

## **Mentors for 2019 SNPRC Summer Intern Program**

### **Edward Dick, Jr., DVM, Diplomate ACVP**

Dr. Edward Dick is a board certified veterinary pathologist. Trainees will be fully involved in the pathology service, conducting gross and microscopic pathologic evaluations of clinical and experimental cases in nonhuman primates. The trainees will also have access to the clinical pathology laboratory, which conducts hematology, blood chemistries, cytology, and fecal parasite exams. Trainees will be expected to prepare a manuscript for publication.

### **Patrice A. Frost, DVM**

Dr. Patrice Frost is one of six veterinarians participating in clinical and research support at the SNPRC. Dr. Frost believes that education is the gate to one's future. As a team of veterinarians, we are committed to providing candidates with an opportunity to get first-hand knowledge in the field of primate medicine. She has had the privilege throughout her 33-year career in primate medicine guiding over 70 students with a variety of educational backgrounds through their introduction to nonhuman primates. Based on the applicant's individual goals and knowledge, we collectively build a rewarding experience to include both clinical and research aspects of our practice.

### **Luis D. Giavedoni, PhD**

Dr. Giavedoni focuses his research on viral infections and the development of vaccines and therapies against such infections, including the use of CRISPR/Cas technologies. He is particularly interested in understanding the immune responses to retroviral infections (e.g. HIV) in animal models. His lab works on cytokines, which are molecules that mediate communication between the immune system and the whole organism. His group has been developing technology for the identification of cytokines in nonhuman primates and also studies the potential use of cytokines. A summer intern will have the opportunity to perform classic and molecular biological and immunological assays, in association with retrovirus and flavivirus studies.

### **Olga Gonzalez, DVM, Diplomate ACVP**

Dr. Olga Gonzalez is a board certified veterinary pathologist with 11 years of combined experience in diagnostic pathology and translational research. Pathology internship will focus on further expanding anatomy and dissection skills while learning about gross and microscopic identification of common diseases that affect different non-human primate species. Students will work directly under the supervision of boarded veterinary pathologist and specialized technical staff. Students will have full access to Texas Biomedical Research library resources for research purposes and will be expected to complete a manuscript for publication and presentation at a local venue or national scientific meeting. Students will also participate in histopathology rounds with other veterinary pathologist from San Antonio area.

### **Shannan Hall-Ursone, DVM**

Dr. Shannan Hall-Ursone has been with the Primate Center since 2015 and is excited about the opportunity to be a mentor. She has been in the field of Laboratory Animal Medicine since graduating from Veterinary school in 2005 and has worked with over 20 different species. Dr. Hall-Ursone is dedicated to ensuring that students get the most out of their summer experience with not only hands-on work but an intriguing project as well. Students will have the opportunity to see and participate in both the clinical and research duties held by research veterinarians at the SNPRC. In addition, opportunities to work with other disciplines such as the Behavioral Team and Pathology will be provided to gain a broader understanding that the best care is always a team effort.

### **Shyamesh Kumar, DVM, PhD, Diplomate ACVP**

Dr. Shyamesh Kumar is a board certified veterinary pathologist. Dr. Kumar's area of interest is infectious and non-infectious disease research using tissue based assays such as Immunohistochemistry and In Situ Hybridization. Trainees will have the opportunity to actively participate in necropsy, attend Wednesday Slide Conference rounds, and do a retrospective or prospective research project with an aim to publish the findings in a suitable journal.

**Robert E. Lanford, PhD and Chris Chen, PhD**

The research programs in the Lanford/Chen laboratory focus on liver disease with an emphasis on developing new primate models for hepatitis B virus and liver cancer. Both programs involve a diversity of molecular biology techniques including the use of gene therapy vectors. The search for a new primate model for HBV currently focuses on the squirrel monkey using a virus related to HBV that was isolated by our lab from Woolly monkeys. High titer infection has been achieved by the delivery of the HBV genome to the liver using adenovirus associated virus (AAV) as a gene therapy vector. The program on liver cancer uses the baboon model. Cancer driver genes (oncogenes and tumor suppressor genes) are introduced into baboon hepatocytes in vitro using lentiviral vectors. These cells form tumors in the liver of immunocompromised mice as well as in baboons. Transformed hepatocytes are transplanted back into the liver of the donor baboon (autologous transplant) avoiding immune rejection. This model circumvents the decades long process normally associated with cancer development.

**Corrine Lutz, PhD**

Dr. Corrine Lutz directs the Behavioral Services program at SNPRC. Her research focuses on primate behavior and wellbeing. A summer student working with Dr. Lutz will participate in behavioral research with group-housed baboons. The intern may also assist in making and distributing environmental enrichment for the animals. Results from this work may be utilized in future behavioral management decisions.

**Corinna Ross, PhD**

Dr. Corinna Ross' research focuses on examining physiological and behavioral characteristics in the marmoset as translational models for human health and disease. Her current research is focused on developing new tools to assess cognitive and ambulatory changes associated with aging and age-related disease. She is also interested in evaluating potential therapeutics to increase health span.

**Ruth M. Ruprecht, MD, PhD**

Summer interns have the opportunity to participate in monoclonal antibody engineering, protein biochemistry and/or virology, depending on their prior experience. Using recombinant DNA technology, Dr. Ruprecht's group generates monoclonal antibodies against HIV, including multimeric IgA and IgM antibodies. These are then tested for their ability to inhibit AIDS virus replication in cultured cells and to protect rhesus monkeys against mucosal virus transmission. Dr. Ruth Ruprecht is a physician-scientist with expertise in virology, molecular biology, and vaccine research; she is well known for her contributions to HIV/AIDS vaccine development.

**Ken Sayers, PhD**

Dr. Sayers is Colony Administrator at SNPRC. An anthropologist, his research focuses on primate ecology, evolution, behavior, and cognition. Trainees will be immersed in primate natural history and will participate in an observational or short-term experimental study in an area of personal interest. Potential topics congruent with the mentor's background include diet selection, nutrition, optimal foraging theory, movement ecology, memory, communication, and human origins.