



Inside the Institute

CIDD Neuroimaging Research Studies

The CIDD Intellectual and Developmental Disabilities Research Center (IDDRC) is the primary research arm of the Carolina Institute. One of 15 National Institutes of Child Health and Human Development funded IDDRC's around the U.S., this center provides core research support to over 60 externally-funded CIDD investigators in both basic science and clinical research. The center maintains four research core facilities, throughout the UNC campus, to support funded investigators conducting research relevant to furthering our understanding of the pathogenesis and treatment of neurodevelopmental disorders. One of these facilities is the Developmental Neuroimaging Core.



Martin Styner, PhD. (foreground) with Aditya Gupta, PhD. in the Neuro Image Analysis and Research Lab

The Developmental Neuroimaging Core provides centralized support and services to the pre-clinical and clinical projects utilizing image acquisition and image processing technology for quantitative measurements of structural MRI (SMRI), functional MR (fMRI), diffusion tensor imaging (DTI), ultrasound in human neuroimaging; and, multiphoton/confocal microscopy data of mouse or cellular models relevant to neurodevelopmental disorders. The core provides access to and training on well-established and validated neuroimaging methods and develops new methods and modifications of existing state-of-the-art image acquisition and analysis methods.

The core operates at two primary locations. The MRI component of the core is lo-

Continued on page 5

CIDD Autism Clinics

The CIDD provides an array of clinical services to children, adolescents and adults who have or are at risk for developmental disabilities. Our interdisciplinary faculty offer numerous clinical services designed to provide diagnostic clarification, interpretation and information, intervention and treatment planning, and support and guidance for families. With the increased prevalence and awareness of autism spectrum disorders, the CIDD has developed several autism-specific clinics to help meet the needs of families across the state of North Carolina. Following is a description of the current CIDD Autism Clinics.



Continued on page 7

Newsletter Highlights

CIDD Imaging Studies	1, 5, 6
CIDD Autism Clinics	1, 7, 8
New CIDD Faculty	2, 4
NC Council on Developmental Disabilities Partnership	2, 8
From the Desk of the Director	3, 4
Announcements, Publications, and Your Support	9

At the Carolina Institute for Developmental Disabilities, we support individuals with disabilities and their families by:

- Identifying and applying innovative solutions to complex issues using an interdisciplinary approach
- Studying best practices and translating research into practical applications
- Promoting self-advocacy, leadership, and inclusion by and for individuals with disabilities
- Training world-class leaders and experts in the field of developmental disabilities

The CIDD Welcomes Three New Faculty Members

Lauren Turner Brown, Ph.D., Psychology

Lauren Turner Brown, Ph.D., completed her doctoral training in clinical psychology at Vanderbilt University, a clinical internship and post-doctoral fellowship at Division TEACCH at UNC, and NIH funded post-doctoral training in neurodevelopmental disorders research at UNC with mentorship from Drs. Jim Bodfish and Grace Baranek. The focus of both her research and clinical work is on gaining a better understanding of the autism phenotype to promote accurate early detection and to develop and test more targeted interventions for individuals with autism. She has served as lead author or co-author on numerous manuscripts on the topic of early identification, diagnostic stability, autism screening, and intervention, and has been an active participant in the Autism Speaks Toddler Treatment Network. Dr. Brown has also developed, in collaboration with Dr. David Penn, a group intervention for adolescents and adults with high functioning autism called Social Cognition and Interaction Training for Autism (SCIT-A). Through the LEND grant she is currently conducting trainings with the North Carolina Children's Developmental Services Agency across the state on the topic of early identification of autism and co-authored a handbook on autism for early intervention personnel. In addition, Dr. Brown works on several funded projects related to development of the First Year Inventory and interventions for young toddlers who show early risk for autism and other developmental disabilities. She remains active clinically through the Preschool Autism, Assessment, Consultation, and Treatment Clinic and Autism Screening Clinic at CIDD.



Jean Mankowski, Ph.D., Psychology

Jean Mankowski, Ph.D., is a psychologist and Clinical Assistant Professor at the CIDD. She completed her doctoral training in school psychology at UNC and her post-doctoral fellowship in Neurodevelopmental Disabilities at the Center for Development and Learning, UNC School of Medicine. Dr. Mankowski is the lead psychologist for the CIDD interdisciplinary Hearing and Development Team, specializing in children who are deaf and hard of hearing. She provides psychological services for several community agencies, including neuropsychological consultation and evaluations for the child and adolescent units at Central Regional Hospital in Butner, NC and neuropsychological assessment for The Whitaker Psychiatric Residential



Continued on page 4

NC Council on Developmental Disabilities Partnership

As fellow members of the ADD (Administration on Developmental Disabilities) network in North Carolina, the CIDD works cooperatively with the North Carolina Council on Developmental Disabilities (NCCDD). Currently, the CIDD has gathered information as the basis for long-range planning for services for people with developmental disabilities in North Carolina. The CIDD collaborated with the Council on activities toward developing Five Year Plan recommendations. The Five Year Plan helps the Council to identify critical needs and issues related to services and supports for people with developmental disabilities and their families. NCCDD uses its Plan to set forth priorities for funding and research to key policy areas, including health care, housing, transportation, employment, and quality assurance. Each Plan covers a five-year time period. The current Plan will guide funding priorities affecting the 2011-2016 fiscal years. Proposed activities also provide useful information for developing the CIDD Five Year Plan. Results will be coordinated as comprehensive plans for the state and continued identification of potential collaboration areas with the Council.



The CIDD team working on this project includes Deborah Zuver, M.A., LMFT, Jim Bodfish, Ph.D., Greg Olley, Ph.D., and Kristine Kelsey, Ph.D. To date, the CIDD team has provided input for survey and data collection, culling pertinent information and data from key documents from agencies and organizations that address the needs of individuals with developmental disabilities across the lifespan and their families. These key documents include needs assessments, policy statements, and planning goals.

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From the Desk of the Director

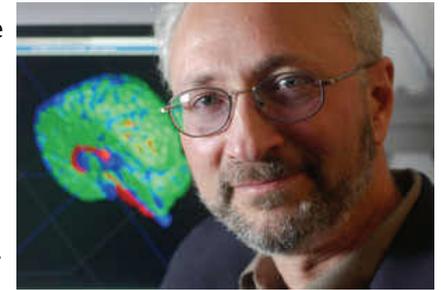
Comprehensive Centers for Developmental Disabilities:

Taking a Page from the Cancer Centers Playbook

In the fall of 2008, when we held the first public celebration to mark the formation of the Carolina Institute for Developmental Disabilities (CIDD), we set a course towards the development of a comprehensive program in developmental disabilities. Merging the CDL (including clinical services, statewide technical assistance, advocacy, and multidisciplinary clinical training) with the NDRC (supporting basic to applied research and research training) established the CIDD as one of the leading comprehensive programs for developmental disabilities in the country. The CIDD is one of only a handful of comprehensive programs around the U.S. that have funding from all three major federal programs in developmental disabilities – a UCEDD (or University Center of Excellence in Developmental Disabilities), LEND (or Leadership and Education in Neurodevelopmental Disorders Program) and an IDDRC (or Intellectual and Developmental Disabilities Research Center). As a comprehensive program for services, training, and research relevant to developmental disabilities, the CIDD plays a unique role in the University and the state of North Carolina and improves the quality of life of individuals with such conditions and their families throughout the state and country.

Despite major recent advances in (1) understanding of the biological basis of neurodevelopmental disorders, (2) developing rational approaches to treatment and intervention, and (3) raising the standards of care and public awareness, the wide-ranging efforts in the field remain poorly integrated. Care is fragmented. Research, while now successful in promoting interdisciplinary collaboration, lacks the overall organization and infrastructure to promote and support fully integrated translational research pipelines from cells to services. Clinical services typically have little linkage to research and research is often conducted without an eye towards 'real world' clinical implications. The complex nature of developmental disorders, together with the broad impact on families, communities, health care systems and educational programs, demands a level of infrastructure and integration of our collective efforts that is far greater than currently exists. The low hanging fruit has been picked and ground has been gained, but clearly that is not enough.

Recently I have had the opportunity to reflect on how other health care disciplines have dealt with these issues and moved their respective fields forward.



By Joe Piven, M.D.

Faced with similar circumstances and frustrations in 1971 Congress passed the National Cancer Act, establishing the first 15 Comprehensive Cancer Centers (CCC) in the United States. Today there are 65 National Cancer Institute (NCI) designated cancer centers in 34 states. Recognizing the critical need to integrate the laboratory bench with the bedside, the aim of this legislation was to expand the primary emphasis of NCI funding from basic cancer-related research to a broader program encompassing all aspects of the cancer continuum. This effort helped to form constructive interactions along a continuum of care spanning across basic and applied research, multidisciplinary clinical research, community outreach and prevention, education, training workforce development, and policy development. In this model, wide-ranging research is closely integrated with all aspects of clinical care. National databases now link outcomes from clinical care across centers, and an infrastructure has been created to allow researchers to access these results. This infrastructure has been especially important in the area of childhood cancer, where over 90% of affected children are enrolled in the cancer centers' clinical trials research network. Childhood cancer treatment stands as one of the premier success stories in modern medicine. Once a uniformly fatal diagnosis, childhood cancer is now curable in more than 75% of patients. As one prominent clinician-researcher in the field noted, these successes have paralleled the formation of cooperative clinical trials networks (Reaman, J of Ped Onc Nursing, 2004).

Cancer centers also serve as regional models for moving forward findings from research, as well as informing patients and the general public about relevant aspects of care. In an interview, Dr. Linda Weiss, Chief of NCI's Cancer Centers Branch noted that "These centers have an environment that fosters basic discovery and its translation into cancer treatment, prevention and control activities; and, the ability to network both within their community and with each other, so there's

Continued on page 4

Letter from the Director continued

extraordinary research power (NCI Cancer Bulletin, 2005).” These varied components of the Comprehensive Cancer Centers are all required components of NCI grant applications. As noted by the former Director of St. Jude’s Children’s Center and later, Physician-in-Chief of the Memorial Sloan-Kettering Cancer Center, “Together these centers have become a national treasure from which come most of the advances in cancer research (Simone, J., Journal of Clinical Oncology, 2002)”.

I believe that the time is right to import such models of integrated services and research into the world of developmental disabilities. Rather than promote fragmented services and research for specific conditions, we need programs of research and integrated services that juxtapose all neurodevelopmental disorders. Clearly this will be the most successful research strategy for dissecting out distinct clinical features and underlying pathogenetic mechanisms, and clearly it will be the most cost effective strategy for structuring systems of care. With the discovery of the specific etiologies for a number of neurodevelopmental disorders such as Fragile X Syndrome, we are now poised to develop translational research pipelines that go from clinical observation through mouse and human clinical studies to understanding the impact of such findings on real world settings in the community. Only through development of infrastructure such as that required for the network of Comprehensive Cancer Centers can we begin to make greater strides in addressing the needs of individuals with developmental disabilities and their families.

In the coming months, we will begin to engage in a strategic planning process within the CIDD. Lessons learned from the cancer field will inform our discussions. We will also explore ways to advocate nationally for federal, state, and private organizations to better integrate their efforts and infrastructure in order to make rapid advances in the field of developmental disabilities. In a time of shrinking resources we are unlikely to see major increases in funding. However these very same economic constraints are likely to move us towards development of more comprehensive, integrative efforts that will almost certainly prove to be ultimately more cost effective than our current efforts.

CIDD New Faculty continued

Treatment Facility. She also provides ongoing Mental Health and Behavioral Consultation to the CHCCS Head Start/Pre-K Program. Dr. Mankowski is involved in a number of different research projects, including an epidemiological study of children with and without autism. Her professional and research interests include the study of autism, fragile X syndrome, psychiatric symptoms or illness within individuals with neurodevelopmental disorders, and neuropsychological assessment of children with psychiatric illness. Her teaching responsibilities include clinical training of psychology graduate students, interns, and fellows.

Margaret Lane DeRamus, M.S., CCC-SLP, Speech and Language Pathology

Margaret Lane DeRamus, M.S., CCC-SLP, completed her master of science in speech and hearing sciences at UNC and her clinical fellowship in the Leadership Education in Neurodevelopmental and Related Disabilities (LEND) program. At the CIDD, Ms. DeRamus participates in interdisciplinary team clinical evaluations of children with developmental disabilities, assessing language, speech, motor-speech, augmentative and alternative communication, feeding, and autism. She provides consultation, evaluation, and treatment at residential facilities for adults with autism and adolescents with behavioral and emotional disabilities. Ms. DeRamus conducts developmental, adaptive, and autism diagnostic (ADOS & ADI-R) evaluations as part of epidemiology of autism research projects (CADDRE/SEED and JASP). In addition, she assists with planning, coordination, and execution of trainings of interdisciplinary Assistive Technology and Augmentative and Alternative Communication (AT/AAC) assessment teams throughout North Carolina public school systems as part of contract with the Department of Public Instruction.



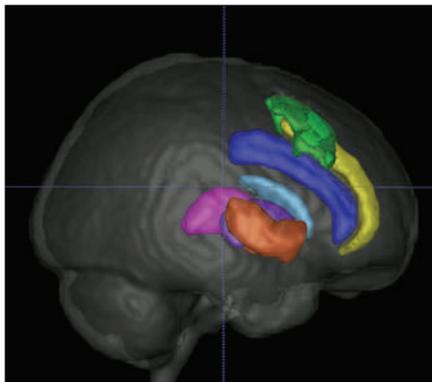
CIDD Neuroimaging Research Studies continued

cated within the Developmental Neuroimaging Laboratory and is directed by Drs. Aysenil Belger and Martin Styner. Drs. Bill Snider and Eva Anton direct the Confocal and Multiphoton Imaging Facility and that component of the core is housed in the UNC Neuroscience Center.

Advances in human and animal neuroimaging techniques provide the unique ability to gain insight into the neural circuitry and mechanisms underlying cognition, behavior and neural development in typically developing individuals and those with neurodevelopmental disorders.

Brain imaging has become an important and indispensable tool for the non-invasive analysis of human brain function and structure. In particular, MRI is especially well suited for the study of children because it is non-invasive, does not involve radiation and therefore can be repeated within short periods of time, thus enabling longitudinal investigations.

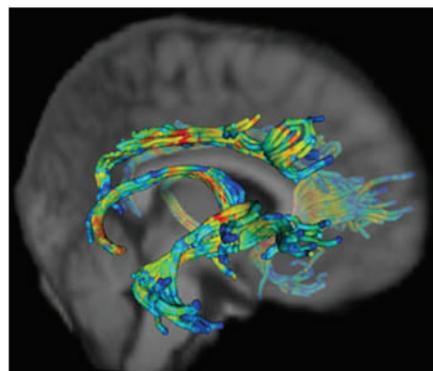
One imaging research investigation currently underway at the CIDD is a **Longitudinal MRI Study of Infants at Risk for Autism**. UNC heads a network of four study sites across the country -- at UNC, the University of Washington in Seattle, Washington University in St. Louis and the Children's Hospital of Philadelphia -- which collaborate on this longitudinal study to examine the brain structure and behavior of infants at high risk for autism (siblings of autistic individuals) from 6 to 24 months of age. The goal of the study is to increase understanding of the timing and pattern of brain development in very young children with autism. This knowledge will help in understanding the underlying causes and brain mechanisms involved in autism and the relationship of those brain mechanisms to particular behaviors and psychological processes. It may also provide clues that will eventually result in early rationale interventions (e.g., early behavioral or medication treatments) to improve outcomes for children with autism.



(e.g., early behavioral or medication treatments) to improve outcomes for children with autism.

Dr. Heather Cody Hazlett is the lead investigator in a pilot study funded by the Foundation of Hope tracking **Brain Development in Infants with Down Syndrome** using MRI scans.

Surprisingly little is known about early brain development in Down syndrome and how it may be similar or different from other neurodevelopmental disorders. Few imaging studies have been conducted on early brain development in Down syndrome compared to typically developing children. This study of very early brain development has the potential to provide important clues in the early changes in the brain of young children with Down syndrome,



Continued on page 6

Selected CIDD sMRI/DTI/fMRI/EEG Neuroimaging Research Studies

→ A Longitudinal MRI Study of Infants at Risk for Autism: Autism Centers of Excellence (ACE) Network (Principal investigator: Joe Piven, M.D.)

→ A Longitudinal MRI Study of Brain Development in Fragile X Syndrome (Principal investigator: Heather Hazlett Hazlett, Ph.D.)

→ Early Brain Development in Twins (Principal investigator: John Gilmore, M.D.)

→ Silvio O. Conte Center: Prospective Studies of the Pathogenesis of Schizophrenia (Principal investigator: John Gilmore, M.D.)

→ Mapping Cortical Circuit Maturation in High Risk Adolescents (Principal investigator: Aysenil Belger Ph.D.)

→ Brain Development in Turners Syndrome (Principal investigator: Rebecca Knickmeyer, Ph.D.)

→ Neurobiological and Behavioral Consequences of Cocain Use in Mother/Infant Dyads (Principal Investigator: Josephine Johns, Ph.D.)

→ Advancing Diffusion Tensor Imaging and Analyses for Basic Alcohol Research (Principal investigator: Kathleen Sulik, Ph.D.)

→ High Throughput web-based Image Analysis of Mouse Brain MR Imaging Studies (Principal investigator: Martin Styner, Ph.D.)

→ Developmental Brain Atlas Tools and Data Applied to Humans and Macaques (Principal investigators: Martin Styner, Ph.D., and Marc Niethamme, Ph.D.)

→ Functional MRI Evaluation of the Effect of Drug Treatment in Autism (Principal Investigator: Gabriel Dichter, Ph.D.)

→ Investigating Effects of Gestational Cocaine and Neural Correlates of Maternal Attachment (Principal Investigator: Karen Grewen, Ph.D.)

→ Neurobiology of Selective Attention in Schizophrenia and Familial-risk Individuals (Principal Investigator: Aysenil Belger, Ph.D.)

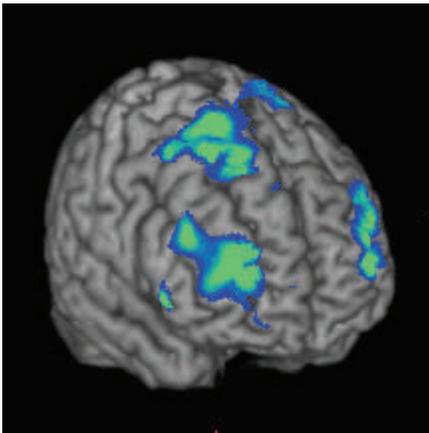
→ Restricted Repetitive Behaviors in Autism (Principal Investigators Jim Bodfish, Ph.D. and Gabriel Dichter, Ph.D.)

CIDD Neuroimaging Research Studies continued



which may help target future therapies.

At the Conte Center for Schizophrenia, CIDD investigators Drs. John Gilmore and Aysenil Belger are using ultrasound and MRI to study prenatal, early postnatal and adolescent brain development in normal children and in children at risk for schizophrenia (children with a first degree family member with schizophrenia). Though schizophrenia has been considered a neurodevelopmental disorder for over two decades, the specific neurodevelopmental mechanisms that contribute to the cortical pathology central to schizophrenia remain unknown. Genetic vulnerability for schizophrenia has been recognized for many years, yet the relationship between genetic risk and specific neurodevelopmental mechanisms is unclear. Through the Center's **Prospective Studies of the Pathogenesis of Schizophrenia** investigators hope to identify fundamental mechanisms of cortical development that are the basis of the neurodevelopmental pathogenesis that is thought to underlie schizophrenia.



More recently, under the direction of Dr. Franc Donkers, the Developmental Neuroimaging Research Core has added brain electrophysiological recording methods to our arsenal of tools for investigating in-vivo development of neural circuits. These methods will be implemented to study neurophysiological processes associated with normal brain development, as well as to identify deviation from the normal in infants and children affected with neurodevelopmental disorders or identified as being high-risk for such disorders due to family history.

These are just a small sampling of the CIDD neuroimaging research studies that are being conducted at the Developmental Neuroimaging Core. To learn more contact core Director, Dr. Aysenil Belger (aysenil_belger@med.unc.edu; 919-966-1648) or Associate Director, Dr. Martin Styner (styner@cs.unc.edu; 919-962-1909)



Professional Seminar in School Psychology

Last fall, four top doctoral students in school psychology gathered each Monday afternoon with Dr. Hexdall to learn about professional practice issues. A myriad of topics were covered but the primary focus was on best practices of supervision, recognizing and addressing ethical dilemmas, and other professional issues such as role definition, marketing oneself in a competitive job market, and prevention of professional burnout. The four students had a unique opportunity to supervise students who were in their first year of the program. Over the course of three sessions, the more advanced students in the class supervised first year students on practicum issues and cases. Each of the students stated it was a positive experience, preparing them for being supervisors later in their careers. In addition, Dr. Erica Wise, Clinical Associate Professor and Director of Psychological Services and who has served as the Chair on the APA (American Psychological Association) Ethics Committee, was a guest lecturer. She spoke with the students on the APA Ethics code and the North Carolina Practice Act. The course wrapped up with students sharing from professional "pop culture" books on topics related to professional identity, leadership and marketing one's strengths.



Caroline Hexdall, Ph.D.

CIDD Autism Clinics continued

Behavioral Medicine in Developmental Disabilities Clinic

Jim Bodfish, Ph.D., Psychology; and Rob Christian, M.D., Pediatrics

The Behavioral Medicine Clinic is an interdisciplinary evaluation and treatment service for children, adolescents, and adults with developmental disabilities including autism spectrum disorders who have complex behavioral and/or psychiatric challenges. Common referral issues appropriate for this clinic include assistance with self-injurious behaviors, disabling ritualistic behaviors, difficulties surrounding obsessive/narrow areas of interest, and explosive/aggressive behaviors. In addition to addressing the above primary referral concerns, the providers in this clinic can consult on or assist in arranging further consultation regarding the following common co-morbid concerns: anxiety disorders (with special emphasis on obsessive-compulsive disorder), mood disorders, tic disorders, attention deficit/hyperactivity symptoms, sleep disorders, seizure disorders, gastro-intestinal/toileting issues. Evaluation services will include multiple disciplines and be problem focused. Intervention services can include but would not be limited to development of a detailed behavioral management plan, psychopharmacologic consultation and collaborative institution of all recommendations with the family and community providers as appropriate.



CIDD-TEACCH Autism Medical Evaluation Clinic

Joe Piven, MD, Psychiatry; Heather Cody Hazlett, Ph.D., Psychology; Aurelie Welterlin, Psy.D., BCBA-D, Psychology, TEACCH Therapist

The CIDD-TEACCH Autism Medical Evaluation Clinic is an interdisciplinary evaluation clinic for children, adolescents and adults suspected of having a diagnosis of an autism spectrum disorder. This clinic represents a partnership between the CIDD and TEACCH. Referrals often include patients with complex presentations resulting from the presence of co-occurring psychiatric or medical problems. Evaluations include evaluation for a diagnosis of autism spectrum disorder and/or consultation regarding complex treatment issues, including medication management, as well as screening for intellectual functioning. The assessment team includes a psychiatrist, neuropsychologist and TEACCH therapist. Child/adolescent psychiatry fellows rotate through this clinic as part of their training. The involvement of Dr. Welterlin, a TEACCH therapist, allows the team to integrate TEACCH services into the treatment plan for individuals who receive an autism spectrum diagnosis and may benefit from such services. Interpretive sessions are conducted with families at the end of the evaluation to review recommendations.

Adolescent and Adult Autism and Related Disorders Clinic *Hal Shigley, Ph.D., Psychology*

The Adolescent and Adult Autism Clinic offers evaluations and recommendations for adolescents, age 14+, and adults of any age. There are three types of evaluations offered: (1) Differential diagnosis of high functioning autism and Asperger's disorder with individuals functioning in the average or above average range of intellectual functioning, who have struggled to succeed academically, vocationally and socially. Many of these persons have received incorrect diagnoses which have interfered with obtaining appropriate services. (2) Other individuals come to the Clinic with multiple diagnoses, including an autism spectrum disorder, who are experiencing significant behavioral challenges which interfere with functioning. The focus of these evaluations is to offer behavior consultation or the development of a formal behavior intervention plan. (3) Transition evaluations are offered for older adolescents or young adults to assist in helping them to transition from school and home-based services to adult educational, residential, and vocational services.

Autism Screening Clinic *Lauren Turner Brown, Ph.D., Psychology*

The Autism Screening Clinic is designed for toddlers ages 1-3 years. This clinic provides a brief observational screening of child behavior and interview with parents when a family or professional has concerns about a possible autism diagnosis. The clinic visit is approximately one hour, and can serve as follow-up after positive screening for autism at a pediatrician's office or for families who have concerns about their young children. Through participation in this clinic, families may learn that they can rule out an autism spectrum, that an autism diagnosis is very likely, or that additional testing and follow-up is needed. Some

Continued on page 8

CIDD Autism Clinics continued



families return for ongoing monitoring and assessment, particularly those with very young children. Recommendations are provided to all families who participate.

LINK Autism and Related Disorders Clinic *Rebecca Edmondson Pretzel, Ph.D., Psychology; Debbie B. Reinhartsen, Ph.D., Speech-Language Pathology (Additional disciplines are included as needed)*

The Autism and Related Disorders Clinic is one facet of LINK activities related to developmental disabilities. This half-day clinic is dedicated to the assessment of and treatment planning for individuals who display communication, social or behavioral characteristics potentially related to an autism spectrum disorder, language disorder, sensory impairment, or other developmental disability. The main focus of the assessment is to understand a child's strengths, diagnose or rule out ASD, identify other related delays or disabilities, and explore the use of AAC (Augmentative and Alternative Communication) as a means of communication for those with little productive use of language. Evidenced-based assessment tools are a standard part of the assessment process, including use of the Autism Diagnostic Observation Schedule (ADOS) and the Autism Diagnostic Interview - Revised (ADI-R). Additional cognitive, language, behavioral, and adaptive behavior testing is included as needed. Results are shared with the parents and recommendations are generated for educational and therapeutic intervention.

Preschool Autism Assessment, Consultation, and Training Clinic *Lauren Turner Brown, Ph.D., Psychology; Margaret DeRamus, M.S., CCC-SLP, Speech-Language Pathology*

The Preschool Autism Assessment, Consultation, and Training Clinic offers diagnostic evaluations for children up to 6 years of age. The primary purpose of the half-day clinic is to determine whether or not the child meets criteria for an autism spectrum disorder, provide recommendations for treatment, and refer the family to other resources in their community. This clinic also includes follow-up consultation and parent training for interested families. Common referral concerns include speech/language delays, differences in social interaction with adults and/or peers, difficulty with behavioral management, strong or unusual interests, difficulty with change, sensory differences, repetitive play and/or behaviors. The half-day evaluation consists of a thorough child assessment typically using the Autism Diagnostic Observation Schedule, a parent interview, and/or other informal tools to assess for characteristics of autism. Developmental, cognitive, adaptive behavior, and speech and language assessments are supplemented as needed. Parents/caregivers are offered an interpretive conference regarding the results of the evaluation, strategies to address their referral concerns, and opportunity to return for follow-up consultation and parent training/therapy. A report of the findings and recommendations is tailored to the needs of the family.



The CIDD has numerous other interdisciplinary clinics that focus on developmental disabilities, including autism spectrum disorders. Referrals to the CIDD may be made by completing the contact form found on the website (www.cidd.unc.edu). For specific questions, contact Jennifer Wang at 919-843-1529 or Jennifer.wang@cidd.unc.edu.

NC Council on Developmental Disabilities Partnership continued

The CIDD team reviewed, compiled, and analyzed survey results. Statewide input from individuals, their families, and professionals was collected from survey questions that addressed the needs of individuals with developmental disabilities and their families. The format offered the opportunity to compare results with those from the previous five-year planning process that was developed by the CIDD (then the Center for Development and Learning).

Subsequent steps have included compiling survey results, key documents summaries, and Council input to create a summary narrative toward NCCDD staff draft of Five Year Plan. In the remaining months of the project, the CIDD team will conduct an evaluation of the five-year plan development process and present results to the NCCDD staff and membership.

To learn more about the CIDD/NCCDD Five Year Plan partnership contact Deb Zuver at (919) 962-3603 or debrah.zuver@cidd.unc.edu.

Announcements:

- **MS Scholarship:**

The Eastern North Carolina Chapter of the National Multiple Sclerosis Society has teamed up with the Angela Rosenberg of the CIDD and UNC's Division of Physical Therapy to establish the Physical Therapy MS Curriculum and Scholarship Fund. The National MS Society has worked with UNC Physical Therapy faculty to develop a curriculum track in the doctorate program geared specifically to address the challenges of people living with MS. [Click here](#) to learn more.



- **UNC Studies published in *Neuron*:**

UNC researchers in CIDD investigator William Snider, M.D.'s lab have pinpointed a crucial function for a key player in the development of the nervous system. [Click to](#) read more on the UNC Healthcare website or go to the [Neuron](#) website.

New research from CIDD Investigator, Manzor Bhat Ph.D.'s lab describes a key molecular mechanism in nerve fibers that ensures the rapid conductance of nervous system impulses. The findings appear online Jan. 27, 2011 in the journal *Neuron*. [Click here](#).



Manzor Bhat, PhD

- **CIDD Associate Director, Jim Bodfish, Ph.D. is interviewed in *Science*:** [Click here](#)

to read the article entitled "These Fake Pills May Help You Feel Better," where Dr. Bodfish critiques the study.

- **CIDD Investigator, Ben Philpot, Ph.D. is interviewed in *Science*:**

[Click here](#) to read the article entitled "Drug to Treat a Type of Mental Retardation Shows Promise"

- **UNC School of Medicine researchers win NARSAD grants:**

Three SOM researchers have won Young Investigator Grants from NARSAD: The Brain and Behavior Research Fund. Grant winners are John A. Allen, PhD, post-doctoral trainee, pharmacology; Sarah J. Hart, PhD, research associate, psychiatry; and Thomas L. Kash, PhD, assistant professor, pharmacology. [Click here](#) to learn more.

- **OPC Area Program 3rd Annual Autism Awareness Lecture:**

On Thursday, April 21 from 1-3 PM at Extraordinary Ventures at 200 S. Elliott Rd. in Chapel Hill, Jim Bodfish, Ph.D., will present "Autism: Advances, current challenges, and future directions". Admission is free to all and pre-registration is not necessary. Please call Peter Kramer/OPC at 919-913-4055 for more information.

Send us your comments:

We would love to hear from you if you have comments about our newsletter, or if you would like to be added to our newsletter list!

A text only version of the newsletter in Word is available.

Drop us a line: info@cidd.unc.edu.

Many thanks to our newsletter article writers and editors:

Joe Piven, Keith Low, and Julia Tarr

Your Support

For more than 40 years, the programs of the Carolina Institute for Developmental Disabilities have provided innovative, high-quality clinical, research, and training activities supporting individuals with developmental disabilities.

The population of our state and nation is growing, and the disability community is growing as well. Children are being diagnosed with developmental disabilities such as autism at an exponential rate. Often, families dealing with a loved one with a disability can feel overwhelmed and need a place to find real answers. Through innovative research that improves practice and enhances education, we will find solutions.

Now, more than ever, we need well-trained practitioners, teachers, and researchers. State funds pay only part of the costs to recruit and retain the best faculty and support the unique training and programs that are the hallmarks of the Carolina Institute for Developmental Disabilities experience. It is private funds that sustain and enhance these extraordinary opportunities for students, patients, families, and faculty. We can't do it without you!

A gift to the Carolina Institute for Developmental Disabilities is an investment in the lives of thousands and in the future of our communities. Join us by giving today.

To make a donation by credit card, please visit the Medical Foundation of North Carolina's gifting page and choose "Carolina Institute for Developmental Disabilities:" [Click Here](#).

To make a cash donation, please send your check to: The Carolina Institute for Developmental Disabilities, University of North Carolina at Chapel Hill CB# 7255, Chapel Hill, NC 27599-3366.

Contact: Julia Tarr at (919) 966-7519 or julia.tarr@cidd.unc.edu to discuss your giving options.