THE YEAR IN FOCUS

Annual Review 2006-2007

Yale Child Study Center
FROM GENERATION TO GENERATION
From the Director

It is my pleasure to introduce this Annual Report of the Yale Child Study Center a department at Yale University School of Medicine that, for nearly 100 years, has brought together multiple disciplines to further the understanding of problems of children and their families. Our mission is to understand children’s development and their social, behavioral and emotional adjustment and to help children with psychiatric and developmental disorders. This mission involves work in six areas:

Research

Our research is broad based spanning work on genes and brain neurotransmitters to treatment and community based programs. We develop new treatments and evaluate their effectiveness and then help to provide these as part of our clinical service as we translate advances in sciences into improved clinical care. Our clinical research programs are nationally and internationally recognized. We are committed to the notion that improved clinical care and research must go hand in hand.

This past year we have been pleased that in a time when research resources are increasingly stretched we have been able to increase our research grant income significantly.

Clinical Services

We treat children and families in outpatient and inpatient settings and provide a range of services in schools, homes, and the community. Our evaluation and intervention programs focus on the complex interaction of home, school, neighborhood, and culture in which children live. Our specialty clinics attract patients from around the world. In addition we remain committed to providing service to New Haven and the region. During fiscal year 2006 we had over 22,000 clinical visits, and this number does not reflect the many children and families engaged in research.

Training

As a Center we are deeply committed to training the next generation of leaders in the field and offer formal training programs in child psychiatry, psychology, and social work. We also train medical students, residents and fellows in pediatrics, graduate students, and Yale college students. Our new Albert J. Solnit Integrated Training Program is a model for training the next generation of leaders in the field.

Community Services

Since its inception the Center has been active in the New Haven community and region in providing consultation and training to schools, community agencies, police officers, attorneys and judges, and legislators. We work with over 500 schools in 43 states.

Social Policy

We work on policy issues related to mental health and health care, child care, education, teacher training, and systems of care at state and federal levels. We remain actively involved in developing and evaluating policies that impact children and their families.

International Activities

The Faculty of the Center maintain active collaborations in almost 30 countries around the world. We help countries develop programs in situations where resources are often lacking and help train individuals who can assume leadership roles in their home countries.

To attain our goals of helping children and their families we must carefully integrate science and clinical services. Our faculty have committed their career to accomplishing our mission. In addition we gratefully acknowledge the support of the Associates of the Center who provide both intellectual and financial support and give us the flexibility to support truly innovative work.

Fred R. Volkmar M.D.
Director and Irving B. Harris Professor
Accomplishments 2006-2007
- Implementation of Collaborative Problem Solving approach leading to a dramatic decrease in the use of seclusion and restraint on Children’s Psychiatric Inpatient Service
- Development of clinical data management system in General Outpatient Clinic that providing real time, data based evaluation of treatment
- Implementation of three evidenced based treatments (cognitive behavioral therapy for anxiety and depression; Parent management training for disruptive behaviors; parenting skill group) in the General Outpatient Clinic

Goals 2007-2008
- Move all outpatient services to newly renovated space at Temple Medical Center to improve patient care and facilitate training and research.
- Continue to promote integration of all clinical services by improved data management, centralizing administrative support, and cross training clinicians and clinical supervisors

Selected Publications
The Psychology Training Program offers a 2-year integrated fellowship with a broad range of clinical, research, teaching, and international scholarly. The Center’s mission of promoting the mental health of children and families through research, clinical training and national and international advocacy provides the foundation for training in a dedicated, committed and culturally sensitive environment. The broad expertise of the faculty and the innovative clinical service models provided by the Center offer diverse, even unique opportunities set a fertile stage for training and education.

**Child and Adolescent Psychiatry**

Child and adolescent psychiatry residency training provides a fully accredited two-year clinical training experience for six to seven residents annually. Residents choose different areas of training emphasis within either the Child Study Center/Riverview Hospital for Children and Youth training track or the New Haven Track which has an added emphasis on specialty clinic training. Our new Albert J. Solnit Integrated training program is a 6-year academic training track for two residents annually. This highly competitive program emphasizes research training embedded within a rigorous educational curriculum. All residents are immersed in intensively supervised clinical and didactic experiences within a multidisciplinary and collaborative model of care. Trainees enter this program after completion of medical school and become board eligible in both general and child and adolescent psychiatry.

Child and adolescent psychiatry graduates pursue careers that provide comprehensive assessment, treatment, and advocacy to children and their families with a full range of psychiatric disorders in various settings—academics, community systems of care, community clinical practice, hospital-based practice, consultation to schools, courts, and public health initiatives, or further specialized fellowship training.

**Research Training**

The Center’s NIH funded research training program is completing its 23rd year. A broad range of disciplines are represented from services research to genetics, molecular and cognitive neuroscience, in vivo brain imaging and experimental psychology. A major strength of the program continues to be its interdisciplinary collaborations. The recent addition of the Albert J. Solnit Integrated Research training program ensures that the Center will remain a national source for academic leaders in child and adolescent psychiatry.

**Medical Student Teaching**

Course work is provided in child development and developmental psychopathology. The Donald Cohen/ Klingenstein fellowship program, funded by the Klingenstein Foundation, provides mentored clinical experiences for first and second year medical students to work with children and their families. During years 3 and 4 medical students may select a child and adolescent psychiatry emphasis for their psychiatry clinical rotation. Medical students frequently work with faculty in research.

**Yale College and Graduate School**

A series of courses are offered to Yale college students as well as to graduate students in the Faculty of Arts and Sciences and to students in the schools of nursing and public health. Undergraduate courses include courses in child development, autism, and other areas.

**http://childstudycenter.yale.edu/training/**

**Psychology**

The Psychology Training Program offers a 2-year integrated fellowship with a broad range of clinical, didactic and research experiences. The American Psychological Association accredited pre-doctoral internship emphasizes community-based intervention and psychological assessment during year one while a hospital-based postdoctoral fellowship focuses on severe psychopathology during the second year. Trainees are affiliated with an area of specialization and have clinical and research opportunities in these areas. The Psychology Training Program continues to attract highly skilled students from leading universities around the country. The program’s commitment to training psychologists dedicated to addressing the needs of children and families was recognized this year with the continuation of awarding of a federal grant to support existing and innovative training opportunities. Psychology program graduates have gone on to a variety of careers in academia, hospital-based practice, community-based practice, and the public policy arena.

**Social Work**

The postgraduate social work training program has a long and distinguished history and is currently being redesigned to parallel the two year training programs in other areas. The program will provide trainees a rich multi-disciplinary training experience in an array of clinical settings within the Child Study Center with particular emphasis in a chosen area of specialization. The program will include a strong, multi-disciplinary didactic component with intensive individual supervision to help refine clinical skills. Graduates of the social work training program will be fully prepared to serve children and families in various settings with unique expertise in such specialty areas as young child development, trauma, autism, school development, intensive in-home services, and outpatient services. Graduates of the social work training program will be well positioned to further serve in leadership roles nationally and internationally in support of the positive outcome of children and families in need.

**Albert J. Solnit Integrated Training Program in Child and Adolescent Psychiatry/Psychiatry/Research**

Named to honor the memory of the late Albert J. Solnit, a pioneer in child psychiatry who served from 1966 to 1983 as the third Director of the Yale Child Study Center, the Integrated Training Program carries on Al’s vision of superior clinical care, research, and advocacy in the best interest of children and families. The program, which accepts 2 physicians annually following medical school, integrates child and adolescent, general psychiatry, and research training over an innovative 6-year curriculum to train the next generation of academic clinician scholars. Started in 2004, in response to an Institute of Medicine report on the need to improve research training during psychiatry residencies, there are currently 6 residents in the program. The program has been honored as a national model of training, with a curriculum designed to enhance early identity formation of trainees as physician-scientists and child and adolescent psychiatrists. It is one of only three such programs in the country. Intensive mentorship, research opportunities for advanced education in research design or neuroscience, and full clinical training in psychiatry and child and adolescent psychiatry are hallmarks of this program. This past year, there were 168 applicants for the two positions.
Our Philosophy and Mission

The mission of the Section on Tic Disorders and Obsessive-compulsive Disorder is to provide specialized care for children and adults with these developmental disorders, conduct state-of-the-art research aimed at understanding the natural history and pathobiology of these disorders, and to educate the next generation of academic leaders. Our Section is committed to improving patient care through conducting innovative clinical and translational research, the development of animal models and education.

Clinical Services

Our greatest assets are the patients and families that we serve and our dedicated staff. We select and deliver treatments of known efficacy based on evidence-based therapeutics. Long term care and consultations are provided in an environment of respect and compassion. We focus not only on the reduction of symptoms but also on the development of unique skills and abilities and self advocacy.

Education and Training

Our Section provides specialty training to residents in psychiatry, child psychiatry, pediatrics as well as pre- and post-doctoral fellows in clinical psychology. We regularly have pre-doctoral research fellows and visiting scientists from around the world.

Research

The world-class investigators in our Section have developed and tested novel therapeutic interventions. At present, the focus of the Section research is on the rigorous testing of Habit Reversal Training for the treatment of tic disorders and the initial testing repetitive transcranial magnetic stimulation in the treatment of severe tics. We have developed many rating instruments, most recently the Dimensional Yale-Brown Obsessive-compulsive Disorder Scale.
In collaboration with other Yale investigators at the Department of Epidemiology and Public Health we are exploring the complex temporal relationships between antecedent psychosocial stress and physiological stressors (including streptococcal infections) and future exacerbations of tic and obsessive-compulsive symptoms.

Accomplishments 2006-2007

• Publication in leading journals of original articles focused on phenomenology, natural history and pathobiology of these disorders, including innovative clinical and translational research in the areas of genetics, neurobiology, neuroimmunology (the potential role of regulatory T cells and other immune mediators) as well as novel behavior treatment (Anger Management Training).

• Publication of systematic and state-of-the-art reviews of current interventions, of a theoretical paper focused on the role of neural oscillations in Tourette syndrome.

• Publication of a state-of-the-art clinical assessment tool based on a multinational collaboration (the Dimensional Yale–Brown Obsessive Compulsive Scale).

Goals 2007-2008

• Continue the development of transcranial magnetic stimulation for individuals with severe, tic disorders in collaboration with investigators in the Department of Psychiatry and at Columbia University and New York University, particularly with recent funding from the Tourette Syndrome Association and private donors.

• Expand our genetic and postmortem brain studies with the recent funding of three project grants from NIH.

• Seek funding for our in vivo brain imaging studies using magnetic resonance imaging, dense array electroencephalography and magnetoencephalography.

• Continue the analysis of data from three recently completed multicentre, prospective longitudinal studies and the related neuroimmunological and molecular neuroscience data generated by three NIH grants and with recent funding from the Tourette Syndrome Association.

Selected Publications


Affiliated research labs are described elsewhere in the Annual Report and include the Developmental Neuroimaging Program, the Neurogenetics Program, the Laboratory of Developmental Neurochemistry, the program on Behavioral and Molecular Genetics of Atypical Developmental Disorders, and others. In addition, the Yale University Social Robotics Lab, housed at the Yale University Department of Computer Science, is dedicated to the development of anthropomorphic robots that interact with people using natural social cues. Funded through a National Science Foundation grant, the work on autism by this lab focuses on merging cutting-edge eye-tracking research and human-robotic research to produce an early detection system for vulnerabilities for autism and an ongoing therapeutic aid for individuals with this and related disorders. This rich web of Yale resources are brought together in a well-coordinated effort to advance autism research. For example, co-registration of eye-tracking and functional MRI data is now possible through cross-lab collaborations, creating an innovative multi-method platform for research on the social mind and the social brain.

Additional collaborations at Yale include the Yale Departments of Psychology and Statistics, the Haskins Laboratories, and Yale School of Medicine Departments of Pharmacology, Pediatrics and Genetics. The Autism Program at Yale is also a participant in a number of national initiatives such as the National Institute of Child Health and Human Development “Baby Siblings Research Consortium” (BSRC) and “Collaborative Programs of Excellence in Autism Research” (CPERA), the National Institute of Mental Health “Studies to Advance Autism Research and Treatment” (STUART), “Autism Center of Excellence” (ACE), “Neuroimaging Studies of Infants at Risk for Autism”, and “Genetics Network”, and the Simons Foundation “Autism Simplex Consortium”. There are international research collaborations involving colleagues in Brazil, the Netherlands, Italy, England, France, Canada, Israel and other countries.

Our Philosophy and Mission
The Autism Program at Yale consists of an interdisciplinary group of clinicians and scholars dedicated to providing comprehensive clinical care and research focused on finding the causes of autism and promoting effective treatments. Efforts of experts are combined to lead the way in the science of clinical care, to train the next generation of leaders in the field, and to advocate for the advancement of research and resources aimed at optimizing outcomes and opportunities for individuals with autism. With a tradition of over 50 years that includes some of the pioneers in the field, the Autism Program at Yale is a National Institute of Health Autism Center of Excellence.

Clinical Services
The Yale Child Study Center Developmental Disabilities Clinics provide comprehensive clinical evaluations for individuals of all ages. Highly experienced professionals from the fields of clinical psychology, child psychiatry, speech-language pathology, social work, genetics, and psychiatric nursing conduct comprehensive evaluations that provide detailed recommendations for intervention. Briefer customized evaluations and consultations are available. The focus of the clinic is to translate a detailed assessment of strengths and challenges into specific recommendations for treatment. Pediatric, neurological, and genetic examinations are added when clinically indicated. The Clinics are highly integrated with the research program, creating opportunities for participation in a wide range of research studies. Activities related to patients and characterization of research participants form the hub around which the entire research effort is organized.

Research Program
Research on autism at the Yale Child Study Center has included studies of the definition and classification of autism, neuropsychology, social cognition, early development and natural course, adaptive skills and outcome, speech-language and communication, the social brain, neurochemistry and neurobiology, family and molecular genetics, psycho-pharmacological, parent-training and behavioral treatments, and animal models. This is a highly synergistic effort involving collaborations among a number of groups and departments within Yale and beyond. These resources include the following:

The Simons Lab for Social Neuroscience in Infancy uses new technologies aimed at the earliest possible detection of autism in siblings of children with autism.

The Infant Cognition Lab studies gaze processing and face perception in infants and toddlers with autism. It is also dedicated to studies of early diagnostic signs and stability as well as the natural course of autism in the first years of life.

The Speech-Language and Communication Lab studies listening patterns to speech sounds, speech production and prosody, metalinguistics and pragmatics/communication of individuals with autism from infancy through adolescence.

The Neuropsychology Lab is dedicated to studies of profiles of cognitive learning in individuals with autism, including research on attention, memory, and executive functions.

The Electrophysiology Lab studies social information processing, e.g., face and emotional perception, using methods such as EEG.

The Social Neuroscience Lab focuses on studies of social engagement in individuals from infancy to adulthood. It emphasizes an “embodied cognition” model of social adaptation and change in syndrome expression.

Affiliated research labs are described elsewhere in the Annual Report and include the Developmental Neuroimaging Program, the Neurogenetics Program, the Laboratory of Developmental Neurochemistry, the Laboratory of Developmental Neurobiology, the program on Behavioral and Molecular Genetics of Atypical Developmental Disorders, and others. In addition, the Yale University Social Robotics Lab, housed at the Yale University Department of Computer Science, is dedicated to the development of anthropomorphic robots that interact with people using natural social cues. Funded through a National Science Foundation grant, the work on autism by this lab focuses on merging cutting-edge eye-tracking research and human-robotic research to produce an early detection system for vulnerabilities for autism and an ongoing therapeutic aid for individuals with this and related disorders. This rich web of Yale resources are brought together in a well-coordinated effort to advance autism research. For example, co-registration of eye-tracking and functional MRI data is now possible through cross-lab collaborations, creating an innovative multi-method platform for research on the social mind and the social brain.

Selected Publications (from over 60 publications)
Unusual patterns of visual attention to social situations in autism:

In this figure, the small cross shows where an adult with autism is looking at during a romantic moment in this movie. He is scrutinizing the light switch on the left hand corner of the screen while there is a passionate embrace occurring in the foreground. Using eye-tracking technology, we have shown that individuals with autism of all ages, from toddler years to adulthood, more readily fixate on non-critical aspects of a social scene, such as the moving mouths rather than the entreating eyes of others, or objects rather than people. We are using similar methods to screen babies at higher risk for autism from birth, with the goal of developing diagnostic markers in the first year of life and of creating novel treatments. This program of research is but one example of a large array of studies focused on behavioral, brain, neurobiological and genetic aspects of autism and related conditions.
EARLY CHILDHOOD PROGRAMS

Linda C. Mayes, M.D., Arnold Gesell Professor and Chairman, Directorial Team, Anna Freud Centre
Interests: Early Childhood Assessment and individual child and parent psychotherapy, transition to parenthood and the biology/psychology of early attachment, impact of stress and toxin exposures during pregnancy on infant outcome, impact of early stress and environmental adversity on early neurocognitive development, dense array electroencephalography, impact of substance abuse on parenting and child development

Walter Gilliam, Ph.D., Associate Professor, Director of Zigler Center for Social Policy
Interests: Early Childhood Assessment, Preschool Program Consultation, Social Policy

Nancy Close, Ph.D., Assistant Clinical Professor
Interests: Early Childhood Assessment, Individual Psychotherapy, Parent-Child Psychotherapy, Preschool Program Consultation

Maya Akbar, Ph.D., Assistant Clinical Professor
Interests: Training, early childhood assessment, developing innovative prevention programs for parents

Lynette Tay, Ph.D., Assistant Clinical Professor
Interests: Early childhood assessment, developing innovative prevention programs for parents, consultation to medical subspeciality services

Sherin Stahl, Ph.D., Assistant Clinical Professor
Interests: Consultation to medical subspeciality services, early childhood assessment

Christy Heise, MSW, Assistant Clinical Professor
Interests: Early childhood assessment, preschool program consultation, individual psychotherapy and behavioral interventions for children and families, group based work with parents, preventative programs for parents (Parents First)

Megan Lyons, MSW, Assistant Clinical Professor
Interests: Early childhood assessment, speech and language assessments and intervention services, individual psychotherapy and behavioral interventions for children and families

Betsy Houser, MSW
Interests: Early childhood assessment, individual psychotherapy and behavioral interventions for children and families, home-based intervention for parents of infants and toddlers (Minding the Baby)

Mary Beth Wolmer, MSW
Interests: Early childhood assessment, individual psychotherapy and behavioral interventions for children and families

Elaine Romano, R.N., P.N.P.
Interests: Long-term outcome of preterm infants, pediatric care of preterm infants

Michael Crowley, Ph.D., Postdoctoral Fellow
Interests: Biology/psychology of early attachment, early conduct and behavioral problems in young children, dense array electroencephalography
Adjunct faculty:
Lois Sadler, Ph.D., Professor, Yale School of Nursing, Director, Minding the Baby Program
Interests: Interventions for adolescent parents, home-based services for parents (Minding the Babies), training in early childhood services

Arietta Slade, Ph.D., Professor, City University New York; Associate Research Scientist, Yale Child Study Center; Co-director: Minding the Baby
Interests: Parent-infant psychotherapy, attachment based interventions, home-based services for parents (Minding the Baby)

Peter Fonagy, Ph.D., Professor University College London; Clinical Professor Yale Child Study Center, Chief Executive Officer, Directorial Team, Anna Freud Centre
Interests: Developing and evaluating interventions for children with depression and anxiety and for parents with major depression, attachment, and personality disorders

Mary Target, Ph.D., Reader, University College London; Clinical Associate Professor Yale Child Study Center, Managing Director, Directorial Team, Anna Freud Centre
Interests: Developing and evaluating interventions for children with depression and anxiety and for parents with major depression, attachment, and personality disorders

Zeev Kain, M.D., Professor, Department of Anesthesiology, Yale School of Medicine
Interests: Perioperative preparation programs for parents and children, perioperative anxiety and impact of postoperative outcome

Our Mission
The early childhood section’s mission is to provide specialized care for pregnant families and for infants, toddlers, preschool children and their parents, to provide consultation to educational and care settings serving very young children, and to inform and study social policies that impact services for infants and young children. We conduct research aimed at understanding how a range of early experiences impact young children’s emotional, social and cognitive development and at how early educational and intervention services positively impact young children’s adaptive development.

Clinical Services
Infancy and early childhood has been a long-standing focus of clinical services in the Center and we are committed to providing the highest quality services to pregnant families, parents, and children from infancy through early school age. Our clinical services are provided both at the Center and in community settings through model prevention and intervention programs for parents and their young children including Parents First and Minding the Baby. Our clinicians provide developmental assessments, individual child and parent psychotherapy, school based consultation to teachers and group based prevention and intervention services for parents. Clinicians in our section also follow-up developmental and medical consultations to families of preterm infants. Our section works collaboratively with pediatrics and early childhood educators as well as other professionals often involved with families of young children as well as with the department of anesthesia to help families and children prior to and immediately after surgery. We are committed to long term care for families and to helping parents find the best resources available to help them care for their young children.

Education and Training
We provide specialty training in early child development and early childhood clinical services to residents and fellows in child psychiatry, pediatrics, psychology, and social work. Additionally, we offer regular seminars to train professionals in our preventative parenting models and an advanced internship for professionals interested in specialized early childhood work. Our section also has visiting scholars from around the world who spend several weeks to months working on both clinical and research programs in the section.

Research
The investigators in our section focus on basic developmental research and on testing the effectiveness of our prevention and intervention programs for parents and infants. Our research includes studies on (1) the impact of early stress and biological exposures during pregnancy on children’s early development and learning, (2) the impact of poverty and related psychosocial stressors on family functioning and children’s development, (3) the biology and psychology of early parenting and attachment and the impact of depression and related stressors such as substance abuse on parents’ resources to care for their children, (4) the efficacy of parenting interventions focused on helping parents understand the emotional needs of infants and young children, (5) the effectiveness of intensive, home-based intervention services for first time parents focused on helping young parents attach to and care for their infant, (6) the quality and efficacy of preschool educational programs and access to early child care and education services, and (7) the impact of perioperative interventions to reduce child anxiety prior to surgery and improve postoperative outcome.

Accomplishments 2006-2007
• In our Minding the Baby program (faculty members Sadler and Slade), we have demonstrated a positive impact on parental care, duration of breast feeding, reduced rates of early childhood asthma, and improved early infant development. We have requests to replicate Minding the Baby in several sites outside Connecticut.
• Our Parents First program was extended to medical settings as well as early childhood education programs thus permitting us to reach parents of infants and young children with medical needs.
• We are working collaboratively with the Yale University Provost Office to establish a university-community based childcare network to improve the quality of available infant and preschool childcare and education programs in the Greater New Haven area. Faculty members in our section are setting state and national standards for the quality evaluation of early childhood education programs.
• With federal funding, we are studying the impact of poverty on early child development and family functioning. Working collaboratively with economists in the School of Public Health as well as cognitive neuroscientists at the University of British Columbia, we have engaged over two hundred and fifty families with preschoolers to participate in yearly assessments.
• Faculty in the section have published reviews of interventions for families of young children and have completed treatment manuals for our preventative parenting services (Minding the Baby and Parents First)

Goals 2007-2008
• Expand and restructure our clinical services so that we may provide additional services to pregnant families and parents as well as work collaboratively with pediatricians to see families and young children in pediatric clinical settings
• Refine our intervention services for pregnant families with a specialized focus on depression and anxiety during pregnancy
• Replicate our Minding the Baby program in another community health care clinic and our Parents First program in two additional health care centers
• Working collaboratively with colleagues in the Department of Psychiatry, adapt our parenting intervention services for families struggling with addiction and substance abuse. A part of this effort is also to study the impact of substance abuse on parental sensitivity to infant cues as part of a program project grant also involving colleagues from the University of North Carolina. These studies will utilize both neuroimaging and dense array electroencephalography.
• With colleagues from the Anna Freud Centre and University College London (Fonagy and Target), adapt an evidence-based attachment/menteralization based treatment for families of school aged children to families of infants and preschool aged children.
• Working collaboratively with colleagues from the University of Connecticut and British Columbia, continue to refine our computer based neurocognitive assessment battery for preschool children.
• With colleagues in the department of anesthesiology, to develop a web based preoperative preparation program for parents of young children.
Selected Publications


Research Labs
Neurogenetics Program
Co-Directors: Matthew W. State, MD, PhD, Murat Gunel, MD (Yale Department of Neurosurgery).
Interests: Genetics of Developmental Brain Disorders

Our Philosophy and Mission
This Yale Neurogenetics Program (NGP) is a new interdepartmental initiative under the direction of Drs. Matthew State MD, PhD (Child Study Center and Department of Genetics) and Murat Gunel MD (Chief, Division of Vascular Neurosurgery) which is engaged in a coordinated effort to identify and characterize genes contributing to structural and functional disorders affecting the human brain. These difficulties range from gross brain malformations to less severe structural problems, such as neuronal migration disorders that lead to seizures and epilepsy, to neuropsychiatric syndromes, such as Autism Spectrum Disorders, Mental Retardation and Tourette syndrome. At present, the program includes basic science faculty from a number of Yale Departments including the Child Study Center (Drs State and Young Shin Kim), Neurobiology (Dr. Nenad Sestan), Molecular Biophysics and Biochemistry (Dr. Thomas Biederer), and Neurosurgery (Drs. Gunel and Angeliki Louvi). The program works very closely with clinical and research programs at the Child Study Center, including the Autism Clinic and the Tourette syndrome/OCD Clinic.

Education and Training
The NGP provides training opportunities to students at all levels, from undergraduates through junior faculty. Training opportunities encompass a wide range of methodologies including: molecular biology, molecular genetics, functional genomics, molecular and array-based cytogenetics and bioinformatics. The NGP places a special emphasis on providing research-training opportunities for international scholars. In the first year in existence, the Program has funded and/or provided training venues for three physicians from Turkey, one from Saudi Arabia, and another from Brazil.

Research
The research interests of the State Lab and NGP are detailed further at:
http://www.yale.edu/state/home.html

Broad areas of interest include:
• Gene identification in Autism Spectrum Disorders, Tourette syndrome, Mental Retardation, Epilepsy and structural brain disorders using molecular cytogenetics, array-based cytogenetics and linkage analysis of unusual families;
• The development of novel analytic tools to identify sub-microscopic chromosomal abnormalities using array-based comparative genomic hybridization;
• Bioinformatic approaches to enhancing gene discovery efforts in developmental disorders;
• Studying the expression, function and interaction of genes identified in our group as contributing to developmental brain disorders.
Accomplishments 2006-2007
The first significant accomplishment of the NGP, at its inception, was the identification, in 2005, of a gene, Slit and Trk-like Family Member 1 (SLITRK1), mutated in Tourette syndrome. This effort, led by the State lab, involved major contributions in the areas of developmental neurobiology by Drs. Sestan and Louvi; in Genetics by Murat Gunel and Richard Lifton; and essential clinical collaborations with colleagues at the Child Study Center. Over the past year, Drs. State, Sestan and Louvi have obtained an NIH grant aimed at elaborating the biology of SLITRK1 and its role in TS.

In addition, this past year the group has:
• made significant progress in characterizing a gene contributing to Autism Spectrum Disorders,
• identified the molecular cause of a new genetic syndrome involving developmental delay and vascular abnormalities;
• characterized a novel mutation in a family with early onset Parkinsonism;
• developed a new bioinformatics approach to identifying sub-microscopic chromosomal abnormalities in patients with neurogenetic syndromes;
• contributed to the identification of a gene that increases the risk for Sudden Infant Death Syndrome in African American children

Selected Publications


Laboratory of Molecular Neurobiology
Paul Lombroso, MD, Elizabeth Mear and House Jameson Professor, Child Study Center and Department of Neurobiology
Interests: Development of synaptic plasticity and neuropsychiatric disorders in which this process is disrupted.

Our Philosophy and Mission
The mission of the Molecular Neurobiology Laboratory is to understand how learning and memory may be disrupted in various developmental disorders.

Education and Training
Our Laboratory provides training in molecular biology, genetics, anatomy, embryology and neurobiology, as applied to the study of brain development and function. We regularly host a number of undergraduate students, post-doctoral research fellows, residents and visiting scientists.

Research
Our research revolves around two interrelated themes: (1) how the mammalian brain develops and maintains the circuitry that is essential for cognition and social interactions; (2) how this circuitry is regulated at the molecular level in adulthood.

The study of regulatory proteins involved in the development of synaptic plasticity. We have characterized a family of proteins that are necessary for synaptic plasticity to develop. We have developed mice strains in which the proteins are absent and determine the functional results of such knockout manipulations on learning and memory formations.

Accomplishments 2006-2007
• We have published several original articles in high impact journals focused on learning and memory, fear conditioning and neuroimmunology.
• We have received a NARSAD grant proposals to continue our studies.

Selected Publications


Program in Child Development and the Law
Faculty: Barbara Nordhaus, M.S.W.
Since the late 1960’s the Center has had a strong interest in the application of child development principles in the law. These issues have included child custody and visitation as well as child placement issues such as commitment to the state, termination of parental rights, and adoption. We continue to provide evaluations both by court order and by request of the Department of Children and Families in foster care/adoption cases as well as relative to the care of abused and neglected children. During the coming year we hope to strengthen our collaborations outside with Center with a broad focus on children and the law.
Behavioral and Molecular Genetics of Atypical Development & Yale Academic Skills Clinical Program

Elena L. Grigorenko, Ph.D., Associate Professor

Interests: Interplay of genetic risk and protective factors and schooling in the manifestation of special educational needs.

Our Philosophy and Mission
The philosophy and mission of EGLAB are based on the idea of individualizing schooling experiences for children with special educational needs (CSEN) to maximize their success in life. Our mission is to enhance our understanding of the profiles of cognitive and behavioral functioning in these children. Our research unfolds at the junction of genetics/genomics, child development, health, and education. We are interested in identifying genetic bases of academic failures and success, assessing CSEN, and finding ways to accommodate these needs with a combination of policy-, pedagogy-, and pharmacology-based approaches. Our aim, ideally, is to bring knowledge of the role of genes as sources of individual differences to the everyday practice of educators, child psychologists and psychiatrists, and pediatricians focusing their combined efforts on helping children with special needs achieve their full potential.

Clinical Services
The Academic Skills Clinic is guided by recent changes in the laws (IDEIA) governing the identification of services for CSEN. Traditionally, psychologists have administered batteries of neuropsychological assessments in an attempt to uncover a gap between performance and aptitude that will lead to the identification of learning disabilities (LD) recognized by schools. The latest change in legislation has introduced a more dynamic and continuous assessment model. We use this model in our practices, which allows us not only to focus specifically on identifying specific children's weaknesses with regard to remedial academic difficulties, but also to work with local providers on implementation of our clinical recommendations through delivery of remedial, tutorial, and advocacy services.

Education and Training
We provide training in molecular and statistical genetics, and academic skills assessment, and intervention. We use this model in our practices, which allows us not only to focus specifically on identifying specific children's weaknesses with regard to remedial academic difficulties, but also to work with local providers on implementation of our clinical recommendations through delivery of remedial, tutorial, and advocacy services.

Research
Our research encompasses both US-based and international projects. In general, our research unfolds along the following three intertwined lines of inquiry:

- Genetic bases of academic disabilities (i.e., LDs and other developmental disabilities where academic functioning is challenged)
- How genetic risk factors for academic failure interact with specific pedagogical approaches
- Assessment devices that are especially useful in dealing with CSEN and devising best-suited evidence-based academic intervention.

Our research studies encompass behavioral and molecular genetic characteristics of children and families as well as interventions to assist children with disabilities. Current research includes studies of:

- Whether early language experience and performance in a native tongue predicts later performance in English in international adoptees brought to the United States early in life
- Learning disabilities in harsh developmental environments and their relation to infection, intoxication, and poverty
- Genetic risk factors for various learning and developmental disorders
- Interactions between genetic and environmental risk factors for conduct problems
- The development of assessment instruments for children with academic gifts, children with academic difficulties, and those children who have both gifts and difficulties.

This research includes children and their families in the United States as well as in Kenya, Tanzania, Zanzibar, the Gambia, Ghana, Zambia, India, and Russia.

Accomplishments 2006–2007
Members of our laboratory have published a number of empirical, theoretical, methodological, and review articles in high impact journals in the fields of education, psychology, and genetics.

EGLAB received a grant from NIH to study developmental language disorders and is a part of two large-scale NIH-sponsored program projects to study learning disabilities and autism. We received a contract from the state of Connecticut to assist in screening for academic difficulties in children in detention. We also continued to work on previously funded grants in progress.

Goals 2007–2008
- Continue our research on genetic bases of academic difficulties.
- Expand our research into genetic bases of early alcohol consumption and conduct problems.
- Continue working on developing and delivering best clinical assessment and remediation approaches for children with academic difficulties.

Selected Publications


http://www.yale.edu/eglab/
Developmental Neuroimaging Program

Robert T. Schultz, Ph.D., Harris Associate Professor, Child Study Center and Department of Diagnostic Radiology

Interests: They neural bases of the autism spectrum disorders.

Our Philosophy and Mission

We use MRI to identify neuroanatomical differences and functional differences in the brains of children and adults with an autism spectrum disorder (ASD) compared to typically developing individuals. Our mission is to link the MRI findings both to genetic influences and behavioral outcomes, in order to form a complete understanding of the etiology of the ASDs as mediated by specific neurodevelopmental pathways.

Education and Training

Our Laboratory provides training in experimental design as it pertains to MRI-based data acquisition techniques, including anatomical MRI, functional MRI and diffusion tensor imaging (DTI). We regularly have a number of undergraduate students, graduate students and post-doctoral fellows working in the lab.

Research

Our lab is supported by a number of grants aimed at characterizing brain abnormalities in the ASD. We have a particular focus on the relationship between deficits in social perception (e.g., face perception, including recognition of person identity and social expressions) and deficits in social cognition, as these contribute to the core symptoms of autism. Our functional MRI (fMRI) work has shown that the temporal lobe of the brain is critical to these functions and to understanding social problems that are the “sine qua non” of autism. These same temporal lobe systems also show altered anatomy. In concert with these basic research studies, we are also doing an intervention study to try to determine if we can change social perceptual skills and also alter the underlying pattern of functional brain activity.

Accomplishments 2006-2007

We have received several new grants this year to study neurodevelopment in the ASDs. We are now embarking on studies of the developing brain by imaging babies at risk for an ASD by virtue of having an older sibling with an ASD; we are charting the development of brain structure starting at 6 months of age and will be linking this to changes in behavior, especially the onset of autistic symptoms. Another new project is looking at longitudinal outcomes in children in early adolescence who show an “optimal outcome” compared to those with a more typical ASD history.

Selected Publications


The Laboratory of Developmental Neurochemistry

Dr. George M. Anderson, Director

The Laboratory of Developmental Neurochemistry, directed by Dr. George Anderson, carries out clinical studies on the neurobiology of autism, attention deficit/teaactivity, Tourette syndrome, PTSD, and postpartum depression, as well as basic studies in related areas. The Laboratory performs a range of monoamine-related and neuroendocrine analyses of plasma, platelet, urine, cerebrospinal fluid and brain samples using high performance liquid chromatographic (HPLC) and radiometric methodologies. The research of the Laboratory is highly collaborative, with a range of productive collaborations with investigators at Yale, with institutions throughout the United States, and with researchers in Holland, France, Germany, Israel, and Canada. Recent publications have reported on pineal functioning, serotonin neurobiology, stress response functioning, placental morphology, and psychopharmacology in autism. A series of recent primate studies have examined issues relevant to treatment of self-injurious behavior, early exposure to serotonergic agents, and effects of early trauma on brain neurochemistry.

Selected Publications


The Laboratory of Developmental Neurobiology

Flora M. Vaccarino, M.D., Associate Professor

Interests: Growth and neuronal specification of the cerebral cortex and basal ganglia; gene-environment interactions in perinatal brain injury

Our Philosophy and Mission

Our mission is understanding how the programs of brain development are modified by adverse postnatal events, and how positive or negative experiences affect brain plasticity.

Education and Training

Our Laboratory provides training in molecular neurobiology, anatomy and genetics as applied to the study of brain development and function. We regularly host a number of undergraduate students, post-doctoral research fellows, residents and visiting scientists. Dr. Vaccarino teaches a course entitled "Neurodevelopment and Neuropsychiatric Disorders". The course focuses on the progressive specialization of cellular function within the CNS, with emphasis on the relationships between evolutionary conserved genes and signaling systems and neuropsychiatric disorders such as depression, autism and schizophrenia.

Research

Our research revolves around two of interrelated themes: (1) how the mammalian brain develops and maintains the circuitry that is essential for cognition and social interactions; (2) how this circuitry is modified by perinatal adverse events or by an enriched environment. Ongoing projects include:

- Regulation of neural stem cells during normal development and after injury. We have discovered that neural stem cells proliferate after injury and have the capacity to repair the immature brain in juvenile animals. By engineering these cells to lack specific growth factors, we identify the genes and their pathways that regulate stem cell proliferation, differentiation and survival at prenatal and postnatal stages of development.

- Maturation of inhibitory systems that normally regulate impulsive behavior and focus our motor and cognitive activity. Inhibitory neurons do not properly mature when infant mice are raised under low oxygen to mimic perinatal hypoxic events. These hypoxic-reared mice develop locomotor hyperactivity and learning impairments. We are testing whether environmental enrichment promotes the maturation of these inhibitory neural networks rendering them less susceptible to perturbations from the surrounding environment.

- Genes that regulate the growth of the cerebral cortex. Fibroblast Growth Factors (FGFs) promote cortical growth by increasing the generation of cortical pyramidal cells from neural precursors. By genetically over-expressing knock-out FGFs at precise stages of development, we can assess the consequences of an excitatory/inhibitory imbalance for cortical structure and animal behavior.

Accomplishments 2006-2007

- We have published several original articles in high impact journals and one review article focused on astroglial cells development, neural stem cells, and the regenerative reaction of the brain to perinatal hypoxia.

- We have been awarded a new R01 grant from NIMH entitled "Inhibitory Interneurons in Tourette syndrome".

Goals 2007-2008

- Continue our studies on the signaling pathways that are critical for the proliferation and migration of neural stem cells during development.

- Expand our research on the consequences of perinatal hypoxia to include how enriched environments affect the regenerative potential and differentiation of neural stem cells.

- Continue our investigations related to the implications of genes of the Fibroblast Growth Factor (FGF) Family for autism-related disorders. This project uses an animal model that over-express an FGF ligand to mimic the cortical overgrowth present in autism.

Program in the History of Medicine

Faculty: David Musto, M.D., Professor

A major focus of study has been the development of drug and alcohol policies in the context of American social history. Supported by a Senior Scientist award from the National Institute of Health Dr. Musto also is a regular contributor on the topic of the history of child psychiatry and psychiatric ethics. Dr. Musto also teaches a popular course for Yale undergraduates on the history of drugs and alcohol.

Accomplishments 1980-2007

- Dr. Musto has been awarded a new R01 grant from NIMH entitled "Inhibitory Interneurons in Tourette syndrome". In the past, Dr. Musto has been a regular contributor to the history of child psychiatry and psychiatric ethics. Dr. Musto has also been a popular course for Yale undergraduates on the history of drugs and alcohol.
Selected Publications


National Center for Children Exposed to Violence

Director: Steven Marans, M.S.W., Ph.D., Professor
Associate Director and Medical Coordinator: Steven Berkowitz, M.D., Assistant Professor Faculty and staff.
Leonard Barbieri, M.S., Associate Research Scientist, Coordinator, Terror and Disaster Preparedness and Response Training Program
Miriam Berkman, J.D., M.S.W., Assistant Clinical Professor, Coordinator, Domestic Violence Home Intervention Project
Alice Colonna, M.A., Senior Clinician and Clinical Supervisor
Phyllis Cohen, Ed.D., Senior Clinician and Clinical Supervisor
Diane Dodge, M.S.W., Clinical Instructor, Senior Clinician and Clinical Supervisor
Hilary Hahn, Ed.M, M.P.H., Associate Research Scientist, Research Section
Kristen Hammel, M.S.W., Clinical Instructor, Staff clinician
Debra Hauser, Ph.D., Clinical Instructor, Community Fundraising Chair
Carolyn Sicher, Psy.D., Associate Research Scientist, Clinical and Trauma Fellowship Coordinator
Deborah Smolover, J.D., Lecturer, Public Policy Coordinator

Philosophy and Mission
The National Center for Children Exposed to Violence was established at Yale in 1999. Its mission is to increase public and professional awareness of the effects of violence on children and to extend the capacity of individuals and communities to reduce the incidence and impact of violence on children. NCCEV furthers its mission by developing model collaborative programs that provide intervention for children exposed to violence and by providing training, technical assistance and consultation to collaborative programs throughout the country that respond to children exposed to violence. In meeting this mission the program has three distinct components: the Child Development-Community Policing Program, the Childhood Violent Trauma Clinic, and Terror and the Disaster Preparedness and Response Training Program.

Clinical Services
The National Center for Children Exposed to Violence provides acute and follow-up clinical assessments and treatment for children, adolescents and families exposed to violence and other potentially traumatic events. These include three specialty services. The Child Development-Community Policing Program Consultation Service provides on-call consultation to New Haven police officers and immediate direct intervention for children and families referred by the police following incidents of violence. Acute clinical services are provided in the home and other community settings, in collaboration with police and other first responders, with the goals of increasing immediate safety and environmental stability, identifying children at risk for serious psychological difficulties and engaging children and families with clinical and other supports. The Childhood Violent Trauma Clinic provides comprehensive assessment and treatment for children and families exposed to violence and other potential trauma. Services include standardized assessments, acute and long-term treatment focusing on posttraumatic reactions, case management and coordinated treatment planning. The Domestic Violence Home Visit Intervention Project (DVHVIP) is a unique home-based intervention implemented by a team of police patrol officers, community outreach advocates, and child mental health professionals that provides information, support, comprehensive social services, enhanced law enforcement, and access to clinical treatment to children and families.

Education and Training
Our Section provides specialty training to residents in psychiatry, child psychiatry, pediatrics as well as pre- and post-doctoral fellows in clinical psychology. This year the Trauma Section established a post-graduate fellowship program to provide advanced training in trauma treatment to post-graduate mental health clinicians.
Research
The National Center for Children Exposed to Violence presently conducts research in the following areas:
(1) Child Development Community Policing Program Evaluation, (2) Domestic Violence Home Visit Intervention Program (DVHVIP) Evaluation, (3) the efficacy of the Child and Family Traumatic Stress Intervention, a 4-session secondary prevention approach to children and families exposed to violence and other traumatic events. An intensive CD-CP Program evaluation in New Haven, Connecticut and Charlotte, North Carolina is designed to evaluate outcomes in terms of changes in law enforcement practice and child and family functioning. Our domestic violence research focuses on an innovative intervention program in which a woman's advocate and patrol officer conduct follow up home-visits to improve physical and psychological security in the aftermath of children's exposure to violence. A longitudinal study was recently completed to evaluate the efficacy of the intervention at six and 12 months post-violent incident. The model is currently being disseminated to three communities with the aim of cross-site data collection and analysis. The study of our brief secondary prevention model for intervention is currently being evaluated to determine its effectiveness in reducing posttraumatic stress symptoms and increasing children's feelings of social support. In addition, on behalf of the City of New Haven, research was conducted on the approaches to tracking of and intervening with youth in the city identified as being at greatest risk for involvement in violent crimes. This initial study has led to the development of a home-based out-reach intervention modeled on the DVHVIP Project. Each research area is designed to influence practice and service delivery within mental health and law enforcement systems, as well as to improve direct clinical service for children affected by violence.

Accomplishments 2006-2007
• Maintained Child Development-Community Policing Program (CDCP), a model collaborative intervention program active since 1991 that brings together police, mental health clinicians, advocates, child protection and juvenile justice professionals to reduce the negative impact of violence on children and families (the model includes 24 hour on-call response to violent incidents, cross training and case conferences)
• Maintained Domestic Violence Home Visit Intervention Project, a city-wide collaborative outreach program for families affected by domestic violence that provides safety planning, information, advocacy and mental health services for domestic violence victims and their children (described below)
• Developed Program manual for DVHVIP to guide program replication
• Completed 12 month longitudinal study of DV-HVIP, documenting program success
• Supported the Childhood Violent Trauma Clinic (CVTC) a specialized trauma clinic providing mental health treatment for children exposed to traumatic events, including domestic violence
• Established fellowship program to train mental health clinicians in state-of-the-art trauma treatments
• Developed family-centered brief treatment model for school-age and adolescent children exposed to violence and other traumatic events (Child and Family Traumatic Stress Intervention (CFTSI))
• Developed a training manual for municipal leadership, emergency response personnel and health care/mental health care providers on behaviorally-informed terror and disaster preparation and response.
• Completed pilot study of tracking and intervention strategies for New Haven youth involved in violent crimes

Goals 2007-2008
• Maintenance of current clinical and research program with extension and replication in additional sites.
• Train 2 new trauma fellows and additional pre- and post-doc fellows at the CSC
• Evaluation of CFTSI treatment model
• Piloting of tracking and intervention strategies with New Haven youth involved in violent crimes

Selected Key Publications

School Consultation Services
Mary Schwal-Stone M.D.
Dorothy Stubbe, M.D.
This service provides psychiatric evaluation and educational programming recommendations to area school systems. Four clinical teams, each comprised of a faculty member plus a child psychiatric fellow, evaluate students referred by the Special Education Departments of the New Haven, Milford and Bridgeport Public Schools as well as other school systems in Connecticut. The goals are to provide expert psychiatric assessment of students who are receiving or are being considered for special education services, to assist the teams in selecting and implementing appropriate educational programming, and to facilitate therapeutic referrals. This service also provides consultation as requested on policy issues and in-service training to school staff.
Community and School-Based Services

James P Comer, MD
Maurice Falk Professor of Child Psychiatry
Jean A. Adnopoz, MPH
Clinical Professor

Our Philosophy and Mission

The primary mission of the Section of Community and School-Based Services is to promote positive child and family functioning through developmentally informed, theory-based programs and practices delivered in real world settings. Services provided by faculty and staff are accessible, culturally competent, and responsive to the strengths and needs of each child and family.

Family Support Services

Jean A. Adnopoz, MPH, Clinical Professor

Faculty

Steven Berkowitz, M.D., Assistant Professor
Ruth King, M.D., Assistant Clinical Professor of Psychiatry
Joseph Woolston, M.D., Albert J. Solnit Professor of Child Psychiatry and Pediatrics

Clinical Services

Family Support Services (FSS) programs provide population-specific, home-based interventions for families with children whose behavioral problems are responsive to, or exacerbated by, persistent, severe environmental stress. The overarching goal of FSS programs is the maintenance of each child’s primary relationship with his/her primary adult caregivers in the interest of permanency, safety and nurturance.

Treatment models include: Intensive In-Home Child and Adolescent Psychiatric Service (IICAPS) for children with serious psychiatric disorders, Intensive In-Home Child and Adolescent Reintegration Service (IICARS), for children returning to the community from long-term care, Intensive Family Preservation (IFP) for children reported as neglected or abused, Positive Intervention for Families with HIV/AIDS (PIFA), and Coordinated Intervention for Women and Children (CIWI) for children affected by parental substance abuse.

Program Coordinators: Jennifer Connell, LCSW, Beth Culler, EdD, Virginia DeVarennes, LCSW, Sandra Gossart-Walker, LCSW, Karen Hanson, MESS, Kristin Holdt, LCSW, Bethany Kleine, LCSW, Elizabeth Rodriguez, Ph.D, Cecilia Rawland, EdD, Cecilia Singh, Ph.D., Catherine Gertsch.

Training

FSS provides training experiences for child psychiatry and psychology trainees and social work students. In addition, some pediatric residents join with FSS staff to make at least one home-visit to families being followed in the Primary Care Clinic of Yale New Haven Hospital.

Research

IICAPS has been replicated in 13 sites throughout Connecticut. Both process and outcome evaluations are critical to understanding the benefits and the challenges of IICAPS and other similar promising practices that provide treatment while also acting as systems change agents. IICAPS is currently being tested in a pilot, randomized, controlled trial which is an essential step if models developed here are to become sanctioned as evidence-based treatments.
Accomplishments 2006-2007

- With the support of the Department of Children and Families (DCF) we have joined with developers of a reinforcement-based drug treatment program at Johns Hopkins to create and replicate Family Based Recovery (FBR) in 6 Connecticut sites. FBR is the first home-based program in the country to integrate a relationship-based parent child intervention with drug treatment.
- FSS introduced two additional adaptations of its core home-based intervention:
  1. Intensive Safety Planning (ISP)
     A brief intervention for families in which children have been removed to determine feasibility of reunification
  2. ACT II
     Treatment and support for adolescents 16-18 years of age with serious emotional disturbances who are also on Adult Probation
- IICAPS added a vocational and social skills program that includes individual counseling and job related activities as well as group sessions.
- The MSST Foundation provided support to pursue dissemination of IICAPS beyond Connecticut

Selected Publications

Goals 2007-2008

- Change teacher culture within schools so that teachers can incorporate a whole school approach with clear goals, high expectations, standards, respect, and caring.
- To create a network of practitioners, policy and practice decision makers in Connecticut that involves the Connecticut State University System, the Department of Education, and at least one school district that will explore ways to effectively apply child and adolescent development principles in these different but related work areas.
- To involve the social work fellows in the SDP work in schools.

Selected Publications
Comer, J., Child Development: The Underweighted Aspect of Intelligence, in Enhancement and New Constructs, 2007 in press.

School Services
James P Comer, MD, Maurice Falk Professor of Child Psychiatry Faculty and Staff
M. Ann Levert, Ed.D., Associate Research Scientist
Fay E. Brown, Ph.D., Associate Research Scientist
Camille Cooper, M.Ed., ABD, Lecturer
Christine Emmons, Ph.D., Associate Research Scientist
Cynthia Savo, M.A., Lecturer

The School Development Program (SDP) is a widely recognized model designed to help educators create a positive school environment that improves teaching, student behaviors and the ability to learn through the understanding and application of the principles of child and adolescent development. SDP school environments support and promote each child's sense of competence and achievement. SDP has both a Yale based staff of psychologists and educators and a national faculty that supports schools and districts using the model nationwide and outside the country.

Training
Schools and districts using the SDP model are trained at Yale and at their home sites. Training often involves social work trainees, students, and visitors from across and outside the country.

Research
The SDP was established in 1968 and has been disseminated widely since 1983. It has been shown effective through twelve external studies, including one randomized, controlled study. In a meta analysis by Jeffrey Berman and his colleagues, the SDP was one of the three programs that raised test scores in studies of the twenty-nine most frequently used comprehensive school reform projects

Accomplishments 2006-2007

- James P. Comer won the 2007 University of Louisville Grawemeyer Award in Education honoring his commitment to educating the whole child and his view that organizing schools to support the development of children yields positive behavioral and academic outcomes.
- James P. Comer was the chair of the National Institute of Child Health and Human Development (NICHD) and National Council for Accreditation of Teacher Education (NCATE) Teacher Education Research Roundtables that explored teacher and administrator knowledge and application of child and adolescent development principles and considered the possible need for standards.
- SDP co-sponsored The Learning and the Brain Conference in San Francisco, February, 2007

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Associates of the Child Study Center

Partners in Science and in Service

The Associates continue to meet with Child Study Center faculty, to encourage new lines of thinking, and to support our work to help children and families locally, internationally, and around the world.

The Associates began in the late 1970’s when then Director Dr. Albert J. Solnit met Irving Harris, renowned for his philanthropy toward bettering the lives of children around the world. In addition to supporting the Center financially, Harris realized that there was a community of individuals who were concerned with children’s mental health and development. He organized the small group to interact with the faculty, to exchange ideas about research in the field, and share their own thoughts and experiences with children. Under the leadership of Dr. Donald Cohen, the Center’s Director from 1983 to 2001, the Associates began meeting annually and grew to its present number of over 100 individuals from throughout the nation. During the last year Dr. Volkmar created the Executive Council of the Associates to promote communication between faculty of the Center and interested friends, corporations, and foundations.

The Associates continue to meet with Child Study Center faculty, to encourage new lines of thinking, and to provide seed funding for new, cutting edge research. They have supported new laboratory facilities, championed innovative clinical care initiatives, and have enabled us to provide excellent clinical services even to the most underserved patients and their families. The support of the Associates has fostered the careers of young scientists and clinical scholars, and has maintained the momentum throughout the Center, as it moves forward with initiatives, programs, and facilities which significantly improve the health and well being of children.

Over the years, Associates of the Center have directed support to projects of personal or professional interest to them. Innovative research funded by Associates include:

- A new study on immunologic response of individuals with Tourette syndrome
- A seed grant on eye tracking studies of children with pervasive developmental disorders (which led to a $5 million dollar federal grant)
- Funds for equipment and research lab with a focus on the genetics of Tourette syndrome (which have led to larger grants and critical findings)
- An intervention program to help parents understand the value of reading to their children
- A highly effective reading intervention program within New Haven elementary schools
- The development of an in-home service for vulnerable children and families
- New studies to evaluate the impact of prenatal cocaine use on child and the mother
- A pioneering child psychiatry residency training program

Each October, the Center invites Associates to New Haven for two days to hear presentations about what is currently most exciting about our clinical, educational, and research programs, to participate in group discussions, and to have the opportunity to schedule meetings with individual faculty members engaged in work of mutual interest.

The Associates are committed, skilled volunteers who play a pivotal role at the Yale Child Study Center and serve as partners in science and service by advancing the broad, interdisciplinary approach to the Center’s study of child development. The Associates share our vision, advocate for our mission, and support our work to help children and families locally, internationally, and around the world.

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Approximately 40 distinguished faculty members are affiliated with the Zigler Center. The faculty members give young researchers the opportunity to conduct policy-relevant research, learn about current policy issues, and advocate.

The Zigler Center is organized into six interacting units:

1. Child Care and Early Intervention Unit
   (Focusing on national and state policies regarding child care, early education, and early intervention)
2. Child Welfare Unit
   (Brings knowledge from current research and best practices to bear on policy development, in order to improve outcomes for this extremely vulnerable group of children.)
3. Electronic Media and Families Unit
   (Consults with various media industry people in the development of new programs for television and computers. Our most recent project dealt with using DVDs and videos to teach parents, teachers and home child care providers imaginative school readiness oriented games.)
4. Head Start Unit
   (Synthesizes the relevant literature, analyze social policy, and disseminate information on Head Start and early childhood intervention.)
5. Public Information
   (Zigler Center faculty give numerous interviews to newspaper reporters, broadcast journalists and magazine writers on child- and family-related topics. Zigler Center faculty members and fellows also publish opinion essays and popular articles and respond to questions from the print and broadcasting media.)
6. Emotional Intelligence Unit
   (Integrates scientific research on emotions and emotion-related skills with traditional research on children’s cognitive and social development and on teacher effectiveness. Much of this research has been extended to different nations, including England, Spain, Croatia, India, and Japan.)

Faculty
Approximately 40 distinguished faculty members are affiliated with the Zigler Center. The faculty members are from a wide variety of disciplines, including: psychology, psychiatry, pediatrics, public health, social work, education, political science, and law.

Training
Each year, approximately 50 fellows, also from a wide variety of disciplines, participate in the Zigler Center’s training program. The majority of fellows are graduate students; other fellows are psychology or social work education, political science, and law.

Policy Training Program
The Zigler Center gives young researchers the opportunity to conduct policy-relevant research, learn about current policy issues affecting children and families, gain an understanding of how policy is made and develop some of the skills necessary to work effectively in the policy arena. Fellows work under the guidance of a Center faculty member. The fellows’ program also includes the Center’s weekly Social Policy Lecture Series, occasional fellows’ meetings and an annual policy orientation trip to Washington, DC. Over 500 fellows have participated in the training program since the Center’s inception in 1978. Former fellows include the Deans of the Schools of Education at Harvard and Stanford and leaders in academia, federal and state government, and advocacy.

Zigler Center Lecture Series
During the academic year, the Zigler Center sponsors a weekly Social Policy Lecture Series which is free and open to the public. Speakers from academia, various levels of government, community organizations, service agencies, the business world and the media discuss their work and its policy implications. Topics include: early childhood education, child care, intervention programs for children and families, education reform, mental health, child advocacy, child and family policies, research at the intersection of psychology and social policy, and media presentation of child and family issues, among others.

Policy Orientation Trip To Washington, DC
Each spring, the Zigler Center sponsors a 3-day trip to Washington, D. C. for its fellows. The purpose of the trip is to orient academic researchers to Washington and the federal policy-making process. Zigler fellows meet with a variety of “players” in the policy making process. Trips typically include visits to Congressional staffs, think tanks, advocacy organizations, and Executive Branch agencies. Fellows visit Capitol Hill to observe hearings, markups and floor action in the Senate and House of Representatives. Fellows are also encouraged to meet individually with legislators from their own states or districts or with their staffers.

“I learned a great deal about policy making in a very short time. The trip was a valuable experience that will help me advocate more effectively on behalf of clients in the future.”
—Rachel Loftin, pre-doctoral clinical psychology fellow and Zigler fellow

International Social Policy Efforts
Dr. Pia Rebello Britto has actively been involved in policy advocacy, development and evaluation efforts over the past year. In terms of policy development, Dr. Rebello Britto lead a team from Yale University to provide guidance for the development of a national strategic plan for Early Childhood Development in the country of Georgia. This plan was endorsed by members of parliament and has lead to the first ever parliamentary council on early childhood development. Dr. Rebello Britto, supported by UNICEF, also has lead a research team of three Zigler Center Fellows to review and evaluate 30 national early childhood policies. The results of these analyses will be used to improve articulations of policies for young children in developing countries.

Recent Publications
International Activities

The Center’s mission understands and helps children and families and has no geographical boundaries. Consequently, we work with organizations, research collaborators, and clinical services in nearly 30 countries around the world. The activities involve collaborative studies to understand children’s mental health and emotional need and to assist other countries in developing programs to train professionals and serve children and their families. The Center has an active international presence through its ongoing involvement with the International Association of Child and Adolescent Psychiatry as well as with numerous collaborative relationships with professionals and agencies around the world. We convene conferences at the Center, visit other countries to conduct training, and invite scientists and clinicians from other countries to learn at the Center and to share their expertise to improve our own work. Teaching and learning are wonderfully reciprocal so international work improves all that we do and disseminates the latest information across geographic and cultural boundaries to improve services and patient care.

Major collaborations include our work with the Anna Freud Centre in London. The Anna Freud Centre Program at the Child Study Center represents a research and training collaboration bridging psychoanalysis and contemporary perspectives on developmental psychopathology and neuroscience. The program is multidisciplinary, it bridges basic and clinical science, brings psychoanalytic perspectives to a range of treatment modalities, encourages young scholars to be interested in psychodynamically informed research perspectives, and nurtures new and integrative scholarship in psychoanalytic theory. Highlights of the program this past year include our annual psychoanalytic research training program and the newly initiated master’s program in psychoanalysis and developmental neuroscience.

The Masters Program in Developmental Neuroscience and Psychoanalysis is a new program involving a collaboration between University College London (UCL) and Yale. For nearly ten years in the collaboration with the Anna Freud Centre, University College has offered a one-year Masters Degree in Developmental Psychoanalysis. The new masters program extends the focus of the present masters in developmental psychoanalysis to include basic and clinical neurosciences and broadens the academic base through the connection to the Center and to Yale. Nine candidates from Europe and the US are completing their first year at UCL and will arrive at Yale in September 2007. The nine fellows have already been matched with Yale faculty mentors from departments across the school of medicine and are beginning to design their projects in collaboration with their mentor. Finally, a new collaboration will formally begin this year as a Center and to Yale.

History of the Center

The originator and first Director of the Child Study Center was Arnold Gesell, PhD, MD (1880-1961). A psychologist, and subsequently a pediatrician, Gesell is often considered the father of child development in the United States. In 1911 Gesell developed a service that became the Yale Clinic of Child Development; in 1930 this clinic became a Department in the School of Medicine. A meticulous observer and researcher Gesell is most well known for his studies of normal child development.

Following Gesell’s retirement Milton J. E. Senn, MD was recruited to serve as both Chairman of the Department of Pediatrics and Director of the Clinic of Child Development which became the Child Study Center. The designation as a Center indicated the University’s desire for a multidisciplinary program focused on children and child development. An innovator in the field of pediatrics it was under Senn’s stewardship that many of the innovations in pediatric care in the U.S. were introduced. He was succeeded in 1958 by Albert J. Solnit who had been the first resident in Child Psychiatry at Yale.

Solnit was a child psychiatrist, a pediatrician, and psychoanalyst who fostered collaborative work with a focus on social policy and child custody. He fostered collaborative work with the Department of Pediatrics and developmental research with children living in adverse circumstances. He also expanded the Center’s focus in neurobiology recruiting Donald Cohen who would succeed him in 1983 as the fourth director of the Center. Cohen stimulated the blossoming of one of the nation’s leading program with a focus on brain mechanisms along with a strong commitment to social policy and international activities. Under his leadership internationally recognized programs in research and clinical work were developed - particularly in the areas of Tourette’s syndrome and autism. His impact on the field remains a strong one even five years after his tragic death in 2001.

In 2001, John E. Schwalter, MD, a child psychiatrist, became Interim and Acting Director of the Center. Over the course of his career, Dr. Schwalter assumed a national and international leadership role in child psychiatry and served as director of Child Psychiatry Training here for almost three decades. He was followed, in 2002, by Alan E. Kazdin, PhD, a clinical psychologist with a strong interest in treatment evaluation and work in the area of conduct disorder. He was succeeded in 2006 by Dr. Fred Volkmar.

Dr. Volkmar came to Yale as a trainee in 1980, remaining on the faculty in 1982, and working with Donald Cohen in developing the internationally recognized autism program. A child psychiatrist Dr. Volkmar is the author of several hundred scholarly works in the area of autism and recently became the editor of the Journal of Autism.

Throughout the history of the Center there has been a stellar group of faculty and trainees (many of whom have themselves gone on to successful research careers and international recognition). A major goal for the Center remains our strong commitment to excellence in science, clinical services, and training and efforts to enhance child mental health worldwide.