001.html>.

Training Veterinarians in NHP Clinical Medicine

Nonhuman primates (NHP) are critical to biomedical/behavioral research and offer unique animal models for human diseases and conditions. Their importance in biomedical and behavioral research is well documented. NHPs' close molecular, immunological, reproductive, and neurological relationship to humans makes them essential surrogates for humans in biomedical studies related to major human diseases (e.g., AIDS, cancer, Alzheimer's disease, Parkinson's disease, and cardiovascular diseases). The National Center for Research Resources (NCRR) and other NIH Institutes and Centers (IC) invest substantial resources in support of the National Primate Research Centers (NPRC) and other publicly funded NHP resources. Major support is also provided for basic and translational research using these species. Clinical veterinarians providing NHP veterinary medical care must receive additional clinical education and experience beyond the professional training received in veterinary school or college in order to provide appropriate and quality clinical care and colony management. The increased demand for the use of NHPs in biomedical investigations, and the emergence and spread of potentially deadly human diseases such as SARS, influenza, and hepatitis that will be studied using NHP models are expected to exacerbate the shortage of veterinarians who are properly educated in NHP clinical care and colony management, especially within the current NPRC network and the other specialized resource centers.

The NCRR will provide funding for postdoctoral clinical education for veterinarians in NHP clinical medicine utilizing the federally funded programs at the NPRCs and specialized breeding and research colonies. This funding opportunity will provide an educational environment for veterinarians interested in pursuing a career in NHP clinical medicine to develop competence in this area. Each participant resident position will be

funded for two years and each participant resident is expected to receive supervised, practical experience in all aspects of veterinary medical care and management of NHP colonies. A participant resident is defined as a veterinarian who graduated from an AVMA-accredited or AVMA-listed school or college of veterinary medicine, who is accepted by the eligible institution to receive clinical experience in NHP clinical care and colony management. A comprehensive and complete education program should be proposed by the applicant. The program should include but is not limited to didactic and clinical components. Following completion of this program, participant residents are expected to have acquired knowledge and professional skills in NHP taxonomy, biology and care, disease recognition and management (diagnosis, treatment, prevention, etc.), clinical skills, NHP use in biomedical/behavioral and translational research, animal welfare, animal model selection criteria, ethical use of NHPs in research, and any additional training the institution deems appropriate for this program. The participant residents are expected to also acquire administrative skills needed for NHP colony management; however, they will not be primarily responsible for performing functions normally done by the institution's regular administrative or veterinary care staff members. The objective is to educate veterinarians to be competent and proficient in the clinical management of NHPs.

Clinical education provided under this Funding Opportunity Announcement (FOA) must involve more than one NHP species. Efforts should be made to include as many of the commonly used species as possible. The Program Director/Principal Investigator (PD/PI) must be a veterinarian with NHP clinical experience. The qualifications and experience of the PD/PI must be adequately described in the application. Methods should be incorporated within the proposal outlining plans for receiving such instruction and experience if diverse species are not present at the applicant institution. Under this initiative, applicant institutions may partner with other institutions to enhance the depth and breadth of clinical knowledge and experience for the participant residents and increases the number of NHP species available to the program. The proposed research education program may complement other, ongoing research training and education occurring at the applicant institution, but the proposed educational experiences must be distinct from those research training and research education programs currently receiving federal support. The R25 is not a substitute for an institutional research training program (T32) and cannot be used to circumvent or supplement Ruth L. Kirschstein National Research Service Award (NRSA) mechanisms. Where

applicable and desirable, clinical participants funded through this program may participate in a structured comparative medicine training program, provided the training conducted under this FOA is acceptable for credit toward board certification by an AVMA-recognized specialty, i.e., American College of Laboratory Medicine (ACLAM), American College of Veterinary Pathology (ACVP), American College of Veterinary Internal Medicine (ACVIM), etc. However, participant residents may not receive additional salary and benefits. Applicants planning to use other facilities for clinical educational activities, or expecting to incorporate this program into existing comparative medicine training programs, must provide letters of agreement signed by all participating institutions.

Applications submitted in response to this FOA for federal assistance must be submitted electronically through Grants.gov <www.grants.gov> using the SF424 Research and Related (R&R) forms and the SF424 (R&R) Application Guide. **Applications may not be submitted in paper format.**

Letter of Intent Receipt Date is January 22, 2007. Application Submission/Receipt Date is February 22, 2007. For complete information, see <grants.nih.gov/grants/guide/rfa-files/RFA-RR-06-006.html>.

American Federation for Aging Research Grants

Since 1981, the American Federation for Aging Research (AFAR) has provided \$93 million to close to 2,200 new investigators and students. To learn more about these grants, see <www.afar.org/grants.html> or phone 212-703-9977. If you would like to be placed on a mailing list to receive periodic updates on AFAR grant programs, please complete the form at <www.afar.org/pub3test.html>.

2007 grants include the Medical Student Training in Aging Research Program, to encourage medical students – particularly budding researchers – to consider a career in academic geriatrics. This program awards short-term scholarships. AFAR has partnered with the National Institute of Aging and several foundations to continue and strengthen the original Hartford/AFAR Medical Student Geriatric Scholars Program. The application deadline is February 7, 2007. For guidelines, see <www.afar.org/medstu.html>.

NIH Announces 2007 Pioneer Award Competition

NIH has launched a new round of competition for the NIH Director's Pioneer Award. The program supports exceptionally creative scientists who take highly innovative and potentially transformative approaches to major challenges in biomedical research. Each Pioneer Award provides \$2.5 million in direct costs over five years. NIH

funded 35 scientists in the first three years of the program, which is part of the NIH Roadmap for Medical Research. In September, 2007, the agency expects to make between five and ten new Pioneer Award grants. Scientists at all career levels and engaged in any field of research may apply for the Pioneer Award, as long as they are interested in exploring biomedically relevant topics. The centerpiece of the application process is an essay on the investigator's vision for addressing a biomedical challenge, the importance of the problem, and the person's qualifications to engage in groundbreaking research. The application period opens on Friday, December 1, 2006, and closes on Tuesday, January 16, 2007. Application instructions are at: <grants.nih.gov/grants/rfa-files/RFA-RM-07-005.html>.

For more information on the Pioneer Award see: <nihroadmap.nih.gov/pioneer>.

Call for Grant Proposals – PCI

Primate Conservation, Incorporated (PCI), is a not-for-profit foundation founded to fund field research that supports conservation programs for wild populations of primates. Priority will be given to projects that study, in their natural habitats, the least known and most endangered species. The involvement of citizens from the country in which the primates are found will be a plus. The intent is to provide support for original research that can be used to formulate and to implement conservation plans for the species studied.

PCI will grant seed monies or provide matching grants for graduate students, qualified conservationists, and primatologists to study rare and endangered primates and their conservation in their natural habitats. Grants have averaged approximately \$2,500, with a maximum grant of \$5,000. We do not support conferences, travel to scientific meetings, legal actions, tuitions or salaries at institutions, or overhead costs.

Proposals are evaluated on a competitive basis. Applications are screened by outside reviewers and the Board of Directors of PCI. All appropriate projects will be considered, but the regions of current interest are Asia and West Africa.

Deadlines for all grant application materials are February 1st and September 20th. Awards will be given May 15th and December 15th. For more information and applications, see <www.primate.org/grant_in.htm>.

AALAS Grants for Laboratory Animal Science

Are you looking for support for a research project in laboratory animal science? The new American Association for Laboratory Animal Science (AALAS) Grants for Laboratory Animal Science (GLAS) Program provides competitive short-term research grants in the laboratory

animal science field. Current AALAS members are invited to apply for one-year grants of up to \$25,000. The principal investigator (PI) must be an AALAS member but Co-PIs do not need to be members. PIs are strongly encouraged to include collaboration with a research scientist in their proposals. The deadline for this first round of funding is February 1, 2007.

The mission of the GLAS Program is to enhance scientific knowledge in laboratory animal science through research and to further promote collaborative efforts by the AALAS membership within the broader scientific

community. A program description and the GLAS application form can be found on the AALAS Website: <www.aalas.org>. For more information, contact [glas@aalas.org].

Great Ape Emergency Conservation Fund

Complete information on how to apply for emergency funding in support of research on great apes in the wild is available at <www.primatesg.org/gaecf.htm>, in the IUCN/SSC Primate Specialist Group's Website.

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Updating Lab Animal Care and Use Guide

The National Institutes of Health (NIH) has informed the research community of the NIH review of submissions to their Request for Information: Standards for the Care and Use of Laboratory Animals, which explored the need to update the laboratory animal welfare standards of the *Guide for the Care and Use of Laboratory Animals (Guide)*. As a first step, the Office of Scientific Affairs (OSA) sought to identify new scientific information that might warrant NIH issuing a contract for a new or updated edition of the *Guide*.

The *Guide* was initially published in 1963, and revised in 1965, 1968, 1972, 1978, 1985, and 1996. The purpose of the *Guide*, as indicated in the Preface of the 1996 edition, is to assist institutions in caring for and using animals in ways judged to be scientifically, technically, and humanely appropriate. Further, recommendations of the *Guide* are based on published data, scientific principles, expert opinion, and experience with methods and practices that have proved to be consistent with high-quality humane care and use.

A Request For Information (RFI) solicited new scientifically valid information, methods or practices, published data or other advances in the humane care and use of laboratory animals, in order to assess the need for updating the standards in the 1996 *Guide*, which is used currently, in order for NIH to determine the need to update the standards of the *Guide*.

A working group composed of 12 scientists and laboratory animal medicine veterinarians from Public Health Service Agencies reviewed the submissions. The group considered the responsiveness of each submission in providing new, scientifically valid information that justified a need for updating the standards of the current 1996 *Guide*.

The group found no evidence to warrant revising the performance standards of the 1996 *Guide*. These standards have allowed individual institutions the flexibility to adapt policies and procedures to their own institutional environments. Some submissions reflected the diversity permitted by the existing *Guide* standards.

However, some submissions recognized several areas for improvement of the *Guide* resulting in a number of recommendations of how the *Guide* might be enhanced for better utilization by NIH-supported investigators. The recommendations included:

- It is desirable to have the *Guide* become a living, Web-based document;
 - periodically, e.g. every 3 to 5 years, revise Appendix A with current references;
 - include new references after critical review for scientific validity;
- include updated, science-based, peer-reviewed guidelines and reports from scientific and professional societies, e.g. the *Report of the AVMA Panel on Euthanasia*; and
- as information for a component of science increases, new reports, e.g. *Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research* (National Research Council, 2003) may be advantageous.

A copy of the group's report may be found at <grants.nih.gov/grants/olaw/rfi_lab_animal_standards/RFI-Report.pdf>. For questions or further information, contact Margaret Snyder, Office of Extramural Research, NIH, Rockledge 1, MSC 7983, 6705 Rockledge Dr., Bethesda, MD 20892-7983 [301-402-1058] fax: 301-480-3530; e-mail: ScientificAffairs@od.nih.gov].

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Announcements from Publications

Editor Search Announcement – *AJP*

The Board of Directors of the American Society of Primatologists has appointed a Search Committee for a new Editor of the *American Journal of Primatology* and invites applications and nominations for this position.

The Search Committee members are Christian Abee, Univ. of Texas M. D. Anderson Cancer Center (UTMDACC), <cabee@mdanderson.org>; Nancy Caine, California State Univ., San Marcos, <ncaine@csusm.edu>; John Capitanio, California NPRC, <jpcapitanio@ucdavis.edu>; Linda Fedigan, Univ. of Calgary, <fedigan@ucalgary.ca>; Jeffrey French (ex-officio), Univ. of Nebraska, Omaha, <jfrench@mail.unomaha.edu>; Marilyn Norconk, Kent State Univ., <mnorconk@kent.edu>; and Steven J. Schapiro, UTMDACC, <sschampir@mdanderson.org>.

The Editor serves a three-year term, with the possibility of up to two additional three-year terms. The new Editor's formal appointment will begin 1 January 2008. The Editor of the *American Journal of Primatology* will direct and implement journal policy within the mission and financial parameters established by the ASP Board of Directors and the publisher, John Wiley & Sons. The Editor is responsible for the academic content of the journal, for professional leadership in establishing and organizing an Editorial Board, and for obtaining and organizing peer reviews of appropriate material that represents a variety of research methods and orientations. The publisher provides an operational budget for the Editor's office, software support for manuscript tracking, and subsidizes the Editor's travel to the annual ASP meeting.

The Search Committee invites applications and nominations for the new Editor.

Applications should include a letter of application, a CV, and the names, titles, and contact information (including e-mail) of three references who are able to evaluate the applicant's editorial abilities.

Nominations should include name, phone number, and e-mail address of the nominee.

While there is no closing date for this search, screening of applications will begin on January 1, 2007, with the ultimate goal of naming the new Editor in June of 2007. All applications must be submitted electronically (Microsoft Word or Adobe pdf attachments) and can be sent to any member of the search committee.

The American Society of Primatologists seeks applications from individuals with a broad perspective on primatology, proven organizational abilities, and a strong

commitment to excellence in research. The Search Committee is particularly interested in receiving applications from individuals who • have a recognized research and publication record; • have an established record of editorial work; • are committed to the further development of the mission of the ASP and the *AJP*, its official journal; and • can demonstrate potential for institutional support.

Asian Primates – Call for Papers

The World Conservation Union Species Survival Commission (IUCN/SSC) Primate Specialist Group is pleased to announce that “*Asian Primates – A Newsletter of the Asian Section of the IUCN/SSC Primate Specialist Group*” has now been upgraded to “*Asian Primates – A Journal of the Asian Section of the IUCN/SSC Primate Specialist Group*”.

Asian Primates is an important source of information not only among the IUCN/SSC Primate Specialist Group members in the region, but also to other professionals and those with a keen interest in primates and primate conservation. The journal aims to provide a basis for disseminating information relating to the research and conservation of nonhuman primates in Asia, and for developing the capacities of young Asian nationals by encouraging them to submit manuscripts in English.

You can support *Asian Primates* and primate work in Asia by contributing texts on any aspect of primate conservation and research in Asia, including articles, thesis abstracts, report summaries, news items, recent events, recent publications, upcoming meetings, and so on. Visit <www.aseanprimates.org/index.php?option=com_content&task=view&id=15> for details.

Journal of Developmental Processes

A new, interdisciplinary journal, the *Journal of Developmental Processes (JDP)*, focuses on the complex, dynamic, biological, and social aspects of developmental systems in humans and other animals. Peer reviewed, it aims to be a new force in systems-oriented thinking about development. Barbara J. King, the Editor, invites you to explore the first issue of the *JDP*. The table of contents, inaugural editorial, and articles can be found at <www.icdl.com/pdf/JDPJournalFall12006.pdf>.

King welcomes submissions and, if especially applicable to development, books for review, from her fellow primatologists. Contact her at the Dept of Anthropology, College of William & Mary, Williamsburg, VA, 23187-8795 [e-mail: bjking@wm.edu].

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About Our Cover Photographer

I am Marian Brickner, living in St Louis (I grew up in New York).

I am a photographer. My goal is to show the character that is somewhere in the individual, of whatever species that I am photographing, whether it is a tiger beetle or a bonobo.

I first became aware of bonobos when the great book, *The Forgotten Ape*, by Frans Lanting and Frans DeWaal, came out. After reading it and learning that bonobo society did not include infanticide, I was hooked.

I decided to try to photograph some individuals. I started out with Kevin at the Fort Worth Zoo. I then went to Milwaukee to take pictures of Linda, his mother, and Laura, his sister. When I showed Kevin's picture to the keepers in Milwaukee, they all were surprised, and said, "He looks just like his mom!" I was shocked. The idea that there was a family resemblance had not occurred to me. I then decided it would be really something to find Linda's children, grandchildren and great-grandchildren and take pictures of them and put a children's book together, showing all the relatives.

I met Ursula Goodenough, a Professor of Biology at Washington University and a bonobo fan, and, as I was looking for a writer, she suggested her daughter. It turned out to be perfect match. We put a book together about

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two of the bonobo children, Lucy and Kaleb, eating, playing, nursing, etc. Ursula knows Jane Goodall, who agreed to write a forward. The book is now in the hands of an agent.

So why don't more people know about bonobos?

My take on it is that the people who are working so hard on the research and trying to save the environment, (and you all know who you are), don't have the time to go into the schools regularly to spread the word. This is where I have decided to fit in.

I have put together a Power Point presentation called "Bonobos, Who Are They and Who Cares?" showing the two bonobo children doing things. I have been to at least 25 classrooms, some here in St. Louis, some in New York, some in Washington, DC. I even did one in a nursing home! Everyone loves it. My approach is to show these pictures – and no one doesn't love Lucy and Kaleb. They then start asking the important questions: "Why are they in zoos?" "Are they endangered?" etc.

And the dialogue starts.

I would like some assistance to get into more schools and give more talks, and even a little travel money would be welcome!

Workshop Announcements

IACUC 101/201 in 2007

The IACUC 101/102 series of training programs is designed to provide IACUC members, administrators, veterinarians, animal care staff, researchers, regulatory personnel, and compliance officers with information on the role and responsibilities of IACUCs. grants.nih.gov/grants/olaw/iacuc101s.htm provides information on hosting a program, the 2007 schedule of OLAW-sponsored programs, and descriptions of each program in the series. The following is the 2007 schedule. Questions should be directed to Mary Lou James [e-mail: mljames@mo.net].

- IACUC 101 February 21 at Oklahoma State University, Stillwater
- IACUC 101 March 25 at the Public Responsibility in Medicine & Research meeting in San Diego, California
- IACUC 101 May 3 at Morehouse School of Medicine, in Atlanta, Georgia
- IACUC 101/201 July 18/19 in Gaithersburg, Maryland, sponsored by BioReliance, Invitrogen Bioservices
- IACUC 101/102 August 29-30 at Spokane, Washington, sponsored by the University of Idaho

- IACUC 101 September 27 in Cincinnati, Ohio, sponsored by the University of Cincinnati.

Teaching Research Ethics

Indiana University's fourteenth annual Teaching Research Ethics Workshop will convene at the Indiana Memorial Union on the campus of Indiana University in Bloomington, Indiana, May 15-18, 2007. Session topics will include an overview of ethical theory, trainee and authorship issues, conflicts of interest, using human subjects in clinical and non-clinical research, and responsible data management. Many sessions will feature techniques for teaching and assessing the responsible conduct of research.

For more information contact Glenda Murray, Program Associate, Poynter Center, Indiana Univ., 618 E. Third St, Bloomington IN 47405-3602 [812-855-0262; fax: 812-855-3315; e-mail: glmurray@indiana.edu]. Information and registration are also available at lpoynter.indiana.edu/tre.

Resources Available

2007 Rhesus Calendar from Cayo Santiago

"The Caribbean Primate Research Center is pleased to announce its 2007 Calendar. Featured in this beautiful calendar are color photos of the rhesus macaques of Cayo Santiago. Might we suggest a (tax-deductible) donation of \$10? All proceeds go to our Education Outreach Program. Think of your friends, families, prizes for students! Please specify number of calendars, and send check or money order (made to the order of: UPR/ CPRC) to José Raul Alicea, Caribbean Primate Research Center, P.O. Box 1053, Sabana Seca, PR 00952.

"If you have questions, contact Dr. Melissa S. Gerald [787-285-1201; e-mail: mgerald@rcm.upr.edu], and see

ucm.rcm.upr.edu/cayosan.html."

"Talking to the Media"

The Union of Concerned Scientists' Media Director, Rich Hayes, has joined with science journalist Daniel Grossman to write "A Scientist's Guide to Talking with the Media: Practical Advice from the Union of Concerned Scientists". "This guidebook gives scientists, and advocates for science, the tools they need to communicate effectively with members of the media." For more information, see secure3.nexternal.com/shared/StoreFront, and click on "Books".

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Meeting Announcements

The 2007 **North American Veterinary Conference** will be held January 13-17, in Orlando, Florida. The Conference promises more than 1,300 CE hours, including hands-on laboratories, Case Challenges, Meet-the-Professor Luncheons, master classes, workshops, and other comprehensive programs for veterinarians, veterinary technicians, practice managers and receptionists. For information, see www.tnavc.org/mynavc; or contact Colin Burrows, Executive Director, NAVC, 5003 SW 41st Blvd, Gainesville, FL 32608 [352-375-5672; Fax: 352-375-4145].

The AWEN Group, Inc., presents its **4th Annual Assessment and Treatment of Pain and Distress in Animals (ATOP) Conference** on Friday, February 9, 2007, at the Millennium Bostonian Hotel, Boston, Massachusetts. The assessment and treatment of pain and distress have become broad objectives for animal care and use programs and some techniques have become widely established. ATOP IV will concentrate on moving beyond these traditional techniques to establish new best practices. It is appropriate for IACUC members, investigators, veterinarians, facility managers, and veterinary technicians involved in the review, preparation, and/or application of treatments to animals. For more information, and to register, go to www.theawengroup.com. Registration deadline is January 8, 2007.

The **Arizona chapter of the American Association for Laboratory Animal Science** will hold its **Spring Symposium** on February 16, 2007, in Phoenix, Arizona. If you have any questions, e-mail azaalas@ahsc.arizona.edu.

The **25th Annual Conference of the Australasian Primate Society** will be held March 9-11, 2007, at the University of Queensland, St. Lucia, Brisbane, Australia. Submit paper/poster abstracts to:

e.collier-baker@psy.uq.edu.au; abstracts will be accepted until February 9. Register before January 9 for early-bird fees! Go to the APS Website, www.primates.on.net, and print off membership and registration forms to become an APS member and enjoy reduced registration fees. Send forms with fees to Membership Secretary, Australasian Primate Society, P.O. Box 363, Happy Valley, SA 5159, Australia.

A workshop, "**The Future of Animal Law: Remember When You Thought You Could Change the World? You Still Can**", sponsored by the Animal Legal Defense Fund and Harvard Law School, will be held March 30 – April 1, 2007, in Cambridge, Massachusetts. For information, see www.cmna.com/animal_law_conference_2007/index.htm.

You are invited to attend the **2007 American College of Veterinary Internal Medicine (ACVIM) Forum** in Seattle, Washington, June 6-9, 2007. For information, contact ACVIM, 1997 Wadsworth Blvd., Suite A, Lakewood, CO 80214-5293 [800-245-9081 or 303-231-9933; fax: 303-231-0880; e-mail: ACVIM@ACVIM.org]; or see www.acvim.org. "If your interests lie in internal medicine, cardiology, neurology, or oncology for small or large animals then the ACVIM Forum is the place for you to see, and be seen."

The 30th meeting of **The American Society of Primate Biologists** will be held June 20-23, 2007, in Winston-Salem, North Carolina, hosted by the Wake Forest University School of Medicine. For details, see www.asp.org/asp2007.

The Laboratory Animal Welfare Training Exchange's (LAWTE) Biennial Conference will take place in Boston, August 8-10, 2007. Topics to be included are educating researchers on reducing pain and distress in

laboratory animals, expectations for animal care training programs, and animal rights/security updates. See <www.lawte.org> for details.

The **6th World Congress on Alternatives and Animal Use in the Life Sciences** will be held in Tokyo, August 21-25, 2007. Objectives of the Congress are to review progress made toward the 3Rs (Reduction, Refinement, Replacement) in education, research, and testing; develop a realistic understanding of the status of alternatives; create an understanding that in research, animal studies, together with clinical studies and in vitro

methods, advance science; contribute to our basic understanding of biology and diseases; and encourage constructive discussions between animal protection groups and scientific communities. Information, registration, and abstract submission are available at <www.knt.co.jp/ec/2007/wc6>. Abstracts are due March 31, 2007.

The Primate Society of Great Britain will host the **International Primatological Society's 22nd Congress**, in Edinburgh, Scotland, August 3-8, 2008. For information, see <www.ips2008.co.uk>.

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Symposium at 2007 ASP Meeting

Julio Cesar Bicca-Marques (Brazil), Thais Codenotti (Brazil), and Clara Jones (U.S.A.) are organizing a symposium for the 2007 meeting of the American Society of Primatologists, to be held in Winston-Salem, North Carolina, June 20-23 (see <www.asp.org>). The title of their proposed symposium is "Primate Contact Zones: Implications for Socioecology, Reproductive Isolation, Speciation, and Conservation".

Primatologists who are investigating this topic and are interested in participating in this symposium should inform Clara B. Jones [e-mail: cbjones@uncfsu.edu] as soon as possible, including a brief statement of the nature of your studies and a potential topic for presentation. Clara will then provide additional information.

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Travelers' Health Notes

Chikungunya Fever Among International Travelers

Chikungunya virus (CHIKV) is an alphavirus indigenous to tropical Africa and Asia, where it is transmitted to humans by the bite of infected mosquitoes, usually of the genus *Aedes*. Chikungunya (CHIK) fever, the disease caused by CHIKV, was first recognized in epidemic form in East Africa during 1952–1953. Because CHIK fever epidemics are sustained by human-mosquito-human transmission, the epidemic cycle is similar to those of dengue and urban yellow fever. Large outbreaks of CHIK fever have been reported recently on several islands in the Indian Ocean, including Réunion, Comoros, Lamu, Madagascar, Mauritius, Mayotte, and the Seychelles, and in India. In 2006, CHIK fever cases also have been reported in travelers returning from known outbreak areas to Europe, Canada, the Caribbean (Martinique), and South

America (French Guyana). During 2005–2006, 12 cases of CHIK fever were diagnosed serologically and virologically at the Centers for Disease Control in travelers who arrived in the United States from areas known to be epidemic or endemic for CHIK fever. A report at <www.cdc.gov/mmwr/preview/mmwrhtml/mm5538a2.htm?s_cid=mm5538a2_e> describes four of these cases and provides guidance to health-care providers. Symptoms may include fever and joint and muscle pain, as well as possible rash, chills, and headache. Clinicians should be alert for additional cases among travelers, and public health officials should be alert to evidence of local transmission of CHIKV, introduced through infection of local mosquitoes by a person with viremia. – Morbidity and Mortality Weekly Report, *September 29, 2006, 55[38]*.

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Awards Granted

Debbie McGuire Gorilla Keeper Grant 2006

The Dewar Wildlife Trust is pleased to announce the 2006 recipient of the Debbie McGuire Gorilla Keeper Grant, an annual grant of \$1,000 awarded to gorilla caregivers to enhance their knowledge of and/or experiences with gorilla husbandry.

Bruno Djakou, of Cameroon, has worked with gorillas since 1997 at the Cameroon Wildlife Aid Fund (CWF), where there are currently 15 gorillas in residence, all rescued victims of the bushmeat trade. Bruno had a brief cameo appearance in the TV show about CWF on Animal Planet's "Growing Up Gorilla", and has been working with juvenile and infant gorillas for almost a decade, yet he has never seen an adult gorilla.

With the grant and contributions from others, Bruno hopes to travel to another zoo (possibly in England) to see his very first silverback up close, which will be an exciting learning opportunity to prepare Bruno and his colleagues for what they will be facing as their 15 gorillas mature. The oldest, a female named Geri, is 10 years old. In his application for the McGuire Grant, Bruno wrote: "If you choose me, my dream is to visit another zoo or sanctuary with big gorillas. I can never imagine seeing the size of a true silverback. My babies are now getting big and I want to be able to give them the best care possible. Maybe you could help me and my gorillas to realize our dream."

Past winners of the McGuire Grant included keepers from the Czech Republic, India, Spain, and Rwanda. The grant accepts applications year-round, with deadlines for applications being September 30th of each year. The winner is announced by November 2nd of each year, but this year we were able to announce Bruno's win early. For more information contact Jane Dewar: <jdewar@gorilla-haven.org>.

ASP Student Prize Award Winners, 2006

Best Oral Paper: Katherine Hinde (UCLA): "Lactational performance in primiparous and multiparous rhesus macaques (*Macaca mulatta*)."

Best Poster: Magdalena Muchlinski (University of Texas): "The anatomy of the infraorbital foramen: Implications for interpreting the ecology of extinct and extant primates."

Honorable Mention Paper: Nga Nguyen (Princeton University): "Endocrine and social sources of variation in the mother-infant relationship in wild baboons in Amboseli, Kenya."

Honorable Mention Poster: Carl Toborowsky (University of Missouri – St. Louis): "Ecology of the whitefronted brown lemur (*Eulemur fulvus albifrons*) in Betampona Natural Reserve, Madagascar."

ASP Research and Development Grant Awards, 2006

Luisa Arnedo: "Variation and social function of neigh vocalizations in northern muriquis (*Brachyteles hypoxanthus*)." \$1,380

Fernando Campos: "Olfactory signaling, urine washing, and urinary hormone profiles of white-faced Capuchin monkeys, *Cebus capucinus*." \$1,500

Rebecca Chancellor: "Within-group relatedness and kinship bias in female gray-cheeked mangabeys (*Lophocebus albigena*) in Kibale National Park." \$1,500

Krista Fish: "The community ecology of sympatric nocturnal primates and bats: Understanding niche separation at the Blyde River Canyon, South Africa." \$1,274

Katherine Hinde: "Lactational investment: Behavioral care, milk production, and infant outcomes in rhesus macaques." \$1,500

Kerry Ossi: "The juvenile balancing act: Survival, skill-learning and growth in Phayre's leaf monkeys." \$1,500

Nicole Rafferty: "Effects of habitat fragmentation on primate-plant interactions: From pollination to seed dispersal." \$1,445

Bernardo Urbani: "Spatial mapping and foraging strategies of white-faced Capuchin monkeys (*Cebus capucinus*) in a tropical rainforest: Insights from natural and experimental field approaches." \$1,450

Total Grant Funding = \$11,549.

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Call for Award Nominations

The Charles River Laboratories Foundation is pleased to announce that nominations are now being received for the 30th annual Charles River Prize. The Charles River Prize, consisting of a suitably inscribed plaque and a check, will be awarded in recognition of distinguished contributions to the field of laboratory animal science by a veterinarian who is a member of the the American Veterinary Medical Association, and is currently engaged in

laboratory animal science. Please forward your nominations to the Charles River Laboratories Foundation, 251 Ballardvale St, Wilmington, MA 01887, not later than February 1, 2007, for processing and forwarding to the AVMA Executive Board Committee on Nominations and Awards, who will make the selection. For further information, please contact <Marilyn.Brown@crl.com>.

News Briefs

Orangutan Head Count in Sarawak

Batang Ai National Park (24,040 ha) and the adjacent Lanjak-Entimau Wildlife Sanctuary (168,758 ha) constitute 98% of the Sarawak range of *Pongo pygmaeus pygmaeus*, one of three orangutan subspecies found in Borneo. Last surveyed in 1992 by the Wildlife Conservation Society (WCS) and the then Sarawak Forestry Department, the Batang Ai Park is estimated to host between 62 and 824 orangutans. Together with the Bentuang-Karimun Nature Reserve across the border in Kalimantan, Indonesia, the forest complex in the southwest corner of Sarawak forms the largest protected area where the orangutan is found, and is recognized as a key area for survival of the species. The area is also earmarked as the country's first terrestrial trans-frontier park, which protects biodiversity that utilizes the forest beyond political boundaries. As forests outside the protected areas are found to host a significant number of orangutans, there are plans to enlarge the Batang Ai park and create the new Ulu Sebuyau National Park.

Over the past two years, WCS researchers have surveyed the site to re-estimate the orangutan population and assess long-term threats. The data would be used to develop a conservation strategy for orangutans in Sarawak. WCS Malaysia Program director Dr. Melvin Gumal says the habitat, largely unspoiled because it was never logged, has vital forest cover to sustain orangutans. He says shifting cultivation was done there over 50 years ago and the forest has regenerated since. He declines to disclose the survey results but says more work is needed to confirm that the population has not plummeted.

The research team, headed by June Rubis, conducted nest counts from early 2004 to January, 2005, on 11 sites in Batang Ai. In March, 2005, the survey was extended to Lanjak-Entimau where, of 10 sites, seven have been completed. Nest count is a common field method to estimate orangutan numbers as the arboreal ape generally builds a new nest to sleep in every night. The method involves dividing the survey area into transects. Rubis and her field assistants walk the 2-km transect twice daily, recording the occurrence, location and decay stage of nests. Then, using a computer software program called "Distance 5", the team calculates the population density based on the proportion of nest-builders in the population, the rate at which nests are produced, and the nest decay rate. Some transects were surveyed for new nests twice to improve the accuracy of population estimates. When the first phase is completed, the researchers will have thoroughly combed through both protected areas.

Besides WCS, the project is funded by the United States Fish and Wildlife Services, Orangutan Foundation

International UK, and local tour operator Borneo Adventure. In the pipeline is a conservation education component to inform target groups – local communities, the relevant authorities, oil palm growers and travel companies – on the importance of conserving orangutans and their habitat. – *September 19, 2006, by Hilary Chiew – Star Publications (Malaysia)*

WWF Helicopter Crash, Nepal 2006

On September 23, 2006, a helicopter carrying several dignitaries, crew, and seven World Wildlife Fund staff members crashed in the high mountains of Nepal during bad weather. The deaths were the single greatest loss of life in WWF's 45-year history. A Nepalese government report at assets.panda.org/downloads/helicopter_crash_report.pdf gives details.

Global Warning System for Zoonotic Diseases

A global early warning system for zoonotic diseases has been launched by the Food and Agriculture Organization (FAO), World Health Organization (WHO), and World Organization for Animal Health (OIE). It has the goal of predicting and responding worldwide to animal diseases, including zoonoses. The system will combine and coordinate the tracking, verification, and alerting mechanisms of the FAO, WHO, and OIE.

Susanne Weber-Mosdorf, WHO Assistant Director General, said, "History shows us that the earlier we can detect a zoonosis, the earlier we can take action to reduce the threats to people. Today, the spread of avian flu reinforces the fact that the animal and human health sectors must work closely together, and that early detection and coordination is critical. This new network is an important step forward."

Information gathered through the tracking and verification channels of the FAO, WHO, and OIE will be shared using the warning system's Web-based electronic platform. The three organizations will jointly analyze the information to decide whether to issue an early warning message. Warning messages will describe the possible implications of disease spread among animals at the national, regional, and international levels and the potential public health impact. If there is a clear indication that a joint on-site assessment or intervention is required, the three organizations will collaborate and activate their response mechanisms.

More information can be found at the three organizations' Websites, www.fao.org, www.who.int, and www.oie.int. – *From the American Veterinary Medical Association's JAVMA-News, October 1, 2006*

Primate Rescue Center Gets New Enclosure

Hoots and cries of excitement filled the air as 11 chimpanzees climbed and swung in a new enclosure that opened last week at the Primate Rescue Center, a refuge for abandoned apes and monkeys in Kentucky.

“I have a very glad heart,” director April Truitt said, as she watched the chimps cavort in the steel and concrete structure. “It’s just amazing to be able to provide this for them. If they have to live in a cage – and they do, because there’s no reintroduction program for them – I’m glad that they can do it here in a spacious, sunny enclosure with all their buddies.”

The enclosure – 100 feet long, 24 feet high and 30 feet wide – was built over 10 weeks after years of planning and fundraising. The new space replaces a temporary enclosure on the same spot that was about 60 feet long and 20 feet tall. Private donations were raised to build the new enclosure, which cost more than \$250,000. There’s still some fundraising left to do.

“It’s not quite paid for, but let’s just say that our banker is being very patient with us,” Truitt said.

The apes are free to come and go from the enclosure to a heated indoor “chimp house” that has a playroom. The chimps range in age from 12 to nearly 40, and will live to be 50 or even 60. Seven chimps came to the rescue center from a lab affiliated with New York University that closed. The other four came from a private owner in Georgia.

Many of the 45 monkeys at the rescue center came as ex-pets that became too much for owners to handle. The rescue center is not a zoo, so it is not open to the public except during periodic by-invitation-only events.

“We are very careful about the number of people we have in here,” Truitt said. “These animals are very territorial, and they are keen on protecting their territory. We just want to provide them a good place to be for the rest of their long lives.” – *Associated Press, Oct 9, 2006*

University Releases Records to Animal Rights Group

Oregon Health & Science University agreed this week to give an animal rights group more than 113,000 pages of records about the care of monkeys used in research. The university’s decision ended a long battle by In Defense of Animals (IDA) for documents about the animals kept at the Oregon National Primate Research Center, which the University manages, *The Oregonian* reported today.

IDA requested the records eight years ago and sued the University in 2001 to obtain them. The University demanded that the group pay more than \$150,000 to cover

the costs of producing the records. The University said it needed to black out the names of researchers to avoid potential threats against them by animal-rights extremists.

But last year, the Oregon Court of Appeals ruled that the fee was excessive, a move that led to the University’s decision. A spokesman for IDA said he expected the documents to show that some animals had been mistreated. But University officials said the records showed that the Primate Center had met all federal laws and regulations.

Animal rights groups have challenged universities in other states to get access to animal care records. – *The Chronicle of Higher Education News Blog, October 18, 2006*

Amazon Deforestation Lowest Since 1991

Deforestation in the Amazon rain forest has declined to its lowest level since 1991 due to strict enforcement of environmental regulations, the Brazilian government said. Preliminary figures released by the environmental ministry showed 5,057 square miles of the rain forest were destroyed this year – the lowest level since 4,258 square miles were lost in 1991.

“We aggressively increased enforcement of environmental laws in the past years and it has worked,” said Joao Paulo Capobianco, the ministry’s Secretary of Biodiversity and Forests.

The Amazon rain forest is the world’s largest remaining tropical wilderness, covering 60 percent of Brazil, an area larger than Western Europe. Scientists estimate about 20 percent of the forest has been destroyed by development, logging and farming. The government in September announced that the forest lost 6,450 square miles this year but the result was revised after additional data was analyzed. The numbers released Thursday are estimates based on satellite images. The final results are expected before the end of the year.

Last year, the rain forest lost 7,250 square miles.

“It’s the second year in a row there’s a decline, so it’s good news and we must applaud the government,” said Paulo Adario, director of Greenpeace’s Amazon campaign. “But our preoccupation is that the average of annual destruction remains high. More needs to be done.” The highest rate of destruction in the Amazon was in 1995, when 11,200 square miles of forest were lost.

“We are trying to repair, in a short period of time, the carelessness that existed for so long,” President Luiz Inacio Lula da Silva said at a news conference. “For a long time we believed the Amazon was endless ... but if we don’t take care of what we have, it’s going to end.” – *by Tales Azzoni, Associated Press writer, October 26*

Fort Wayne Zoo Orangutan Dies After Giving Birth

A 22-year-old orangutan died an hour after giving birth at the Fort Wayne Children's Zoo. The 4½-pound male baby was the first orangutan born at the zoo, and officials said the mother, Sayang, seemed to have a normal labor and delivery.

"Everything was proceeding normally. It was exactly what we would expect," zoo veterinarian Joe Smith said. "She took the baby in her arms and held it to her chest and was cleaning it off and showed all the natural maternal instincts that she should."

Zookeepers watched but left Sayang alone during her labor Sunday. Smith said the orangutan had made herself a bed on a shelf and lay on it during her labor and until about 45 minutes after giving birth. Then she crawled down to the floor, where she lay on her back and passed out, he said.

"It was a very sudden, abrupt thing," Smith said. Zookeepers rushed in and tried to revive Sayang with CPR and a defibrillator for about 45 minutes before they pronounced her dead.

Zookeepers are working around-the-clock shifts caring for the newborn, which must be fed every two to three hours. The Orangutan Species Survival Plan committee will have to determine whether to allow the baby to remain at the Fort Wayne Zoo or place it in another to match it with a mother.

"We would have to find another female with a proven history of maternal care," Smith said. – *Associated Press, October 25*

Cameroon Wildlife Sanctuary Awaits "Taiping Four"

The Limbe Wildlife Centre in Douala, Cameroon, home to dozens of primates endangered by the illegal bushmeat trade, is preparing to welcome some famous guests: the "Taiping Four" gorillas smuggled to Malaysia four years ago.

Felix Lankester, director, said the Centre had gone to great lengths to be ready for the return of the western lowland gorillas, currently held in Pretoria Zoo in South Africa. Taiping Zoo in Malaysia acquired the animals, smuggled out of the West African country via Nigeria, in 2002, but Cameroon has been lobbying for their return ever since.

"We have constructed a quarantine facility as an annex to our existing gorilla facility," Lankester told Reuters at the weekend, dismissing earlier suggestions by Pretoria Zoo that his center did not have the right facilities to host the gorillas. "In 2005, the construction of a new 2,500-square-meter gorilla enclosure was completed. They will live in this new enclosure with the 11 other gorillas that live here."

Cameroon's Ministry of Forestry and Wildlife said the gorillas were expected any time between November and February, ending a lengthy campaign for their return. Their move to Malaysia sparked condemnation from Cameroon and some 67 environmental and animal welfare organizations. Amid the outcry, Malaysia sent them back to their home continent but not their home country in 2004: they ended up in South Africa. Pretoria Zoo officials questioned whether they came from Cameroon and DNA tests had to be carried out. In September, after Cameroon threatened to seek damages, South Africa's National Zoo said it was sending them home.

Due to an increase in illegal hunting, sanctuaries all over Africa are dealing with an influx of bushmeat orphans in need of lifelong care. This year alone Limbe has rescued four chimps. Although the center has no plans yet to release the animals into the wild, it is proposing to develop a protected field site where a monitored release will be possible. – *By Tansa Musa, for Reuters, October 29*

Donations to PASA

Second-hand uniforms that were donated to the Pan African Sanctuary Alliance (PASA) by the Banham Zoo and Suffolk Wild Animal Park in the United Kingdom have been allocated to two PASA sanctuaries: the Centre de Conservation pour Chimpanzes (CCC) in Guinea and the Sanaga-Yong Chimpanzee Rescue Center in Cameroon. The uniform donation – which included shirts, jerseys, trousers, and boots – was the second in 2006 by these donors, which earlier sent a large shipment to the Chimpanzee Rehabilitation Association in Gambia. For more information, please visit <www.banhamzoo.co.uk>.

Medical equipment and hospital supplies donated by the Cleveland Metroparks Zoo, the Fort Wayne (Indiana) Zoo, and the Lincoln Park Zoo in Chicago have been sent on to three PASA sanctuaries: CERCOPAN in Nigeria and the Sanaga-Yong Chimpanzee Rescue Center and Limbe Wildlife Centre in Cameroon. The supplies address a wide range of diagnostic and treatment needs. PASA and its member sanctuaries are extremely grateful.

Gorilla Dies After Falling into Jacksonville Zoo Moat

A western lowland gorilla died at the Jacksonville (Florida) Zoo and Gardens. The gorilla, named Ben, fell into a moat while being chased by another gorilla. Ben was one of four male gorillas known as "the bachelors". Zoo personnel saw him fall into the water and responded immediately, but nothing could be done.

The zoo's Animal Programs Director, Delfi Messinger, says they are conducting a full investigation to make sure this doesn't happen again. Zoo spokeswoman Gina Stiles says a necropsy will be done to determine the exact cause of the gorilla's death.

Ben was 21 years old. Born at the Oklahoma City Zoo, Ben went to the Jacksonville Zoo and Gardens in 1998. -- *Associated Press, November 8, 2006*

Another Tacugama Chimpanzee is Back Home

The Tacugama Chimpanzee Sanctuary in Sierra Leone was able to return one of its five remaining escaped chimpanzees to the enclosures on November 13, leaving just four still loose following the breakout of 27 individuals on April 23.

“Ole”, a 12-year-old male, was found in the heavily forested hills eight kilometers from Tacugama, and it took sanctuary manager Bala Amarasekaran and his staff four hours of night hiking to get the chimpanzee in from the forest. Said Amarasekaran: “(Ole) is in perfect condition and I felt so sad to put him back in the den. It took us so long to teach him how to live in the wild and when he had the chance...all we did was to bring him back to his confinement!”

Tacugama, which has committed to returning all of the escaped chimpanzees to their enclosures before reopening the sanctuary, is a charter member of the Pan African Sanctuary Alliance (PASA). -- *posted by PASA to the Alloprimate list, November 15*

Thailand to Send Orangutans Home to Indonesia

Thailand will send 48 endangered orangutans home to Indonesia this week, two months after their return was delayed by a military coup, a Thai forestry official said Monday. The primates had been smuggled into Thailand and were seized at a Bangkok zoo two years ago. They will finally be sent home Wednesday, flying on a military aircraft to Jakarta airport, said Wattana Veta-yaprasit, Director of Thailand’s Wildlife Conservation Division.

Following their seizure from the Bangkok zoo, an investigation was carried out to determine whether they were from Malaysia or Indonesia. “Indonesia will take all 48 apes while they continue to undergo DNA tests to

clearly identify their origins. Any of them proven to have originated in Malaysia will be sent there later,” said Wattana. After arriving in Indonesia, the orangutans would be kept at a rehabilitation center, before going to a zoo, he added.

Orangutans, the only great ape to be found outside of Africa, are native to the islands of Sumatra and Borneo. Experts say only about 27,000 remain in the wild and populations are fast declining due to deforestation and trafficking, AFP reported. -- *Antara News, November 21, 2006*

OSU Chimps Transferred to Chimp Haven

Seven chimpanzees originally sent from Ohio State University (OSU) to Primarily Primates, Inc. (PPI), in San Antonio, Texas, have been relocated to a second sanctuary – Chimp Haven, a home for chimpanzees formerly used in research, in Shreveport, Louisiana. These seven individuals are the survivors of a group of nine chimps relocated from OSU in March of this year. One of the chimpanzees died during transfer to Primarily Primates and a second individual died two weeks later.

In October, the Texas Attorney General’s Office took control of Primarily Primates, Inc. and an Austin judge appointed wildlife rehabilitator Lee Theisen-Watt as interim operator of the facility. According to Theisen-Watt, approximately 200 animals have been relocated to other sanctuaries in an effort to relieve cramped conditions at PPI. -- *Shreveport Times, November 25, 2006*

Gibbon Conservation Center Must Move

In the latest issue of *The Gibbon’s Voice*, Alan Mootnick [e-mail: gibboncenter@earthlink.net] writes: “The Gibbon Conservation Center needs to begin collecting funds now to purchase property in order to relocate. Encroaching local development will soon become a very real threat to the health and well-being of our gibbons. Stress from the sight and noise of construction, and microorganisms in the dust stirred up in earth moving, pose unacceptable and lethal dangers.”

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Volunteer Opportunities – Field Assistant for Primate Research in Peru

Inés Nole Bazán is looking for volunteers to assist with the data collection for her investigation, “Intestinal parasite loads of a Neotropical primate measured in disturbed and undisturbed forests”. The aim of this project is to understand the human influence on parasite infection in a wild species of a Neotropical monkey. She is looking for enthusiastic, hard-working and reliable individual(s) who possess(es) a strong interest in primates to assist her for a period of one to four months between February and May, 2007.

Fieldwork will take place at the Los Amigos Research Center (CICRA), Madre de Diós, Peru. Check out the Website, www.amazonconservation.org/home/LosAmigos/cicra.htm, for more information about the field station. Fieldwork will take place around the station and will involve mainly behavioral observations of titi monkeys (*Callicebus brunneus*) and collecting fecal

samples for the diagnosis of intestinal parasites. Volunteers should be prepared to work long hours and in both rain and hot weather.

Transportation to the Center, including travel to Peru, and room and board there, must be paid by the volunteer. Estimated costs are \$270 to \$465 for transportation from Lima to the Field Station. Room and board at the Center will cost about \$20/person/day.

Applicants should be enthusiastic and genuinely interested in primates. Applications should include a current CV or resume and a brief description of yourself including your interest in primates and any relevant experience (i.e. field/laboratory experience, outdoor experience, etc.).

If you are interested, please send your application by e-mail to Inés Nole at: inesnole@hotmail.com. The deadline for applications is January 10, 2007.

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Information Requested or Available

PHS Animal Welfare Policy Announcement

The NIH has announced the Notice of a Report on the Review of Responses to the National Institutes of Health Request for Information: Standards for the Care and Use of Laboratory Animals. The Notice, NOT-OD-07-016, is to inform the research community of the NIH review of submissions to RFI NOT-OD-06-011 (Request for Information: Standards for the Care and Use of Laboratory Animals), which explored the need to update the laboratory animal welfare standards of the *Guide for the Care and Use of Laboratory Animals*. It is available at: grants2.nih.gov/grants/guide/notice-files/NOT-OD-07-016.html.

New from Gorilla Haven

The Gorilla Haven Web page, www.gorilla-haven.org, now has a video clips page (by popular demand) and a new “Jane’s Blog” section.

New World Monkey E-List

Nix Howlett, at Brookfield Zoo, has started an e-mail discussion list for New World Monkey keepers. Contact Nix at nihowlet@brookfieldzoo.org.

World’s 25 Most Endangered Primates

At the 21st Congress of the International Primatological Society in Entebbe, Uganda, primatologists compiled an updated list of the world’s most endangered primates: www.imate-sg.org/newT25.htm.

More Interesting Websites

- American Zoo and Aquarium Association’s Contraceptive Advisory Center’s site, listing contraceptive options for nondomestic species: www.stlzoo.org/animals/scienceresearch/contraceptioncenter
- Australasian Zoo Keeping: www.australasianzookeeping.org
- Australasian Society of Zoo Keeping, Inc. www.aszk.org.au
- Books recommended for Zoo Libraries: www.sil.si.edu/SILPublications/zoo-aquarium/tpbib.htm#INTRODUCTION
- Complete works of Charles Darwin: darwin-online.org.uk
- *The Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research*: www.nap.edu/catalog/10732.html#toc
- Information discouraging the purchase and keeping of nonhuman primates as pets: petmonkey.info/articles.htm
- IUCN/SSC Primate Specialist Group: www.imate-sg.org
- Neanderthal DNA information, by *Nature* journal: www.nature.com/nature/focus/neanderthaldna/index.html
- Southeast Asian Primatological Association: www.aseanprimates.org

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Recent Books and Articles

(Addresses are those of first authors unless otherwise indicated)

Books

- *The Evolution of Human Life History*. K. Hawkes & R. R. Paine (Eds.). Santa Fe, NM: SAR Press, 2006. [Price: (paperback) \$34.95]

Contents: Introduction, by R. R. Paine and K. Hawkes; The derived features of human life history, by S. L. Robson, C. P. van Schaik, & K. Hawkes; Life history theory and human evolution: A chronicle of ideas and findings, by K. Hawkes; Slow life histories and human evolution, by K. Hawkes; Primate life histories and the role of brains, by C. P. van Schaik, N. Barrickman, M. L. Bastian, E. B. Krakauer, & M. A. van Noordwijk; Lactation, complementary feeding, and human life history, by D. W. Sellen; Modern human life history: The evolution of human childhood and fertility, by B. Bogin; Contemporary hunter-gatherers and human life history evolution, by N. Blurton Jones; The osteological evidence for human longevity in the recent past, by L. W. Konigsberg & N. P. Herrmann; Paleodemographic data and why understanding Holocene demography is essential to understanding human life history evolution in the Pleistocene, by R. R. Paine & J. L. Boldsen; The evolution of modern human life history: A paleontological perspective, by M. M. Skinner & B. Wood; Appendices; References; and Index.

- *Wildlife Contraception: Issues, Methods, and Applications (Zoo and Aquarium Biology and Conservation Series)*. C. S. Asa & I. J. Porton (Eds.). Baltimore: Johns Hopkins University Press, 2005. [Price: \$65]

Includes "Contraception in nonhuman primates, by I. J. Porton & K. E. Dematteo.

- *Grains of Golden Sand: Adventures in War-torn Africa*. D. Messinger. (M. Kizito, M., Illustrator). Partners Pub Group Inc, 2006. [Price: paperback, \$15.95]

- *Comparative Cognition: Experimental Explorations of Animal Intelligence*. E. A. Wasserman & T. R. Zentall (Eds.). New York: Oxford University Press, 2006. 720 pp. [Price: \$120]

Contents include: Grouping and segmentation of visual objects by baboons (*Papio papio*) and humans (*Homo sapiens*), by J. Fagot & I. Barbet; Similarity and difference in the conceptual systems of primates: The unobservability hypothesis, by J. Vonk & D. J. Povinelli; What is challenging about tool use? The capuchin's perspective, by E. Visaberghe & D. Fragaszy; and Chimpanzee social cognition in early life: Comparative-developmental perspective, by M. Tomonaga, M. Myowa-Yamakoshi, Y. Mizuno, S. Okamoto, M. K. Yamaguchi, D. Kosugi, K. A. Bard, M. Tanaka, & T. Matsuzawa.

We would like to acknowledge *Primate-Science* as a source for information about new books.

Book Chapters

- Biology and medicine of non-human primates. Part II: Clinical medicine and uses. Linn, M. J., Duran-Struuck, R., Trivedi, A. K., Zajic, L. B., Wroblewski, S. K., Hawley, A. E., & Myers, D. D., Jr. In *Laboratory animal medicine and management*. J. D. Reuter & M. A. Suckow (Eds.). Ithaca, NY: International Veterinary Information Service, 2006, <www.ivis.org/advances/Reuter/myers2/chapter.asp?LA=1>.

Contents: Anesthesia, analgesia, euthanasia; Diseases and medicine; Nonhuman primate neoplasms; Clinical methodologies; Laboratory animal use in research; Primate resources; Appendix; and References.

Bulletins

- *Animal Welfare Information Center Bulletin*, Summer, 2006, 12[3-4].

Contents include: Searching bibliographic databases for alternatives, by T. Allen & D. Jensen; Examples of reduction, refinement and replacement from the British Home Office Animals Inspectorate; and New lancet offers painless bleeding technique, by L. McGinnis.

Magazines and Newsletters

- *Boletín de la Asociación Primatológica Española*, May, 2006, 13[1-2], <www.uam.es/ape>. [Depto. de Psicología Biológica y de la Salud, Facultad de Psicología, Universidad Autónoma de Madrid, Cantoblanco 28049, Madrid, Spain]

Contents include "Programa de conservación del tití de manos blancas [*Saguinus leucopus*] en Colombia".

- *Boletín de la Asociación Primatológica Española*, September, 2006, 13[3]. [Address same as above]

Contents include a detailed report of the IPS Executive Board's pre-congress and post-congress meetings in Entebbe, Uganda (in Spanish).

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by C. A. Sariol, J. Gonzalez-Martinez, T. Arana, S. Gascot, E. Suarez, E. Maldonado, M. S. Gerald, M. Rodriguez, & E. N. Kraiselburd; Molecular cloning and gene expression of endoplasmic reticulum stress proteins in Japanese monkey, *Macaca fuscata*, by A. Higashino, R. Fukuhara, T. Tezuka, & T. Kageyama; Hepatitis viruses in non-human primates, by M. Makuwa, S. Souquiere, P. Telfer, O. Bourry, P. Rouquet, M. Kazanji, P. Roques, & F. Simon; Objective measures of health and well-being in laboratory rhesus monkeys (*Macaca mulatta*), by J. J. Smith, V. Hadzic, X. Li, P. Liu, T. Day, A. Utter, B. Kim, I. M. Washington, & M. A. Basso; Electromyographic telemetry in the development of humane primate model of spinal cord injury, by S. Nesathurai, W. A. Graham, D. J. Edell, D. L. Rosene, K. Mansfield, P. Sehgal, D. Magill, & J. B. Sledge; Model of traumatic spinal cord injury in *Macaca fascicularis*: Similarity of experimental lesions created by epidural catheter to human spinal cord injury, by S. Nesathurai, W. A. Graham, K. Mansfield, D. Magill, P. Sehgal, S. V. Westmoreland, S. Prusty, D. L. Rosene, & J. B. Sledge; and Monoclonal antibody testing, by J. L. VandeBerg, S. M. Zola, J. J. Ely, & R. C. Kennedy.

• *Lemur News*, June, 2006, 11.

Contents: Editorial; Surveys for lemurs and biodiversity in the Beakora Forest southeast of Kalambatritra Reserve, Madagascar, by P. Rabeson, D. Andrianarisata, P. Rasabo, D. Andrianoely, G. Razafindrakoto, D. Razafindraibe, L. Rasabo, & P. C. Wright; Inventaires des Lémuriers nocturnes dans la forêt pluviale de Maromizaha (Est de Madagascar), by B. Randrianambinina & S. Rasoloharijaona; An international conservation and research programme for Perrier's sifaka (*Propithecus perrieri* Lavauden, 1931) in northern Madagascar, by C. Schwitzer, O. Arnoult, & B. Rakotosamimanana; Preliminary survey of lemur density in the semimontane rainforest of Anka, Fort-Dauphin region, by I. Norscia, O. G. Rahanitriniaina, A. Jolly, & G. Donati; Range extension of Perrier's Sifaka, *Propithecus perrieri*, in the Andrafiarana Classified Forest, by J. F. Ranaivoarisoa, R. Ramanamahefa, E. E. Louis, Jr., & R. A. Brenneman; A preliminary study on resident lemur populations in the Mariarano Classified Forest, by A. Rambintsoa, Z. J. Rigobert, R. Richard, R. J. F. Xavier, R. A. Brenneman, & E. E. Louis, Jr.; Les populations reliques de primates: Les Propithèques, by L. Wilmè & M. W. Callmander; Gastrointestinal parasites of *Cheiro galeus* spp. and *Microcebus murinus* in the littoral forest of Mandena, Madagascar, by B. M. Raharivololona; A lemur survey of the Réserve Spéciale de Marotandrano, Madagascar, by J. Ralison; Totale disparition du Propithèque de Coquerel (*Propithecus verreauxi coquereli*) du nord de la réserve spéciale Bora (Province de Mahajanga), by P. Koenig & A. Zavaosa; Rapid assessment of lemurs in southern and southwestern forests of Madagascar, by J. Ralison; Spider-catcher – Predation of *Eulemur fulvus* on an orb web spider, by R. Dolch; Activity budget, ranging,

and group size in silky sifakas (*Propithecus candidus*), by E. R. Patel; and Cytogenetic and molecular characteristics of a new species of sportive lemur from Northern Madagascar, by C. Rabarivola, A. Zaramody, J.-L. Fausser, N. Andriaholinirina, C. Roos, D. Zinner, H. Marcel, & Y. Rumpler.

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Includes “Conservancy researchers gone wild”, by C. Wolovich.

- *Primate Conservation: The Journal of the IUCN/SSC Primate Specialist Group*, 2006, No. 20. [Conservation International, 1919 M Street NW, Suite 600, Washington, DC 20036; e-mail: j.lucena@conservation.org]

Contents: Primates in peril: The world’s 25 most endangered primates, 2004–2006, by R. A. Mittermeier, C. Valladares-Pádua, A. B. Rylands, A. A. Eudey, T. M. Butynski, J. U. Ganzhorn, R. Kormos, J. M. Aguiar, & S. Walker; On a new species of titi monkey, genus *Callicebus* Thomas (Primates, Pitheciidae), from Western Bolivia with preliminary notes on distribution and abundance, by R. B. Wallace, H. Gómez, A. Felton, & A. M. Felton; Identification, behavioral observations, and notes on the distribution of the titi monkeys *Callicebus modestus* Lönnberg, 1939 and *Callicebus olallae* Lönnberg, 1939, by A. Felton, A. M. Felton, R. B. Wallace, & H. Gómez; A survey of primate populations in northeastern Venezuelan Guayana, by B. Urbani; A history of long-term research and conservation of northern muriquis (*Brachyteles hypoxanthus*) at the Estação Biológica de Caratinga/RPPN-FMA, by K. B. Strier & J. P. Boubli; Engl

ish common names for subspecies and species of African primates, by P. Grubb; Geospecies and superspecies in the African primate fauna, by P. Grubb; The distribution and status of hoolock gibbon, *Hoolock hoolock*, in Manipur, Meghalaya, Mizoram, and Nagaland in northeast India, by A. Choudhury Choudhur; The pros and cons of a consensus list of Asian primate subspecies, by D. Brandon-Jones; A Conservation Action Plan for the Mentawai primates, by D. J. Whittaker; and Conservation of threatened primates of northeast India, by A. Srivastava.

- *Primate Report*, July, 2006, 73.

Contents: Genetic characterization and phylogenetic relationships between the *Ateles* species (Atelidae, Primates) by means of DNA microsatellite markers and craniometric data, by M. Ruiz-García, A. Parra, N. Romero Aleán, P. Escobar-Armel, & J. M. Shostell; Social relationships in a free-ranging group of bonnet macaques in Tamil Nadu, India, by M. Mehu, M.-C. Huynen, & G. Agoramorthy; and Applied primatology in zoos: History

and prospects in the field of wildlife conservation, public awareness and animal welfare, by S. Gippoliti.

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- *A Critical Look at Animal Experimentation*. Medical Research Modernization Committee, 2006, <www.mrmcmed.org/Critical_Look.pdf>.

“Considerable evidence demonstrates that animal experimentation is inefficient and unreliable, while newly developed methodologies are more valid and less expensive than animal studies.” – *from the Introduction*

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- Abstracts presented at the Association of Veterinary Anaesthetists’ Spring Meeting, Liverpool, U.K., April 2006. *Veterinary Anaesthesia and Analgesia*, 2006, 33[6].

- Program of the 5. Göttinger Freilandtage, December 13–16, 2005. “Primate Diversity – Past, Present and Future”. *Primate Report*, December, 2005, Special Issue, 72-1.

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- Primate Sexual Selection — Graduate Student Contributions. *International Journal of Primatology*, 2006, 27[1].

Introduction, by J. A. Parga; Sexual selection in the loud calls of male primates: Signal content and function, by R. A. Delgado; Scaling of size and dimorphism in primates I: Microevolution, by A. D. Gordon; Scaling of size and dimorphism in primates II: Macroevolution, by A. D. Gordon; Male mate choice in *Lemur catta*, by J. A. Parga; and Preferences for symmetry in conspecific facial shape among *Macaca mulatta*, by C. Waitt & A. C. Little.

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Contents: Reconciling the origins of Africa, India and Madagascar with vertebrate dispersal scenarios, by J. C. Masters, M. J. de Wit, & R. J. Asher; Malagasy primate origins: Phylogenies, fossils, and biogeographic reconstructions, by N. J. Stevens & C. P. Heesy; A composite molecular phylogeny of living lemuroid primates, by M. DelPero, L. Pozzi, & J. C. Masters; Lemuriform origins as viewed from the fossil record, by M. Godinot; Lack of torpor in free-ranging southern lesser galagos, *Galago moholi*: Ecological and physiological considerations, by N. Mzilikazi, J. C. Masters, & B. G. Lovegrove; and Historical biogeography of the strepsirhine primates of Madagascar, by I. Tattersall.

- Preparation of Animals for Use in the Laboratory. *ILAR Journal*, 2006, 47[4], <www.ilarjournal.com>.

This issue of *ILAR Journal* features articles by laboratory animal scientists from diverse backgrounds. Contents include: Introduction: The art and science of preparing animals for the research environment; Considerations in the selection and conditioning of Old World monkeys for laboratory research: Animals from domestic sources; Preparing New World monkeys for laboratory research; Preparing chimpanzees for laboratory research; Establishing an appropriate period of acclimatization following transportation of laboratory animals; and Preparation of animals for use in the laboratory: Issues and challenges for the Institutional Animal Care and Use Committee (IACUC).

- Basic and applied biology of the primate reproductive tract: In honor of the career of Dr. Robert M. Brenner. *Reproductive Biology and Endocrinology*, 2006, 4[Suppl. 1], <www.rbj.com/home>.

Contents: Preface, by R. L. Stouffer; Introduction, by R. M. Brenner; Cellular and molecular regulation of the primate endometrium: A perspective, by W. C. Okulicz; Application of functional genomics to primate endometrium: Insights into biological processes, by L. C. Giudice; Regulation of human endometrial function: Mechanisms relevant

to uterine bleeding, by H. O. D. Critchley, R. W. Kelly, D. T. Baird, & R. M. Brenner; A critical period of progesterone withdrawal precedes menstruation in macaques, by O. D. Slayden & R. M. Brenner; A baboon model for endometriosis: Implications for fertility, by J. M. Hastings & A. T. Fazleabas; Role of nonhuman primate models in the discovery and clinical development of selective progesterone receptor modulators (SPRMs), by K. Chwalisz, R. Garg, R. Brenner, O. Slayden, C. Winkel, & W. Elger; Estrogen receptor-alpha (ER-alpha) and defects in uterine receptivity in women, by B. A. Lessey, W. A. Palomino, K. B. C. Apparao, S. L. Young, & R. A. Lininger; and The role of HLA-G in human pregnancy, by J. S. Hunt, D. K. Langat, R. H. McIntire, & P. J. Morales.

- Electronic Submission of R01 Grant Applications, *NIH Extramural Nexus*, November, 2006, Special issue, <grants.nih.gov/grants/partners/1106Nexus.htm>.

Animal Models

- Generation of simian-tropic HIV-1 by restriction factor evasion. Hatzioannou, T., Princiotta, M., Piatak, M., Jr., Yuan, F., Zhang, F., Lifson, J. D., & Bieniasz, P. D. (P. D. B., Aaron Diamond AIDS Research Center, 455 First Ave, New York, NY 10016 [e-mail: pbienias@adarc.org]). *Science*, 2006, 314, 95.

“Because HIV-1 does not infect most nonhuman primates, animal modeling of human HIV infection and AIDS has primarily consisted of experimentally infecting macaques with related simian immunodeficiency viruses (SIVMAC). However, the usefulness of such models is limited by the substantial divergence between SIVMAC and HIV-1. We derived an HIV-1-based virus that includes only small portions of SIVMAC yet replicates robustly in both transformed and primary rhesus macaque T cells. Derivation of simian-tropic HIV-1 (stHIV-1) has important implications for understanding primate lentivirus zoonosis and should allow the development of improved animal models for studies of AIDS and the evaluation of vaccines and treatments.”

- Navigation-associated medial parietal neurons in monkeys. Sato, N., Sakata, H., Tanaka, Y. L., & Taira, M. (ARISH, Nihon Univ., Kudan-Kita 4-2-1, Chiyoda, Tokyo 102-0073, Japan [e-mail: masato@med.nihon-u.ac.jp]). *Proceedings of the National Academy of Sciences, U.S.A.*, 2006, 103, 17001-17006.

“To examine the neural basis of route knowledge by which one can reach one’s destination, we recorded the activity of 580 neurons in the monkey medial parietal region (MPR) while monkeys actively navigated through a virtual environment. One hundred eighty of these neurons (31%) showed significant responses to the monkeys’ movements in the virtual environment. Of these responsive neurons, 77% (139/180) showed responses associated with a specific movement at a specific location (navigation neurons), 8% (14/180) showed responses associated with a

specific movement (movement-selective neurons), and the remaining 27 neurons (15%) were nonselective. We found navigation neurons whose responses to the same movement at the same location were modulated depending on the route that the monkey was currently taking, that is, in a route-selective manner (32 of 59 tested neurons among 139 navigation neurons, route-selective navigation neurons). The reversible inactivation of MPR neurons by muscimol resulted in a monkey becoming lost during the navigation task trial. These results suggest that MPR plays a critical role in route-based navigation by integrating location information and self-movement information.”

- Long-term motor cortex plasticity induced by an electronic neural implant. Jackson, A., Mavoori, J., & Fetz, E. E. (E. E. F., Dept of Elec. Engineering., Univ. of Washington, Seattle, WA 98195 [e-mail: fetz@u.washington.edu]). *Nature*, 2006, 444, 56-60.

“It has been proposed that the efficacy of neuronal connections is strengthened when there is a persistent causal relationship between presynaptic and postsynaptic activity. Such activity-dependent plasticity may underlie the reorganization of cortical representations during learning, although direct in vivo evidence is lacking. Here we show that stable reorganization of motor output can be induced by an artificial connection between two sites in the motor cortex of freely behaving primates. An autonomously operating electronic implant used action potentials recorded on one electrode to trigger electrical stimuli delivered at another location. Over one or more days of continuous operation, the output evoked from the recording site shifted to resemble the output from the corresponding stimulation site, in a manner consistent with the potentiation of synaptic connections between the artificially synchronized populations of neurons. Changes persisted in some cases for more than one week, whereas the output from sites not incorporated in the connection was unaffected. This method for inducing functional reorganization in vivo by using physiologically derived stimulus trains may have practical application in neurorehabilitation after injury.”

- Conservation and evolution of gene coexpression networks in human and chimpanzee brains. Oldham, M. C., Horvath, S., & Geschwind, D. H. (D. H. G., Semel Inst., David Geffen School of Med., 710 Westwood Plaza, Los Angeles, CA 90095-6814 [e-mail: dhg@ucla.edu]). *Proceedings of the National Academy of Sciences, U.S.A.*, 2006, 103, 17973-17978.

“Comparisons of gene expression between human and non-human primate brains have identified hundreds of differentially expressed genes, yet translating these lists into key functional distinctions between species has proved difficult. Here we provide a more integrated view of human brain evolution by examining the large-scale organization of gene coexpression networks in human and chimpanzee brains. We identify modules of coexpressed genes that correspond to discrete brain regions and quantify their con-

servation between the species. Module conservation in cerebral cortex is significantly weaker than module conservation in subcortical brain regions, revealing a striking gradient that parallels known evolutionary hierarchies. We introduce a method for identifying species-specific network connections and demonstrate how differential network connectivity can be used to identify key drivers of evolutionary change. By integrating our results with comparative genomic sequence data and estimates of protein sequence divergence rates, we confirm a number of network predictions and validate these findings. Our results provide insights into the molecular bases of primate brain organization and demonstrate the general utility of weighted gene coexpression network analysis.”

- Repeated intravaginal inoculation with cell-associated simian immunodeficiency virus results in persistent infection of nonhuman primates. Kaizu, M., Weiler, A. M., Weisgrau, K. L., Vielhuber, K. A., May, G., Piaskowski, S. M., Furlott, J., Maness, N. J., Friedrich, T. C., Loffredo, J. T., Osborne, A., & Rakasz, E. G. (E. G. R., AIDS Vaccine Research Lab., Wisconsin NPRC, Madison, WI [e-mail: erakasz@primate.wisc.edu]). *Journal of Infectious Diseases*, 2006, 194, 912-916.

The goal of the present study was to develop a nonhuman primate model of intravaginal human immunodeficiency virus (HIV) transmission with cell-associated virus. Reproductively mature, cycling cynomolgus macaques with or without chemically induced, transient ulcers of the lower female reproductive tract repeatedly received challenge with a variable amount of in vitro simian immunodeficiency virus mac239-infected peripheral blood mononuclear cells. Persistent viremia was established with surprisingly few infectious lymphocytes containing physiologically relevant quantities of cell-associated virus. This model will be indispensable for the testing of vaccines and topical agents that are aimed toward the prevention of heterosexual transmission of HIV.

- Effects of methamphetamine on cortisone concentration, NK cell activity and mitogen response of T-lymphocytes in female cynomolgus monkeys. Saito, M., Yamaguchi, T., Kawata, T., Ito, H., Kanai, T., Terada, M., Yokosuka, M., & Saito, T. R. (Department of Radiology, Graduate School of Medicine, Chiba University, 1-8-1 Inohana, Chuo-ku, Chiba-shi, Chiba 260-8670, Japan). *Experimental. Animals*, 2006, 55, 477-481.

“As a model for studying methamphetamine (MAP) abuse, which has become a social problem in Japan, we investigated the changes in serum cortisone, NK cell activity and mitogenic response of T-lymphocytes after a single injection of MAP (3.0 mg/kg) in female cynomolgus monkeys. Serum cortisol concentration was significantly elevated to 2.66 times pre-injection levels at 6 h post-injection, and the effect was still observed 24 h later. NK cell activity was significantly elevated at 6 h after MAP injection, but at 24 h after injection had dropped markedly to 49.5% of

baseline. Mitogen (PHA) response of lymphocytes was elevated when MAP was injected, and this increased level continued up to 24 h. We speculate that the transient increase in NK cell activity followed by a distinct drop, as well as the changes in T-lymphocytes, may be strongly related to the cortisone concentration.”

Behavior

• Food-associated calls in chimpanzees: Responses to food types or food preferences? Slocombe, K. E., & Zuberbühler, K. (School of Psychology, Univ. of St Andrews, St Andrews, Fife KY16 9JP, U.K. [e-mail: kz3@st-andrews.ac.uk]). *Animal Behaviour*, 2006, 72, 989-999.

“Chimpanzees produce specific vocalizations, called ‘rough grunts’, when they find food. These calls vary depending on the type of food. We investigated whether these calls vary according to the type of food alone or the chimp’s preference for that type of food. We recorded calls from chimps relating to nine different types of food, ranked as high, medium, or low preference. The chimps consistently produced distinct calls for each of the three different preference classes. Furthermore, even within the high preference foods (bread, banana and mango), certain items could be associated with particular types of call, suggesting that chimpanzees can label individual types of food. However, although our results were repeatable with other captive chimpanzees, we were unable to confirm these findings with data from the wild. This suggests that the emergence of vocal ‘names’ for food items by chimpanzees that we found is a byproduct of the special circumstances found in captivity.”

Care

• Use of enclosures with functional vertical space by captive rhesus monkeys (*Macaca mulatta*) involved in biomedical research. Clarence, W. M., Scott, J. P., Dorris, M. C., & Paré, M. (M. P., Dept of Physiology, Centre for Neurosci. Studies, Queen’s University, Kingston, P.O., K7L 3N6, Canada [e-mail: pare@biomed.queensu.ca]). *Journal of the American Association for Laboratory Animal Science*, 2006, 45, 31-34.

“We assessed space use by two pairs of captive female rhesus monkeys recently transferred into two enclosures moderately larger than their former traditional research cages and providing elevated perches at or above human eye level for all monkeys. This new space did not affect the ongoing biomedical research in which these captive monkeys were involved, and we sought to determine whether they used the elevated positions preferentially, as do wild animals. The frequency and duration of visits at each of the 9 distinct regions within these enclosures was calculated during 30-min morning and evening sessions over 20 days. We found that the monkeys frequented all regions of their enclosures in a similar manner during both morning and evening sessions. However, the duration spent at each region varied significantly between morning

and evening sessions, with high perches being chosen preferentially in the evenings. Overall, the monkeys spent the majority of their time at elevated positions. These results support the view that access to functional vertical space provides a preferred environment for species-specific behavior and is an option that should be considered by other research facilities.”

Disease

• Malaria control using indoor residual spraying and larvivorous fish: A case study in Betul, central India. Singh, N., Shukla, M. M., Mishra, A. K., Singh, M. P., Paliwal, J. C., & Dash, A. P. (Neeru Singh, Malaria Research Centre Field Station, RMRCT Complex, Nagpur Road, Garha, Jabalpur 482003, Madhya Pradesh, India [e-mail: oimrc@yahoo.co.in]). *Tropical Medicine & International Health*, 2006, 11, 1512-1520.

To assess the impact of intensified malaria control interventions in an ethnic minority community in Betul using existing tools, two rounds of indoor residual spraying with synthetic pyrethroid insecticide were applied and larvivorous fish introduced, followed by intensive surveillance for early detection of *Plasmodium falciparum* with rapid diagnostic tests and prompt treatment with sulphadoxine pyrimethamine. Pre-intervention surveys revealed a very high fever rate in the community in all age groups with a slide positivity rate of >50% with >90% *P. falciparum*. The post-intervention phase showed a sharp steady decline in number of malaria cases (β 0.972; $P < 0.0001$, 95% CI 0.35–0.47). Monitoring of entomological results revealed a significant decline in both *Anopheles* species and *A. culicifacies* ($P < 0.0001$). This combination of indoor residual spraying and early detection and prompt treatment complemented by rapid diagnostic tests and larvivorous fishes successfully brought malaria under control. These approaches could be applied in other regions of different endemicity to control malaria in India.

• Implication of a retrovirus-like glycoprotein peptide in the immunopathogenesis of Ebola and Marburg viruses. Yaddanapudi, K., Palacios, G., Towner, J. S., Chen, I., Sariol, C. A., Nichol, S. T., & Lipkin, W. I. (Greene Infectious Disease Lab., Mailman Sch. of Pub. Health, Columbia Univ., 722 W. 168th St., Rm. 1801, New York, NY 10032 [e-mail: wil2001@columbia.edu]). *The FASEB Journal*, 2006, 20, 2519-2530.

“Ebola and Marburg viruses can cause hemorrhagic fever (HF) outbreaks with high mortality in primates. Whereas Marburg (MARV), Ebola Zaire (ZEBOV), and Ebola Sudan (SEBOV) viruses are pathogenic in humans, apes, and monkeys, Ebola Reston (REBOV) is pathogenic only in monkeys. Early immunosuppression may contribute to pathogenesis by facilitating viral replication. Lymphocyte depletion, intravascular apoptosis, and cytokine dysregulation are prominent in fatal cases. Here we functionally characterize a 17 amino acid domain in filoviral

glycoproteins that resembles an immunosuppressive motif in retroviral envelope proteins. Activated human or rhesus peripheral blood mononuclear cells (PBMC) were exposed to inactivated ZEBOV or a panel of 17mer peptides representing all sequenced strains of filoviruses, then analyzed for CD4+ and CD8+ T cell activation, apoptosis, and cytokine expression. Exposure of human and rhesus PBMC to ZEBOV, SEBOV, or MARV peptides or inactivated ZEBOV resulted in decreased expression of activation markers on CD4 and CD8 cells; CD4 and CD8 cell apoptosis as early as 12 h postexposure; inhibition of CD4 and CD8 cell cycle progression; decreased interleukin (IL)-2, IFN- γ , and IL12-p40 expression; and increased IL-10 expression. In contrast, only rhesus T cells were sensitive to REBOV peptides. These findings are consistent with the observation that REBOV is not pathogenic in humans and have implications for understanding the pathogenesis of filoviral HF.”

- Human immunodeficiency viruses: SIV infection in wild gorillas. Van Heuverswyn, F., Li, Y., Neel, C., Bailes, E., Keele, B. F., Liu, W., Loul, S., Butel, C., Liegeois, F., Bienvenue, Y., Ngolle, E. M., Sharp, P. M., Shaw, G. M., Delaporte, E., Hahn, B. H., & Peeters, M. (UMR145, Inst. de Recherche pour le Développement, Univ. of Montpellier 1, 34394, Montpellier Cedex 5, France [e-mail: martine.peeters@mpl.ird.fr]). *Nature*, 2006, 444, 164.

HIV 1 group M, the AIDS pandemic virus, was traced to a single cross-over of simian immunodeficiency virus from chimpanzees in west central Africa. Cross-over from the same reservoir led to the infection of a few individuals in Cameroon with HIV-1 group N. A third virus in this radiation, HIV-1 group O, was identified in Cameroon in 1994 but its primate reservoir was unknown. Now a probable source has been found: viruses resembling HIV-1 group O are present in wild-living gorillas. Like chimpanzees, gorillas are hunted as food, a possible route for human HIV-1 group O infection.

- Ebola outbreak killed 5000 gorillas. Bermejo, M., Rodríguez-Teijeiro, J. D., Illera, G., Barroso, A., Vilà, C., & Walsh, P. D. (Dept of Animal Biology, Univ. of Barcelona, ES-08028 Barcelona, Spain [e-mail: magda_bermejo@yahoo.es]). *Science*, 2006, 314, 1564.

“Over the past decade, the Zaire strain of Ebola virus (ZEBOV) has repeatedly emerged in Gabon and Congo. Each human outbreak has been accompanied by reports of gorilla and chimpanzee carcasses in neighboring forests, but both the extent of ape mortality and the causal role of ZEBOV have been hotly debated. Here, we present data suggesting that in 2002 and 2003 ZEBOV killed about 5000 gorillas in our study area. The lag between neighboring gorilla groups in mortality onset was close to the ZEBOV disease cycle length, evidence that group-to-group transmission has amplified gorilla die-offs.”

Evolution, Genetics, and Taxonomy

- A juvenile early hominin skeleton from Dikika, Ethiopia. Alemseged, Z., Spoor, F., Kimbel, W. H., Bobe, R., Geraads, D., Reed, D., & Wynn, J. G. (Dept of Human Evolution, Max-Planck-Inst. for Evolutionary Anthropology, Deutscher Platz 6, 04103 Leipzig, Germany [e-mail: zeray@eva.mpg.de]). *Nature*, 2006, 443, 296-301.

“Understanding changes in ontogenetic development is central to the study of human evolution. With the exception of Neanderthals, the growth patterns of fossil hominins have not been studied comprehensively because the fossil record currently lacks specimens that document both cranial and postcranial development at young ontogenetic stages. Here we describe a well-preserved 3.3-million-year-old juvenile partial skeleton of *Australopithecus afarensis* discovered in the Dikika research area of Ethiopia. The skull of the approximately three-year-old presumed female shows that most features diagnostic of the species are evident even at this early stage of development. The find includes many previously unknown skeletal elements from the Pliocene hominin record, including a hyoid bone that has a typical African ape morphology. The foot and other evidence from the lower limb provide clear evidence for bipedal locomotion, but the gorilla-like scapula and long and curved manual phalanges raise new questions about the importance of arboreal behaviour in the *A. afarensis* locomotor repertoire.”

- Geological and palaeontological context of a Pliocene juvenile hominin at Dikika, Ethiopia. Wynn, J. G., Alemseged, Z., Bobe, R., Geraads, D., Reed, D., & Roman, D. C. (Dept of Geology, Univ. of So. Florida, Tampa, FL 33620 [e-mail: jwynn@cas.usf.edu]). *Nature*, 2006, 443, 332-336.

“Since 1999, the Dikika Research Project (DRP; initiated by Z.A.) has conducted surveys and excavations in badlands that expose Pliocene and Pleistocene sediments south of the Awash River in Ethiopia, between surrounding hominin localities at Hadar, Gona and the Middle Awash region. Here we report our geological mapping and stratigraphic measurement of the DRP area, and the context of a remarkably well-preserved skeleton of the earliest known juvenile hominin at the Dikika DIK-1 locality. Our mapping of the DRP area permits a complete definition of the hominin-bearing Hadar Formation and provides a cohesive structural and tectonic framework defining its relationships to adjacent strata. Our findings reveal the basin-scale tectonic, depositional and palaeoenvironmental history of the area, as well as a clear taphonomic and palaeontological context for the juvenile hominin. Such data are crucial for understanding the environmental context of human evolution, and can be integrated into larger-scale tectonic and palaeoenvironmental studies. Our basin-scale approach to palaeoenvironments provides a means to elucidate the complex geological history

occurring at the scale of temporally and geographically controlled fossil point localities, which occur within the rich tectonic and depositional history of the Awash Valley.”

- Late survival of Neanderthals at the southernmost extreme of Europe. Finlayson, C., Pacheco, F. G., Rodríguez-Vidal, J., Fa, D. A., Gutierrez López, J. M., Pérez, A. S., Finlayson, G., Allue, E., Baena Preysler, J., Cáceres, I., Carrión, J. S., Jalvo, Y. F., Gleed-Owen, C. P., Jimenez Espejo, F. J., López, P., López Sáez, J. A., Riquelme Cantal, J. A., Sánchez Marco, A., Guzman, F. G., Brown, K., Fuentes, N., Valarino, C. A., Villalpando, A., Stringer, C. B., Martínez Ruiz, F., & Sakamoto, T. (The Gibraltar Museum, 18–20 Bomb House Lane, Gibraltar [e-mail: jcfinlay@gibraltar.gi]). *Nature*, 2006, 443, 850-853.

“The late survival of archaic hominin populations and their long contemporaneity with modern humans is now clear for southeast Asia. In Europe the extinction of the Neanderthals, firmly associated with Mousterian technology, has received much attention, and evidence of their survival after 35 kyr bp has recently been put in doubt. Here we present data, based on a high-resolution record of human occupation from Gorham’s Cave, Gibraltar, that establish the survival of a population of Neanderthals to 28 kyr bp. These Neanderthals survived in the southernmost point of Europe, within a particular physiographic context, and are the last currently recorded anywhere. Our results show that the Neanderthals survived in isolated refuges well after the arrival of modern humans in Europe.”

- Genetic, physiologic and ecogeographic factors contributing to variation in *Homo sapiens*: *Homo floresiensis* reconsidered. Richards, G. D. (Dept of Integrative Biology, Univ. of California, Berkeley, CA 94720 [e-mail: grichard@berkeley.edu]). *Journal of Evolutionary Biology*, 2006, 19, 1744.

“A new species, *Homo floresiensis*, was recently named for Pleistocene hominid remains on Flores, Indonesia. Significant controversy has arisen regarding this species. To address controversial issues and refocus investigations, I examine the affinities of these remains with *Homo sapiens*. Clarification of problematic issues is sought through an integration of genetic and physiological data on brain ontogeny and evolution. Clarification of the taxonomic value of various ‘primitive’ traits is possible given these data. Based on this evidence and using a *H. sapiens* morphological template, models are developed to account for the

combination of features displayed in the Flores fossils. Given this overview, I find substantial support for the hypothesis that the remains represent a variant of *H. sapiens* possessing a combined growth hormone/insulin-like growth factor I axis modification and mutation of the MCPH gene family. Further work will be required to determine the extent to which this variant characterized the population.”

- An RNA gene expressed during cortical development evolved rapidly in humans. Pollard, K. S., Salama, S. R., Lambert, N., Lambot, M.-A., Coppens, S., Pedersen, J. S., Katzman, S., King, B., Onodera, C., Siepel, A., Kern, A. D., Dehay, C., Ingel, H., Ares, M., Jr., Vanderhaeghen, P., & Haussler, D. (D. H., Univ. of California, Santa Cruz, CA 95064 [e-mail: haussler@soe.ucsc.edu]). *Nature*, 2006, 443, 167-172.

“The developmental and evolutionary mechanisms behind the emergence of human-specific brain features remain largely unknown. However, the recent ability to compare our genome to that of our closest relative, the chimpanzee, provides new avenues to link genetic and phenotypic changes in the evolution of the human brain. We devised a ranking of regions in the human genome that show significant evolutionary acceleration. Here we report that the most dramatic of these ‘human accelerated regions’, HAR1, is part of a novel RNA gene (*HAR1F*) that is expressed specifically in Cajal-Retzius neurons in the developing human neocortex from 7 to 19 gestational weeks, a crucial period for cortical neuron specification and migration. *HAR1F* is co-expressed with reelin, a product of Cajal-Retzius neurons that is of fundamental importance in specifying the six-layer structure of the human cortex. HAR1 and the other human accelerated regions provide new candidates in the search for uniquely human biology.”

Facilities

- Occupational health in animal care, use and research. Hankensen, F. C. In J. D. Reuter & M. A. Suckow (Eds.), *Laboratory animal medicine and management*. Ithaca, NY: International Veterinary Information Service, 2006.

Miscellany

- What makes us different? Lemonick, M. D., & Dorfman, A. *TIME Magazine*, Oct. 9, 2006, 44-53, <www.time.com/time/magazine/article/0,9171,1541283,00.htm>.

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