

SPACEX-PLORER | ASIA'S DREAM TEAM | WOMEN'S WRITES

UofL Magazine

FOR ALUMNI & FRIENDS



SPIRITED SCIENCE

*Four Speed School women are the engineers
behind Kentucky's best bourbons*

UNCOVERING THE UNKNOWN

Researchers at UofL were part of a group that discovered an insidious new autoimmune disease that causes kidney failure.

The discovery of anti-brush border antibody (ABBA) disease was made in the UofL Core Proteomics Laboratory, led by Director Jon B. Klein, UofL School of Medicine vice dean for research and professor of medicine and James Graham Brown Foundation Chair in Proteomics.

"It's the first time in my career that I've described a new disease. Most people in their career don't stumble on this," said Klein, who is internationally recognized for his expertise in biomarker discovery related to kidney disease and practices with UofL Physicians-Kidney Disease Program.

The UofL lab identified ABBA after analyzing biopsied kidney tissue from 10 patients who had developed acute kidney injury, a sudden episode of kidney failure or damage that happens within a few hours or days. The condition causes a build-up of waste products in the blood and makes it difficult for kidneys to maintain adequate balance of fluid in the body.



Klein

For the first time, researchers discovered that in the nephrons, the functional units of the kidneys, antibodies had coated a specialized part of cells called brush borders, which help reabsorb and process proteins.

Further research will focus on defining demographics of patients with ABBA and the disease's prevalence. Also, determining where on the protein megalin—which acts as a sponge to absorb proteins and other compounds that enter the nephron—the antibody binds is key to treating the disease, Klein said.



Priya Chandan, left, with patient Whitney Foster, middle, and Felissa Goldstein, medical director at Lee Specialty Clinic.

Confidence in lifetime care

Students learn communication techniques for treating adult patients with IDD

Thanks to medical advances and the deinstitutionalization movement, the number of adults living in the community with intellectual developmental disabilities (IDD) has grown dramatically.

These individuals require many of the same health care services as any adults. However, most physicians in adult medical specialties have not been trained to work with this population and may not be comfortable with the communication challenges or other unique needs these patients may have.

Priya Chandan, assistant professor in the School of Medicine and in the School of Public Health and Information Sciences, has an older brother with Down syndrome. Through his experience, she understands the need for physicians to be comfortable and educated in the care of people with IDD to ensure they receive quality health care. Chandan is leading a project to help medical students become more confident in caring for adult patients with IDD across their lifespan.

"Physicians in every specialty will care for individuals with IDD. They need to understand their needs and to have communication strategies in the clinical setting," Chandan said. "This patient population is not just a pediatric population. All physicians need to be comfortable serving them."

The National Curriculum Initiative in Developmental Medicine (NCIDM) is a partnership between Special Olympics International (SOI) and the American Academy of Developmental Medicine and Dentistry (AADMD) to ensure future physicians receive training in the field of developmental medicine, the care of individuals with IDD across the lifespan.

Over four years, 12 medical school partners will each design and implement their own curriculum enhancements. UofL is among the first schools to initiate this training, along with Baylor College of Medicine and the University of Colorado.

Beginning this year at UofL, fourth-year medical students may complete an elective rotation at Lee Specialty Clinic, an interdisciplinary clinic that focuses on caring for adults with IDD. Through this experience, the students become more comfortable treating these patients. In addition, second-year medical students are having small group discussions, each led by a Special Olympics Kentucky athlete in the Athlete Leadership Program, to help them better understand the needs of patients with IDD.

"Communication is a big part of it," Chandan said. "One of the main things these individuals want doctors to know is that doctors should speak to them directly and get to know them as people rather than rely solely on information from a caregiver."