**Kristina Haley, M.D.**  
**Proposal:** Evaluation and characterization of platelet function in adolescent women with heavy menstrual bleeding  
**Award:** $39,796

In girls and young women, heavy menstrual bleeding (HMB) is frequently the first and only symptom of an underlying inherited bleeding disorder. As a bleeding disorder can exacerbate the heavy menses that are common in the first year after periods start, the adolescent population is an important segment to target with regard to improved diagnostic evaluation and treatment for inherited bleeding disorders. They are due to quantitative or qualitative disruptions of the primary hemostatic system (platelets and the proteins underlying blood vessels), the secondary hemostatic system (coagulation proteins) or the tertiary hemostatic system (proteins involved in localizing the clot). The accessibility, performance, and interpretation of currently available platelet function assays limit the clinician’s ability to accurately diagnose many of these disorders. This leaves many patients without a diagnosis which makes it difficult for providers to prescribe specific treatment for HMB or other bleeding symptoms. Kristina hypothesizes that a qualitative platelet function defect is responsible for a proportion of young women with HMB with normal results on first line bleeding disorder evaluations. Further, she hypothesizes that currently available platelet function testing is not adequate for the diagnosis of mild platelet disorders. In order to test these hypotheses, she will connect their clinical work in the Young Women’s Hematology; Spots, Dots, & Clots clinic to their collaborative basic science work in the Department of Biomedical Engineering through a prospective cohort study of young women presenting with HMB.

**Chelsea Jenkins, Ph.D. student**  
**Proposal:** Developing novel treatments for children with Juvenile Myelomonocytic Leukemia  
**Award:** $31,388

Juvenile Myelomonocytic Leukemia (JMML) is a rare devastating blood cancer that affects young children. This proposal would provide new insights into the treatment for children with this deadly cancer. Currently only half of children with JMML survive. We have identified a particular multi-kinase inhibitor, dasatinib, which was able to selectively kill cancer cells from patients with JMML. Preliminary evidence from our lab suggests that dasatinib might be acting by inhibiting the activity of a kinase called TNK2, and that there is direct interaction between PTPN11 and TNK2. DCH cares for the vast majority of children in Oregon with leukemia, which combined with the excellent research environment of the Knight Cancer Institute, makes this an ideal place to develop and implement novel therapeutic strategies to improve outcomes for children with JMML.
Michael Chiang, M.D. (Partially funded)
Proposal: Retinal Imaging & Whole Exome Sequencing for Quantitative Retinopathy of Prematurity Analysis
Award: $39,087
Retinopathy of prematurity (ROP) is a leading cause of childhood blindness throughout the world. The goal of this project is to improve the clinical care and scientific understanding of ROP by identifying imaging and genetic features of the disease, and by analyzing their relationships. This will be done in premature infants at the Doernbecher Neonatal Care Center (DNCC). This project will further develop these methods into a preliminary quantitative ROP image analysis system. We will perform preliminary whole-exome sequencing on a group of infants most likely to exhibit genetic factors that are associated with ROP and will correlate genetic data with the clinical and imaging data. Our overall hypothesis is that these imaging and genetic technologies may be used together to improve clinical ROP diagnosis and to improve our understanding of disease pathogenesis.

Anna Wilson, Ph.D.
Proposal: The Comfort Ability Workshop: Improving Pain Treatment for Children and their Families
Award: $39,649
Pediatric chronic pain is a significant health problem that places youth at risk for pain and disability into adulthood. Many children undergoing treatment for medical conditions (e.g., cancer, arthritis, cystic fibrosis, inflammatory bowel disease) experience recurrent or ongoing pain that is moderate to severe. While many youth experience recovery or a resolution of pain symptoms, longitudinal studies show that for many youth, pain is not transitory, with approximately 30% reporting continued pain at 1 and 4-year follow-ups. Research has demonstrated that behavioral and psychological approaches to pain management are effective for pain reduction, and can be more effective than medication, behavioral treatment for youth with chronic pain at Doernbecher is limited. This project is designed to fill this gap in service by implementing a one-day treatment program teaching kids with chronic pain and their parents behaviorally-based skills and psychological strategies that are empirically supported in the management of chronic pain. The funds for this grant will be used to implement and evaluate this program here at Doernbecher, filling a significant service gap and making pain treatment more accessible.

Andrea Frank, Ph.D.
Proposal: Adolescent Neurology Transition Clinic
Award: $25,130
In the Division of Child Neurology at Doernbecher Children’s Hospital (DCH), we care for children with a variety of conditions, including epilepsy, migraine, and neuromuscular disorders. A large number of our patients have complex healthcare needs which do not resolve during childhood, and they must transition to the care of an adult neurologist. To prepare patients and families for this transition, we must address the multifaceted needs of this vulnerable population, including medical, social, financial and legal needs. We propose the creation of an Adolescent Neurology Transition Clinic, focused on providing a smooth and individualized transition to adult care. Funding from this grant will support clinical personnel and provide patient-specific materials. Materials will include individualized binders for patients which contain their health history, educational information and community resources. In addition, this pilot clinic may serve as a template for other pediatric specialties at Doernbecher in order to better serve our community.

For additional information on the Friends of Doernbecher grant program contact Mallory Tyler at the Doernbecher Children’s Hospital Foundation at 503-2208344 or tylerma@ohsu.edu