

Biomedical Division Focuses on Research | CPD

Sue Reeves

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A researcher prepares to test a blood sample.

Conducting cutting-edge autism research and providing medical care for people with disabilities are completely different activities, but they are both housed in the Biomedical Division of Utah State University's Center for Persons with Disabilities.

Dr. Anthony Torres is a co-director of the Biomedical Division and heads the Research Lab, where he and the staff search for answers to autism spectrum disorder, ADHD and other neurological puzzles. By determining the genetic makeup, or genotype, of DNA extracted from thousands of blood samples, Torres and his staff have found significant evidence linking autism to the immune system.

Senior lab technician Michael Benson supervises the lab's student workers, and also designs experiments and fine-tunes the protocols to make sure everything is working correctly.

The researchers can genotype six samples per day, Torres said, and there are 30 different data points they look for on each gene. Once the data is collected, it is entered into a database and analyzed.

Torres currently has five undergraduate researchers working in the lab.

"They are excellent students," he said. Many go on to medical school, and their success rates are very high.

"They do important work. They have projects that have to get done," Torres said. "We put a lot of responsibility on them. This is not what they'd do in class, they're doing real research."

Autism was first identified in 1943, Torres said, yet very little is known about its cause.

"We have papers going back to the 1980s showing an immune system association with autism," said Torres, who has been involved in autism research since 1993. "The immune system is very complicated, we'll go deeper and deeper into these associations. Our findings are among the best, now we go to another population and see if there's an association, then we just keep expanding that."

Dr. Dennis Odell is a co-director of the Biomedical Division and heads the Medical Clinic, which provides medical evaluation and treatment for children and adults with developmental disabilities and related health problems including autism, ADHD and learning disabilities. The Medical Clinic, which treated 1,091 patients in 2012, is a separate entity from the Autism Spectrum Disorders Evaluation Clinic, which is part of the CPD's Exemplary Services Division, but Medical Clinic staff members participate in autism evaluations.

"We evaluate and treat neurodevelopmental issues, including autism, ADHD and associated problems, Tourette's, and to a certain extent behavior," Odell said. "We work with kids and adults who have been referred by their doctors or schools, and provide the medical component as well."

Odell also has a private pediatric practice at Logan's Budge Clinic, but sees a lot of children with disabilities.

People should consider the CPD Medical Clinic "because we're really good at it," Odell said. "We're able to take the time. Evaluations are generally pretty time consuming, and it's difficult to do that in an office setting. This clinic is well-suited to be able to do that."



Odell said the CPD clinic's most recent focus has been helping to get the autism clinic going. He sees five or six new evaluations a week, plus follow-up visits with current patients. Clients for the autism clinic are often referred by the CPD's Up to 3 Early Intervention Program.

Dr. Clint Field has been on staff at the Medical Clinic for about six months, Odell said, and performs psychological evaluations and deals with anger management issues. Field is also in private practice at the Budge Clinic.

"We haven't had a staff psychologist before," Odell said. "He's the first in the Biomed Division."

While Odell deals with pediatric patients, nurse practitioner George Wootton sees adults who are dealing with autism, ADHD or mental health issues such as depression, anxiety or bipolar disorder.

"ADHD doesn't end at age 18," Wootton said. "Sometimes we have to figure out what else they have."

When Wootton started at the CPD about 10 years ago, there were few people who were interested in mental health.

"My practice became a mental health practice," he said. "There are so many things we can offer people."

Wootton sees patients across the age spectrum, he said, divided fairly equally between children, adolescents and adults.

"We give people a place to be vulnerable and be OK with it," he said. "People need time to be listened to. It's amazing what you can do in people when you give them time to talk."

While psychiatric medications have become really good and fairly cheap, Wootton said, they are not the only answer.

"We have become so pharmacologically oriented, and immediately we think 'what's the medication?' That's really great, really helpful, but the meds are just tools. It's the same with any mental health work. Therapy is really important."

Referrals come from physicians and therapists, Wootton said, but most know someone else who is a patient, or they are simply seeking information and start at the university.

Johna Larson of Millville is the mother of four biological children and three children with disabilities who were adopted. Jordan, 26, was born with fetal alcohol syndrome. Jonathan, 24, had developmental delays. Both Jordan and Jonathan were patients of Odell's at the CPD clinic.

Larson's youngest son, Jace is 19 and the only one still living at home. Jace has autism spectrum disorder, ADHD and mental health issues, and had been seeing Wootton at Bear River Mental Health.

"There should be a law that says doctors can't leave until their patients are grown," Larson said with a laugh. "We decided to follow George to the CPD rather than break in and train a new doctor."

Jace is healthy other than the autism, Larson said, but he needs psychiatric and behavioral medications for mood and aggression issues.

"I love how they will research for you," Larson said. "I wanted books to read that might help me—not nursing manuals—and George researched and gave me a list of books and websites."

Parents of children with disabilities need to feel like they're not totally alone, Larson said. If you see a specialist they're only focused on their specialty, she said, and children can't be treated like that.

"At the CPD, they follow you in a much broader respect and look more at the family as a whole," she said. "The CPD is a spot of comfort. The doctors and nurses are so aware that we're overwhelmed and grieving."

"They have the projects, they have the information and they have the knowledge of what's going on," Larson said. "To these doctors, Jace isn't different. He's like every other kid they see."

Larson said she knows the staff cares about her, too, because they're willing to have the hard discussions.

She recently talked to Wootton about the possibility of a residential living center for Jace, something she's not ready to consider while she can keep him at home.

The quality of the physicians and assistants is wonderful, Larson said.

"They don't make you feel dumb or stupid or crazy," she said. "They're on the cutting edge. They're publishing research. They're not last week's news."

Larson said she only recently realized how fortunate her family has been to have had access to the CPD Medical Clinic.

"We've taken it for granted," Larson said. "I can't imagine not having the CPD."