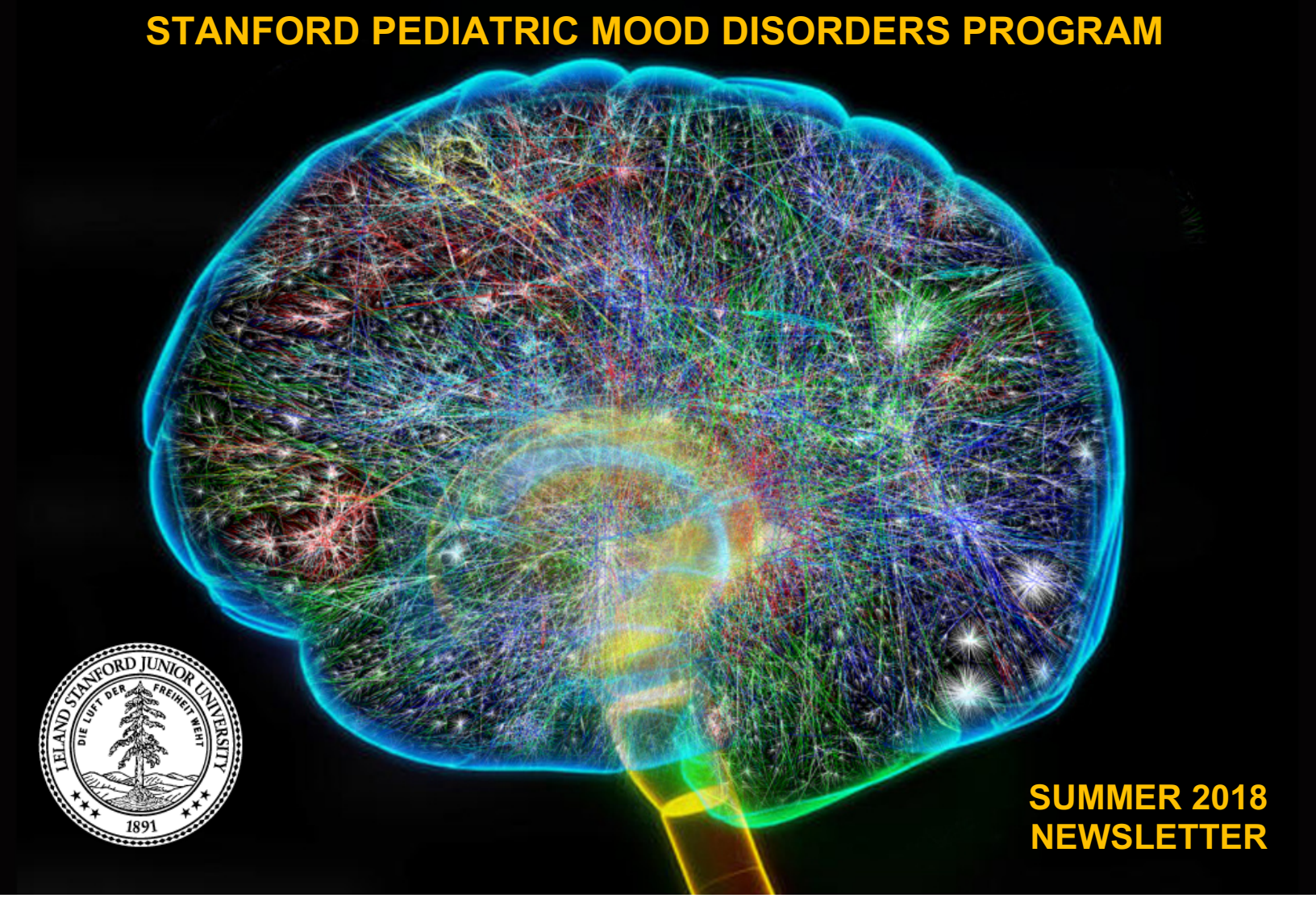
STANFORD PEDIATRIC MOOD DISORDERS PROGRAM



SUMMER 2018 NEWSLETTER

GREETINGS!

Welcome to the Stanford Pediatric Mood Disorders Program annual newsletter! This newsletter is for current and prospective participants and their families, as well as for health and allied professionals interested in learning about our work. We extend a warm hello to you all. We would also like to thank our current participants and families for their time and interest. Without you, our work would not be possible. We hope that this newsletter is interesting and informative to you.

OUR MISSION:

To **improve the mental health and lives of all children and adolescents**, especially those youths with or at risk for mood disorders;

To **transform delivery of mental health care** through fully integrated, globally recognized research, education, and innovation.

OUR VISION:

Our vision is to prevent mood problems that begin in childhood from taking hold and continuing into adulthood. We conduct research that clarifies the causes of mood disorders in childhood and try to improve upon currently available treatments.

DIRECTOR'S CORNER

Hello everyone! What a year it has been! Thank you so much for your contributions to our work. With this information, we hope to advance our understanding of how mood symptoms first develop in childhood and how youth can build resilience. We have our work cut out for us, but as you will find out in this newsletter, with the help of cutting-edge scientific tools, our team has been working hard to be able to rapidly translate our research into practical tools that improve the health and well-being of all children and families. Here's wishing you all a healthy and happy year ahead!
~Dr. Singh

WE ARE FOLLOWING AND RECRUITING!

R & R

Risk and Resiliency Study

The goal of this study is to discover factors that make youth either vulnerable or resilient to developing mood symptoms.

Children (8-17 years of age) of families with and without histories of Major Depressive Disorder and Bipolar Disorder are invited to participate in clinical interviews, cognitive tasks, MRIs, and blood/saliva tests.

Hooray! We have completed recruitment of 150 participants! We are now following up with families participating in the study over the next 2-5 years to track neural and behavioral markers of risk over time and see if we can base any clinical outcomes on these measures.

Thank you for responding to over-the-phone surveys and returning for a follow-up scan!

MOMENTUM

Measuring Overeating and Mood Effects on Neurobehaviors ThroUgh Maturation

MOMENTUM is recruiting youth (9-17 years of age) to participate in a study aimed at understanding the relationship between mood and appetite.

Participants receive an MRI scan at two time points over the course of two years to examine neural networks involved in reward function.

Participants are also clinically evaluated for insulin sensitivity and symptoms of depression at baseline, 6 months, and 24 months.

Spread the word and refer a child struggling to maintain a healthy weight and experiencing sad moods!

AIMS

Arousal Induced by Medication Study

The goal of this multi-site trial is to evaluate the benefits and safety of antidepressant and psychotherapy treatment in teens who have a family history of Bipolar Disorder.

Youth (12-17 years of age) complete behavioral, clinical, physiological, and genetic assessments, as well as MRI scans of the brain.

Participants in this study have appreciated the chance to have access to timely and expert assessment by our Stanford team and evidence-based therapy and psychiatric services.

Help families *keep it chill* and refer them to our program!

Find out if you are eligible at: https://is.gd/pearlsurvey

CONTACT US:
http://med.stanford.edu/pedmood.html
401 Quarry Road, Stanford, CA 94305
(650) 721-4049
Email: thepearlab@stanford.edu

ARETAEUS

Observational Study of Youth At Risk

This study sponsored by Janssen invites adolescents and young adults (15-25 years of age) who have a parent with a diagnosis of Bipolar Disorder to monitor with us clinical, genetic, activity-level, and other biological information at 6-month intervals over 24 months.

The goal of the study is to evaluate early risk markers that may be good targets for treatment.

With the help of this study, our hope is to potentially delay or prevent the onset of bipolar disorder in youth who may be at risk.

"Like" our page on Facebook at: *PEARL at Stanford*!

ONGOING RESEARCH & PROGRAMS

From Affective Illness to Recovery: Student Access to Rapid Treatment (FAIR START) identifies college age students 18 and above affected by mood disorders to engage in treatment as early as possible to halt the progression of their illness. The program enables youth struggling with few resources to receive an early and correct diagnosis free of charge. This is followed by a personalized treatment plan. At any given time, as many as eight students could be in the process of evaluation, treatment, and long-term follow-up recommendations. To learn more, contact Lauren Chang at (650) 498-8459.

Childhood Sex Differences in the "Integration" of the Superficial White and Cortical Gray Matter

We are using a "big data" approach to understand why girls sometimes more frequently experience depression and anxiety while boys experience attention deficit and hyperactivity. Using data from 10,000 kids in the Philadelphia Neurodevelopmental Cohort, our team is conducting exciting analyses to discover how the brain's structure and function might explain apparent differences between boys and girls. These differences could underlie observable sex differences in behavior in developing adolescents.

Transcranial Magnetic Stimulation (TMS) Teen MDD Study

Interested in a non-medication alternative to treating your child's depression? Our program is collaborating with Stanford's Depression Research Clinic to conduct Stanford's first ever trial using TMS in 12-21-year-old youth with depression. Contact Jessica Hawkins at (650) 723-8323 for more details.

WANT A PICTURE OF YOUR BRAIN? WANT SOME SUMMER SPENDING CASH? PARTICIPATE IN ONE OF OUR STUDIES!

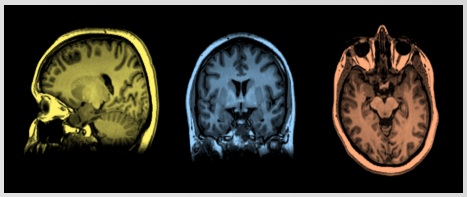
The PEARL Research Team Welcomes All New Families!

We continue to look for paid research subjects.
If any of our studies are of interest to you
or someone you know, please contact us at:

650-721-4049
thepearlab@stanford.edu

Check out your eligibility at: https://is.gd/pearlsurvey

14th ANNUAL MOOD DISORDERS EDUCATION DAY



Join us on Saturday, July 14th 2018, 8:00AM-3:00PM
Frances C. Arrillaga Alumni Center
326 Galvez St. Stanford, CA 94305

The Stanford University Mood Disorders Center will host the 14th Annual Mood Disorders Education Day for patients and their families, caregivers, friends, and community. Join us to learn about the latest from leading researchers in the field of mood disorders.

The Education Day program will include discussions of recent treatment advances, the neuroscience of mood disorders in adults, adolescents, and children, and translating research findings into practice. Education Day will also include opportunities for Q&A and panel discussions. The event is free to the public and refreshments will be provided. **Please pre-register online at moodeducation.eventbrite.com.**

OUR TEAM

Manpreet K. Singh, MD, MS
Director, Pediatric Mood Disorders Program

Melissa Packer
Lab Manager

Alexis Staver
Clinical Research Coordinator

Danielle Wall
Clinical Research Coordinator

Nina Bahl
Clinical Research Coordinator

Sara Momi Leslie
Neuroimaging Research Coordinator

Lauren Chang
FAIR START Research Coordinator

Akua Nimarko
PhD Candidate

Kevin Sun
MD Candidate

Sarthak Andal
MD Candidate

Leah Lurye
PsyD Candidate

Nicole Starace, PhD
Study Psychologist

Kyle Hinman, MD
Study Clinician

Isheeta Zalpuri, MD
Study Clinician

Michelle Goldsmith, MD
Medical Monitor

Natalie Rasgon, MD PhD
Co-Investigator and Director, PALS Network

Cara Bohon, PhD
Co-Investigator and Collaborator

Booil Jo, PhD
Statistician

Allan Reiss, MD
Co-Investigator and Collbaborator

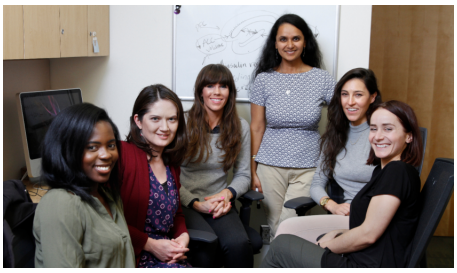
Gary Glover, PhD
MR Physicist, Collaborator

WELCOME and THANK YOU to all our summer research interns, residents, clinical fellows, and other trainees!

RECENTLY PUBLISHED RESEARCH:

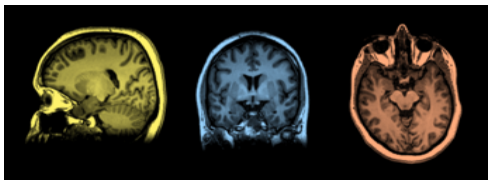
Singh MK, Leslie SM, Packer MM, Zaiko YV, Phillips OR, Weisman E, Wall D, Jo B, Rasgon NL (2018). Brain and Behavioral Correlates of Insulin Resistance in Youth with Depression and Obesity. *Hormones and Behavior.* We found that youth with greater insulin resistance had higher levels of anhedonia and more food seeking behaviors, reduced hippocampal and ACC volumes, and greater levels of ACC and hippocampal dysconnectivity to fronto-limbic reward networks at rest. This motivational brain network may link depression to insulin resistance.

Phillips OR, Onopa AK, Zaiko Y, Singh MK (2018). Is Insulin Insensitivity in Children Associated with Smaller Brain Volumes? *Pediatric Diabetes.* Smaller whole brain volumes were associated with insulin resistance independent of age, sex, depression severity, body mass index, socioeconomic status, Tanner Stage, and Intelligence quotient (IQ) in 46 youth with depression who are struggling to maintain a healthy weight. The precise relation between insulin resistance and the developing brain needs further study.



Ordaz SL, Goyer MS, Ho TC, Greicius M, Singh MK, Gotlib IH (2018). Network Basis of Suicidal Ideation in Depressed Adolescents. *J Affective Disorders.* Adolescents with suicidal ideation show hypoconnected networks associated with a complex set of cognitions associated with cognitive control, self-referential thinking, and processing salient information. While multiple networks could be targets for effective early interventions, those targeting cognitive control may be particularly beneficial.

Chang KD, DelBello MP, Garrett A, Kelley RG, Howe M, Adler CB, Rana M, Welge J, Strakowski S, Reiss AL, Singh MK (2018). Neurofunctional Correlates of Response to Quetiapine in Adolescents with Bipolar Depression. *J Child and Adolescent Psychopharmacology.* Twenty-three youth 10-17 years of age underwent an MRI scan at baseline, then were randomized to quetiapine or placebo, followed for 8 weeks, and at the end of their study participation underwent another MRI scan. During functional MRI scan, participants viewed negative and neutral pictures. Baseline activation patterns in the prefrontal cortex that are important for the regulation of emotion predicted response within the quetiapine group only. Thus, quetiapine may be more effective in the context of specific prefrontal activation patterns in youth with bipolar depression. Larger studies of these youth would help to clarify the effects of quetiapine on the brain.



Zalpuri I, Singh MK (2018). Treatment of psychiatric symptoms among offspring of parents with bipolar disorder, *Current Treatment Options in Psychiatry.* There is limited evidence supporting the treatment of youth at risk for bipolar disorder to prevent psychiatric symptoms from progressing to threshold bipolar or other psychiatric disorders. There is an urgent need for randomized trials and research that identifies reliable biomarkers to individualize treatments for these youth.

Singh MK, Leslie SM, Bhattacharjee K, Gross M, Weisman W, Staver A, Soudi L, Phillips O, Onopa A (2017). Vulnerabilities in Cognitive Flexibility in Youth Offspring of Parents with Mood Disorders, *Journal of Clinical and Experimental Neuropsychology.* Youth at familial risk for mood disorders demonstrate visuospatial deficits early in the processing stream. Improved methods for identifying at-risk children with the earliest possible neurocognitive impairments may inform cognitive strategies that could prevent mood disorders.

Gershon A, Johnson S, Thomas L, Singh MK (2018). Double Trouble: Weekend Sleep Changes are Associated with Increased Impulsivity among Adolescents with Bipolar I Disorder. *Bipolar Disorders.* Adolescents with bipolar disorder have higher impulsivity, later and more variable rise time, and more variable time in bed and sleep duration on school days compared to` healthy controls. These findings highlight the important effect of sleep on impulsivity among adolescents with bipolar disorder and add to the growing evidence that establishing sleep routines may be an important therapeutic target for youth with BD.