



BUILDING THE FUTURE:

A NEW ERA OF STUDYING AND CARING FOR EARTH'S MOST ENDANGERED MAMMALS

By SALLY BORNBUSCH, Ph.D. and SARA CLARK

This fall, the Duke Lemur Center celebrates a transformational moment in its 55-year legacy of studying and caring for lemurs: the grand opening of the Anna Borrueel Codina Center for Lemur Medicine and Research.

Made possible thanks to an \$8M gift by an anonymous Duke alumnus whose family has a passion for lemurs and wildlife protection, the 8,000-square-foot structure provides cutting-edge facilities and technologies tailored to complement the DLC's world-class veterinary and research programs.

◀ The Borrueel Center, just weeks before completion.

“THE LEMUR CENTER’S VETERINARY TEAM HAS BEEN RECOGNIZED AS THE WORLD’S LEADER IN LEMUR MEDICINE. THE BORRUEL CENTER GIVES THEM THE INFRASTRUCTURE THAT COMPLEMENTS THEIR SKILL LEVEL. THEY’RE WORLD-CLASS VETS, AND THEY DESERVE WORLD-CLASS FACILITIES; NOT TO MENTION THEY’RE ALSO SUPPORTING ONE OF THE MOST PROMINENT NON-INVASIVE RESEARCH PROGRAMS IN THE COUNTRY.”

GREG DYE, EXECUTIVE DIRECTOR

By combining veterinary care and research spaces within the new building, the DLC will maximize the outcomes of both programs.

“Not only is the Lemur Center advancing the science of lemur medicine, we’ve also pioneered a research program focused on non-invasive techniques,” says Greg Dye, the Executive Director of the DLC. “These are strategies that yield high-quality scientific data while also maintaining the highest standards of care for the animals.

“The Borruel Center was designed to house both our veterinary and research programs,” Dye said. “They fit together. They prove that we can be advocates for lemur health and welfare, and at the same time be a leader in research.”

ADVANCING VETERINARY SCIENCE

Since 1966, the Lemur Center’s veterinarians have cared for more than 4,000 lemurs and shared their expertise with zoos and conservation organizations worldwide. With surgery and intensive care suites, dedicated quarantine and recovery spaces, and advanced radiography and microscopy equipment, the Borruel Center more than triples the size of the DLC’s existing veterinary facilities and will allow the veterinary team to strengthen and expand their already robust teaching programs and high levels of animal care.

“In the past, we’ve always relied on surplus equipment and had to make do with very limited space,” says Cathy Williams, D.V.M, a veterinarian for 26 years at the DLC. “I never thought I’d be here when a new building was



◀ The topics explored by the Lemur Center’s in-house scientists have major implications for how the DLC cares for its colony, including husbandry practices and dietary intervention. “The ability to work side-by-side with researchers in the new building means we can really expand what we know,” says veterinarian Laura Ellsaesser, D.V.M. *Photo by Lydia Greene.*

constructed. It opens up so many opportunities.”

“The Lemur Center’s veterinary team has been recognized as the world’s leader in lemur medicine,” says Dye. “The Borruel Center gives them the infrastructure that complements their skill level. They’re world-class vets, and they deserve world-class facilities.”

ELEVATING RESEARCH

Alongside the new veterinary spaces, the Borruel Center houses cutting-edge scientific research facilities, including a molecular lab and fully equipped hibernation rooms, called hibernacula.

In addition to two DLC research scientists who run extensive in-house research programs, the DLC’s research team accommodates an average of 80-90 external research projects annually. “These new spaces will enable the Lemur Center to take our own research programs to the next level,” explains the

DLC’s Director of Research, Erin Ehmke, Ph.D. “They’ll also increase the scope and diversity of the projects we can accommodate, as well as intensify the level of mentorship we can provide to student researchers.”

Specifically, the new hibernacula will greatly promote research on hibernation, one of the DLC’s primary research focuses. The Lemur Center is home to 30 fat-tailed dwarf lemurs—the world’s only truly hibernating primates. The hibernacula will allow researchers to control aspects of the lemurs’ environment, such as temperature, to mimic the natural conditions that modulate hibernation in the wild.

“Having these new hibernacula, we will be able to replicate, to a degree, the dwarf lemurs’ experiences in Madagascar,” says DLC research scientist Marina Blanco, Ph.D. “We can bring a little bit of Madagascar into the DLC.”

By promoting successful hibernation

► The Borrueel Center more than triples the size of the DLC's existing veterinary facilities. Pictured: The DLC veterinary team delivers a rare blue-eyed black lemur via caesarean section in 2018. *Photo by Sara Clark.*



in the DLC's dwarf lemur colony, Dr. Blanco's research will not only improve the lemurs' care and health, but could also inform biomedicine, in the treatment of diabetes and other metabolic disorders, or even understanding mechanisms that delay aging.

FOSTERING COLLABORATION

Beyond contributing updated spaces and equipment, the building serves another invaluable function: It provides the physical infrastructure and a centralized location that will encourage a robust collaboration between the

Lemur Center's research and veterinary science programs.

"We're really excited about what this means for making the veterinary team more accessible to researchers, in a collaborative effort," says DLC veterinarian Laura Ellsaesser, D.V.M. "The topics our research scientists are studying have major implications for how we care for our lemurs. This isn't just egghead science; there's true application to it as well."

"We're learning a lot, and we obviously have so much more to learn," says Williams. "What does the microbiome

▼ With classrooms, viewing areas, cameras, and microphones, the new veterinary hospital is designed to aid in the training and mentorship of visiting students, including veterinary students from Madagascar. Having already hosted and trained multiple Malagasy veterinarians, the DLC aims to intensify this program by having Malagasy and U.S. students learn side-by-side in the new center. Pictured: DLC veterinarian Cathy Williams with visiting Malagasy veterinarian Tsiky Rajaonarivelo. *Photo by David Haring.*





“WHAT EXCITES ME MOST IS HAVING A CENTRALIZED LOCATION THAT BRINGS SO MANY DIVERSE ASPECTS OF WHAT WE DO, TOGETHER. THE BORRUEL CENTER PROVIDES AN INTEGRATIVE SPACE WHERE WE CAN DO CUTTING-EDGE RESEARCH IN ENDOCRINOLOGY, GENETICS, AND MICROBIOME SCIENCE THAT IS RIGHT DOWN THE HALL FROM A WORLD-CLASS VETERINARY FACILITY.”

LYDIA GREENE, Ph.D., DLC RESEARCH SCIENTIST

look like in a wild lemur versus a lemur here in Durham? How can we maintain these species in captivity in a manner in accordance with what they evolved to do, metabolically?”

The benefits are mutual. For example, not only can the research performed by DLC research scientist Lydia Greene, Ph.D., on the nutritional ecology of lemurs in Durham and in Madagascar inform the diets provisioned to the Lemur Center’s colony, but also the veterinary perspective on lemur physiology and medicine can be applied to better understand the results of Dr. Greene’s studies on lemur gut microbiomes.

Ultimately, by promoting the collaboration and mentorship of scientists and veterinarians that visit the DLC from around the world, the Anna Borruel Codina Center for Lemur Medicine and Research will lay the groundwork for expanding the DLC’s programs that improve the care and conservation of lemur populations within human care and in their natural habitats in Madagascar. “2021 marks the DLC’s 55th anniversary,” says Dye. “This building really kicks off the foundations we’re putting in place for the next 55 years of groundbreaking lemur research and care.” 🙏

THE DLC IS ONE-OF-A-KIND IN ITS EXPERT CARE OF LEMURS. No other zoo or research center is accredited by both research and animal welfare organizations, including the Association for Assessment of Laboratory Animal Care (AAALAC) and the Association of Zoos and Aquariums (AZA). These accreditations testify that the Duke Lemur Center meets the highest standards of animal care.

THANK YOU, DONORS!

FUNDING FOR for the Anna Borruel Codina Center for Lemur Medicine and Research was generously donated by an anonymous Duke alumnus. If you’re in a position to consider making a similar impact on the future of the DLC’s work studying and protecting lemurs, there are many more ongoing DLC infrastructure projects we would love to discuss with you.

Projects include a new Education and Discovery Center that will be the epicenter of the Lemur Center’s education, conservation, and paleontology programs; a Center for Conservation Breeding; and an expansion of our forested free-ranging enclosures. To discuss how you can help expand the DLC’s legacy, please contact Mary Paisley at mary.paisley@duke.edu or (919) 401-7252.

A complete list of major and principal gift opportunities can be found at **[LEMUR.DUKE.EDU/MAJORGIFTS](https://lemur.duke.edu/majorgifts)**