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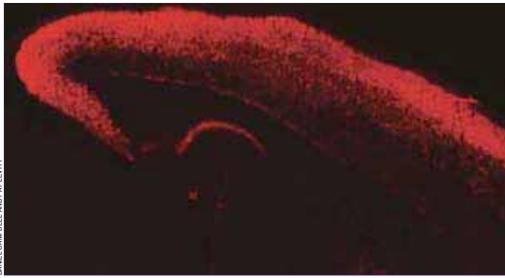


11 From Dinner to Discovery

Discovery

Gene Variant Carries Increased Risk of Autism

By Melissa Marino



An image of the developing cerebral cortex of a mouse prior to birth is stained to show the presence of MET gene. It shows that MET is produced at high levels during the peak of development of this part of the brain, which is one of the major structures involved in processing complex information. This indicates that MET is associated with autism spectrum disorder, which disrupts the development of the cerebral cortex.

Researchers have identified a common gene variant that more than doubles the risk of autism. The research, led by investigators at the Vanderbilt Kennedy Center for Research on Human Development, provides new insights into the genetic basis of the complex disorder.

An international team of scientists led by research fellow Daniel Campbell, Ph.D., and Pat Levitt, Ph.D., reported that a genetic variant associated with the MET gene is common in children with autism and appears more frequently in families that have more than one affected child. The study was published in the *Proceedings of the National Academy of Sciences*.

Although both environmental and genetic factors are likely involved in autism, mounting evidence suggests that genes play an important role in an individual's susceptibility to the disorder.

"Autism is recognized as the most highly heritable neuropsychiatric disorder," said Levitt, professor of pharmacology and Vanderbilt Kennedy Center director. "In identical twins, the concordance is between 70 percent and 90 percent, meaning that if one twin has autism, the other twin is at very high risk of having the disorder."

While the search for autism vulnerability genes has intensified in recent years, most studies have identified only linkage peaks, or areas on specific chromosomes where such genes might lie. Chromosome 7 contains several such "hotspots," but few promising susceptibility genes have been identified in the region.

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Annette Schaffer Eskind Chair Endowed

By Jan Rosemergy

Harry R. Jacobson, M.D., Vanderbilt University Medical Center vice chancellor for health affairs, announced the creation of the Annette Schaffer Eskind Chair held by Pat Levitt, Ph.D., the director of the Vanderbilt Kennedy Center.



Annette Eskind

Eskind has played an active role in supporting public and special education throughout Middle Tennessee for many years. The Annette Schaffer Eskind Chair represents her commitment as the founding chair and a longstanding member of the Vanderbilt Kennedy Center Leadership Council and as an advocate for children with special needs.

"There is one true thing to be said of Annette Eskind: she is involved," Jacobson said, "from her days as a social worker, to her experience with the Board of Education, her leadership in the arts community, and her prominence in advocating for strong cultural

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Director's Message

Voices from the Community



Pat Levitt, Ph.D.

More than ever, scientists are realizing that their strongest advocates for advancing the discovery front for causes and cures of disorders that impact our children are members of the community who recognize that biomedical and biobehavioral research are the cornerstones of improving the lives of all individuals.

National research efforts over the past 40+ years have been the envy of the world. They have been responsible for the dramatic changes in health outcomes, including the development of new medications by the pharmaceutical industry, new technologies for earlier and more accurate diagnoses of diseases, and a much better understanding of the value of healthy and active lifestyles.

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Gene Variant from page 1

While conducting research on genes involved in brain development in mice, Levitt's team had found that the MET gene—a gene typically associated with cancer—was involved in the development of certain circuits within the cerebral cortex, a brain region whose development is disrupted in autism.

"This gene also happens to be located in one of those 'hotspots,'" Levitt said.

Additionally, MET has known roles in the development of the cerebellum—another brain region implicated in autism—and in immune system regulation and gastrointestinal repair. Some children with autism exhibit medical problems related to those systems.

Given these associations and MET's chromosomal location, Levitt wondered if this gene could be involved in autism vulnerability.

In the current study, Levitt and colleagues analyzed the MET gene in more than 700 families who had at least one child with autism. They found that children with autism commonly had a specific change in the sequence of the promoter region of the gene, the part of the gene that regulates the amount of MET protein produced.

"This variant is in the part of the gene that controls how much of the gene gets expressed . . . kind of like 'volume control' on a stereo," Levitt said.

People with two copies of this variant were



Pat Levitt and Daniel Campbell, Vanderbilt Kennedy Center researchers, make important breakthroughs in autism-related research.

2.27 times as likely to have autism as the general population. Individuals with only one copy were also at higher risk (1.67 times) than those without the variant.

"This is a relatively common variant, seen in about 47 percent of the population," Levitt said. "So why doesn't everybody have autism?"

That speaks to the environmental and other genetic contributions, Levitt said. "Genes create a vulnerability that then gets coupled with some environmental disturbance—but right now, we don't have any idea what those factors might be."

But these findings do help set the stage for more in-depth investigation of the interaction between genes and environmental factors in animal models. Levitt is now creating animals with this genetic variant to assess environmental

contributions and probe the underlying biology of autism.

"This mutation itself is not going to be diagnostic," he said. But if other genetic variations are identified that carry similar robust associations with autism, screening for a combination of these variants could facilitate the early identification of those at high risk of autism.

And improving early diagnosis might be the best way to help treat or prevent the disorder.

"The more genetic vulnerability genes we identify, the better handle we have on designing experiments to look at gene-environment interactions," Levitt said. "We think this will be the way to understand autism and prevent it."

Daniel Campbell, Ph.D., a research fellow in Levitt's lab, was first author on the paper. Other Vanderbilt authors were James Sutcliffe, Ph.D., associate professor of molecular physiology and biophysics, and Philip Ebert, Ph.D., research fellow in pharmacology.

The research was funded by grants from the National Institutes of Health, Marino Autism Research Institute, Telethon-Italy, Cure Autism Now, National Alliance for Autism Research, Fondation Jerome Lejeune, and National Association for Research on Schizophrenia and Depression.

The research findings have been widely reported, including in *Newsweek* and *TIME*, and on MSNBC and CNN. ●

Chair Endowed from page 1

and human relations. Annette and her late husband, Irwin, have become synonymous with generosity, not only to Vanderbilt but throughout this community."

The establishment of the chair was announced November 15 at the Vanderbilt Kennedy Center Leadership Dinner at Loews Vanderbilt Hotel.

A graduate of the Boston University School of Social Work, Eskind worked for many years as casework supervisor for Jewish Family Service in Nashville. She is a member of the National Association of Social Workers and the Academy of Certified Social Workers.

Throughout her career, Eskind has been involved in dozens of civic activities. She served on the Nashville Board of Education for 9 years and was founder and president of the

Nashville Public Education Foundation. She is the recipient of the Human Relations

Award of the National Conference of Christians and Jews, the Alexis deTocqueville Award of the United Way, and the Academy of Women of

Biomedical Library and the Vanderbilt-Eskind Diabetes Clinic.

Levitt has served as the director of the Vanderbilt Kennedy Center since 2002. The Vanderbilt Kennedy Center is a national Developmental Disabilities Research Center and a University Center for Excellence in Developmental Disabilities Education, Research and Service.

"The highest honor for anyone in academics at a university is to hold a named chair," Levitt said. "It reflects recognition, by your colleagues and the community, that you have made significant contributions in your field of study, and that they expect this to continue. The Annette Schaffer Eskind Chair has even greater meaning for me, personally, because of the unparalleled dedication and generosity that Annette and her family have exhibited to the Vanderbilt Kennedy Center and to the University at large." ●



Steven Gabbe, Gordon Gee, Annette Eskind, Pat Levitt, and Harry Jacobson

Achievement Award of the YWCA.

Eskind and her late husband have been generous supporters of the Medical Center for decades. Two facilities on the Medical Center campus bear the family's name, the Eskind

Mapping How the Brain Hears

By Jan Rosemergy



Conference presenters, left to right, front row: Sasha Key, Patricia Deevy, Beverly Wright; middle row: Mark Wallace, Ron Gillam, Leonard Kaczmarek, Joseph Solus; back row: Shihab Shamma, Christoph Schreiner, Daniel Polley, Troy Hackett, Stephen Camarata, Richard Woodcock

It is not often that researchers who map the brain's auditory system have an opportunity to sit in the same room and talk for two days with researchers who do clinical work using auditory interventions designed to improve listening comprehension in people with disabilities.

What is known about the auditory system—and how much is yet to be known—was the subject of a Vanderbilt Kennedy Center (VKC) two-day conference that brought together Vanderbilt's own remarkable cadre of auditory system and language intervention experts with several of the nation's leading researchers in the field.

The conference "Integrating Auditory Perception, Processing and Comprehension: New Directions for Research," held September 28-29, was organized by Stephen Camarata, Ph.D., professor of hearing and speech sciences and director of the VKC Research Program on Communication and Learning. Also instrumental in planning the conference were Vanderbilt Hearing & Speech Sciences faculty members and VKC researchers Mark Wallace, Ph.D., Daniel Polley, Ph.D., and Troy Hackett, Ph.D.

The conference was an outgrowth of the Vanderbilt Kennedy Center's commitment, laid out in its strategic plan, to build research strength in auditory system development, plasticity, and function, and to become a national and international leader in auditory research.

"Great strides have been made in understanding the visual and somatosensory systems," said Center director Pat Levitt, Ph.D., in opening the conference, "but the auditory system is a modality that has been under-represented."

Each of the dozen researchers who presented is preparing papers that will be published and will contribute to setting a future national research agenda, Camarata indicated.

"Our goal was to span the breadth of the field," Camarata continued, "both basic and applied clinical research—from basic processes, with maps of the

auditory cortex, animal and human imaging, and genetics, through applied clinical interventions. Putting it all together is so very important."

Troy Hackett kicked off the conference with a presentation on the anatomy of the auditory cortex, based on research with nonhuman primates. He emphasized that the long-term goal is to understand the structure and function of human auditory cortex organization. "We are a long way from achieving this," Hackett acknowledged.

Daniel Polley summarized neurophysiological correlates of perceptual learning in the auditory cortex, work that is based on a rat animal model. The long-term goal of his research program is to develop therapies for auditory processing disorders that are based on state-of-the-science understanding of the auditory system and brain plasticity.

The focus shifted to applying understandings of perceptual learning with Beverly Wright's presentation on human discrimination learning on basic auditory tasks. Wright, Ph.D., associate professor of communication sciences and disorders, Northwestern University, emphasized theoretical implications. "Our sensory systems are not rigid, but change with experience, and by studying how people learn we can infer basic processes," Wright said. She emphasized that increased knowledge of auditory learning will advance clinical practice for users of hearing aids and cochlear implants, individuals with learning disabilities, and nonclinical populations, such as musicians.

Vanderbilt's Mark Wallace focused on multisensory processes—the interactions among hearing, vision, and touch. Based on work with the cat animal model, he summarized that multisensory neurons and multisensory integration develop over a protracted period of postnatal life in both cortical and subcortical circuits. In addition, the maturation of multisensory processes appears to be critically dependent on the sensory experiences acquired during early postnatal life. Wallace went on to present behavioral and fMRI evidence for a multisensory framework for dyslexia.

ERP (Event Related Potential) measures of auditory processing and applications were addressed by Sasha Key, Ph.D., Vanderbilt research assistant professor of hearing and speech sciences and director of the VKC Psychophysiology Lab. She emphasized that ERPs are noninvasive, are inexpensive, and provide accurate temporal resolution. This technique also allows comparisons across life span and populations and

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Director's Message from page 1

Last month, the U.S. Congress passed into law the *Combat Autism Act*, developed through grassroots efforts of national and local organizations, including the Autism Society of America, Cure Autism Now, and Autism Speaks. These now are influential organizations, launched by families whose lives had been altered for a lifetime by the increasing prevalence of the diagnosis of autism spectrum disorder. Almost \$1 billion dollars over 10 years will be available with the sole intent of supporting the efforts that are needed to discover the causes and to define new treatments and possible cures for a disorder that affects 1 in 166 children.

In the context of the national budget, I have termed it a drop in the bucket, considering the dramatic financial and emotional impact that autism can have on the lives of individuals, their families, and communities around the country. But this was, in total, a remarkable convergence of advocates, not professional lobbyists, who told the stories that made our policy makers sit up, take notice, and respond with a call to action. The new effort already has attracted the best scientific minds in the country to get involved in autism-related research.

These grassroots research advocacy efforts are now being discussed as a model for developmental disabilities, which for far too long have been both under-researched and way under-funded.

The National Down Syndrome Society has gathered the strong voices of parent advocates spearheading national strategic efforts to bring a spotlight for a far greater effort in research funding. Their message is straightforward: if given the chance, research efforts will bring new biomedical, behavioral, and educational interventions and programs to address a lifetime of needs for individuals with Down syndrome, a disorder that is diagnosed in approximately 1 in 700 live births.

Community voices in the area of mental health advocacy for more research funding are being heard more and more by our national leaders.

Policy makers are beginning to hear the message that supporting the very best in research efforts will help our nation emerge out of a situation in which an individual with a developmental disability or mental health disorder may require millions of dollars in care over a lifetime.

More than ever, communities are establishing the priorities that will impact both today's and tomorrow's generations of individuals with developmental disabilities and their families. In addition, scientists are recognizing that we have a responsibility to work harder than ever to be in harmony with voices that are proving to be more and more effective. ●

Vanderbilt Kennedy Center for Excellence in Developmental Disabilities

Supporting Siblings

By Traci Fleischman



Siblings are affected by their brother or sister with a disability and are likely to affect that person throughout their lives.

For most of us, relationships with our siblings provide our longest lasting family ties. As persons with disabilities are increasingly living longer lives, siblings become future caregivers, taking the parents' role. Currently, 526,000 persons with developmental disabilities are over the age of 60. By the year 2030, that number is expected to rise to 1.5 million.

Sibling Research Consortium

As a result of the growing population of aging persons with disabilities, the Sibling Research Consortium was established. Begun in 2003, the Consortium is a collaborative effort of researchers from several universities interested in siblings of individuals with disabilities and The Arc of the United States, with leadership provided by the Vanderbilt Kennedy Center's Family Research Program. For additional information, see kc.vanderbilt.edu/kennedy/research/siblingconsortium.html.

Adult Sibling Questionnaire

With the help of the Consortium, Vanderbilt Kennedy Center members, Robert Hodapp, Ph.D., professor of special education, and Richard Urbano, Ph.D., research professor of pediatrics, compiled a national, web-based Adult Sibling Questionnaire for siblings to help researchers understand the relationships and needs of adult siblings of persons with disabilities. All respondents were at least 18 years old and have a sibling with a disability.

Hodapp and Urbano examined six major areas: joint activities and involvement, relationship

with brother/sister, brother/sister support needs, transitions, knowledge of skills and needs, and reflections.

Preliminary findings showed differences across gender for siblings of persons with different disabilities and for siblings who are closer versus less close to their brother/sister with a disability. Overall, almost 75% of all survey respondents were female, and females (as opposed to males) reported that they spent more time each month with their brother/sister with a disability.

While females and males reported similarly close relationships, females reported that they had benefited more from this relationship.

Differences also emerged among siblings of persons with Down syndrome, with autism, and with other disabilities. Compared to the other two groups, siblings of brothers/sisters with Down syndrome had more contact and closer relationships. These siblings also showed slightly better health and lower levels of depressive symptoms. Across age of the brothers/sisters with disabilities, all groups showed lessened contacts, but both the Down syndrome and the Autism groups (but not the Other Disabilities group) showed less close sibling relationships when their brothers/sisters with disabilities were aged 30-44 (in Down syndrome) and 45 years and older (in both Down syndrome and Autism groups).

A final finding related to closeness. Siblings who considered their sibling relationships to be closer spent more time with their brother/sister with a disability and reported that they had benefited more from this relationship.

Reflecting on this study, Hodapp noted that "We have found that people want to do this survey and want to tell their story." As the first ever nationwide survey, "We have a database and a richness of responses that, to my knowledge, has not been done anywhere else."

Though they do not have disabilities themselves, siblings of brothers/sisters with disabilities have experiences and needs that must be addressed throughout the lifespan. For the sake of everyone—brothers, sisters, parents, providers, and especially the family member who has special

needs—siblings and their concerns should not be ignored.

SibSaturdays

The Vanderbilt Kennedy Center collaborates with several disability groups in the Nashville area to offer a program called SibSaturdays. This program acknowledges that being the brother or sister of a person with special needs is for some a good thing, for others a not-so-good thing, and for many, somewhere in-between. It reflects a belief that brothers and sisters have much to offer one another—if they are given a chance. SibSaturdays involve a spirited mix of games (designed to be unique, off-beat, and appealing to a wide ability range), new friends, and discussion activities. For information, contact (615) 936-5118. Sibling support groups also are available in other Tennessee areas. Sibshops were developed by Don Meyer, director of the national Sibling Support Project.

Summary

For information on sibling research or programs, contact ucedd@vanderbilt.edu or (1-866) 936-8852.

International Technical Assistance



Hussain Ali Maseeh (center), Psy.D., of United Arab Emirates, with Elisabeth Dykens (left), Terri Urbano, Elise McMillan, and Traci Fleischman. The Vanderbilt Kennedy Center UCEDD and the Vanderbilt MIND Training Program coordinated and hosted Maseeh's visit, Dec. 4-8. Sponsored by the Association of University Centers on Disabilities, the purpose of the visit here and to other UCEDDs was to provide technical assistance on intervention and inclusive early childhood services, including interdisciplinary assessments, evaluation practices, and family-centered practices, with the goal of establishing an early intervention system in Dubai.



Treatment and Research Institute for Autism Spectrum Disorders

Simons Foundation Simplex Family Resource Project

By Craig Boerner

Vanderbilt Kennedy Center's autism research team is joining an elite group of 11 institutions that are combining clinical and genetics expertise for a large-scale study of families with one child with autism in hopes of one day understanding what genes underlie autism.

A 3-year, \$1 million grant from the Simons Foundation has the Vanderbilt Kennedy Center well-positioned to foster an ideal environment for its team to recruit, evaluate, and sample "simplex" families, meaning that only one child is presenting indicators of being on the autism spectrum.

The Simons Foundation Simplex Family Resource Project is a multi-center trial enterprise/cooperative that includes Harvard University, Yale University, Emory University, the University of Michigan, McGill University (Montreal), Columbia University (New York), University of Illinois-Chicago, UCLA, University of Washington (Seattle), and Washington University (St. Louis).

The Vanderbilt Kennedy Center will recruit 75 to 100 families in the first year of the project and 100 families in subsequent years. The group of 11 project sites will collectively recruit 1,000 or more families who have one child with autism, at least one child without autism, and both parents.

"This is an extremely important step in our efforts to advance research in the genetics, molecular biology, and cognitive neuroscience of autism and autism spectrum disorders," said Gerald Fischbach, M.D., scientific director of the Simons Foundation. "I believe that this group will form a vital and intellectually stimulating core resource."

James Sutcliffe, Ph.D., associate professor of molecular physiology and biophysics, is the Center's overall principal investigator for the project. The phenotype principal investigator is Wendy Stone, Ph.D., professor of pediatrics and psychology and TRIAD director. Zachary Warren, Ph.D., clinical assistant professor of psychiatry, is overseeing the clinical operation and will be responsible for coordinating all aspects of the study at the Vanderbilt recruitment site.

"Vanderbilt and groups including the Autism Genetic Resource Exchange have collectively recruited large samples of families with two or more children with autism in the past," Sutcliffe said. "What has been missing is a similarly large and clinically well-characterized,



Families with both parents who have one child with autism and at least one child without autism are invited to take part in this important project to help understand the genetics of autism. Contact Genea Crockett or Sharlet Anderson, Vanderbilt Center for Human Genetics Research (615) 343-5855.

set of 'simplex' families in which there is only one affected member."

Sutcliffe said this project is important because it will develop a large resource consisting of a collection of families and related samples (DNA) and clinical/phenotypic data on the affected child and parents and siblings.

"This data and DNA will be put into a repository so qualified scientists and research groups can apply different strategies to study genes and behavior and relationships between the two," Sutcliffe said. "By making the data and samples widely available, and by letting people try different approaches to discovery, we believe that real progress can be made. By bringing the top autism research institutions and their scientists together, the Simons Foundation and the investigators are able to put the best minds to work to make the discoveries we need to understand what causes autism." ●

TRIAD Workshops and PSEP

Autism Behavior Management Workshop for Parents

During this 3-session workshop, parents learn how autism affects their child's behavior.

TRIAD staff show caregivers how to implement evidence-based strategies for increasing desired behaviors, teaching new skills, and decreasing inappropriate behaviors. The workshop is open to parents and others who are directly involved in the care of the child with autism, 4 to 12 years.

Integrating Different Methodologies Workshop for Teams

This 4-day workshop serves families, school personnel, and therapists. Participants learn how to use teaching methods consistent with the principles of applied behavior analysis to create a comprehensive educational program for students with autism spectrum disorders. Training teams consist of up to four individuals and may include parents, teachers, teaching assistants, consultants, therapists, or other personnel working with the child.

TRIAD Autism 101 Workshop for Preschool Providers

This workshop serves teachers, classroom assistants, speech-language pathologists, occupational therapists, and other providers working in a preschool or daycare setting. TRIAD staff provide basic information about autism. Participants learn about the early features of autism, the characteristics and learning styles of young children with autism, and evidence-based approaches for behavior management and teaching new skills.

PSEP Clinic

Through the Parent Support and Education Program (PSEP), autism specialists provide information, support, and consultation for parents of children under 4-years-old and siblings. PSEP provides three clinic visits. Consultations are individualized to each family.

For information on scheduling, fees, and registration, contact TRIAD@vanderbilt.edu, (615) 936-1705. ●

Leading the Vanguard of Discovery



KAROLY MIRNICS, M.D.
Associate Professor of Psychiatry
Vanderbilt Kennedy Center Member
Joined Vanderbilt Kennedy Center 2006

Research Interests
My long-time interest is gene expression profiles of brain disorders, particularly gene expression patterns in the dorsolateral prefrontal cortex. Neuroimmune and synaptic changes in schizophrenia are of particular interest. Other projects involve Alzheimer's disease, autism, epilepsy, and multiple sclerosis, as well as developing novel DNA microarray technologies. In my lab we routinely use in situ hybridization, immunohistochemistry, laser dissection microscopy, qPCR and DNA microarray analyses. Furthermore, laboratory operations are expanding to perform in vitro and in vivo assays that are mechanistically addressing the transcriptome profile changes, as well as generating transgenic mice relevant to our understanding of the pathophysiological processes in brain disorders.

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Principal Investigator

- Family cognitive-behavioral prevention of depression, National Institute of Mental Health
- Neocortical transcriptome changes in schizophrenia, National Institute of Mental Health
- Cortical circuitry and cognition in schizophrenia, National Institute of Mental Health

National Service and Awards

- Counterdrug Technology Assessment Center of ODNCP (Office of the President of the USA), 2000-2004
- Member of the Foreign Scientist Council of the Hungarian Academy of Sciences, 2003-present
- Faculty of 1000 Medicine, Neurogenetics Section, 2004-present
- Elected to American College of Neuropsychopharmacology 2005
- Elected to European College of Neuropsychopharmacology 2005
- Elected editorial board member, *Biological Psychiatry*, 2005

Selected Publications

- Mirmics, K., Korade, Z., Arion, D., et al. (2005). Presenilin-1-dependent transcriptome changes. *Journal of Neuroscience*, 25, 1571-1578.

- Mirmics, K., Levitt, P., & Lewis, D. A. (2006). Critical appraisal of DNA microarrays in psychiatric genomics. *Biological Psychiatry*, 60, 163-176.

- Arion, D., Unger, T., Lewis, D. A., & Mirmics, K. (in press). Molecular markers distinguishing supragranular and infragranular layers in the human prefrontal cortex. *European Journal of Neuroscience*.

Education

- R.N., 1980, Nursing, University of Novi Sad, Yugoslavia
- M.D., 1986, Medicine, University of Novi Sad, Yugoslavia
- Residency, 1987-1989, Clinical Pharmacology, University of Novi Sad, Yugoslavia
- M.S., 1989, Psychology, University of Novi Sad, Yugoslavia

Attraction to Developmental Disabilities Research

Developmental disorders are devastating at the levels of individual, family, and society. Despite this, developmental brain disorders remain greatly understudied and poorly understood to date. I strongly believe that with joint research and administrative efforts we can make a difference in the lives of individuals with developmental disabilities. Knowledge is the essential power source for developing various therapies in the broadest sense of the word. A comprehensive understanding of developmental brain disorders will allow implementing preventive measures, and will lead to developing early diagnostic/intervention strategies and designing drugs that specifically target the critical features of developmental disorders. I want to be a small piece of the solution. I want to know that I contributed something to a future intervention that will change the lives of individuals with developmental brain disabilities.

Reasons for Kennedy Center Membership

As a scientific community, we came to the realization that the complexity of developmental brain disorders requires that we comprehensively analyze them, and none of the research laboratories can do this alone. Fortunately, we live in an integral world where information can be shared in real-time across disciplines. However, integrating research efforts is only a first step toward developing effective treatments of developmental disorders. The Vanderbilt Kennedy Center, under the leadership of Drs. Levitt and Dykens, recognizes the need for integration among families, clinicians, researchers, administrative agencies, and various social groups. Together, and only together, we can achieve amazing things, and through the existence and vision of the Vanderbilt Kennedy Center we integrate our efforts, ideas, hopes and dreams. ●

Grants Awarded

Psychoeducational impact of minimal sensorineural hearing loss in children

Fred Bess, Ph.D. (Hearing & Speech Sciences)
National Institute on Disability and Rehabilitation Research

Regulation of Shh signaling activity in limb patterning

Chin Chiang, Ph.D. (Cell & Developmental Biology)
National Institute of Child Health and Human Development

Shaping a Shh morphogen gradient

Michael Cooper, M.D. (Neurology)
National Institute of Neurological Disorders and Stroke

Adolescent self-management of diabetes: An intervention

Shelagh Mulvaney, Ph.D. (Hearing & Speech Sciences)
National Institute of Diabetes and Digestive and Kidney Diseases

Parent education program to address sleep disorders in learners with autism spectrum disorder

Beth Malow, Ph.D. (Neurology)
Organization for Autism Research

Family risk for ADHD and infant neuropsychology

Julia Noland, Ph.D. (Psychology & Human Development)
National Institute of Mental Health

Etiology of working memory deficit in schizophrenia

Sohee Park, Ph.D. (Psychology)
National Institute of Mental Health

Perceptual circuits in somatosensory cortices

Anna Roe, Ph.D. (Psychology)
National Institute of Neurological Disorders and Stroke

Fast optical imaging of cortical signals in the behaving primate

Anna Roe, Ph.D. (Psychology)
National Institute on Drug Abuse

Early intervention and treatment of autism spectrum disorder

Wendy Stone, Ph.D. (Pediatrics)
Autism Speaks

Baby Siblings Research Consortium Project on prospective evaluation of head and brain: Growth in infants at high risk of autism

(supplement)
Wendy Stone, Ph.D. (Pediatrics)
Autism Speaks

Development of a PhD clinical sciences program in Vietnam

Bahr Weiss, Ph.D. (Psychology & Human Development)
Fogarty International Center

Individual differences in extrastriatal dopamine release

David Zald, Ph.D. (Psychology)
National Institute on Drug Abuse

Vanderbilt Kennedy Center Nicholas Hobbs

Discovery Grants

Pilot testing of an intervention for attachment-impaired preschool foster children

Linda Ashford, Ph.D. (Pediatrics), Patti van Eys, Ph.D. (Psychology & Human Development), Bahr Weiss, Ph.D. (Psychology & Human Development), Paris Goodyear-Brown, M.S.S.W. (Nursing)

Plasticity in developing postnatal auditory system and its role in auditory perception

Daniel Polley, Ph.D. (Hearing & Speech Sciences)

Sleep characteristics and cognitive functioning in typical children and children with autism

Sasha Key, Ph.D. (Hearing & Speech Sciences), Beth Malow, Ph.D. (Neurology), Wendy Stone, Ph.D. (Pediatrics)

Discovery Grant Donated by Mr. and Mrs. B. James Greenfield and Family in Memory of Mark Greenfield

Predictors of health outcomes in infants with Down syndrome

Robert Hodapp, Ph.D. (Special Education), Richard Urbano, Ph.D. (Pediatrics)

Endowed Chair Honors Susan Gray

By Melanie Moran



Ann Kaiser

Vanderbilt Peabody College of education of human development has created a new endowed chair in honor of one of its most influential faculty, Susan Gray. Ann Kaiser, professor of special education and psychology and director of the Vanderbilt Kennedy Center Research Program on Families, has been named as the holder of the new chair.

"Ann Kaiser excels in her roles as professor, scholar, and colleague and has established a record that deserves the high recognition involved with a chaired appointment," said Dan Reschly, past chair of the Department of Special Education. "Dr. Kaiser is a superb scholar in the area of language interventions for children with developmental delays and disabilities. She is an unusually perceptive scholar and colleague. She is an outstanding University citizen who will carry the chair title with dignity and class."

The establishment of the chair was announced October 20 in a lecture and reception in honor of Susan Gray at the Cohen Building on the Peabody campus. The chair was created with funding from an anonymous donor.

During her tenure at Vanderbilt, Kaiser has served as chair of the Department of Special Education and acting associate dean for Graduate Studies and Research. She is the author of more than 125 articles and chapters on early language and behavior interventions for young children with disabilities and children growing up in poverty. She has been the principle investigator on research and training grants from the U.S. Department of Education, the National

Institute of Mental Health, the U.S. Department of Health and Human Services, and the National Institute for Child Health and Human Development.

Kaiser's primary area of research is early intervention for children with developmental disabilities and children at risk. She has received numerous awards for her research and mentoring, including the Harvie Branscomb Distinguished Professorship at Vanderbilt University.

Kaiser received her Ph.D. in developmental and child psychology from the University of Kansas. She has been a

faculty member at Vanderbilt since 1983.

Susan Walton Gray earned her M.A. in 1939 and her Ph.D. in 1941 from George Peabody College, which merged with Vanderbilt in 1979. She returned to campus in 1945 to join the



Susan Gray

psychology faculty, where she remained until her retirement in 1978.

Gray was motivated by a deep concern for the education of underprivileged children. Highlights of her career include providing the intellectual framework for Project Head Start, collaborating on the development of the John F. Kennedy Center for Research on Education and Human Development, and founding its Demonstration and Research Center for Early Childhood Education, which she directed. She was instrumental in the Kennedy Center having an on-campus, research-oriented school, the Experimental School, which was renamed the Susan Gray School in 1986 in recognition of Gray and her enduring contribution to the welfare of our nation's young children. ●

You and your work have had great influence on the Joseph P. Kennedy Jr. Foundation by causing it to concentrate on early intervention in child development and the role of the family in the intellectual, emotional, and physical growth of children. Your full, productive, and influential career has produced real change in the lives of young children in America.

—Eunice Kennedy Shriver, on the occasion of Dr. Susan Gray's retirement in 1978

Mapping How the Brain Hears

from page 3

correlations with standard assessments.

Key reviewed ERP data on speech and language issues in dyslexia, Williams syndrome, Down syndrome, and treatment effects during speech intervention, reading intervention, and cochlear implants.

Joseph Solus, Ph.D., Vanderbilt research assistant professor of molecular physiology and biophysics, presented potential candidate genes for receptive language disorders.

Auditory processing in the context of broad cognitive abilities was reviewed by Richard Woodcock, Ed.D., Vanderbilt visiting professor of hearing and speech sciences. Woodcock provided evidence that auditory processing ability is, in fact, a key correlate of overall intellectual ability. He speculated that this relationship is not due to hearing ability but to a broad ability to interpret rapidly and effectively and to store sensory information.

Ron Gillam, Ph.D., distinguished professor of communicative disorders and deaf education, Utah State University, addressed results of a randomized clinical trial of Fast ForWord language intervention in school-age children with language impairment. He reported that specific training on tone discrimination, phoneme (speech sound) discrimination, and other auditory training techniques did not result in significant improvements in auditory comprehension.

This result was in agreement with a recurring theme during the conference: Neural plasticity is triggered by task-specific learning, but the plasticity does not appear to generalize readily to other skills.

"The challenge now is to develop interventions that directly treat and improve auditory comprehension," Camarata said.

Other topics and national presenters were: auditory cortical receptive fields—forms and transformations, Christoph Schreiner, M.D., Ph.D., professor of otolaryngology, University of California-San Francisco; attention and plasticity in the auditory cortex, Shihab Shamma, Ph.D., professor of electrical engineering, University of Maryland; genetics of neural ion channels in the auditory cortex, Leonard Kaczmarek, Ph.D., professor of pharmacology and cellular and molecular physiology, Yale University; and sentence processing and typical and atypical development, Patricia Deevy, Ph.D., research associate in speech, language, and hearing sciences, Purdue University.

Camarata characterized the conference as an "amazing array of issues and talents." ●



Susan Gray School *Where Knowledge Meets Nurture*
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Multiculturalism—“Around the World” Everyday

By Courtney Evans



Benjamin Dykens-Hodapp and Christopher Nixon celebrate the culture of Mexico

To have students from a variety of cultures is not enough to make a school multicultural. For a school to be truly multicultural, these cultures must be embraced, and these individuals must be encouraged to contribute their own unique perspectives and experiences to empower the organization as a whole. Susan Gray School (SGS) is filling this tall order and thus may be considered “multicultural” through its mission, its programming, and its commitment to teaching that “differences are beautiful.”

Embracing Cultures

The Susan Gray School currently has children from France, England, Afghanistan, Ivory Coast, China, Thailand, Korea, Uruguay, Mexico, and India, to name a few.

“I think that Nashville is very international,” said SGS teacher, Jane Hussain. “The public school system is dealing with more than 65 languages. Vanderbilt itself is an extremely international place because of the researchers and scientists who come here from all over the world. It would be a shame for our curriculum not to be influenced, for us not to take advantage of all that richness.”

When Seema Deshpande first toured the school with her daughter, Apoorva, they were met with great excitement about their being from India.

“One of the first things they talked about was that the children were learning about India for the ‘Holidays Around the World’ event,” Deshpande remarked. “Not just about the Asian continent, but India as a distinct country. This was very attractive for me. Though I want my children to have the best of what is here, because we are

settled here now, I don’t want them to lose that link to their culture. That, coupled with the fact that I knew being schooled with children with special needs would encourage Apoorva to learn patience, made me realize that I didn’t need to look at other schools.”

Encouraging Contributions

For “Holidays Around the World,” families are invited to share their cultural rituals, foods, and histories. Each classroom chooses a country and decorates in ways that represent that culture. Families provide pictures and items such as musical instruments and textiles from their native lands to transform the

classroom. Parents are encouraged to visit and tell stories and sing songs in their native language.

“We talk with staff about the importance of valuing families,” said Michelle Wyatt, SGS assistant director. “We want families to know that our staff value their perspective and beliefs and want them to share those with their child’s teachers and classroom.”

Hussain’s classroom of 1- to 2-year-olds chose Thailand. They decorated the walls with little white lights and with pictures of Buddhist temples.

“Being so young, the children couldn’t understand Buddhism or temples, but they certainly enjoyed having the ceiling lights off and watching the little white lights twinkle in honor of the King’s birthday,” said Hussain.

Studying other cultures makes its way into the curriculum in many different ways. One of Hussain’s students is fed through a feeding tube. She notes how important it is that the girl’s other senses be stimulated. Smell, so connected with taste, is of great importance. So they cooked Thai soup and let pineapples and mangoes ripen in the classroom.

“We might not have chosen pineapples and mangoes unless we had been studying Thailand,” said Hussain. “These are unique tastes and smells for the children to experience. Pam had the experience of smelling these wonderful and exotic soups and fruits. Now, hopefully, when she is one day able to eat with her mouth, she will be interested in tasting those fruits that smelled so good.”

Empowering the Whole

Lila King’s father, Richard, believes that it is extremely important to expose children to differences at an early age.

“One of the reasons we wanted Lila to attend the School is that we wanted her to grow up feeling that being with people who weren’t typically developing was important for overriding certain cultural social prejudices,” King said. “For me, that’s all a part of building a tolerant attitude toward people, which includes becoming aware of and receptive to cultural differences.”

Schools play an extremely important role in shaping how its students define what is “normative.” As a community, Susan Gray School staff are teaching sensitivity and inclusion and allowing students to experience the reality that we are living in a global village.



Coco Wang and Inca Sole Picon learn about Hanukkah.

“We are laying the foundation for the children’s future view of diverse cultures, values, and beliefs,” Wyatt said. “We have a huge responsibility.”

“Children learn what they see,” stated Deshpande. “They must learn about other cultures at an early age so that they don’t find it out of the ordinary when they come into contact with cultures that are different from their own. This can enable them to think, ‘Oh! This is really neat’ rather than ‘Oh! There is something wrong with you because you are different.’ What’s that saying? You point one finger and four fingers point back at you? I don’t want my kids to grow up pointing fingers.” ●

Connecting Hispanic Families with Services

By Jan Rosemergy



Claudia Avila-Lopez and Carolina Meyerson, Vanderbilt Kennedy Center Hispanic Disability Outreach, Luisa Hough, Mental Health Association of Middle Tennessee, and Luz Belleza, Metro Social Services

Navigating service systems tends to be complicated, so imagine how tough it can be for Spanish-speaking families who have a child or adult family member with a disability. Connecting Hispanic families with disability services—as well as with health, education, and social services—is a priority of Tennessee Disability Pathfinder, a project of the Vanderbilt Kennedy University Center for Excellence on Developmental Disabilities supported by the Tennessee Council on Developmental Disabilities.

Pathfinder Hispanic Services

Leadership for identifying Hispanic disability services statewide is provided by Pathfinder's Claudia Avila-Lopez, Hispanic outreach coordinator. Free information and referral is provided through Pathfinder's Español phones, (615) 400-4422 Nashville, and (615) 322-7830 statewide.

"Pathfinder's Hispanic outreach is distinct from other information and referral services like 211 because we specialize in disability resources and work directly with families to understand the variety of services needed," explained Avila-Lopez. "Then we support the family throughout the process and follow up to see that services are obtained."

A web-linked directory of Español national, state, and community resources is found on Pathfinder's website, www.familypathfinder.org, which also includes a database of over 1,200 Tennessee agencies searchable by county and service category.

Carolina Meyerson, Pathfinder Hispanic outreach specialist, works one-to-one with Hispanic families at the Woodbine Community Center. She leads Pathfinder's newest Hispanic service, a monthly evening support group for parents of children with disabilities, held at the Vanderbilt Kennedy Family Outreach Center.

"We're especially pleased that we have dads taking part, as well," Meyerson said.

"Collaboration is essential for helping families

get the services they need," emphasized Carole Moore-Slater, Pathfinder director.

Middle Tennessee Conference

Collaboration was the hallmark of Pathfinder's second annual Hispanic Disability Conference held Dec. 6 at the Knowles Senior Center.

The first panel "Disability Services in the Hispanic Community" highlighted programs of Metro Social Services, the Mental Health Association of Middle Tennessee, and Pathfinder.

In a unique collaboration, these agencies have developed a web-based directory of Nashville community organizations. Criteria for inclusion include the agency having a staff member fluent in Spanish, and disability or social service programs that specifically serve Spanish-speaking families. See www.caminoseguro.org. The database will be expanded to become statewide.

"We're stronger if we collaborate," stressed Luz Belleza of Metro Social Services. She also emphasized the importance of educating families. "We can coordinate but in the end they need to take the necessary steps."

The Mental Health Association's Luisa Hough coordinates Encuentro Latino, a monthly meeting of agency staff who share information about services and problem-solve together. Interested service providers are welcome.

"We work together so well we know one another by first names," Hough said. "We're friends in action."

The second panel addressed Health Care Services for Individuals with Disabilities, with presentations by coordinators of Hispanic services at Bridges to Care, TennCare, and Children's Special Services.

The final panel was an overview of services across the life-span, highlighting prenatal services provided by the Vanderbilt Center for Health Services' Maternal Infant Health Outreach Worker program at the Woodbine Community Center, Outlook Nashville's preschool home visiting and center-based programs, and Metro Public School's early childhood and school-age services.

West Tennessee Conference

An Hispanic disability conference will be held April 5 in Memphis in conjunction with the Boling Center UCEDD.

For information contact claudia.avila@vanderbilt.edu, (615) 322-8529 ext. 11.

Disability Services Directories 2007-2008

Tennessee Disability Pathfinder is a free, statewide, disability information and referral service in English and Spanish, covering all disabilities and ages. Services are provided by phone, internet at www.familypathfinder.org, and printed directories.

2007-2008 Disability Services and Supports Statewide Directory

To be published in 2007 in 3 volumes: West, Middle, and East Tennessee \$25 per directory

To order, contact
ashley.coulter@vanderbilt.edu
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Directories will be available for West, Middle, and East Tennessee.

Spotlight

A Multi-Faceted Approach

ALYNE MASSEY

By Traci Fleischman

Alyne Massey has long been dedicated to Vanderbilt University with an ongoing interest in children and youth services, medical research, and education. Due to her commitment, she became part of the Vanderbilt Kennedy Center Leadership Council in 2000. Annette Eskind, founding Chair of the Leadership Council, invited Massey to join the Council and the Nicholas Hobbs Society. Massey became intrigued with the Center's mission and wanted to help raise money to support its activities.

"The Vanderbilt Kennedy Center is so important to the community. If word about the great work at the Center gets out, families know



COURTESY OF MASSEY FAMILY

where to go for help. The treatments and research are able to reach those who will benefit," explained Massey. "The Center's faculty and staff are helpful, knowledgeable, and available."

Massey is a long-time resident of Tennessee. She moved from New Haven, Connecticut, to Columbia, Tennessee, after her father decided to open a private law practice there after teaching at Yale Law School for many years. Massey graduated from Ward-Belmont Preparatory School and Vanderbilt University.

Massey serves on several boards throughout Nashville, Washington D.C., and Palm Beach, Florida, as well as on the advisory board of the Vanderbilt Board of Trust. She also is a lifetime trustee of Cheekwood Botanical Garden and Museum of Art.

"Alyne is a good friend and a great community advocate for important issues in Tennessee," Eskind said. "When she commits to something, she not only commits personally, but she commits financially. She is a past co-chair for the Vanderbilt Kennedy Center's annual Leadership Dinner and continues her efforts with the Center today."

Tribute to Mollie Gavigan

Mollie Burd Gavigan, a member of the Vanderbilt Kennedy Leadership Council, passed away on November 27. She was a long-time friend and supporter of the Vanderbilt Kennedy



Center, along with her husband Dr. William Gavigan, III. She was a passionate advocate for children and adults with intellectual or other disabilities. She took special pride in her contributions to the establishment of the Hand-in Hand Program for students with intellectual disabilities at Pope John Paul II High School in Hendersonville, where her daughter Jeanne is a junior. In addition to Jeanne, she is survived by three sons, William, Joey, and Michael and their families. Charlotte Gavigan, her daughter-in-law, is a new member of the Leadership Council. "Mollie was involved in many programs that take research-based best practices into the community," said Elise McMillan, associate director of the Vanderbilt Kennedy Center UCEDD. "She knew personally the overwhelming needs of individuals with disabilities and their families, and she worked tirelessly to make remarkable changes."

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Continued on page 11

From Dinner to Discovery

By Jan Rosemergy

From Dinner to Discovery” was the theme of the Vanderbilt Kennedy Center Leadership Dinner held November 15 at Loews Vanderbilt Hotel. Thanks to a record number of 325 attendees and to table sponsorships and Hobbs Donor Society memberships, the Dinner raised \$129,000, the largest amount to date to fund Discovery Grants for innovative research.

The annual event was planned by Dinner Chairs Deborah Lovett and Dana Atkins; Cathy Stewart Brown, Leadership Council Chair; and Barbara Gregg Phillips, Past Chair, and other Leadership Council members.

“The evening was a gala celebration demonstrating community support for scientific discoveries to create a better future for individuals with disabilities and their families,” said Brown. “We all want to thank our extraordinary Dinner Committee chairs, Deborah Lovett and Dana Atkins, who made this dinner a huge success.”

“Everyone who attended is still talking about the wonderful video describing the unique relationship a sibling has with a brother or sister with a disability,” Brown continued. Produced by Kent Communications, the video featured interviews of sibling pairs across a range of disabilities—autism, Down syndrome, Williams syndrome—and across the life span. It also described research on sibling relationships led by Vanderbilt Kennedy Center researchers.

“When I came to Vanderbilt, I had an image in my head of what it meant to do research on developmental disorders,” said Vanderbilt Kennedy Center director Pat Levitt in his remarks. “I have come to learn there is so much more. The Vanderbilt Kennedy Center is so special because we have

embraced the impact that we can have on individuals with developmental disabilities, and their families.”

The need is dramatic, Levitt emphasized, “One in six—the number of individuals with a developmental disability. One in three—the number of families in the U.S. impacted by someone with a developmental disability.”

Levitt briefly described research initiatives and announced recipients of 2006-07 Discovery Grants (see “Grants Awarded” p. 6).

Levitt concluded, “I thank all of you for being part of our extended family that has enabled us to reach beyond the ordinary—to strive to be extraordinary.”

The evening’s celebration culminated with the announcement by Harry Jacobson, M.D., Vanderbilt vice chancellor for health affairs, of the establishment of the Annette Schaffer Eskind Chair to be held by the director of the Vanderbilt Kennedy Center for Research on Human Development, Pat Levitt, Ph.D.

“There is one true thing to be said of Annette Eskind,” Jacobson said. “She is involved. She and her late husband Irwin have become synonymous with generosity, to Vanderbilt but also throughout the community. Annette, we are honored that you would lend your name to this important chair.”

Jacobson praised Levitt for his achievements “as a researcher, mentor, and leader.”

Members of the Nicholas Hobbs Society received the 2006 commemorative plate featuring “Flower Fairies” by Anne Ambrose. This is the fifth in a series, initiated by Mrs. Harla Levitt, which features art by a child or adult with a developmental disability selected from the Center’s annual art exhibits. ●



Cathy Stewart Brown, Annette Eskind, and Barbara Gregg Phillips



Leigh Ann and Orrin Ingram, Deborah and Michael Lovett, and Dana Atkins



In his remarks, Director Pat Levitt emphasized that one in six individuals has a developmental disability and that one in three families in the U.S. is affected.

Kennedy Center Donors from page 10

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Every effort has been made to ensure the accuracy of this report, which reflects Honor and Memorial gifts September 1-December 31, 2006, and gifts made earlier but not in time to be acknowledged in the Fall 2006 *Discovery*. If an error has been made, we offer our sincerest apology and ask that you bring it to our attention by contacting (615) 343-5322.

The Nicholas Hobbs Society is made up of donors who give \$1,000 or more annually to the Center or one of its programs. Through their gifts, Hobbs Society members advance groundbreaking research in human development.

For information about joining the Nicholas Hobbs Society or making Honor or Memorial gifts, contact (615) 343-5322. ●

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Friday, May 18
8 a.m. Shotgun Start

Waddell & Reed Financial Services Charity Golf Tournament

Vanderbilt Legends Club's Roper's
Knob Course

Benefiting the Vanderbilt Kennedy Center

A great morning of golf, door prizes, cold
beverages, and lunch

Entry fee; contact
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Discovery is a quarterly publication of the Vanderbilt Kennedy Center designed to educate our friends and the community, from Nashville to the nation. The Center is committed to improving the quality of life of persons with disabilities of thinking, learning, perception, communication, mood and emotion caused by disruption of typical development. The Center is a university-wide research, training, diagnosis, and treatment institute. It is a national Mental Retardation and Developmental Disabilities Research Center funded by the National Institute of Child Health and Human Development, and a University Center for Excellence in Developmental Disabilities (UCEDD) funded by the Administration on Developmental Disabilities.

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2007 Calendar of Events

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February

FEBRUARY 12

Lectures on Development and Developmental Disabilities

Accounting for the Uneven Linguistic Profiles Seen in Children With Specific Language Impairment

Larry Leonard, Ph.D., Rachel E. Stark
Distinguished Professor of Speech-Language Pathology, Purdue University
Monday 4:10 p.m., Room 241
Vanderbilt Kennedy Center/MRL Building

FEBRUARY 16

Statistics & Methodology Core Seminar Series Choosing the Best Items: A Practical Guide to Psychometrics

Warren Lambert, Ph.D., Assistant Director of Statistics & Methodology Core
Lunch provided
Pre-registration required
kc.vanderbilt.edu/pre-register
Friday 12 noon, Room 241
Vanderbilt Kennedy Center/MRL Building

FEBRUARY 24

SibSaturday

Fun, games, activities, and conversation for children, ages 5-7 and 8-13 years, who have a sibling with a disability
\$10/child or \$20/family
Advance registration required
Contact roxanne.carreon@vanderbilt.edu, (615) 936-5118
Saturday 10 a.m.-2 p.m. (lunch provided), Room 241
Vanderbilt Kennedy Center/MRL Building

March

MARCH 14

Developmental Disabilities Grand Rounds The Quest for a Cognitive Neuroscience of Schizophrenia: The Case of Working Memory and Prefrontal Cortex

Sohee Park, Ph.D., Associate Professor of Psychology and Vanderbilt Kennedy Center Investigator



Young children with Specific Language Impairment is the topic of a February 12 lecture.

Co-Sponsor Center for Child Development, Pediatrics
Light breakfast provided
Wednesday 8 a.m., Room 241
Vanderbilt Kennedy Center/MRL Building

MARCH 22-23

Lectures on Development and Developmental Disabilities and Brainstorm 2007

Why Zebras Don't Get Ulcers: Stress, Disease and Coping (Thursday)

Stress and Where Stress-Related Diseases Come From (Friday)

Robert Sapolsky, Ph.D., Professor of Biological Sciences, Professor of Neurology & Neurological Sciences, Professor of Neurosurgery, Stanford University
Thursday 4 p.m., Room 103 Wilson Hall
Friday 9 a.m., Room 241
Kennedy Center/MRL Building

April

APRIL 4

Developmental Disabilities Grand Rounds Prader-Willi and Williams Syndromes: New Insights Into Behavioral Strengths and Problems

Elisabeth Dykens, Ph.D., Professor of Psychology, Vanderbilt Kennedy Center Associate Director and UCEDD Director
Co-Sponsor Center for Child Development, Pediatrics
Light breakfast provided
Wednesday 8 a.m., Room 241
Vanderbilt Kennedy Center/MRL Building

APRIL 16

Lectures on Development and Developmental Disabilities

Triple Vulnerability in the Development of Anxiety and its Disorders

David Barlow, Ph.D., Professor of Psychology and Psychiatry, Director of Center for Anxiety and Related Disorders, Boston University
Monday 4 p.m., Room 241
Vanderbilt Kennedy Center/MRL Building

APRIL 18

Neuroscience Graduate Seminar Series Immature Brain Is Not a Miniature Adult Brain: Energy and Ions During Development

Maria Erecinska, Ph.D., Professor, Department of Anatomy, University of Bristol
Wednesday 4:10 p.m.
Room 1220 MRB III Lecture Hall

APRIL 22-28

Nashville Week of the Young Child

Vanderbilt and community sponsors
Events to be announced
See kc.vanderbilt.edu/kennedy/woyc
Contact Nashville Area Association for the Education of Young Children (615) 383-6292

May

MAY 7

Special Lecture The Autistic Brain: Observations and Controversies

Margaret Bauman, Ph.D., Associate Professor of Neurology, Harvard University
Monday 4:10 p.m., Room 241
Vanderbilt Kennedy Center/MRL Building





Arts & Disabilities

Vanderbilt Kennedy Center Exhibits

Monday-Friday 7:30 a.m.-5:30 p.m., Lobby
Vanderbilt Kennedy Center/MRL Building

February 12-May 30

Artism: Project Onward

An exhibition of work by visual artists with autism from the studio of Project Onward, a program of the Chicago Department of Cultural Affairs

Thursday, May 24

Reception for Artists 5 p.m.

Autism and the Arts Workshop 6 p.m.

(Autism Society of Middle Tennessee)

Room 241

Vanderbilt Kennedy Center/MRL Building



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"Artism" exhibit features works by Chicago visual artists with autism.

Take Part in Research

StudyFinder

Children and adults, with and without disabilities, are invited to take part in research. See kc.vanderbilt.edu/studyfinder
Contact Lynnette Henderson (615) 936-0448; tollfree (1-866) 936-VUKC [8852]

ASMT Events

Autism Society of Middle Tennessee

www.autismmidtenn.org

ASMT event information (615) 385-2077

Registration is requested for all events

ASMT members free; nonmembers \$5/family

FEBRUARY 22

How Cultural Differences Influence the Autism Epidemic

Roy Richard Grinker, Ph.D., Professor of Anthropology and the Human Sciences, George Washington University

Thursday 6:30 p.m., Room 241

Vanderbilt Kennedy Center/MRL Building

MARCH 29

Understanding Social/Sexual Behavior and Vulnerability in Autism Spectrum Disorders

Dena Gassner, M.S.W., The Center for Understanding

Thursday 6:30 p.m., Room 241

Vanderbilt Kennedy Center/MRL Building

DSAMT Events

Down Syndrome Association of Middle TN

www.dsamt.org

DSAMT event information (615) 386-9002

MAY 4 & 5

Third Statewide Conference

Tennessee Disability Conference

MAY 31-JUNE 2

Fifth Annual Tennessee Disability MegaConference

Highlights include world-class speakers, informative workshops, agency fair, fun evening events, awards banquet

Nashville Airport Marriott: \$79/night plus tax; reserve by May 9 to receive this rate; use keyword: TN Disability Mega Conference; contact (615) 889-9300 or (1-800) 228-9290

For information, see tndisabilitymegaconference.org
Phone, web, print resources

Disability Calendar

www.familypathfinder.org

English (615) 322-8529,

(1-800) 640-INFO [4636]

Español (615) 322-8529 ext. 11

Disability Pathfinder

Internet calendar of training and other disability-related events

kc.vanderbilt.edu/tnpathfinder/calendar.html

2007-2008 Disability Services and Supports

Statewide Directory

To be published in 2007 in 3 volumes:

West, Middle, and East Tennessee

\$25 per directory

To order, contact

ashley.coulter@vanderbilt.edu

(615) 322-8529 ext. 15

Access Nashville

A volunteer organization dedicated to identifying "accessibility-friendly" locations in Nashville in collaboration with volunteers in the disability and business communities. Accessibility surveys of restaurants, entertainment attractions, and hotels available on Nashville Convention and Visitors Bureau website. Volunteer and receive free training. Consultation and information provided for organizations interested in replicating this project in other towns and cities. A project of the Vanderbilt Kennedy Center for Excellence in Developmental Disabilities and the Tennessee Council on Developmental Disabilities

Contact tnpathfinder@vanderbilt.edu,

(615) 322-8529 ext. 12

kc.vanderbilt.edu/accessnashville

Camps

The Vanderbilt Kennedy Center for Excellence in Developmental Disabilities, with national and community organizations, sponsor inclusive summer camps:

Explorers Unlimited Academic Camp

(Down syndrome)

Transitions (intellectual disabilities)

TRIAD Social Skills Camp (autism)

Music Camp (Williams syndrome)

Contact gretchen.herbert@vanderbilt.edu,

(615) 322-8147

SibSaturdays

A Vanderbilt Kennedy Center for Excellence in Developmental Disabilities program for children who have brothers or sisters with disabilities
Ages 5-7 and 8-13 years

Fun, games, activities, and conversation

\$10/child or \$20/family

Financial assistance available

Advance registration required

Contact roxanne.carreon@vanderbilt.edu, (615)

936-5118

Saturdays, dates to be announced, Room 241

Vanderbilt Kennedy Center/MRL Building