CELEBRATING 50 Years
OPENING DOORS, TRANSFORMING LIVES
VKC by the Numbers*

**304**
research publications by VKC investigators in 2014-2015

**120,000**
TN Disability Pathfinder website had > 160,000 visits from more than 120,000 users and received 1,925 calls and emails

**1,152**
Vanderbilt Autism Resource Line calls

**213**
VKC Investigators and Members in 30 departments in 7 Vanderbilt schools/colleges

**20,635**
copies of LEND guides on autism and other disabilities have been given to families and service providers since December 2013.

**76,812**
IDD Health Care Toolkit website received 76,812 page views by 26,496 users over 32,429 sessions

*For FY 2015 unless otherwise noted*
Director’s Message — Of Giants and Legacy

What a year 2015 has been for the Vanderbilt Kennedy Center as we celebrated the Center’s 50th anniversary. We have been looking forward even as we have looked back.

We kicked off this landmark year on January 21 with our Martin Luther King Jr. Commemorative Lecture “The Future of Disability Policy” by Andy Imparato, J.D., the talented director of our national organization, the Association of University Centers on Disabilities.

On May 29—50 years to the day of our founding and also President John F. Kennedy’s birthday—we hosted Timothy Shriver, Ph.D., for a special day of visits and a great talk titled “Lessons in What Matters.”

On September 29, we held our annual Science Day but with a twist—renowned neuroscientist Pasko Rakic, Ph.D., spoke, a VKC directors’ panel gave their perspectives on accomplishments and challenges, and over 100 graduate students and postdoctoral fellows shared their research in poster sessions.

Finally, on October 9, we held a Homecoming for staff and faculty who have given years of dedicated service.

We created two VKC videos—a 22-minute documentary produced by Peabody College’s Lyle Jackson on VKC history and current strengths, and an 8-minute overview by Kyle Jonas, a former UCEDD trainee and now staff member. (See back cover for how to view videos.) We also launched a 50th Anniversary website—visit the timeline and photo gallery.

Funding is crucial to our future, and in this 50th year we submitted grant applications for support as a national Intellectual and Developmental Disabilities Research Center and a national University Center for Excellence in Developmental Disabilities. Both were funded for another 5 years. TRIAD funding through State of Tennessee contracts and federal grants is at its highest level ever.

None of these things would have happened without the collective efforts of our researchers, trainees, staff, families, and State and community partners.

As I reflected on our 50th anniversary, the image in my mind was this—“If I have seen further than others, it is because I have stood on the shoulders of giants” (Isaac Newton). A 12th century theologian, John of Salisbury, adds to that—“We see more, and things that are more distant, than they did, not because our sight is superior or because we are taller than they, but because they raise us up, and by their great stature add to ours.”

Over this year, I have appreciated how our Center was built by countless giants, paving the way for others as our Center has evolved. With deference to John of Salisbury, we are all giants, taking turns to stand on the shoulders of others and inviting them to stand on ours.

In daily life, we hardly realize how much more we receive than we give, and life cannot be rich without expressing gratitude, which leads us to a reflection from Dietrich Bonhoeffer’s Letters and Papers from Prison: “It is so easy to overestimate the importance of our own achievements compared with what we owe to the help of others.”

Elisabeth Dykens, Ph.D.
Annette Schaffer Eskind Chair

Associate Director’s Message — Our Covenant Together

Celebrating our Center’s 50th anniversary, we have a lot to be proud of. We have been at the forefront of basic science discoveries related to intellectual and developmental disabilities (IDD) for five decades. Still, the best days of the VKC are ahead of us!

We have an amazing group of scientists, a dedicated donor base, an impressive footprint in the community, and strong institutional support. These pieces of the puzzle are essential for our continued success, and they ensure that the basic and translational IDD research at the VKC will continue to push the boundaries of science and result in new groundbreaking discoveries.

“Noblesse oblige,” or “nobility obliges” is a concept that clearly applies to us. The VKC extends beyond mere entitlements and requires that we fulfill our research responsibilities and reach our full potential. We must remain nimble, innovative, and vigilant. We owe this to ourselves, and this covenant cannot be broken.

Now that our VKC Intellectual and Developmental Disabilities Research Center has been renewed by the National Institute of Child Health and Human Development, it is time to look ahead and not sit on our laurels.

To fully live up to our amazing potential, we need to communicate and to listen to each other. Are we providing the best and most needed services to our IDD researchers? What is missing and what can take us one step further? Are there unidentified needs? What is the best use of our philanthropy, donations, and institutional support? How can we make the biggest difference for you?

The VKC leadership cannot and should not decide alone the paths that will be taken in the future. We need your feedback (kc@vanderbilt.edu). We are stronger together. We are here to serve you.
CLANCY HOPPER

**ACM Lifting Lives**

**Music Camper**

My name is Clancy Hopper. I am 26, and I have Williams syndrome. Having Williams syndrome has given me many opportunities and has taught me how to advocate for myself.

In 2005, I was contacted by the Williams Syndrome Association to see if I would want to take part in a Music Camp. I jumped on the opportunity. While I was at this camp, research was conducted to see how music plays a key role in the lives of those with Williams syndrome and how it affects the brain.

During the week of camp, we take part in fun activities. My favorite was line dancing at the Wildhorse Saloon. Camp concludes at the Grand Ole Opry performing our song written during camp. Most recently, I got to perform “Bright Eyes,” written at the 2014 camp, in Dallas for the ACM Gala with fellow campers and The Band Perry! ACM Lifting Lives has fully funded our camp for 6 years.

In Dallas, I started communicating with Pete Fisher, General Manager of the Grand Ole Opry, about job opportunities. I applied for a part-time tour guide, had an interview, and I have been an employee at the Grand Ole Opry for 2 months now! I get to share my love and knowledge of Country Music!

CATHERINE GORDON

**Special Education teacher**

I am a graduate of Fisk University (1978). While attending Fisk, I was privileged do my **practicum studies** at the Kennedy Center. I was scheduled for 2 hours a day, 2 days a week. I found myself going on days I wasn’t even scheduled. I loved working with children with special needs. Upon graduating from Fisk, I completed an M.A. in special education from Ohio State University (1979). I found an excellent job teaching students with special needs in Columbus. I am now preparing to retire after teaching 36 years. I wouldn’t be where I am today had it not been for my experience at the Kennedy Center. Thank you for my enriching experience with the Kennedy Center. As a result, I was always willing to have student teachers in my room from OSU, Capitol University, etc. I’m so glad I taught children with special needs. It has indeed been a wonderful career!

TAMMY COX MILLER

**Home Visiting Program, Demonstration and Research Center on Early Education (DARCEE, early 1970s)**

I was 2 years old when my mom and I took part in the **DARCEE Home Visiting Program**. I remember the Home Visitor coming one time with someone who brought a video camera and filmed us baking cookies. They were then able to plug into the TV and play it back to us, in the days before VCRs. I remember seeing myself say, “Mama, eat your cookie!” We labeled our house with words. For example, our door had a card with the word “door.” Sometimes the Home Visitor would drive us to class with the other children and parents. During one of the group classes, a guinea pig was brought out for us to pet. Today, I work with the Head Start program, including with Home Visitors in two counties.

SHIRO AND TAMMY ONEDERA

**Parents**

Nervous, hesitant, exhausted, and scared. That is how our family could have been described when we first walked through the elevator doors at **TRIAD** in the Vanderbilt Kennedy Center. Our youngest son Cade, who has autism, needed help. Our whole family needed help in understanding that life shouldn’t be defined by big obstacles, but rather by the determination to overcome
them—together. We learned so much about how to thoughtfully apply ourselves, instead of aimlessly exhausting ourselves. We think TRIAD is an acronym for Truly Remarkable Individuals Altruistically Determined—to make lives better! Their mark, indelible. Our appreciation, undeniable. Thank you, TRIAD!

DARA BACON
KidTalk Research Participant
When our son Uriah was born with Down syndrome, we knew Vanderbilt would be a great resource. It wasn’t until this year that we experienced the jewel known as the Vanderbilt Kennedy Center. My husband is an assistant professor, and I work in preschool literacy outreach. We are an educated family that has access to resources and materials, yet the KidTalk study helped us inspire language development in our son like never before. KidTalk has been the most practical, hands-on learning experience we’ve had as a family. We’ll continue benefiting from the strategies and education long after the study is finished.

SANDRA BELD
Parent of Reading Clinic student
My son had barely 30 sight words when we started at the Reading Clinic and hated reading. Reading has always been a struggle for him. Now he is up to almost 70 sight words and loves to read. His speech has improved as well. Being given a partial scholarship was like being given a space to breathe. The mountain became a hill that we could climb without a safety line.

MEGAN HUMBURG
Former Reading Clinic tutor
Working in the Reading Clinic has taught me how to be a more effective teacher and has encouraged me to view learning as a richly complex process. Before my time as a tutor, I often fell into the trap of viewing kids as either “good students” or “bad” ones. Working closely with struggling readers has taught me that all students have the potential to become engaged and passionate learners. As teachers, it is up to us to tap into that potential.

JAMIE GALVIN
Next Steps at Vanderbilt student
As I started my first year in college I was nervous and scared. But I got there and discovered I can do this even with my learning disability. That doesn’t define who I am. My personality defines who I am. I made so many friends I love so much. Ms. Lindsey has helped me with advice about jobs. She said we should try to almost 70 sight words and loves to read. His speech has improved as well. Being given a partial scholarship was like being given a space to breathe. The mountain became a hill that we could climb without a safety line.

MICHAEL FLOM
Next Steps at Vanderbilt Ambassador
My friends have often asked me why I mentor those with developmental and intellectual disabilities. I am a Next Steps mentor because I want the students to achieve their maximum potential, even if it requires many helping hands. The Next Steps program requires all participants to form their foundation early and then constructively work towards the finished product. We mentors serve as the engineers in Next Steps, but the students are the architects—and I wouldn’t want it any other way. Interacting with students with intellectual disabilities is how I and my fellow mentors have become more human.

SANDRA GINN
Participant, Prader-Willi Syndrome Clinical Trial
Three years ago, I would not have thought we would ever be where we are today. Thanks so very much Continued on page 6

ELISE MCMILLAN
Parent of Will and Co-Director of the VKC UCEDD
From the time Will was born 27 years ago with Down syndrome, the Vanderbilt Kennedy Center has been a partner with our family in helping him achieve his dreams. It’s fitting that the Center was begun in a partnership with the Kennedy family who knew firsthand what life was like for an individual with a disability and family members. Fifty years later, in partnership with Vanderbilt University and Vanderbilt University Medical Center, families are still making that difference.

So many of our major initiatives have had family involvement and financial support, whether it’s the Annette Schaffer Eskind Chair held by our Director, the Next Steps at Vanderbilt postsecondary program begun with support from Linda Brooks and her family, or the Britt Henderson Training Series started by Carol and Bob Henderson and their family in memory of their son Britt. Individuals with disabilities and their families play a strong role in our Leadership Council and Community Advisory Council.

I’m so thankful that that welcoming spirit that we felt in 1988 remains as a hallmark of our Center today.

for including Rebecca in the study. She has been very successful on the [trial medication]. Without your help in that short half-a-day [visit], we would not be where we are today. I am so thankful for the work and research and time and so much of your life that you put into Prader-Willi syndrome.

KELLY WOLENBERG
LEND Trainee 2013-14

As a Vanderbilt medical student, I was already committed to interprofessional learning and collaboration. For my continuity clinic, I worked in Pediatric Neurogenetics and Metabolism along with a nurse practitioner student and a pharmacy student. However, when I joined the LEND program, my interprofessional scope broadened dramatically to include audiologists, physical therapists, and psychologists, among others. I quickly learned that only a small part of pediatric health care is provided within a doctor’s office. Professionals from many disciplines improve and sustain the health of pediatric patients in child care programs, schools, legislative offices, and even in a child’s home. LEND enhanced my vision of ideal advocacy and teamwork, while also providing me with the resources and connections to work towards making a difference. I will continue to rely on the expertise of my LEND colleagues throughout my career.

SAMANTHA GOLDMAN
UCEDD Trainee 2012-2016

As a long-term UCEDD trainee, I have had amazing opportunities to connect with the larger disability community as well as to learn from experts. This has impacted my personal and professional growth, helping me to develop valuable skills and to become fully engaged in learning opportunities. This addition to my formal Special Education program has truly enriched my experiences as a Vanderbilt student.

NOAH SPIEGEL
Nashville Opera CEO

Working with TRIAD is one of the most rewarding experiences of producing our Nashville Children’s Opera On Tour program. We see joy on children’s faces as they engage in the performances, and experience the elements of the opera in ways that enliven the theatrical experience. We see parents who are able to experience a community event free of judgment and fear, where they know their child is able to experience the opera however they choose—singing along, screaming with delight, moving about freely—whatever moves them to enjoy the performance.

PARENT
I can’t believe the number of accommodations that TRIAD and the Nashville Children’s Opera thought of and provided for the audience. The story boards, dim lighting, and quieter voices the singers used were all helpful for our family. Even though we did not use the quiet space this time, it was stress-relieving just to know that it was there if needed. We don’t go out very often as a family. The movies are too loud. Food sensitivities make eating at restaurants difficult. It was very nice to have a family event we could go to.

JEANETTE PIERCEY
SENSE Theatre parent

Abby loved SENSE Theatre [“a stage of hope for children with autism”]. It was wonderful seeing all the children [with and without autism] enjoying themselves. Abby could be herself and felt really comfortable. She was outgoing, she had fun, she had no fear. She felt accepted and welcomed. She made wonderful friends and looked forward to going every day. Abby learned that new things can be fun. It was great!

SADIA AND BINTA BARROW
Parents (from Gambia)

My daughter, Binta, uses a wheelchair for sitting and going. Therefore, she has to have a wheelchair accessible van to travel back and forth to her doctor’s appointments, physical therapies twice a week, and out to the communities. She has one which has over 200,000 miles. In August 2015, it had
a major problem that cost over $800. Being a single parent with a child with multiple disabilities who depend on people for all her daily life routines, this is a lot of money for me to come up with, for the van to be fixed. I had to cancel all her appointments for two weeks, which was causing problems on her legs contractions. Pathfinder’s Multicultural Outreach Program helped us get part of the amount for my daughter’s van to be fixed. I can’t thank Pathfinder enough for the great job they are doing to help special need people or family members get the services or help we need to care for our love ones. May God continue to give you all you need to continue to serve people with special needs. My daughter, Binta and I (Sadia) love you all!!!

JUDY ANDERSON
Parent of Project ERIC participant
Our son Brandon has Down syndrome and participated in Project ERIC, which is Enhanced Reading Instruction for Children with Down syndrome. It involved reading passages and learning a strategy to identify pronouns and answer “where?” questions, as well as answering in complete sentences. I will never forget when I listened in one day on Brandon and Kim, and the joy I received hearing him answer the question and read the sentence. My sweet boy was reading, yes, my tears flowed with such pride!! So grateful to VKC and the many dedicated people to provide all of the programs to our children.

PARENT OF TEEN WITH AUTISM,
VAP-T participant
It was good to know that there are options for our kids to have a better life….I felt empowered leaving this [Volunteer Advocacy Program-Transition] session…. I think it made me feel as if someone is out there on our side when that’s not usually the case. (Outside of you guys, of course.)

JAN LINCOLN
Special education teacher, Centennial High School
With 31 years of experience in special education, one would think I had “heard it all.” The Britt Henderson Training Series for Educators—Roadmap to Employment offered me so much up-to-date, useful information that my classroom has been enhanced and improved.

PEDIATRICS PROVIDERS AND STAFF
University Pediatrics is a primary care clinic that relies on area agencies’ services as we provide the best possible care for our patients. Tennessee Disability Pathfinder offers essential information and invaluable assistance to our medically complex patients and their families. Not only do we rely on Pathfinder for the most current resources, but Pathfinder also assists our families in navigating the sometimes confusing and often overwhelming path of caring for a child with a disability. A specific example from our practice is a young boy with autism. Since his father passed away his mother did not know where to turn for support. Pathfinder has helped her complete paperwork and connect with various referrals and resources that her son needs. Pathfinder is a wonderful resource for our clinic, our patients and our community.

ANNE MARTIN
“It took us so much stress off me from the day I talked to you,” Robertson County resident Annie Martin told Tennessee Disability Pathfinder. “I knew it was taken care of. I knew it was!” Her sister first put her in contact with Pathfinder during one of the hottest days of summer, after Annie’s air conditioner had failed. Because of multiple sclerosis (MS), the heat triggers bad muscle spasms and extreme fatigue in Annie. Pathfinder immediately connected with the national and local MS society, and mailed her an application for assistance. “It was so quick,” said Annie. “Within 24 hours they had approved it and the check to Lowes was in the mail for us to get the new air conditioner….It was superfast and so easy. Everyone was so nice. I was so thankful, and Pathfinder stayed with me through the whole thing to make sure it did go through.”

VIENNEAU FAMILY
We are so thankful to have had the opportunity to participate in the Putting Faith to Work Initiative. Not only was this a good experience in meeting kind and caring individuals, but the program also worked in securing a job for our son. It is through creative initiatives like this [working with congregations] that other individuals with disabilities will be able to secure employment opportunities that otherwise might not be an option for them. Preston stated that everyone was so kind and he appreciates everyone’s help. Because it was such a good experience for our family, I plan to stay involved as a way of giving back.

Pictured page 6 top: Jack and the Beanstalk giving back.

TRIAD workshops served
648 teachers, caregivers and other providers of services to children and adolescents with autism and IDD

VKC programs reached all
95 Tennessee counties

Putting Faith to Work Initiative
VIENNEAU FAMILY
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Pictured page 6 top: Jack and the Beanstalk performance at the Nashville Opera. Photo by Kyle Jonas.
THE FUTURE OF DISABILITY POLICY
January 21, MLK Commemorative Lecture
I congratulate the Vanderbilt Kennedy Center for your 50 years of leadership….Whether it is inclusive higher education, community living, using technology to support self-determination, diagnosis at earlier ages—all the things the [national developmental disabilities] network has developed and done has translated into better quality of life for people with disabilities….If you ask what is the future of disability policy, it is leveraging all these things to accelerate progress so we start to see more labor force participation, less poverty, higher quality of life, more supports for families, more sustainable approaches to whatever money we spend to support this population, getting a good return on that investment in terms of outcomes.
Excerpts, Andy Imparato, J.D., Executive Director, Association of University Centers on Disabilities

LESSONS IN WHAT MATTERS
May 29, 50th Anniversary Community Celebration
How remarkable it is how these individuals [with intellectual disabilities], for whom institutionalization was one of the only options their families were given… that these individuals have been able to come out of the shadows and into their communities with their families….You will miss an opportunity to see and learn something if you view someone solely by his or her disability. We have closed the gap in some ways, but we have only scratched the surface.
I hope that, in the next 50 years, [the Vanderbilt Kennedy Center] challenges itself to a new intensity… that it fights for the human side of human rights. I hope we challenge ourselves to a new paradigm of education that recognizes not just the needs and services for people who have differences, but also their gifts and talents….I hope this Center commits itself to a research agenda that fights a culture of elitism that says that the only thing we want to research is ways to either cure or to prevent, as though everybody who has a difference is somehow no longer worthy, and commits itself again to a culture of research that reveals gifts, gifts in the life cycle, gifts in ways we barely understand.
Excerpts, Timothy Shriver, Ph.D., Chairman and CEO of Special Olympics

VKC SCIENCE DAY
September 29, 50th Anniversary
"Neuronal Migration—Relevance to Intellectual and Developmental Disabilities"
Understanding human cerebral cortex is the most important scientific quest, so you—the Kennedy Center—are working on the most important thing in the world….There is no simple solution to complex problems [so scientists must] have patience.
Excerpts, Pasko Rakic, Ph.D., Dorys McConnell Duberg Professor of Neuroscience, Kavli Institute for Neuroscience, Yale University

Directors Panel
We celebrate the amazing people who made [50 years of accomplishments] possible.
—Karoly Mirnics, M.D., Ph.D., VKC Associate Director

Where might the Center be in another 10, 20, 50 years?
In the future, if the VKC stays as nimble as it has been, it will be plumbing the depth
We must find time to stop and thank the people who make a difference in our lives.

- JOHN F. KENNEDY

of issues impinging on the lives of children over the next 5 decades. The future does not look to me as bright for children as in the past—issues of world conflict render children defenseless, climate change impacts greater on children than on adults, food scarcity and hunger find children first, immigration tends to push children forward as pawns, public school disintegration impacts poor children first and worst, child health and prevention services tend to be cut from budgets first…. We must ramp up resources to train budding young researchers and attract more of our brightest away from a career in hedge funds to a life of child development research and advocacy.

—Donald Stedman, Ph.D., VKC Director (1970-1971)

In the future I envision a center with an ever wider scope, not a place but a concept involving people all over the world, a time when barriers between basic and applied research will have disappeared in favor of mission-oriented research.

—H. Carl Haywood, Ph.D., VKC Director (1971-1983)

[I hope that we will] create opportunities for individuals with special needs or challenges to become more deterministic about their own lives.

—Pat Levitt, Ph.D., VKC Director (2002-2008)

[I hope that] disabilities will be viewed as a natural part of the human experience, that this will be a center on the science of human flourishing for all across the life span.

—Elisabeth Dykens, Ph.D., VKC Director (2008-present)

HOMECOMING

October 8, 50th Anniversary

Gathering of VKC staff and faculty across the years.

Six Words on Disabilities and Abilities

For the Center’s 50th anniversary, we challenged individuals with disabilities, family members, educators, and others to express their experiences or views of disabilities in only six words, which are posted on our 50th Anniversary website (vkc.mc.vanderbilt.edu/vkc/50). Read their “six words.” What are your “six words”?

- Want to, can do, did do!
- People with disabilities give back, everyday
- Every day, new chances to grow
- We all deserve the same opportunities
- Redefining disabilities—just dump the “dis”
- Disabilities unite more than they separate
- Utterly Unexpected, Often Challenging, Unforeseen Blessings
- Disability notwithstanding, our lives are amazing
- Advocating together, we change the world
- Deep down, we are the same
- I'm a whole person, like you
- No normal, open my heart, grief
- Live and love like all others
- Conquering obstacles while always staying positive
- Loving who I am every day
- A family affair—struggles and successes
- Widening my worldview, moved to action
- Challenging Life with my unique me!
- Family, friends, support, Special Olympics, YMCA, travel
- I am an INDIVIDUAL with autism
- Life altering, in a good way
- Not a burden, but a blessing
- Not much different than anyone else
- Capable, with creativity, and good at loving

UCEDD provided continuing education to over 1,700 individuals
Discovery involves risk-taking. When hundreds of thousands of dollars are needed for a single large-scale study, it is reasonable that public funding agencies like the National Institutes of Health or private foundations require evidence—pilot data—showing the merits of a scientific hypothesis or approach before awarding research grants. But how to fund pilot research?

In 1998, the Vanderbilt Kennedy Center (VKC) and its fledgling Leadership Council of community supporters devised a solution. They created the Nicholas Hobbs Society to promote philanthropic giving. In turn, those gifts have funded an annual competition for Hobbs Discovery Grants open to VKC researchers to fund innovative interdisciplinary approaches or interventions. Often, the risk-taking produces promising pilot data, which allows VKC researchers to compete successfully for large federal or foundation grants.

Since 1998, 32 of 69 Discovery Grants have resulted in subsequent research funding. Each $1 invested in a Hobbs pilot grant returns approximately $30 through externally funded grants. This internal grant mechanism also has helped attract junior researchers into the field of intellectual and developmental disabilities research, and has helped senior researchers explore new areas.

Today, like other Vanderbilt donor societies, Hobbs Society members are recognized for gifts of $2,500 or more annually. Some donors have made larger gifts and have targeted a specific area, e.g., autism, Down syndrome. Discovery Grants are $25,000-$30,000 on average, for 12 months, nonrenewable. Since 1998, $1.6 million has been invested in Discovery Grants.

**FROM DYSLEXIA TO AUTISM**

In 2006, Mark Wallace, Ph.D., was jointly recruited to Vanderbilt by Hearing & Speech Sciences and the VKC. Wallace now holds the Louise B. McGavock Chair; is professor of Hearing & Speech Sciences, Psychiatry, and Psychology; and is director of the Vanderbilt Brain Institute and associate director of the Vanderbilt Conte Center for Neuroscience.

"Previously, I had worked exclusively with animal models, investigating multisensory function in dyslexia," Wallace said. "Coming to the Vanderbilt Kennedy Center allowed me to put my work into a human context, specifically the context of developmental disabilities."

In 2009, Wallace and Malcolm Avison, Ph.D., professor of Radiology and Radiological Sciences, received a Hobbs Discovery Grant to investigate the neurobiological underpinnings of developmental reading disabilities, with a focus on multisensory networks (i.e., vision and hearing), and to explore the feasibility of remediation methods based on a multisensory platform.

"The brain imaging findings were muddy," Wallace said. "It wasn’t clear whether the hypothesized differences in networks were there, at least to the degree that we thought they would be. But—this is the real twist and turn in this story—two of the subjects recruited for the dyslexia study were also on the autism spectrum. Their brain images were by far the strongest evidence that there were substantial changes in sensory function, or at least in sensory networks."

That serendipitous discovery led to Wallace’s transition into research on multisensory processing in individuals on the autism spectrum. He began collaborating with VKC autism researchers to investigate audio-visual integration differences in children with autism.

"The real Holy Grail in my mind," Wallace said, "is what those changes in sensory function mean for these children in their real world activities. We want to be able to use tasks developed in our lab to improve sensory function in these children. We hope that by improving multisensory function, we’ll see transfer into real world domains like social communication."

**RESEARCH PATHWAYS**

The seeds of findings in Wallace’s Hobbs Discovery Grant have since led to significant research projects from various funding sources, each another step in understanding sensory and multisensory functioning in children with autism.

With funding from the National Institute on Deafness and Communication Disorders, Wallace and Stephen Camarata, Ph.D., professor of Hearing & Speech Sciences and Psychiatry, studied the relationship between sensory processing in children with autism and changes in communication skills in these children.

"If these changes do exist, could this be a platform for developing better remediation? That was the goal," Wallace said.

Another unusual twist in the road involved...
a project in collaboration with Paul Newhouse, M.D., Jim Turner Professor of Cognitive Disorders; professor of Psychiatry, Pharmacology, and Medicine; and director of the Vanderbilt Center for Cognitive Medicine. Their study, funded by the National Cancer Institute, was aimed at providing the first comprehensive view of how multisensory function changes over the lifespan.

“This research was in the context of aging, but for me, the fact that there would be developmental changes in audio-visual integration related to cognition provided a great foundation to compare with children with autism.”

The Simons Foundation Autism Research Initiative (SFARI) awarded Wallace a SFARI Explorer Award to better define how alterations in sensory function in autism relate to changes in performance in a host of cognitive domains.

The most recent opportunity came with the 5-year renewal of the VKC Intellectual and Developmental Disabilities Research Center. In addition to funding research support services for 46 VKC investigators who lead 69 research projects, this grant from the National Institute of Child Health and Human Development funds a research project, which Wallace leads. The long-term objective is gaining a better understanding of sensory and multisensory contributions to autism and testing whether behavioral training methods focused on sensory function may have potential for remediation.

“We can really do something special now,” said Wallace.

GRATITUDE
How Wallace’s Discovery Grant has led to a new research program is but one example among the 69 Grants awarded to date. Although dollars of funding generated and number of research publications are important metrics, the greatest metric ultimately is how discoveries can lead to improving the lives of individuals with developmental disabilities.

“We are enormously grateful to all Nicholas Hobbs Society members and other donors for their generosity and vision,” said Elisabeth Dykens, Ph.D., VKC director. “They make possible these innovative, potentially life-changing Discovery Grants.”

**Pictured page 10 top: Mark Wallace, director of the Vanderbilt Brain Institute and VKC investigator. Photo by Daniel Dubois.**

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**VKC by the Numbers**

**Trainees of 5 universities in 13 disciplines make up the Vanderbilt LEND Training**

**106 research posters presented at 2015 VKC Science Day**

**TennesseeWorks website had over 15,000 website sessions by almost 10,000 unique users**

**Next Steps students had support from 68 Vanderbilt student Ambassadors—26% special education majors, 15% other Peabody departments, 59% in other fields (2014-15)**

**13 activities of the Multicultural Outreach Program reached 393 participants in 11 languages**

**140 educators focused on “High Expectations in Competitive Work” in Britt Henderson Training Series**

**Shared Tennessee Kindred Stories of Disability with all 132 Tennessee legislators and the 11 members of the Tennessee Congressional Delegation**

**37 children and adults with disabilities exhibited 91 art works**

**UCEDD mentors 44 long-term trainees and 46 intermediate trainees in 15 disciplines**

**Reading Clinic sessions provided 63 students with 1,512 hours of tutoring**

**TRIAD provided training on autism spectrum disorder to over 475 Tennessee school personnel**

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*For FY 2015 unless otherwise noted*
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