



The Insider

Life Span Institute at Parsons

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Patty Black Moore, Editor

Student Spends Summer Immersed in Translational Research



From left, clockwise: Dean Williams and Kate Saunders discuss behavioral concepts with research assistants: Mambu Sherman, Shannon Tierney, Colleen Eisenbart, and Gabriella Yates

Surrounded by her colleagues, Shannon Tierney, research assistant, finds herself immersed in translational research at the Parsons Research Center, Life Span Institute at Parsons and loving every minute. Shannon says she is really more of a basic research person and likes to find out how things work. “Once we find out more about how behavior works, this knowledge can be used to address problems of social significance. Participating in the translational research here with Dr. Dean Williams and Dr. Kate Saunders is helping me to understand how exactly basic behavioral concepts turn into ways to understand and change complex behavior. I think that students who are interested in any type of behavioral research would benefit from the kind of experience I am having here this summer.”

Shannon continues, “Dr. Williams and Dr. Saunders have me working on a wide variety of skills that will help prepare me for a career in research. The most important thing I think I am getting from this

experience is being guided through the conceptual foundations for the research we do through reading articles from journals, such as *the Journal of Applied Behavior Analysis* and *Journal of the Experimental Analysis of Behavior*. I am also gaining experience
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“Just the STATS”

Did you know?

- ◆ The LSI at Parsons’ budget for FY 09 is 5.073 million dollars in state and federal grants and contracts

What does this mean?

- ◆ For every \$1 invested by the University of Kansas or the State of Kansas there is a return of \$4.22 in grants and contracts

Who does all this work?

- ◆ Approximately 50 faculty and staff including 12 with Doctor of Philosophy or Doctor of Education degrees (Ph.D/Ed.D), one with an Education Specialist (Ed.S) degree and 11 with Masters degrees

PROJECT HIGHLIGHT



Postdoctoral Training in Translational IDD Research

Dean Williams joins 12 other University of Kansas multidisciplinary researchers who have extensive experience in training predoctoral and postdoctoral students and make up the faculty for Postdoctoral Training in Translational IDD (Intellectual and Developmental Disabilities) Research, a new five-year grant; directed by Kate Saunders, Ph.D. and co-director John Colombo, Ph.D. More information about this project can be found at http://www2.ku.edu/~lsi/research/projects/Saunders_K/post-doc_training_DD_translational.shtml

Dr. Williams is a senior research professor in the Life Span Institute Parsons Research Center. He received his Ph.D. in Psychology from the University of Florida, and did post-doctoral training in neuroscience and behavioral pharmacology at the Bowman Gray School of Medicine. He is a fellow of Division 25 of the American Psychological Association. Williams has been the editor of the *Experimental Analysis of Human Behavior Bulletin*

and served on the editorial boards of the *Journal of the Experimental Analysis of Behavior*, *The Behavior Analyst*, and the *Experimental Analysis of Human Behavior Bulletin*. Williams’ mentoring philosophy is to promote the development of independent programs of “use-inspired basic research,” that is, research that explores basic behavioral processes, but is directed by problems of human behavior.

Close Up: An example of translational research

To explain what characterizes translational research, consider three facets of Williams’ research addressing serious problem behaviors, such as aggression and self injury, exhibited by many individuals with intellectual and developmental disabilities (IDD). In approaching this problem, Williams made a novel connection between applied-research findings and findings from basic laboratory research conducted with animals. To make this connection, Williams had to be well versed in the literature on the clinical

problem, and also in the basic behavioral processes that appeared to be related to the clinical problem. Applied research has shown that a substantial portion of problem behavior is maintained by negative reinforcement in the form of escape. That is, the behaviors serve to remove the individual from



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Close Up: Research Example... from page 2

aversive stimuli. The conditions that produce escape-motivated aberrant behavior in the applied studies, however, often involve seemingly benign events such as the presentation of an educational task by a teacher. What the applied research had not provided was a process-level account of why such events are aversive to some individuals and not others, and/or at some times and not others.

Williams drew on basic research, conducted with animals, showing that schedules of positive reinforcement can, under specifiable circumstances, become aversive and produce escape. This counterintuitive outcome might explain why seemingly benign events produce maladaptive escape behaviors in individuals with IDD. The first step in the research program was the investigation of this phenomenon in laboratory studies of human subjects. For this portion of the research program, Williams collaborated with an investigator at West Virginia University, Mike Perone, who had conducted some of the seminal basic animal studies. Their studies have shown that schedules of positive reinforcement that maintain behavior perfectly well can nonetheless promote escape responses if they follow a “better” reinforcement condition. Currently, the project is on a path to fully model the clinical condition in the laboratory by demonstrating problem behavior under conditions that promote escape in animals and humans (R01 HD044731). These studies also will measure participants’ physiological reaction to experimental events. Upcoming studies will take a step outside the laboratory, to model maladaptive escape in the more natural environment. This programmatic

effort will also test potential treatment procedures, first in the laboratory, and then in the natural environment. Thus, studies in the future will flow from use-inspired basic to applied research, and vice versa. For this more applied portion of the research program, Williams is collaborating with researchers at Kennedy-Krieger Institute of Johns Hopkins, another IDDRC (Intellectual and Developmental Disabilities Research Center) that is the leading treatment facility for aberrant behavior along with a third IDDRC, at University of Massachusetts Medical Center. A new collaborative Program Project grant (PO1) involving these three institutions has just been funded.

At the same time that strands of the research program are moving towards application, new basic questions are being explored. The masters’ thesis of Adam Brewer, a student who is jointly supervised by Williams and KU faculty Greg Madden, is exploring rat strain differences in susceptibility to the generation of problem behaviors. Two strains, one of which is hypersensitive to stressors and aversive stimuli, are being compared to see whether the hypersensitive strain pauses longer than the less sensitive strain. This student has also spent time in Parsons, and has been involved in a human study. Taken as a whole, this research program exemplifies the interface of basic and applied research that is the nature of translational research.

Also see the May 2009 issue of The Insider, Project Highlight, Postdoctoral Training in Translational IDD Research, page 2, <http://www.parsons.lsi.ku.edu/ParsonsLSI/html/Newsletters/Archive.shtml>

NEW GRANT AWARD



Muriel Saunders received a new Field Initiated Research award “Weight Loss by Individuals with Physical Disabilities” from the National Institute on Disability and Rehabilitation Research (NIDRR) for the period 10/1/09-9/30/12. Co-Principal Investigator is Amanda Reichard, Research and Training Center (RTC) on Independent Living. Co-Investigators are Martha Hodgesmith (RTC); Joe Donnelly and Bryan Smith, Energy Balance Laboratory and Weight Management Center; Debra Sullivan, Matt Mayo, and Cheryl Gibson, University of Kansas Medical Center (KUMC) and **Richard Saunders**, Life Span Institute at Parsons.

PROJECT NEWS

KEE Sponsors DME Donation Drives in Four Cities in June

The Kansas Equipment Exchange (KEE) program asked residents in Hiawatha, Atchison, Topeka and Overland Park if they had durable medical equipment (DME) taking up space in the garage such as a wheelchair or a home care bed that was no longer needed. And would they donate their unneeded equipment to help a Kansan with disabilities who needs

DME but can't afford it? And in each city in just two days in June, residents responded with a resounding "Yes, we do and Yes, we will!"

KEE coordinator, Sharon Morton and Assistive Technology for Kansans (ATK) director, Sara Sack joined with co-sponsors Northeast Kansas Area Agency on Aging and Medicalodges Atchison on Saturday, June 20 for donation events in Atchison and Hiawatha. The following Saturday, June 27 KEE teamed with American Care Equipment and ResCare HomeCare in Overland Park and Jayhawk Area Agency on Aging in Topeka for the final two collection events. Family, friends and staff created a festive atmosphere for each event. Topeka television station KSNT Channel 27 also was on hand to cover the story for the 5:00 and 10:00 news.

Donations included 14 manual wheelchairs, 17 power chairs, 13 scooters, 10 hospital beds, five Kid Karts, 12 shower chairs, six transfer benches,



CCTV, ramps and much more, with a grand total of over 125 items! Donated equipment is still being picked up but to date, equipment collected has been valued at over \$100,000.

Since April 2003, reusing donated equipment has saved Kansas taxpayers nearly \$3 million through the KEE program. KEE is a cooperative program between Kansas Health Policy Authority (Kansas Medicaid), the University of Kansas and Assistive Technology for Kansans.

In the picture: Topeka Donation Drive volunteers included Pam Brown, Christal Casteel and Susan Harris, Jayhawk AAA; Stuart Jones, Rebecca Merz and Jerrame Reeves-Mullin, Assistive Technology for Kansans (ATK) Northeast AT Access Site in Lawrence; and Sara Sack, ATK director as well as members of a traveling dance troupe, the Country Kickers.

SEK Foster Care Project Sponsors Free Autism Workshop

The Science and Art of Behavioural Autism Interventions, a free workshop sponsored by The Southeast Kansas Foster Care Treatment Project on June 15, 2009 was presented by Shahla Alai-Rosales, Ph.D., BCBA-D, Associate Professor, Department of Behavior Analysis, University of North Texas.

With more than 25 years of experience in the fields of Early Childhood and Special Needs as well as the project director of the North Texas Autism Project, Dr. Alai-Rosales addressed intervention for

children with autism using Applied Behavior Analysis (ABA). More than 30 participants from community developmental disability organizations, foster care agencies, mental health centers and special education interlocals learned that best practice is to intervene as early as possible, identify goals that are functional for the youth, utilize intervention strategies that are supported by science and practice scientist-practitioner skills.

GRANT RENEWAL AWARDS

David Lindeman received his fifth-year continuation "Kansas Inservice Training System (KITS)" from Kansas Department of Education (KsDE). Grant renewal: July 1, 2009 - June 30, 2010.

David Lindeman received annual continuation "Kansas Inservice Training System - Part C Infant/Toddler Component" from Kansas Department of Health and Environment (KDHE). Grant renewal: July 1, 2009 - June 30, 2010.

David Lindeman received annual continuation "Active Treatment Training Program" from Kansas Neurological Institute (KNI) and Parsons State Hospital (PSH&TC). Grant renewal: July 1, 2009 - June 30, 2010.

David Lindeman received annual continuation "Southeast Kansas Respite Care Services" from Parsons State Hospital (PSH&TC). Grant renewal: July 1, 2009 - June 30, 2010.

David Lindeman received annual continuation "Coordinated Resource and Support Services" from SEKRS, Inc. Grant renewal: July 1, 2009 - June 30, 2010.

Mike Wehmeyer, Dave Lindeman and Matt Reese received their 38-year continuation of the "Kansas University Center on Developmental Disabilities (KUCDD)" from Health and Human Services-Administration for Children and Families-Administration on Developmental Disabilities (HHS-ACF-ADD). Grant renewal: July 1, 2009 - June 30, 2010.

PROJECT NEWS



"KU Diet Project"

Richard Saunders reports that the weight loss research group has launched a new website at www.diet.ku.edu <<http://www.diet.ku.edu>>. Known formally as "Reducing the Incidence of Obesity in Adults with Developmental Disabilities in Kansas," participants quickly shortened the name to the "KU Diet Project." Co-investigators are Joseph Donnelly and **Muriel Saunders**. The project is funded by the Kansas Council on

Developmental Disabilities, the U. S. Administration on Developmental Disabilities, and the University of Kansas. Website development will continue through the summer.

GRANT SUBMISSIONS

Muriel Saunders submitted an application in response to the RFA from Special Olympics on 6/29 titled: "Closing the Loop: Exploring Best Practices in Healthy Athletes Referral Follow-Up"

Muriel Saunders and Richard Saunders are Co-Investigators on a R01 resubmission to National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) on 7/5 with Joe Donnelly as Principal Investigator titled: "Weight Loss and Maintenance with Individuals with IDD"

Richard Saunders submitted a Challenge Application with **Muriel Saunders**, Bryan Smith, and Amanda Reichard on 4/27 titled: "ARRA Challenge Grant: Analyzing a Diet Plan for Adults with Intellectual or Developmental Disabilities"

Richard Saunders submitted an application to the Robert Wood Johnson Foundation on 4/8 with Marilyn Ault, Kandace Fleming, and **Muriel Saunders** titled: "Walking Across Kansas: Exercising to Learn"

Richard Saunders submitted a Recovery Act Administrative Supplement to his P01 with Lesley Olswang, **Muriel Saunders**, and Melinda Docter on 6/30 titled: "Communication of People with Mental Retardation"

STAFF PROFILE

Mambu Sherman Research Assistant and Behavioral Skills Trainer

I recently earned my B.S. degree in Behavior Analysis from Savannah State University in Savannah, Georgia. I am 22 years old, born in Liberia, relocated to Atlanta, GA at the age of 3 and was raised there. I moved to Savannah, GA to attend college where I graduated in 3 1/2 years with cum laude honors.

Technically, I have two positions: Behavioral Skills Trainer and Research Assistant. I'm employed as a skills trainer with the Southeast Kansas Foster Care Program with Katie Hine and I am also a research assistant with two projects: Laboratory Models of Maladaptive Escape Behaviors with Dean Williams and Recombinative Generalization of Within-Syllable Units in MR with Kate Saunders. I was actually working with KU research here in Parsons last summer 2008 as a summer research intern (working with the same

projects). Here I am, back as a full time employee.



Parsons is very different from what I'm use to, but the environment is great and I am adamant about understanding human behavior, and expanding my knowledge in the field of behavior analysis. I'm currently undecided about what specific direction I would like to go in regards to type of career, however, working here provides me the opportunity to engage in *and* gain experience in both the research and applied settings of behavioral science. I look to enroll in graduate school next fall and begin working towards my PhD.

COMMUNITY SERVICE

KU Works to Recycle 11,024 Pounds of E-waste

Kathy Olson and Patty Black Moore, Life Span Institute at Parsons, worked alongside fellow co-sponsors, K-State Extension and Research, City of Parsons and SEK Recycling at the E-waste Collection Day in Altamont on May 30, 2009.

Residents of the five-county area started bringing in their unwanted computers, microwaves and televisions well before 9 a.m. A steady stream of cars and trucks kept more than a dozen volunteers busy unloading and sorting for the next five hours collecting 11,024 pounds of e-waste. Kari West, Public Information Officer, City of Parsons, said that plans are being developed for the next Parsons e-waste collection event scheduled for September 18-19, 2009.



STAFF NEWS

Christenson Retires, 31 Years with KU

Bob Christensen, graphic artist and photographer, made it official on July 2, 2009 and retired after 31 years of service with the Life Span Institute at Parsons. Colleagues, friends and family shared a potluck lunch and a celebratory cake and punch. Gracious as always, Bob accepted his retirement presents and his KU cake and amid a chorus of well wishes headed south. Bob plans to spend his summer enjoying his grandchildren as he and his wife settle into their new home community of Fate, Texas.



Sara Major to Race for the Cure August 9

Sara Major, behavior therapist with the SEK Foster Care Project, will run the Race for the Cure, August 9 in Kansas City sponsored by the Greater Kansas City Affiliate of Susan G. Komen for the Cure. For more information about Sara's commitment to ending breast cancer see her webpage at <http://www.active.com/donate/KC2009/seesararun>

CONFERENCE UPDATE

Autism Across the Life Span

Kathy Olson, conference coordinator, reports that the website for the November 6-7, 2009 conference, Autism Across the Life Span in Wichita is now available for conference information and online registration at <http://www.continuinged.ku.edu/programs/autism/>.

The conference will feature evidence-based practices in autism to address the pressing needs of families, rehabilitation professionals, service providers and educators with special relevance to communities throughout Kansas.



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Shannon Tierney Spends Summer Immersed in Translational Research ...continued

running lab sessions with human participants, working with individuals with disabilities, conducting preference assessments, and administering standardized tests. I am working on a few different projects here in Parsons, most notably Dr. Williams' project studying aberrant behavior that occurs during transitions and Dr. Saunders' projects focusing on literacy skill acquisition."

Shannon, a 4.0 University of Kansas Junior, was recently awarded the Helen Jedlicka Mandigo Scholarship in the specialty area of basic research and conceptual foundations as well as the Niswander Japanese Dictionary Award for her work as a first year Japanese language student. In her free time, she enjoys knitting and crocheting, learning XHTML and CSS, studying Japanese and spending time with her cat and her dog.

PRESENTATIONS AND TRAININGS

- Baynham, T., Skinner, J., Stein, M., Schmidt, A., & Saunders, K.** (2009, May). *Cross-modal generalization of letter names*. Symposium presentation at the 35th Annual Convention of the Association for Behavior Analysis International, Phoenix, AZ.
- Brewer, A., Johnson, P., Stein, J., Francisco, M., Williams, D., & Madden, G.** (2009, May). *Pre-ration pausing following rich-to-lean transitions on multiple schedules in Fischer 344 and Lewis Rats*. Symposium on Recent Topics on the Disruptive Effects of Negative Incentive Shifts presented at the 35th Annual Convention of the Association for Behavior Analysis International, Phoenix, AZ.
- Broyles, L., Rennels, K., Perin, N., & Rinkel, P.** (2009, June). *Addressing the social-emotional needs of young children*. PBS Kansas presentation via ITV at 16 sites in KS.
- Goosen, M.** (2009, March). *Kansas early learning document training*. Presentation at Greenbush, KS.
- Lindeman, D.P.** (2009, May). *Overview of the LSI/Parsons and it's impact on Kansas*. Kansas Closure and Realignment Commission, Parsons, KS.
- Miksich, P.** (2009, March). *Autism: Red flags and working with families within early intervention*. Presentation at Kansas City, KS.
- Miksich, P.** (2009, April). *Evidence based practice: Assessment/intervention in the context of daily routines and activities*. Inservice at Garden City, KS.
- Miksich, P.** (2009, June). *Let's talk about what we know*. Presentation by ITV at Focus on Autism Spectrum Disorders Conference, KS.
- Miksich, P.** (2009, June). *Family services coordination training and Part C updates*. Statewide training for Part C Service Coordinators at Wichita, KS.
- Miksich, P., Hornback, M., & Rinkel, P.** (2009, March). *Planning for Successful Transitions for children with ASD from Infant-Toddler (Part C/tiny-k) to Preschool Services (Part B/619)*. Presentation at Leadership in Autism Spectrum Disorders Conference, Wichita, KS.
- Olson, K.M.** (2009, June). *College of Direct Support Administrator Sharesop and Technical Training Workshop*. Parsons, KS.
- Olson, K.M.** (2009, June). *College of Direct Support Administrator Sharesop and Technical Training Workshop*. Great Bend, KS.
- Olson, K.M.** (2009, June). *College of Direct Support Administrator Sharesop and Technical Training Workshop*. Lawrence, KS.
- Olson, K.M.** (2009, June). *College of Direct Support Administrator Sharesop and Technical Training Workshop*. Wichita, KS
- Rinkel, P.** (2009, May). *Curriculum planning and reflection: Part I*. Inservice at Lawrence, KS.
- Rinkel, P.** (2009, May). *Evaluating training activities and planning for next year.*. Inservice at Lawrence, KS.
- Rinkel, P.** (2009, May). *Curriculum planning and reflection: Part II*. Inservice at Lawrence, KS.
- Rinkel, P.** (2009, May). *Curriculum planning and reflection: Part III*. Inservice at Lawrence, KS.
- Saunders, K.** (2009, May). *Experimental analysis of human behavior II*. Chair, International Paper Session at the 35th Annual Convention of the Association for Behavior Analysis International, Phoenix, AZ.
- Saunders, K.** (2009, May). *Science board translational series: The science and practice of discrete-trial training*. Chair, Symposium at the 35th Annual Convention of the Association for Behavior Analysis International, Phoenix, AZ.
- Saunders, K.** (2009, May). *Why some procedures for teaching arbitrary-matching-to-sample are more effective than others*. Symposium presentation at the 35th Annual Convention of the Association for Behavior Analysis International, Phoenix, AZ.
- Saunders, M., Saunders, R., Donnelly, J., Smith, B., Sullivan, D., Guilford, B., Erickson, B., & Rondon, M.** (May, 2009). *Home-based evaluation of the 5-3-2 diet for overweight adults with developmental disabilities*. Paper presented at the 35th annual meeting of the Association for Behavior Analysis International, Phoenix, AZ.

PRESENTATIONS AND TRAININGS continued

- Saunders, R., Saunders, M., Donnelly, J., Smith, B., Sullivan, D., Guilford, B., Erickson, B., & Rondon, M.** (May, 2009). *Clinic-based evaluation of the 5-3-2 diet for overweight adults with developmental disabilities*. Paper presented at the 35th annual meeting of the Association for Behavior Analysis International, Phoenix, AZ.
- Smith, C.L., Broyles, L., & Ehling, M.** (2009, March) *Head Start, mental health, and integrated continuous improvement processes*. Presented at the 22nd Annual Research Conference – A System of Care for Children’s Mental Health: Expanding the Research Base, Tampa, FL.
- Stein, M., Alligood, C., Baynham, T., Schmidt, A., Skinner, J., & Saunders, K.** (2009, May). *Recombinative generalization of onsets and rimes: Short and long vowel sounds*. International Poster Session presented at the 35th Annual Convention of the Association for Behavior Analysis International, Phoenix, AZ.
- Yates, G., Dozier, C., Neidert, P., & Williams, D.** (2009, May) *Relative task preference as a predictor of aberrant behaviors during transitions in persons with developmental disabilities*. International Poster Session presented at the 35th Annual Convention of the Association for Behavior Analysis International, Phoenix, AZ.
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ARTICLES AND NEWSLETTER ARTICLES

- Lindeman, D.P.** (2009). Kansas early childhood teacher training programs: Current status. *Kansas Child*, 8(2), 10-11.
- Moore, P.** (2009). Assistive Technology for a More Independent Life. *The Kansas Speech-Language-Hearing Association (KSHA) Connection Newsletter*, 23(2), 7.
- Page, K.** (2009, Spring). Resource spotlight from the ECRC: ADOS – Autism Diagnostic Observation Schedule. *Kansas Inservice Training System Newsletter*, 18(2), 11.
- Rinkel, P.** (2009, Spring). Talking with parents about autism. *Kansas Inservice Training System Newsletter*, 18(2), 5, 7, 9.



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