

investigating INTERVENTIONS

By Allison Wood and photos by Neal Hinkle



Jennifer Poss Taylor hopes researchers can provide help for those, like her daughter, Ashley, who struggle with the effects of fetal alcohol syndrome.

Adoption was Jennifer Poss Taylor's greatest hope, knowing from her teenage years that she couldn't have children.

So seven years ago, she and her husband were thrilled to adopt a blonde-haired, blue-eyed toddler named Ashley. As their daughter grew, noticeable development issues became apparent; at age 5, Ashley was diagnosed with fetal alcohol syndrome (FAS).

Poss Taylor poured over research articles and any book she could find, yet still felt lost in regard to what faced them in raising their daughter. So she wrote and published *Forfeiting All Sanity, a Mother's Story of Raising a Child with Fetal Alcohol Syndrome*, a day-to-day glimpse of parenting a child with FAS.

Fetal alcohol syndrome is a clinical diagnosis and is the most serious of fetal alcohol spectrum disorders, according to the National Organization on

Fetal Alcohol Syndrome. The conditions can occur in an individual whose mother drank alcohol during pregnancy. Effects, sometimes lifelong, can include physical, mental and/or learning disabilities.

"Recent numbers indicate that 1 in 120 children are diagnosed with autism and 1 in 150 are diagnosed with FAS/FASD (fetal alcohol spectrum disorders), yet the latter is an issue that is not talked about. Drinking while pregnant is a taboo topic," states Poss Taylor who has become an advocate for families with FAS. "I'm continually amazed by people who assess drinking while pregnant as a minimal risk. I ask, 'Why take even a minimal risk?' The only prevention for fetal alcohol syndrome is not drinking at all."

George Henderson, Ph.D., agrees. "We only know with certainty that the completely safe amount of alcohol to drink during pregnancy is none." For 34 years, Henderson, an NIH-funded researcher, has studied the effects of alcohol on the developing fetus.



George Henderson, Ph.D., and his team expand the scope of research conducted through the South Plains Alcohol and Addiction Research Center.

Now, his research team is part of TTUHSC's South Plains Alcohol and Addiction Research Center (SPAARC), where, he says, there is a "critical mass of investigators with the expertise to look at molecular and anatomic changes in brain cells exposed to alcohol and develop means to prevent these toxic effects on the growing brain."

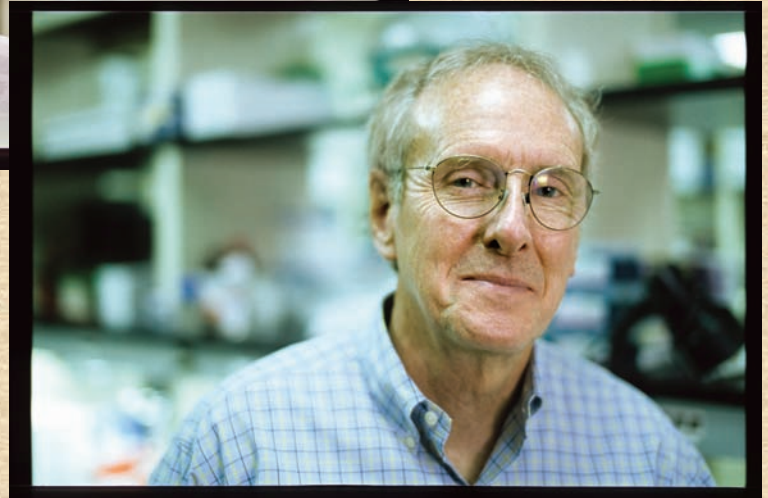
Douglas Stocco, Ph.D., executive vice president for research, credits Peter Syapin, Ph.D., and Susan Bergeson, Ph.D., with recruiting Henderson about a year ago.

Henderson's research significantly expands the scope of SPAARC's work, said Syapin, SPAARC director and professor of pharmacology and neuroscience. "The effects of alcohol on the fetus has important consequences that we need to understand better. His research will significantly add to our on-going research in binge drinking, genomics and epigenetics effects of drinking, and alcoholism-induced brain damage."

SPAARC's mission is to develop translational, multidisciplinary and collaborative approaches to better understand the consequences of alcohol and drug use. Behavior and physiological research takes place to determine changes on a molecular and genetic level. The center currently is home to a staff of 25, including researchers, associates, assistants and students. Long-range plans are for SPAARC to be a recognized NIH Center of Excellence.

"Dr. Henderson's recruitment provides new expertise that was missing in SPAARC as well as an influx of new research faculty and post-doctoral fellows that help stimulate new ideas for research," Syapin said. "This also demonstrates to the (SPAARC) founders that TTUHSC is committed to the study of alcohol and drug addiction and to the success of this group by providing significant start-up funds for his research and through infrastructure improvements resulting in a new laboratory for the center."

Bergeson, associate professor of pharmacology and neuroscience and a genetics expert, said the breadth of alcohol research at SPAARC was expanded by the addition of Henderson's focus on FASD. "Although some of the mechanisms of alcohol insult overlap between the developing fetus and adult brain, fetal exposure can lead to unique problems.



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"Dr. Henderson's lab brings new expertise, such as laser microdissection, which will allow us to study alcohol's complex effects at the basic cellular level."

And that is all good news to Poss Taylor who says this type of research has been at the top of her list since living a day-to-day life complicated by the affects of FAS. "I hope to meet this team someday, and I would love for them to meet Ashley."