CONTENTS

3 From the Director
4 Genes and brains
5 Autism and other intellectual disabilities
6 Independence, community participation and self-determination for people with disabilities
7 Community health and health care
8 Learning and teaching
9 Parenting, child neglect and maltreatment
10 Teens and young adults
11 Addiction
12 Schiefelbusch tribute
13 In memoriam: Stephen Schroeder Edward Zamarripa
14 Friends of the LSI Investigator awards
15 Funding
16-23 Centers
Welcome to the 2017 Annual Report from the Schiefelbusch Institute for Life Span Studies. This year’s report reflects the work of the many researchers who are affiliated with or work within the Institute. There is not enough room to list all of the accomplishments attained this year, but we’ve managed to capture many of them here to give a sense of the breadth and depth of our investigators’ commitment to doing science that makes a difference in the lives of people all around the world.

This year marked a number of changes in the landscape of the Institute. With respect to the climate for research funding and science, we saw unprecedented upheaval in Washington, following along from years of uncertainty within the State of Kansas. In the face of all this, our investigators and centers remained dedicated to the translational research tradition that has always been the foundation of the Institute and they had another remarkably productive and successful year. But along with this success, we also experienced change and loss.

We saw important milestones in two of our centers. With the retirement of Deb Kamps, Matt Mosconi became director of the Kansas Center on Autism Research and Training. Charlie Greenwood stepped down from the directorship of the Juniper Gardens Children’s Project last year, but we successfully recruited Brian Boyd from the University of North Carolina to come and lead that center in early 2018. I look forward to seeing these centers prosper under new leadership and have every confidence that they will do so.

We lost Steve Schroeder, who carefully sailed the institute through some difficult waters in the early 1990s. Ed Zamarripa, who partnered with Steve during those tough times and managed the finances of the institute for nearly 40 years, also passed away earlier this year. The Institute owes much to these two individuals, who will be remembered as much for their proficiency and savvy as they will be for their infectious laughter. They didn’t often have it easy, but they almost always had fun. I am glad to have had the honor and privilege of working closely with both of them.

One final milestone here is very much worth mentioning. This annual report is the last one to be written and edited by Karen Henry in her capacity as LSI’s associate director for communication. Karen, who will also be retiring at the end of 2017, has helped us to tell the LSI’s story within and beyond KU for 16 years. This report is the perfect venue for us to thank her for all she’s done, to congratulate her on all she’s accomplished, and to wish her well as she moves forward.

And, speaking of moving forward… I hope you enjoy this year’s report.
THE LIFE SPAN INSTITUTE

LSI neuroscience and genetics research is increasingly offering a more refined understanding of the intricate biological causes of disability.

Peter Smith and colleagues discovered a possible biological basis for the unusual and altered skin sensitivities in girls with Rett syndrome, a severe X-linked developmental disorder affecting 1 in 10,000 female live births, and almost always fatal in males. Using a rat model with a mutated MeCP2 gene, the researchers found too many total nerve fibers in the rat’s skin but too few that detect heat. This may explain why girls with Rett syndrome are unusually sensitive to pressure and cold, but insensitive to heat. Further, they found significant differences in the expression of 1,347 genes in sensory neurons in the Rett rat models, many of which are involved in developing a cell’s structures or cytoskeleton. The study suggests that the MeCP2 mutation in neurons could also stiffen the cytoskeleton, possibly explaining the increased sensitivity to pressure typical of girls with Rett.

Jonathan Brumberg reported that he and his collaborators were able to identify locations in the brain that are active during continuous speech—both overt speech (actually speaking) and thinking about speaking (covert speech). They accomplished this by recording electrical signals directly from the brain while subjects repeated sentences continuously aloud and silently. This is one of the first observations of the continuous speech process that also revealed the common brain networks in overt and covert speech.

Mabel Rice explores both nature and nurture in her longitudinal study of Specific Language Impairment. In an in-depth overview of future SLI and language disorder research for clinicians in 2016, she suggests that future models of the causal pathways of SLI could guide gene–treatment decisions similar to current personalized medicine approaches.

John Colombo and Susan Carlson continue their longitudinal study into the effects of supplementing infant formula with two long chain polyunsaturated fatty acids (DHA and ARA) on neural development in infants. In 2017, they reported that formulas with the highest DHA supplementation led to decreased blood levels of ARA. They had previously found that infants fed on this formula showed reduced cognitive benefits compared to infants whose formulas had a more moderate dose of DHA. These results suggest that the balance between the two LCPUFAS is an important consideration in cognitive and behavioral development in infants.

Genes and brains

These images of the skin of a rat model of Rett syndrome reveal many more nerve fibers that sense pressure and cold (red), but fewer that sense heat (green), suggesting why girls with the disorder may be very sensitive to touch and cold, but insensitive to heat.

Credit: Department of Molecular and Integrative Physiology, University of Kansas Medical Center
LSI’s research into the causes and treatment of autism spectrum disorders (ASD), including Fragile X Syndrome and other developmental disabilities, has always been at the heart of the Institute’s mission. Now in 2016-17, LSI is poised to take its ASD research to the next level.

Matthew Mosconi, a psychologist and neuroscientist, assumed the directorship of the Kansas Center for Autism Research and Training, one of LSI’s 14 affiliated centers in 2017. With a $2.3 million award, he has begun research that will define motor deficits in ASD and determine their bases in the brain. By defining motor deficits in ASD, Mosconi hopes to start mapping these brain processes and determine how they relate to other social, communication and cognitive symptoms that build on basic motor skills.

Another outstanding recruitment, Brian Boyd, was selected to be the new leader for the Juniper Garden’s Children’s Project, another LSI center with a storied history of doing research in and with the community of urban Kansas City, Kansas. Boyd and his team at the University of North Carolina Chapel Hill carried out one of the largest treatment comparison studies of preschool programs for children with autism and were able to show that comprehensive treatment models can make significant changes in the trajectories of children’s development.

Steven Warren, Nancy Brady and Holly Storkel have distinguished themselves as ASD researchers individually, each approaching the often severe language and communication issues in ASD from different research perspectives. Now, they are collaborating on the keystone project of the $5.4 million award funding the Kansas Intellectual and Developmental Disabilities Research Center, a KU-KUMC research institute. Children with ASD who have less than 20 spoken words are the focus of the project that will assess a new multimodal treatment that builds on their previous research discoveries.

Nancy Brady developed a tool called the Communication Complexity Scale to help professionals assess the communication ability of people with little or no spoken words. Currently, the tool is being validated in schools for use by speech professionals and as an outcome measure in clinical trial research.

The Communication Complexity Scale, developed by Nancy Brady, is proving to be a major breakthrough in assessing the communication skills of those with no or little speech. Currently, the tool is being validated in schools for use by speech professionals and as an outcome measure in clinical trial research.

Credit: Diane Guthrie, Guthrie Photography

Autism and other intellectual disabilities

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Credit: Diane Guthrie, Guthrie Photography
Individuals with intellectual disabilities are increasingly acting as the change agents of their own lives. This has been the scientific concern of researchers like Michael Wehmeyer and Karrie Shogren, who have studied the concept of self-determination and how it can be taught, measured and implemented for both children and adults. This year they, along with Kathleen Lane, won a $3.3 million award to test their successful self-determination instructional model in 15 high schools in Maryland. The program has already resulted in better post-secondary outcomes for students in Rhode Island.

Mary Morningstar directs a program that gives young adults with intellectual disabilities the opportunity to earn a two-year KU Career Development certificate in an on-campus, inclusive experience. She welcomed her second class of eight students this fall for a total of 11 in the program; six of whom will live on campus.

Even 27 years after the ADA became law, people with physical disabilities still often experience a built environment and social systems that prevent full participation in their communities. In 2016, researchers Glen White, Jean Ann Summers and Dorothy Nary completed a five-year project to improve community participation on these issues and were awarded a new grant in 2016 as well. Among their accomplishments was a web-based tool designed to assist the staff of the national network of Centers for Independent Living help people with physical disabilities manage their own health. With Jerry Schultz and Christina Holt, the group also developed a tool to help people advocate to improve access issues in their own communities.

**Independence, community participation and self-determination for people with disabilities**

Carol Conforti-Adams of Bradford, New Hampshire, prepares to go kayaking using her adaptive kayak. She took part in one of the Research and Training Center on Independent Living’s projects designed to increase community participation, which includes recreation.

Credit: Carol Conforti-Adams
The Health for All Food and Retail and Restaurant Initiative has 21 participating businesses now, offering Kansas City, Kansas residents healthy choices in neighborhood mom and pop grocery stores and restaurants.

Credit: Diane Guthrie, Guthrie Photography

Community health and health care

LSI aims to improve the health of individuals and communities through research into health care policy, especially in regards to medical insurance for people with disabilities and chronic illness. Community health researchers work directly with community groups to change conditions which lead to high incidence of preventable diseases like diabetes, such as the lack of access to health care, healthy food or places to exercise.

Jean Hall is known as a go-to national expert on many issues in health care, most notably, high risk pools, as well as privately managed state Medicaid programs. In 2017, she was interviewed or cited by the New York Times, Annals of the Internal Medicine, Politifact and National Public Radio, among other media.

In 2017 Vicki Collie-Akers was selected to lead an evaluation of an effort to reduce childhood obesity in 33 school districts in Missouri. She continues her leadership of an innovative, community-wide effort to improve the health outcomes of Latino residents of Kansas City, Kansas, along with Jerry Schultz.
Research over several years has shown that CW-FIT, a classroom management system, has powerful effects on student behavior and time on task.

Credit: Diane Guthrie, Guthrie Photography

Learning and teaching

Many LSI researchers are contributing to understanding how we learn and how teaching can foster learning. LSI has been a trailblazer in this domain for more than fifty years, applying behavioral and instructional science and technology to some of the most challenging problems in education.

Six researchers from the Juniper Gardens Children’s Project located in urban Kansas City, Kansas—Dale Walker, Charles Greenwood, Judy Carta, Jay Buzhardt, Dwight Irwin and Alana Schnitz—collectively were awarded $7.5 million in 2017. They will develop and test tools for preschool teachers to nurture students’ literacy, language and social-emotional development as well as develop problem-solving skills through data-driven interventions.

In 2016, Howard Wills received a new grant to adapt his research-based classroom management system for middle school teachers. The game-based system has been successfully implemented in culturally diverse elementary classrooms in Kansas, Missouri, Tennessee and Utah. Educators can find out more at cwfit.ku.edu.

Irma Brausser-Hock and Michael Hock reported encouraging results from their study of an intensive two-year supplemental reading curriculum for middle school students with reading disabilities in 2017. The comprehensive program included explicit instruction in phonics, decoding, word identification, fluency, vocabulary, and comprehension. Students in the program performed significantly higher on standardized measures of reading than students in a comparison program.

Amber Rowland, Jena Craig-Hare, Marilyn Ault, James Ellis and Jan Bulgren published results of their National Science Foundation award that produced a curriculum to teach scientific argumentation through social media to 400 ninth-graders. The treatment group was much more active in using social media to identify, evaluate and judge scientific claims and argue their points of view using reasoning and evidence. Scientific argumentation is one of the priority skills of the National Research Council and is part of the Common Core Standards.

Amy McCart is helping California educators implement SWIFT (Schoolwide Integrated Framework for Transformation), a research-based educational framework developed at KU, in thousands of schools throughout California. SWIFT has redefined what an inclusive education looks like, has successfully elevated student achievement, and improved social and behavioral issues in 64 schools in five states.
An in-home parenting program for mothers in low-income Kansas City neighborhoods, that was extended through cell phone access to support and text reminders of good parenting practices, was still effective 12 months after the program ended.

Credit: Diane Guthrie, Guthrie Photography

Parenting, child neglect and maltreatment

LSI researchers develop and test innovative technology-based interventions to support more positive and responsive parenting. They also seek to understand why some are children are resilient despite neglect and abuse.

Kathryn Bigelow and Judy Carta published encouraging results from a 12-month follow up of a home visiting parenting program intervention. The short-term program focused on teaching specific parenting skills to low-income mothers at risk for child maltreatment in the home by parenting coaches. To extend the program between home visits, each mother was provided with a cell phone. This allowed more frequent contact with her coach and to receive text messages that prompted her to use newly learned skills. Both parenting and child behavior was improved as compared to a control group at the 12-month follow-up, supporting the long-term effectiveness of this low-cost approach.

In a new project, Bigelow and Dwight Irwin are developing and testing the TALK Around Town mobile application and online web portal, an app that uses GPS to prompt parents to encourage language development in their children based on where they are. The app will be loaded on parents’ cell phones to supplement a home-based Early Head Start parenting program.

Yo Jackson received a new five-year award in 2016 to continue her work in deconstructing the effects of child maltreatment. In the new grant, she will be following children in foster care from the ages of 3 to 5 to understand more about the components of response to trauma. The project will determine how the frequency, duration and severity of exposure to trauma impact young children’s emotional regulation and working memory skills over time.
LEAD UP, a successful KU program to mentor youth from eighth to 12th grades, directed by Jomella Watson-Thompson, (far right, first row) will be an integral part of a new grant to prevent youth violence in Kansas City, Kansas which she also directs.

Credit: Diane Guthrie, Guthrie Photography

**Teens and young adults**

Finding innovative approaches to addressing youth violence, preventing obesity and transitioning to adult employment is also within the scope of LSI’s research interests.

**Jomella Watson-Thompson** received a four-year award in 2017 that will coordinate the resources of several organizations and agencies, including the Kansas City, Kansas police department, to address the urgent problem of youth violence in Kansas City, Kansas—and determine if the program is effective. Watson-Thompson says that community programs often serve different youth, but the KCK Youth Violence Prevention Project will layer the efforts of multiple organizations to focus on the same group of youth in the same neighborhood.

**Matt Enyart** is directing an effort to assist Johnson County officials implement Positive Behavior Support in facilities for marginalized youth and adults who require significant behavioral health supports. The goal is to determine if these individuals can be supported in their homes and communities instead of restrictive facilities.

**James Basham** is contributing to the development of Teen Career Pathway, a video game that will let middle and high school students with developmental, learning or emotional/behavioral disabilities play through a day in the life of a science, technology, engineering or mathematics (STEM) professional.

**Chris Cushing** developed a smartphone app that allowed teenagers to record their mood and energy several times a day and combined these reports with physical activity measurements from activity trackers they wore. Contrary to prevailing assumptions, some participants exercised when they were happy and others when they reported feeling sad. A long-term goal of this research is to design an intervention system that would personalize prompts based on each individual’s optimum times to exercise as gleaned from data collected from reported internal states.
Addiction

LSI behavioral science researchers are gaining new insights into addiction.

David Jarmolowicz directs a collaborative project with the School of Pharmacy and the Hoglund Brain Imaging Center at the KU Medical Center that is establishing a regional and national hub to support multidisciplinary translational research into problem gambling.

Derek Reed is examining addiction to nicotine, alcohol and even indoor tanning through the lens of behavioral economics. This emerging science draws from neuroscience and economics and is uncovering why we make decisions that are not in our best interests, even when we have information to make better choices. Further, this research is understanding how changing an environment can guide us to healthier behaviors.

Kelsie Forbush wondered whether “drunkorexia”—fasting and self-induced vomiting to avoid weight gain from consuming alcohol—was an eating disorder, substance use disorder or both. She found that this pattern of behavior was more related to disordered eating and that individuals who engage in this behavior may be at-risk for future eating and substance use disorders.
On July 28th, 30 family, friends and colleagues of our much-loved founding director, Richard Schiefelbusch, gathered at the Spencer Research Library to surprise Dick for his 99th birthday. But the real surprise for Dick was the unveiling of a permanent exhibit in the Library’s revamped North Gallery honoring his contribution to the University of Kansas. He was selected to represent achievement in the social sciences for the entire history of KU, and was one of only three individuals chosen for the exhibit overall. Dick was one of the first KU faculty members to understand that the future of the social sciences required collaborative, multidisciplinary and rigorous research. He also learned how to sustain these efforts through federally-funded awards. He not only directed the Bureau of Child Research for 35 years, but he was integral to establishing the University of Kansas special education department, speech and hearing clinic and helped develop the Intercampus Program in Communicative Disorders.
2017 saw the passing of two outstanding leaders who steered the Life Span Institute through stormy weather to become the strong, influential research enterprise it is today.

Stephen R. Schroeder, distinguished professor emeritus of applied behavioral science, who directed LSI from 1991 until his retirement in 2001, died suddenly on October 15, 2017 in Hannibal, Missouri, while on a Mississippi River cruise with his wife, Carolyn. Steve assumed the directorship when the Bureau of Child Research and several other research groups were incorporated into the Schiefelbusch Institute for Life Span Studies (Life Span Institute). His background in experimental psychology and pharmacology enabled him to provide scientific leadership to both behavioral researchers at KU and biomedical researchers at the University of Kansas Medical Center to ensure the continuation of critical bi-campus program.

Besides being an internationally known scientist, particularly for his work on treatments for self-injurious behavior, he will be remembered for his personal devotion to individuals with disabilities. At his memorial service, a colleague remembered his dedication to finding a way to help “JA”, a young man with particularly severe SIB, over several years. He and Carolyn were also moved to tangibly, professionally and emotionally support and personally serve at the Centro Ann Sullivan del Perú, LSI’s Peruvian affiliate. After retirement, Steve also served for a year at the Prince Salman Center for Disability Research in Riyadh, Saudi Arabia to set up one of the first disability research programs in that country.

Steve will be sorely missed at LSI, particularly by the many he helped mentor as young scientists. Director John Colombo credits him with the trajectory of his own research—a collaborative biobehavioral approach that also characterizes the institute as a whole. Steve’s mentorship will go on: in 2016, he and Carolyn, an adjunct faculty member in the Department of Clinical Child Psychology, established the Stephen and Carolyn Schroeder Young Investigators Award for Research in Neurodevelopmental Disorders as well as the Carolyn and Stephen Schroeder Practice-Informed Research Award, an endowed fund for the benefit of clinical child psychology at KU. They were also members of the Friends of the Life Span Institute.

By Steve’s side, as well of that of every other LSI director, was Edward Zamarripa, retired director of finance and administration, who died after a sudden illness on July 3, 2017, in Colorado Springs on a trip with his wife, Mary Ann. Ed was particularly qualified for his position with an M.S. in Management and Administration and a doctorate in Special Education, Law and Policy. In 2009, he was honored for his 40 years of service by all four LSI directors, Richard Schiefelbusch, Stephen Schroeder, Steve Warren and John Colombo. At that time, he was awarded the first Jay Turnbull Fellowship which honored his advocacy for the employment of people with disabilities like Jay Turnbull as well as his friendship with him.

Ed has been described as the dean of center administrators, the ultimate general counsel, our knight in shining armor and a man of vision driven by deep-seated values by his former bosses and Rud Turnbull, Marianna and Ross Beach Distinguished Professor Emeritus in Special Education.

Ed also received the only award given at the LSI Fiftieth Anniversary Celebration in 2006, the Man Behind the Scene award. He was singled out as one of the most influential contributors to LSI history. Steve Warren noted that not only did the directors benefit from Ed’s truly exceptional problem-solving skills, but also countless LSI investigators, staff and students.
The Friends of Life Span Institute Investigator Awards were established in 2012 to recognize outstanding new and mid-career LSI investigators. Each award winner receives a $7500 award to further their research. The awards are for Principal Investigators on externally-funded LSI research projects who are evaluated on the nature and quality of their research record and the potential impact, or realized impact, of their work in generating new knowledge or contributing to translational science in keeping with the mission of the Life Span Institute.

Dale Walker, Ph.D., associate research professor at the Juniper Gardens Children’s Project, was awarded one of two 2017 mid-career awards by the Friends of the Life Span Institute. She is a national/international expert in early childhood development theory and research pertaining to learning language. Her research has focused on identifying the effects of early experience on language development and school readiness, designing and validating interventions for promoting children's early communication, and developing assessments and observations that can be used by practitioners for informing intervention with infants and young children.

Holly Storkel, Ph.D., chair and professor of Speech, Language, Hearing, was chosen for one of two Friends of the Life Span Institute mid-career awards in 2017. Her research seeks to understand why some children learn the words of their native language easily while others struggle. Her current research focuses on children with Specific Language Impairment (SLI), who are slower to learn new words than their peers, placing them at risk for academic failure. Her long-term goal is to develop an effective word learning treatment for kindergarten children with SLI, thereby improving their academic and vocational outcomes.

Navin Viswanathan, Ph.D., associate professor of Speech, Language, Hearing, was awarded the Friends of the Life Span Institute early career award in 2017. His research strives to answer a perennial question: how listeners understand language despite the variability of acoustics related to a speaker’s dialect, rate of speech and background noise, and in comparison to current speech recognition systems. His work has broad clinical implications for tests of hidden hearing loss, children and adults with cochlear implants and childhood apraxia.

**Friends of the Life Span 2017 Investigator Awards**

Dale Walker, Ph.D.  
Holly Storkel, Ph.D.  
Navin Viswanathan, Ph.D.
Funding

The Life Span Institute saw a small increase in funding in fiscal year 2017, to $28.28 million from the previous year’s $28.24 million. LSI holds a total of 115 awards, with 81 continuing awards and 34 new ones.

Federal awards still account for the vast majority (74 percent) of LSI funding at $21 million, with other sources, including the state of Kansas, at $3 million (11 percent), private foundations at $910 thousand (3 percent), other state agencies at $1.4 million (5 percent) and industry and other funding sources at $1.9 million (7 percent) comprising the rest.

Funding from the National Institutes of Health increased to $6.4 million from $5.98 million, awards from the U.S. Department of Education decreased to $9.67 million from $13 million. Another $4.6 million in funding was generated by awards from the U.S. Department of Health and Human Services as well as $239 thousand from the National Science Foundation and the Federal Communications Commission.

LSI represents a high return on investment. In 1990, LSI returned $3.30 on every dollar the state of Kansas invested in the Institute. In 2017, every state of Kansas dollar invested in LSI yielded $7.89 in external awards.

In keeping with KU Center for Research reporting policy, funding to LSI from 2008 to 2011 that is attributable to the American Recovery and Reinvestment Act of 2009 is not included here.

Fiscal year 2015 was a record for external funding of the LSI.
The Life Span Institute Affiliated Centers

The Life Span Institute brings together scientists from multiple disciplines who collaboratively take on the problems of human development and health at the intersections of science. They are affiliated through 13 University of Kansas research centers in Lawrence, Kansas City and Parsons, Kansas.

**Beach Center on Disability**

Through excellence in research, training, technical assistance and public service in Kansas, the nation and the world, the Beach Center on Disability seeks to make a significant and sustainable difference in the quality of life of families and individuals affected by disability. Founded in 1988 by KU Distinguished Professors Emeriti Ann and Rud Turnbull, the Beach Center honors the late Ross and Marianna Beach for their long-standing efforts on behalf of families affected by disability and was inspired by the Turnbulls’ son, Jay, who had several disabilities.

- **Michael L. Wehmeyer, Ph.D., Director**
- **Kathleen Lane, Ph.D., Associate Director**
- **Jean Ann Summers, Ph.D., Associate Director**
- **Karrie A. Shogren, Ph.D., Coordinator, Family Programs**
- **Mary Morningstar, Ph.D., Director, Transition Coalition**

**FY 2016-17 Highlights**

The Beach Center on Disability is home to multiple investigators and researchers who focus on research to improve the lives of people with intellectual and developmental disabilities. Director Michael Wehmeyer and Associate Director Karrie Shogren, along with Susan Palmer, conduct multiple projects on developing assessments of self-determination, designing measures to promote supported decision-making, and researching interventions to promote the self-determination of youth and adults with intellectual and developmental disabilities.

Senior Scientist James Thompson, Shogren and Wehmeyer engage in research on the measurement and impact of supports and support needs for people with intellectual and developmental disabilities.

The Beach Center's Kansas Institute on Positive Behavior Supports, headed by Jennifer Kurth, principal investigator, and Matt Enyart, project director, provides statewide training and supports web-based materials pertaining to PBIS. The Comprehensive, Integrated, Three-Tiered (CI3T) Prevention Research Project team, led by Kathleen Lane, works with local and national schools to implement high-quality, multi-tiered systems of supports.

New funding awarded in 2017 will allow Lane to collaborate with Wehmeyer, Shogren and Carol Quirk, a KU SWIFT Center and Maryland Coalition of Inclusive Education researcher, to examine schoolwide applications of efforts to promote self-determination. The Transition Coalition, led by Mary Morningstar with Dana Lattin, provides online information, support and professional development on the transition from school to adult life for youth with disabilities. Researchers design training that leads to change and support school and community teams as they learn research-based effective practices. The Transition Coalition also houses the KU Transition to Postsecondary Education program for college-age students with intellectual and developmental disabilities, a two-year curriculum leading to a career development certificate.

The year also brought several changes and departures. Judith Gross, who directed the Beach Center Family Employment Awareness Training project, which promotes awareness of employment options for family members with intellectual and developmental disabilities, became director of the Center on Community Living and Careers at the Indiana Institute on Disability and Community, Indiana University Bloomington. Her efforts have been well received and we look forward to her continuing this important work at IIDC. Longtime investigators Jean Ann Summers and Martha Blue-Banning retired in 2017. Both contributed immeasurably to the Beach Center mission and, though they will be missed, their legacy will continue.

The Beach Center is academic home to a number of doctoral students in the KU Department of Special Education, the top-ranked special education graduate program in the country. Kurth, Lane, Morningstar, Shogren, Thompson and Wehmeyer, who hold faculty appointments in the department, host several visiting scholars and doctoral students throughout the year. Doctoral student Katey Burke served as the Borchardt Family Doctoral Fellow in 2016-2017, working with Shogren and Wehmeyer on activities to improve employment outcomes for people with intellectual disability.

The fellowship is generously supported by the Borchardt Family through the KU Endowment Association. Hatice Uyanik (2016) and Mayumi Hagwara (2017) received the department’s David Dahlke award, which recognizes a doctoral student who demonstrates efforts to improve the quality of life for persons with severe disabilities. David Royer, a recent doctoral graduate mentored by Kathleen Lane, received the 2017 Judy Tate Outstanding Doctoral Student Award. Finally, Wehmeyer, Shogren, and Lois Weldon, Beach Center Office Manager, received the Jay Turnbull Fellowship in 2016. The award recognizes research to advance the rights and abilities of individuals with intellectual or related developmental disabilities and their families to secure equal opportunity, economic self-sufficiency, independent living and choice, and full participation in their communities.

**Biobehavioral Neurosciences in Communication Disorders Center**

The Center for Biobehavioral Neurosciences in Communication Disorders (BNCD) was founded in 2002 when the National Institute on Deafness and Other Communication Disorders awarded a core grant to establish the center. The BNCD is a natural outgrowth of the Life Span Institute’s long-standing focus on communication and language development and intervention.

The BNCD’s research spans a wide range of issues relevant to the cause and treatment of communication disorders from infancy to old age including studies on infant attention, the genetics of language impairments, language intervention, the decline of working memory in old age as reflected in speech and more precise measures of hearing loss to aid cochlear implant design.

- **Mabel L. Rice, Ph.D., Director**
  - Contact: 785 864-4570, bncd.ku.edu

**FY 2016-17 Highlights**

Fifteen investigators are affiliated with the BNCD with research interests that include the underlying biological and genetic bases of speech, language and hearing disorders and the way in which these processes and abilities play out over time, whether in the natural course of acquisition, age-related decline, trauma-induced decline or impairment or in behavioral intervention settings.

**Center for Community Health and Development**

Established in 1975, the Center for Community Health and Development (CCHD) joined the Life Span Institute in 1990 and has developed widely...
used capabilities for community-based participatory research and building capacity for community work. It was designated as a World Health Organization Collaborating Centre for Community Health and Development in 2004.

Vincent T. Francisco, Ph.D., Director
Jerry A. Schultz, Ph.D., Co-Director
Contact: 785 864-0533, communityhealth.ku.edu

FY 2016-17 Highlights
CCHD, formerly the Work Group for Community Health and Development, was renamed in 2017 to reflect its established presence at KU. The CCHD continues its mission of partnering with organizations and communities in their quest to achieve greater equity and social justice by facilitating positive community and systems change. In so doing, the CCHD promotes a science agenda that advances collective understanding of the community-level processes and change interventions involved in improving community health. The following are among the highlights of 2016-17.

Vincent Francisco, director of the Center and of the World Health Organization Collaborating Centre for Community Health and Development at KU, is leading a project funded by the Robert Wood Johnson Foundation to study benchmarks of successful community initiatives.

The U.S. Department of Health and Human Services Office of Public Health and Science awarded Jomella Watson Thompson and colleagues a Center of Excellence Grant through its Minority Health Youth Empowerment program. This project seeks to prevent youth violence by addressing social determinants in the Kansas City Metro area.

KU Provost Neeli Bendapudi signed a Memorandum of Understanding to extend the Academic Health Department partnership with the Lawrence-Douglas County Health Department to 2020. The partnership builds a shared research program and enhances capacity for implementing core functions and essential services of public health in Douglas County.

A long-term research partnership with the Latino Health for All Coalition in Kansas City, Kan., continues with the mission of reducing the risk for diabetes and cardiovascular diseases by promoting physical activity, healthy nutrition and access to health services for the Latino community. With funding from NIH, the Centers for Disease Control’s REACH program and local foundations, the coalition continues to improve conditions for health and health equity.

CCHD, with leadership from Vicki Collie-Akers, was selected to lead the evaluation of the “Healthy Schools, Healthy Communities” initiative funded by the Missouri Foundation for Health, which addresses childhood obesity in 33 Missouri school districts. The study will examine how comprehensive implementation of policy, program and environmental changes impact healthy eating, physical activity and weight status among children. See https://mffh.org/our-focus/childhood-obesity/healthy-schools-healthy-communities/

CCHD received a grant from the Ewing Marion Kauffman Foundation to implement a “Landscape and Feasibility Study” for an all-access library card initiative. Jerry Schultz is principal investigator.

CCHD is partnering with the Pan American Health Organization of the World Health Organization to develop a Healthy Cities Action Toolkit. Drawing upon the Community Tool Box, this toolkit will build capacity for taking action for healthier cities in the Americas.

More than 5.9 million users from 208 countries accessed the Community Tool Box this year. The Community Tool Box was featured in a report from the Georgia Health Policy Center and the Robert Wood Johnson Foundation. The report compared online resources supporting local health improvement and found the Community Tool Box and the County Health Rankings & Roadmaps platforms to be the most comprehensive in the nation.

Publications


Center for Research on Learning
The Center for Research on Learning (CRL) was established in 1978 as the Institute for Research in Learning Disabilities and currently includes 38 researchers and support staff dedicated to the Center’s four-fold mission of research, product development, dissemination/system change and professional learning. Researchers study problems in education and work to place solutions that make a difference into the hands of educators, learners, employers and policy makers.
Michael Hock, Ph.D., Director
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The Center’s research teams and their focus are as follows.
• ALTEC, guided by Jana Craig-Hare and Amber Rowland, designs, develops and evaluates effective use of educational technologies in K-12 instruction and uses technologies to engage learners.
• The Center on Online Learning and Students with Disabilities, led by Sean Smith, Jamie Basham and Daryl Mellard, conducts research on how online learning can be made more accessible, engaging and effective for K-12 learners with disabilities.
• The e-Learning Collaborative, led by Mellard, studies and develops new uses of technology to improve online learning environments and pedagogies.
• The Institute for Content Area Learning and Teaching (I-CALT) provides research on and development of instructional practices that enhance student learning and higher-order reasoning abilities in content-area classes.
• The Institute for Research in Adolescent Learning, co-directed by Irma Brasseur-Hock and Michael Hock, designs and validates instructional practices, strategies and programs that enhance the achievement of adolescents who struggle with learning.
• The Kansas Coaching Project, led by James Knight, conducts research on instructional coaching (including virtual coaching) and professional development intended to teach educators how to use proven instructional methods.
• The Professional Development Research Institute, directed by Patty Graner, studies ways to design and deliver quality professional learning opportunities and support to teachers with the ultimate goal of improving student achievement.
• The Research Collaboration, co-directed by Amy Gaumer Erickson and Pattie Noonan, provides professional development and evaluation for numerous diverse education projects.

FY 2016-17 Highlights
Brasseur-Hock’s online course “Blended Instructional Design” was presented at the Flipped Learning Network, the SPI conference and the KU TechEd camp. She launched and continues to study the Fusion Reading program (Brasseur-Hock, Deshler, Hock, 2012) in Virginia, North Carolina, Minnesota, Iowa and New York. She also

Continued on page 18
is leading efforts in Virginia to study how blended professional development can impact teacher fidelity of implementation and student outcomes.

Craig-Hare strengthens research-practitioner partnerships through her work with K-12 districts and schools. She was selected as a fellow by the Research-Practitioner Collaboratory, funded by the National Science Foundation (NSF). She also received the International Society of Technology in Education Making IT Happen Award for her contributions to helping teachers integrate technology.

Rowland continues as co-principal investigator for the NSF grant "Enhancing Argumentation with Social Media: Supporting Teacher Professional Learning and Student Science Practice," which is studying how social media can support teacher professional learning and student practice of scientific argumentation in high school biology classrooms. She also is project director of a U.S. Department of Education, Office of Special Education Programs Stepping Up grant with Smith.

Janis Bulgen is the principal investigator on a subcontract for an i3 (Investing in Innovation) Development Grant: "Redesign of Secondary Courses to Improve Academic Outcomes for Students with Disabilities and Other Underperforming Students with Mobile Technologies."

Noonan and Gaumer Erickson continue to lead the Kansas Technical Assistance System Network evaluation. This five-year evaluation project provides a comprehensive evaluation of educators’ acquisition of knowledge and skills and the implementation of evidence-based practices that address the current Kansas State Department of Education statewide priorities. They also published a book on their College and Career Competency Framework, “The Skills that Matter: Teaching Interpersonal and Intrapersonal Competencies in Any Classroom,” available at https://us.corwin.com/en-us/nam/the-skills-that-matter/book255639.

Mellard, Smith and Basham recently wrote a report for the Equity Matters series published by the Center on Online Learning and Students with Disabilities. The report is available at http://centerononlinelearning.org/publications/annual-publication-2015/

**Centro Ann Sullivan del Perú**

Centro Ann Sullivan del Perú (CASP) is a nonprofit educational institution that serves children and adults with intellectual disabilities, autism spectrum disorder and behavioral problems as well as their families and professionals from Perú and other parts of the world. Under the direction of its founder, Liliana Mayo, Ph.D., CASP is recognized and honored worldwide for its contributions as a model research, demonstration and training center and for its Functional-Natural Curriculum developed by Judith LeBlanc and the staff of CASP. Mayo has been supported by a steady stream of University of Kansas colleagues who have volunteered as consultants, trainers and fundraisers; notably, LeBlanc, who has served as CASP research director for more than 35 years, and retired Life Span Director Stephen Schroeder and his wife, Carolyn Schroeder. CASP has a formal agreement with LSI and receives much of its staff education through faculty from the special education and applied behavioral science departments at KU.

Liliana Mayo, Ph.D., Director
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**FY 2016-17 Highlights**

CASP celebrates is 38th year believing in and practicing the Power of 2. The Power of 2 stresses the power and importance of the dynamic partnership that has been the key to success for CASP. This partnership between CASP professionals and CASP families has resulted in one of the largest schools of families in the world. Never families not only benefit from training by CASP professionals but also from working together with other parents and family members with prior years of experience and training.

This year marks the third "Mother-to-Mother" project. The Mother-to-Mother program provides families and professionals with a day-long learning experience from not only CASP professionals but from parents of children with different abilities who have shared their same fears, hopes and dreams for their child’s future. Following this year, CASP will have reached an anticipated total of more than 3,300 participants in 15 cities across Perú.

In Lima, CASP educates more than 450 people with different abilities and their families annually. Teamwork between the staff and families prepares students for inclusion in life, school and work. More than 110 individuals currently hold positions in real jobs for real pay in small and large companies. Following last year’s historic Congress of Perú, which employed six students from CASP, this year the president of the Congress has one of the six students working directly with him while in session, a very prestigious position. Sixty percent of CASP students who are working are the primary economic support for their families and 100 students are included in 53 regular schools. Through the Long Distance Education Program, CASP has conducted 48 conferences for more than 36,583 parents and professionals in the 24 states of Perú and in 16 other countries: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Germany, Guatemala, Honduras, Italy, México, Nicaragua, Panamá, Spain and the United States.

In the past year, advocacy for improved treatment for people with disabilities has strengthened in Perú in the private and public sectors. In November, Delta Airlines staff from Lima and Atlanta will learn how to deal with persons with different abilities on their flights as CASP to conducts its fifth annual simulated travel experience to enable more than 200 students to experience all the steps involved in airline travel. A complete simulated airport is built at CASP with check-in counters, security, boarding gate and the cabin of an airplane. This year students will "travel" from Lima to Brasil.

In August, Liliana Mayo was notified that the Society for the Advancement of Behavior Analysis Board of Directors is awarding her its one-time Humanitarian Award in honor of the quality and dedication of her work. The award is for the scope and range of excellent contributions to the promotion of human welfare.

August through November, members of the CASP team, CASP students and parents are conducting training and consultation guiding the work at the Centro Ann Sullivan Panama (CASPAN), supporting the 2012 decision by the Government of Panama to adopt the CASP model to teach children with ASD in Panama.

Finally, in April, a team of 20 delegates visited CASP from the Perú Mission for Global Mental Health of the Columbia University Global Health Program.

**Child Language Doctoral Program**

The Child Language Doctoral Program was established in 1983 as the first specialized degree program in the emerging field of child language acquisition. The program focuses on the interdisciplinary academic preparation and research training of child language specialists. The internationally recognized faculty bring diverse approaches to the study of how children communicate and speak. The program offers students a wide choice of research tools, facilities and affiliated research labs, including large-scale longitudinal studies of children with language impairments, genetics of speech and language impairments and language intervention studies of children with a wide range of language impairments including those using communication devices. LSI, the Language Acquisition Preschool and the clinical and research facilities of the Speech-
Language-Hearing Clinic provide research sites and practicum experiences.
Mabel L. Rice, Ph.D., Director
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FY 2016-17 Highlights
The Child Language Doctoral Program (CLDP) is affiliated with the departments of applied behavioral sciences, clinical child psychology, linguistics, molecular biosciences, psychology and speech, language and hearing. CLDP is an entity that provides faculty appointments and new course development that complements those of the affiliated departments. Lesa Hoffman, Ph.D., was the first direct faculty appointment in the CLDP. She has a split appointment as professor in the CLDP and as the scientific director of the Research and Design and Analysis unit within LSI. She is an outstanding quantitative scholar with multiple projects funded by the National Institutes of Health. She also is well known as a teacher and consultant and is the sole author of a textbook on longitudinal analyses. She teaches advanced coursework on modeling methods for longitudinal and multivariate studies of children’s development. Her courses include Latent Trait Measurement and Structural Equation Models and Advanced Multilevel Models, Multilevel Models for Longitudinal and Repeated Measures Data.

The second faculty member in the CLDP is M. Hashim Raza, a research geneticist who worked at an internal research lab at the National Institute of Deafness and Other Communicative Disorders. Raza joined the CLDP as an assistant professor in 2015. He is an expert in pedigree-based genetic analyses that have led to the identification of candidate genes for stuttering. He is moving into genetic studies of families with language impairments. Raza developed three doctoral-level courses in genetics of speech and language impairments: Concepts in Human Molecular Genetics, Principles to Study Human Genetic Disorders, and Behavioral and Cognitive Genetics. One of the courses is offered in a collaborative format with Mabel Rice in order to bridge the scope of genetics investigations, from molecular bioscience to behavioral phenotyping of speech and language impairments.

Students currently enrolled in the CLDP are Claire Selin, Teresa Girolamo, Heather Fielding, Erin Andres and Lindsay Williams.

Juniper Gardens Children’s Project
The Juniper Gardens Children’s Project (JGCP) began in 1964 when citizens from northeast Kansas City, Kan., joined with faculty from the University of Kansas to devise solutions to specific problems in educational achievement and parenting in that low-income community. The JGCP has grown over the years from a small, community-based research initiative housed in the basement of a liquor store into a unique, internationally recognized research center that collaborates with local and national community sites to develop projects and investigations.

JGCP is currently located at the Children’s Campus of Kansas City (CCCK). The CCCK is a state-of-the-art facility where JGCP researchers are located with a model educational center and social service agencies serving low-income families and children. This research-program partnership was developed to address issues of children and families in poverty and serves as a center for training and technical assistance for promoting quality early education in the Kansas City metropolitan area.

JGCP is particularly recognized for its contributions to the development of effective approaches for promoting school readiness, reducing the achievement gap, and for generating research-based solutions that will accelerate learning and reduce classroom conduct problems in special and general education. JGCP has received the Research Award of the International Council for Exceptional Children in recognition of its outstanding research contributions to the field.

Judith J. Carta, Ph.D., Interim Director
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FY 2016-17 Highlights
JGCP continues to support early childhood and early intervention research. Research on young children (birth to age five) focuses on developing strategies for parents, teachers and caregivers to enhance language and social-emotional outcomes and improve the likelihood of school readiness. Judy Carta, Charles Greenwood and Dale Walker head the Bridging the Word Gap Research Network, a national network of more than 150 interdisciplinary researchers, practitioners and policymakers advancing a research agenda to reduce the gap in the language learning environments of young children in poverty.

Two projects led by Jay Buzhardt, Walker and Greenwood are focused on designing and testing a web application for early childhood providers to translate child outcome data into actionable steps that providers can take to individualize their curriculum for infants and toddlers at risk for disability. Walker and Carta are working with researchers at the American Institutes for Research to scale up the use of this technology for early intervention providers across Pennsylvania. Kathy Bourque has been evaluating the use of iPads for promoting the social communication of young children with autism spectrum disorder. Kathy Bigelow and Judy Carta are testing a model for training teachers in infant-toddler centers how to individualize their support for children’s social-emotional development. Greenwood, Carta and Alana Schnitz are testing the effectiveness of a program for training teachers in strategies to promote preschoolers’ early literacy skills. Greenwood, Carta and Dwight Irvin are developing an approach for training preschool teachers to use classroom observation data to adapt language and early literacy instruction for struggling learners.

JGCP also continues a research tradition focused on school-age children, especially those with challenging behavior and severe emotional and behavior problems. Howard Wills in collaboration with researchers throughout the country has been testing the effectiveness of Class-Wide Function-related Intervention Teams (CW-FIT), a classroom management system for improving students’ engagement during academic instruction. Wills and his team have also been evaluating the effectiveness of I-Connect, a self-monitoring smart phone app that prompts students to stay on task.

JGCP continues to be a leader in developing digital applications that can be used in community-engaged research and practice. JGCP researchers have developed mobile phone and tablet devices to give teachers and parents real-time advice and data-based feedback on their use of evidence-based instructional and caregiving strategies. Bigelow and Irvin, for example, have developed a GPS-enabled phone app (“Talk Around Town”) to increase parents’ talk to their children by providing location-specific prompts within the community. The Individual Growth and Development Indicators (IGDIs) online data system, now 12 years old and developed by Buzhardt, Walker and Greenwood, helps guide practitioners’ intervention decisions with at-risk infants and toddlers. It has been enhanced in a revised website, a hand-held support app, and with improved benchmarks for cognitive problem solving and movement IGDIs.

Kansas Center for Autism Research and Training
The Kansas Center for Autism Research and Training Center (K-CART), established in 2008 with private and public funds, is a multidisciplinary center at the University of Kansas that promotes research and training on the causes, nature and management of
autism spectrum disorder (ASD) and related intellectual/developmental disabilities (IDD). Committed to the highest standards of scientific rigor, K-CART generates new scientific discoveries about ASD/IDD, disseminates research-based practices by training professionals, practitioners and families who serve children and adults with ASD/IDD, and provides clinical services through the Center for Child Health and Development (CCHD) at the KU Medical Center.

Matt Mosconi, Ph.D., Director
Leadership Team:
Kathryn Ellerbeck, M.D., M.P.H., FAAP
Linda Heitzman-Powell, Ph.D., M.P.H., BCBA-D
Rene Jamison, Ph.D.
Sean Swindler, M.S.Ed
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FY 2016-17 Highlights

The year was one of both transition and tremendous progress for K-CART. Debra Kamps, director of K-CART since its inception in 2008, retired in June 2017. Kamps' steward leadership helped K-CART to prosper over the past nine years and all in the K-CART and autism communities are grateful for her tireless efforts. Following Kamps' retirement, Matthew Mosconi, Ph.D., was appointed K-CART director. Mosconi joined the KU faculty in 2015 as an associate professor in clinical child psychology and LSI associate scientist. Under his leadership, K-CART will continue to advance its scientific, training and clinical missions while aiming to expand its basic and applied research programs.

K-CART investigators secured multiple federal and foundation research awards this year, including funding to support basic studies of brain processes involved in sensory and motor issues in ASD (principal investigator [PI]: Mosconi), clinical trials for individuals with Fragile X Syndrome (site PI: Ellerbeck), and translational studies to develop empirically supported social skill interventions for females with ASD (PI: Jamison). In 2016 K-CART became part of the Kansas Intellectual and Developmental Disabilities Clinical Translational Core, supported by the National Institute of Child Health and Human Development, which will provide critical infrastructure for KU/KUMC investigators conducting clinical studies of ASD/IDD. K-CART also collaborates with the CCHD to grow its research registry that now includes clinical and demographic information on more than 6,000 individuals with ASD. The primary goals of the project are to increase researchers’ access to and communication with individuals with ASD/IDD and to involve more individuals and families with ASD/IDD in clinical research studies across the KU/KUMC campuses.

K-CART made several important strides in its training mission during the past year. K-CART partnered with CCHD to provide research and field experiences for trainees in the recently renewed Leadership Education in Neurological Disabilities (LEND) grant (PI: Ellerbeck) which supports clinical, research and leadership training for students preparing for careers in ASD/IDD.

The OASIS Provider Training Program, designed to increase entry-level skills for individuals providing early ASD intervention, also continued its important efforts. The program has trained approximately 1,300 educators and providers throughout the ASD community. The OASIS Parent Training Program provides parents of children with ASD the opportunity to learn and practice behavioral techniques with their child under the guidance of a certified OASIS coach. Supported by funds from the National Institute on Disability Independent Living and Rehabilitation Research, this program is now offered as a clinical service.

K-CART continues to increase its clinical reach through its partnership with CCHD. CCHD served more than 1200 children this past year through ASD evaluations and treatment. To better serve rural populations in Kansas, CCHD also pioneered telemedicine approaches for diagnosis and treatment including 20 telemedicine clinic slots per month. The Bridge Clinic provides assessment, treatment and parent-training services for children recently diagnosed with ASD. Designed to “bridge the gap” between diagnosis and entry into treatment, this program supports families as they attempt to process their child’s diagnosis and understand their best treatment options.

Finally, K-CART continues to expand its community outreach. K-CART maintains an Autism Resource Center at the KU Edwards Campus to help families locate community resources and evidence-based treatment sources. In partnership with Johnson County Community College, K-CART hosted another successful “Autism Across the Life Span” conference in 2017. The 2018 conference will be April 20 at the KU Edwards Campus.

Kansas Intellectual and Developmental Disabilities Research Center

The Kansas Intellectual and Developmental Disabilities Research Center (KIDDRC) serves as a central focus for intellectual and developmental disabilities (IDD) research at the University of Kansas Lawrence and Medical Center campuses. The KIDDRC supports basic and applied research on neurodevelopmental disorders and early interventions that improve cognitive, language and social outcomes in typically developing children and children with disabilities. The Center provides investigators with administrative, preclinical, clinical-translational, measurement and statistical/ bioinformatics services and supports a randomized clinical trial on an intervention for improving communication in extremely low-verbal children with autism spectrum disorder.

In addition to serving IDD scientists in critical ways, the KIDDRC seeks to attract new investigators to the field of IDD, support the professional development of junior scientists already working in the field, and facilitate research collaborations of KU’s IDD scientists within and beyond the institution. More than one-third of our investigators collaborate with KIDDRC investigators across three Center sites. Over the past five years, KIDDRC has generated more than 400 high-impact publications.

John Colombo, Ph.D., Director
Peter Smith, Ph.D., Co-Director
Contact: 785 864-4295, kiddrc.ku.edu

FY 2016-17 Highlights

Nancy Brady and Steven Warren published a paper in the Journal of Autism and Developmental Disorders on the longitudinal effects of the quality of parenting on children with Fragile X.


KIDDRC principal investigator John Colombo and KUMC scientist Susan Carlson joined forces with Australian colleagues to demonstrate the consistency of improvements in pregnancy outcomes with prenatal omega-3 supplements in the journal Prostaglandins, Leukotrienes and Essential Fatty Acids (PLEFA).


Members of the KIDDRC Research Design and Analysis Core collaborated on several papers with KIDDRC investigators. Kandace Fleming published with Warren and Brady’s Fragile X team (Journal of Speech, Language, and Hearing Research), with Holly Storkel’s team (Language, Speech, and Hearing Services in the Schools), with Yolanda Jackson’s team (Child Abuse and Neglect), and with several Juniper Gardens investigators (Exceptional

THE LIFE SPAN INSTITUTE
ANNUAL REPORT 2016-17

Children). They also coauthored papers by collaborating with investigators at KUMC. Kim Richter’s team (Nicotine & Tobacco Research) and Paul Cheney’s team (Journal of Neuroimmune Pharmacology). Finally, Fleming and RDA scientist Rebecca Romine Swinburne coauthored a submission to the Gatlinburg Conference on Intellectual and Developmental Disabilities.

Dwight Irvin, who is part of the Clinical Outcomes and Biobehavioral Technology Core, published technical papers on behavioral imaging in classroom environments (Advances in Neurodevelopmental Disorders, Behavior Research Methods) and papers at two international meetings of the Institute of Electrical and Electronics Engineers.

Kansas University Center on Developmental Disabilities

Almost 50 years ago, as the Life Span Institute’s research on intellectual and developmental disabilities took root, efforts began to translate this research into practice through what is now known as the Kansas University Center on Developmental Disabilities (KUCDD). Virtually all of LSI’s direct service, technical assistance, applied research and post-doctoral pre- and in-service training are associated with KUCDD. These include clinics to diagnose and treat children with disabilities, a statewide project that provides assistive technology to people with disabilities and their families, and training childcare providers and social workers to support individuals with disabilities. In addition, investigators affiliated with KUCDD conduct applied research that has state, national and international impact in self-determination, support needs assessment, inclusive educational practices, early childhood education, community and workplace supports, transition, autism spectrum disorder (ASD) and other areas critical to the lives of people with developmental disabilities and their families.

Karrie A. Shogren, Ph.D., Director
James R. Thompson, Ph.D., Associate Director for Consumer Activities
Susan B. Palmer, Ph.D., Associate Director for Applied and Translational Research
Kathy Ellerbeck, M.D., Director, KUCDD-Kansas City Site
David P. Lindeman, Ph.D., Director, KUCDD-Parsons Site
Sara Sack, Ph.D., Director, Assistive Technology for Kansans Project
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FY 2016–17 Highlights

Faculty at the Center for Child Health and Development (CCHD), which is the KUCDD site at the University of Kansas Medical Center, provide autism and neurodevelopmental screening and evaluation to more than 1,100 children through clinical services on the KUMC campus, telemedicine services to families statewide and outreach clinics targeting specific underserved Kansas communities. Through the Rural Outreach Clinics operated by CCHD and the Kansas Children with Special Health Care Needs project, KUCDD faculty at the Kansas City site provided rural outreach clinics in four communities. In addition, special arrangements were made to provide outreach to military families at Kansas bases, including Ft. Riley and Ft. Leavenworth, serving 33 children and families who otherwise would not have been served. This includes a new project led by CCHD speech-language pathologist Joshua Allison-Burbank to conduct outreach to Kansas tribal communities, including a needs assessment in their communities.

CCHD continues to conduct innovative research programs. Rene Jamison’s Girls Night Out program means that CCHD is one of the few centers in the country conducting research on girls with ASD. The CCHD clinical research database was included as part of the KIDDRC Clinical-Translational Core. CCHD’s database will enable researchers to access CCHD’s population of children with ASD and intellectual/developmental disabilities (I/DD), increase the number of those children and families involved in research projects, and position CCHD and KU to partner with other regional and nationwide researchers. CCHD continues to house the Maternal and Child Health Bureau-funded Leadership Education in Neurological Disabilities program (LEND), training the next generation of leaders and researchers in ASD and I/DD.

The Assistive Technology for Kansans (ATK) project, operated by the KUCDD-Parsons site, provided training and technical assistance on the availability and use of assistive devices and services to 3,844 people in Kansas and across the United States. ATK lent devices to 428 people with disabilities for use in their homes, schools, work places or communities.

KUCDD faculty at the Lawrence site conducted a number of research, training and technical assistance projects focused on promoting and enhancing the self-determination of youth and young adults with intellectual and developmental disabilities. KUCDD Lawrence-site faculty recently created a new measure of self-determination, the Self-Determination Inventory, which is now available online and for use by researchers and practitioners at www.self-determination.org.

The Kansas Inservice Training System (KITS) developed and implemented 12 technical assistance (TA) plans for early intervention providers in Kansas. These are highly intensive, written plans that identify outcomes, needed resources, persons responsible, evaluation methods and goal-attainment scales. In 2016-17, TA plans had an impact on 22 administrators, 84 professionals and 1,925 children. In the coming year, KITS will begin to provide training and TA to childcare providers across the state.

Life Span Institute at Parsons

As the founding Center of the Schiefelbusch Institute for Life Span Studies, LSI at Parsons works with national, state, regional and community partners to conduct research, develop model service programs and provide training for professionals involved in services for individuals of all ages with disabilities and their families. Located in southeast Kansas, the Center includes a component of the Kansas University Center on Developmental Disabilities and the Parsons Research Center.

David P. Lindeman, Ph.D., Director
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FY 2016–17 Highlights

Faculty and staff provided training or technical assistance to 9,481 Kansans in all 105 Kansas counties, to 727 individuals at national conferences, had eight peer-reviewed publications and produced two newsletter series.

Through collaborative research, a Parsons principal investigator is developing preclinical models to understand and develop treatments for self-injurious and aggressive behavior in individuals with developmental disabilities by combining clinical and laboratory research. The Kansas Inservice Training System (KITS) provided training and individualized technical assistance (TA) to 106 teachers/administrators resulting in a potential impact on 1,925 children and families. In addition, 1,040 professionals were engaged in other training/professional development events.

KITS, in collaboration with Kansas Child Care Training Opportunities, Inc. provides statewide training and TA for childcare providers, focusing on increasing access to and quality of child care services. This year the project provided support to 547 providers.

LSI Parsons served 3,844 Kansans with disabilities and chronic health conditions at six sites where individuals accessed more than 5,809 assistive technology (AT) services

Continued on page 22
and acquired nearly 2,400 AT devices valued at more than $1.4 million. The following Kansans received AT services:

- 170 infants and toddlers with disabilities and their families
- 287 adults with disabilities, supported through retraining or obtaining employment
- 89 farmers, ranchers and other agricultural workers
- 1,794 seniors needing services to stay in their homes or be active in their community
- 1,684 individuals who received training on the use and maintenance of an assistive device.

Assistive Technology for Kansans (ATK) was one of four state programs invited to present to the U.S. Department of Education. ATK provided technical assistance in 14 states. ATK provided services to 33 individuals through the iRAN Connect advanced telecommunication grant for individuals who are deaf and blind as part of the National Deaf Blind Equipment Distribution Network.

ATK supported 75 individuals with disabilities through "Achieving Employment and Health Goals with Digital Technology" training. Thirty-four of the 75 participants found employment using their new digital technology skills and 13 others made it to the interview stage.

Fire-safety prevention and emergency training was provided to 189 individuals who were deaf or had a hearing loss so they could live more safely in their homes. Staff conducted 14 community-training events to educate first responders about disability etiquette and increase communication between individuals with disabilities and local first responders. Follow-up survey results revealed 93 percent of participants practiced their emergency escape plan and 77 percent tested their accessible signaling systems.

A project for rural and frontier health care supported 78 individuals with disabilities to help them prevent or manage diabetes through classes and mobile health technologies. "Supporting Consumer Behavioral Change through mHealth Strategies and Peer Supports" will serve individuals with disabilities in southeast and northwest Kansas counties. Participants will develop two behavioral health goals and enter data in mHealth apps that provide summaries to document behavioral change.

LSI Parsons collaborated with Kansas State University to operate the AgrAbility project to help injured farmers and ranchers acquire technology and modify production activities to support returning to agricultural employment.

A white paper from the 20th Annual Research Retreat on the topic, "Building Research Infrastructure: Planning for Future Needs and Implementing for Change," was published and posted to the Merrill Advanced Studies Center website.

**Research and Training Center on Independent Living**

The Research and Training Center on Independent Living (RTC/IL) has a 37-year history of conducting disability research, providing training and transferring knowledge to practice. The Center furthers independent living for people with disabilities through scientifically sound, theoretically driven interventions that lead to effective community-living solutions and policy change. Center researchers, professional staff and students work closely with consumers and service providers to develop research and products that meet their needs. The Center also partners with other universities and agencies to improve the health and participation of people with disabilities.

Glen W. White, Ph.D., Director
Martha J. Hodgesmith, J.D., Associate Director
Jean Ann Summers, Ph.D., Research Director
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**2016-17 Highlights**

**Success stories: Community partners share experiences**

Collaboration with community partners has been essential to testing the interventions conducted by RTC/IL, which is completing its final year of funding from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR). The Center has published five success stories to highlight improvements that these partners made in their own communities across the United States. Participants in this research used several strategies to increase community participation by people with disabilities.

The success stories were presented at the Community Living Summit, held in Alexandria, Va., in September 2016. National policymakers and representatives of national disability organizations attended the Summit, joining the Center’s researchers, members of the scientific and consumer advisory panel and community research partners. Summit materials are posted at rtcil.org/dsummit.

**Building on success in new Center**

Center researchers are now further developing two of the interventions from the prior center in the new Research and Training Center on Promoting Interventions
for Community Living, which was funded by NIDILRR in October 2016. Glen White notes that this five-year center provides an opportunity to build on earlier successes and increase the scale and validity of the research and its outcomes. This Center is a partnership with the University of Montana.

**Partners edit journal issue**

White and Jean Ann Summers highlighted the center’s focus on participation by editing a special issue of the *Journal of Prevention & Intervention in the Community* titled “People with Disabilities and Community Participation.” The five studies included examine community participation from multiple angles, with articles by researchers from the RTC on Community Living and other previous centers funded by NIDILRR.

**Senator Dole gift benefits RTC/IL**

Senator Bob Dole made a gift of $10,000 to RTC/IL in January 2017. Senator Dole played an integral role in the 1990 passage of the Americans with Disabilities Act and has a physical disability himself. He was interested in supporting the Center because of his long-standing interest in and advocacy on behalf of Americans with disabilities.

**Resources on accessible parking**

The new brochure “Accessible Parking Etiquette: Honor the Aisles!” informs all drivers about the purpose of access aisles, including those who have accessible parking permits but may not need the van-accessible parking space. White has worked with the Kansas Department of Revenue to disseminate the brochure to people applying for or renewing accessible parking permits as well as to those renewing their driver’s license.

Graduate research assistant Kelsey Shinnick successfully defended her master’s thesis in January 2017. Her study, “Examining Multiple Interventions to Deter Access Aisle Parking Violations,” is available as a fact sheet.

**RTC/IL featured in library exhibit**

The RTC/IL was one of 14 programs featured in a special KLI Libraries exhibition “Engaged: Campus and Community Scholars Working Together for the Public Good.” The exhibit, which ran January-August 2017, highlighted work that is committed to creating reciprocal and mutually beneficial community-based scholarship. The RTC display featured our commitment to participatory action research and integrated knowledge translation.

**Advocacy work**

While the Center provides guidance on advocacy to people with disabilities, staff members also practice advocacy in their own communities. In Lawrence, Kan., Dot Nary spearheaded an effort that resulted in improved access to city government for all citizens. The city installed a height-adjustable podium in the City Commission meeting room, so now people who address the commissioners can see and be seen by all who are attending the meetings.

**SWIFT Education Center**

SWIFT Education Center provides technical assistance, professional development and other services to states, local educational agencies and schools. With these partnerships, SWIFT works to transform education so it benefits all students, their families and communities. SWIFT approaches this vision by helping whole education systems build their own capacity to provide academic and behavioral support to improve outcomes for all students by implementing an equity-based, multi-tiered system of support. The Center has an emerging research arm that investigates important questions around a multi-tiered system of support and its successful implementation in schools and districts.

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**FY 2016-17 Highlights**

In 2016-17 SWIFT continued its collaboration with the Orange County Department of Education (OCDE) and Butte County Office of Education (BCOE) to equip region, county and district leaders across the state of California to install, improve and sustain an integrated academic, behavioral and social multi-tiered system of support (MTSS) in more than 10,000 early childhood, elementary and secondary schools.

A National MTSS Professional Learning Institute (PLI) co-sponsored by SWIFT, OCDE, BCOE and the California Department of Education drew more than 1,000 participants eager to learn and grow their MTSS knowledge as well as develop understanding about leadership, fidelity of implementation and other topics to support the success of the initiative in their communities. This event provides a forum for SWIFT’s long-term partners in Vermont, Maryland, Oregon and New Hampshire to tell their SWIFT transformation stories to the next generation of education leaders who embrace the SWIFT vision of “All Means All.”

SWIFT is completing the fifth and final year of technical assistance partnerships with the aforementioned states and Mississippi (who opted to hold a regional SWIFT PLI this fall) funded by the U.S. Department of Education, Office of Special Education Programs. Preliminary student outcome data across the five states indicate that goals were met: local educational agencies acquired the capacity to lead transformation work; schools are including students with disabilities in general education at a higher rate, especially students with extensive needs; the number of students in and out of school suspensions is down, which means participation in the classroom is up; and state assessment scores for reading and math show a strong, positive association with implementation of the SWIFT framework.

SWIFT expanded its national knowledge bank of resources on swiftschools.org/shelf to include three films illustrating and describing the three levels of MTSS: Universal, Additional and Intensified Support. These approximately three-minute films are a great way to explain to families, educators, school boards and the community the SWIFT domain that drives academic and behavior improvements.

SWIFT continued to produce webinars on timely and important topics such as “Culturally Responsive and Sustaining Practices for Teaching and Learning” with Tiffany Kyser; “Monitoring MTSS Fidelity of Implementation” with Jodi Henderson; “Using Universal Screening Procedures with Evidenced-based Interventions for Internalizing Behaviors” with Lucille Eber; “Using MTSS to Improve Family and Community Partnerships” with Kimberli Breen; “How to Partner with Hard-to-Reach Families” with Grace Francis and Shana Haines; a two-part series on “Sorting through the Sensory Jungle and Focus on Strengths” with Winnie Dunn; a two-part series on “The Importance of System Screening and Using Data to Support School Success” with Kathleen Lane; and “Using Data to Improve Student Outcomes” with Chandra Williams. This lineup of learning experiences can be accessed at swiftschools.org/shelf. Also available on the SWIFT website are blog posts and podcast interviews with scholars, practitioners, family members – all leaders in the field of inclusive education – on the “SWIFT Talk” blog and “Unscripted” podcast.

As an internationally recognized leader in inclusive education, Wayne Sailor authored two particularly important peer reviewed works this year:


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